

# FY2019 UPWP

## Unified Planning Work Program

### Chapter IV

### Other Regional Transportation Planning Initiatives



# FY 2019 UNIFIED PLANNING WORK PROGRAM

## CHAPTER IV OTHER REGIONAL TRANSPORTATION PLANNING INITIATIVES

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## INTRODUCTION

The Federal rules governing the work and responsibilities of Metropolitan Planning Organizations require that the Unified Planning Work Program produced every year “describe the planning priorities facing the metropolitan planning area (found in Chapter I). This Chapter IV includes: “a description of all proposed transportation and transportation-related planning work elements or activities, including related state transportation department or transit authority corridor planning work elements or activities, regardless of funding sources; and a description of transportation-related air quality planning work elements or activities, regardless of funding sources and which entity conducts such work elements or activities.” As such this chapter contains information not included in the other chapters of the FY 2019 UPWP.

The description includes:

- Who will perform the work;
- Completion schedules; and
- Final products.

The information is intended to insure the coordination of all transportation planning underway in the region and prevent duplication of planning and study efforts. This information, obtained from all transportation, planning and operating agencies that impact Northern New Jersey, reflects the overall complexity and multi-dimensionality of metropolitan planning activities throughout the region.

This portion of the FY 2019 UPWP is divided into two sections. Section One is separated into four parts. Part One incorporates information from various Transportation Planning and Operating agencies. Part Two includes Transportation Management Associations (TMAs) activities funded through NJ TRANSIT, NJDOT and New Jersey Department of Law and Public Safety, including transit marketing/promotional initiatives and services to support the NJ Safe Routes to School Program. Part Three includes the TMA and County Project Handoffs that are funded on a yearly basis. Additionally, it should be noted that Volume IV of the FY 2019 UPWP includes the full Transportation Management Association (TMA) work programs. Part Four is a compilation of Local Subregional Initiatives. Section Two is the New Jersey Department of Transportation State Planning and Research Program for CY 2017-CY 2018, Year Two. Section Three is the NJTPA’s Study and Development Program (S&D), which is a schedule of project planning, environmental reviews and other work that will be conducted during the coming year to advance proposed improvement projects toward possible federal funding.



**NORTH JERSEY TRANSPORTATION  
PLANNING AUTHORITY, INC.**

**FY 2019**

**UNIFIED PLANNING WORK PROGRAM  
CHAPTER IV  
OTHER REGIONAL TRANSPORTATION  
PLANNING INITIATIVES**

**SECTION I**

**PART ONE - TRANSPORTATION PLANNING AND  
OPERATING AGENCIES**





**AGENCY: DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION**

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**SUBJECT:** Scudder Falls (I-95) Bridge Replacement

**DESCRIPTION:** The Delaware River Joint Toll Bridge Commission is continuing the replacement of the Scudder Falls (I-95) Bridge, which currently has numerous traffic safety and congestion issues. The bridge replacement project is the largest single capital undertaking in Commission history.

The bridge is the most heavily used crossing among the 20 bridges in the Commission's system. Replacement of the Scudder Falls Bridge will provide a new, improved facility providing new capacity and other upgrades to meet future traffic demands of the coming decades. The Scudder Falls Bridge operates at the worst level of service (a federal highway classification called LOS F) during peak travel periods.

In 2003 the Commission signed a Memorandum of Agreement with PENNDOT and NJDOT to proceed with the environmental studies and preliminary design for the I-95/Scudder Falls Bridge Improvement Project. These organizations agreed to use PENNDOT's Project Development Process to fulfill the National Environmental Policy Act (NEPA) process requirements.

The Environmental Assessment (EA) the Commission prepared for the project underwent extensive review by the departments of transportation in New Jersey and Pennsylvania and the Federal Highway Administration (FHWA). The document also was reviewed by federal and state environmental resource and regulatory agencies with regard to project findings, assessments and mitigation for a number of environmental considerations within the project limits including historical and archeological resources, threatened and endangered species, and wetlands, among others.

The FHWA was the agency ultimately responsible for reviewing the EA and determining acceptability so that it may be distributed for public examination and comment during a comment period that would include an open house/public hearing. Announcements about the availability of the EA and details about the open house/public hearing were made through the project website ([www.scudderfallsbridge.com](http://www.scudderfallsbridge.com)), a newsletter to project stakeholders, press release, and advertisements in local newspaper outlets. The Commission and its project consultants examined a wide variety of improvement options for each of the four segments of the Scudder Falls (I-95) Bridge Replacement project (Project). All of the options were aired at open houses, municipal meetings and stakeholder group sessions.

On June 14, 2012, the FHWA issued a Finding of No Significant Impact (FONSI) for the project. The FHWA's determination validated the project's extensive environmental documentation compiled by the Commission.

The Project consists of the following:

The proposed project area would extend 4.4 miles along I-95 – from the Route 332 interchange in Bucks County, Pa. to the Bear Tavern Road interchange in Mercer County, N.J. The work will include a complete replacement of the existing four-lane Scudder Falls Bridge over the Delaware River with six lanes of through traffic (three in each direction), two auxiliary northbound lanes for entry/exit travel, and one auxiliary southbound lane for entry/exit travel.

Other major components of the project include:

- Widening of I-95 from the Route 332 exit in Pennsylvania to the bridge by adding an additional lane in each direction (widening to the inside of the highway)
- Reconfiguration of the I-95/Taylorsville Road Interchange in Lower Makefield Twp., Pa. by eliminating the existing eastern southbound off-ramp from I-95 and combining it with the existing western southbound off-ramp
- Reconstruction and reconfiguration of the Route 29 interchange through the use of roundabouts. This option would avoid traffic signals, resulting in a folded diamond interchange with two roundabout intersections at the ramps with I-95
- A Pedestrian/Bicycle shared-use pathway on the upstream structure of the new dual spans
- Full inside and outside shoulders/breakdown lanes on both bridge spans, a current highway standard requirement; the inside shoulders will be 14-foot wide (two feet wider than the 12-foot width required under current highway design criteria) to allow for future bus-rapid transit routes in the region
- Noise-abatement walls along the approach roadways leading to and from the bridge

**SCHEDULE:** The main construction contract was awarded January 30, 2017, and is underway. Completion of the project is tentatively scheduled for 2021.

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**SUBJECT: Northampton Street Toll-Supported Bridge Rehabilitation**

**DESCRIPTION:** This project will consist of rehabilitation and replacement of the floor system at the Northampton Street Toll-Supported Bridge. Work will also include rehabilitating the bridge to preclude major repairs for a minimum of 15 years, including complete replacement of the grid deck and structural steel floor system; removal of existing paint and repainting of the trusses; repairs to the truss bearings and abutment backwalls; improving bridge drainage; replacement of sidewalk and access panels; substructure repairs; new bridge lighting & architectural lighting; and replacement of the approach roadways at both ends of the bridge.

**SCHEDULE: Concept Study / Design 2018-2019 and Construction in 2019-2020.**

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**AGENCY: INTER-MPO ACTIVITIES  
CENTRAL JERSEY TRANSPORTATION FORUM**

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**SUBJECT:** Achieve improved and more integrated regional land use and transportation planning that will result in a better quality of community life in Central Jersey.

**DESCRIPTION:**

The Central Jersey Transportation Forum serves a role unique in the state in bringing together a wide range of public, non-profit, and private organizations to facilitate a regional, cooperative approach to solving transportation problems. The geography is approximately 25 municipalities in three counties, generally focused around US 1 but also including US 206 and US 130. The area includes Trenton through New Brunswick. It is a shared project with NJTPA, though it has been staffed by DVRPC. The Forum has held steadily well-attended meetings for over 15 years.

The Forum moves toward its goal through an agreed-upon action plan. This involves work in east-west access; transit and alternative modes; land-use/transportation integration; and system-wide planning and coordination. Progress is reported on through a handout prepared for each meeting. Approximately every two years a survey is conducted to refine the future direction of the Forum. The 2014 survey showed long-term commitment by participants, with 66% of respondents engaged in this voluntary gathering for four or more years. Respondents largely felt the Forum has been effective and action-oriented for the last several years.

The Forum meets three times per year with meetings of its Steering Committee and two action teams in between. The Route 1 Regional Growth Strategy (Rt1RGS) Action Team focuses on policy matters and the Transit Action Team on advancing various ways of increasing transit use. The Rt1RGS Action Team developed a Smart Growth Road Show which had been presented for elected officials in eight municipalities and one county at the end of 2015. Each went on to adopt a resolution supporting coordinated Smart Growth planning with other Central Jersey municipalities. The Forum has been a long-term supporter of NJ Transit's Route 1 Bus Rapid Transit (BRT) project.

**TASKS:**

1. Support Forum, action team, and Road Show presentations – Arrange meetings, prepare materials, track progress on the action plan, and continue to improve effectiveness.
2. Transportation and land development project web maps – Maintain and refine interactive web maps depicting timing and status of transportation improvement projects as well as planned and potential land development projects for the purpose of increasing information sharing.
3. Coordinate with other projects – Communicate with Forum participants and serve as liaison to related projects.

**PRODUCTS:**

1. Presentations, meeting summaries, table tracking progress, other outreach material
2. Summaries of analysis, updated web maps, additional web material

**Beneficiaries:**

NJDOT, New Jersey Transit, New Jersey Office of Planning Advocacy, TMAs, study area counties (Mercer, Middlesex, and Somerset) and municipalities, and residents and employees in the region.

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## AGENCY: NEW JERSEY HIGHLANDS COUNCIL

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**SUBJECT:** Highlands Regional Master Plan (RMP)

**DESCRIPTION:** Through the passage of the Highlands Act in August 2004, the Highlands Water Protection and Planning Council was created and charged with the task of developing a Regional Master Plan (RMP) to restore and enhance the significant value of the abundant and critical resources of the Highlands Region. The Act defines the Region as including nearly 860,000 acres located in 88 municipalities in seven northern New Jersey counties (Bergen, Morris, Hunterdon, Somerset, Sussex, Passaic and Warren).

A fundamental aspect of the RMP is the process by which local governments work collaboratively with the Council to adjust land use plans and development requirements to support the goals and requirements of the RMP. The Act requires Preservation Area municipalities and counties to conform to the RMP. Municipalities in the Planning Area have incentives to voluntarily conform to the RMP. The RMP is built upon land use standards and a Land Use Capability Map series.

The Land Use Capability Map series is based on an analysis of natural resources, existing development, infrastructure, and agricultural activities. The Zone map establishes six geographic zones that overlay municipal zoning, each with its own criteria and standards. Four other maps in the series address capacity for water availability, water supply utilities, wastewater utilities and septic systems.

The RMP became effective September 8, 2008. It serves as the regional planning framework for resource protection and as a complement to local land use planning efforts. The document provides strategic opportunities for communities to consider and act upon, based on an understanding of the cumulative and regional impacts of local land use decisions, including the relationship between land use and transportation. It also provides a framework to coordinate the policy and planning decisions made by federal, State, and regional entities such as NJTPA, to ensure that these decisions and public investments are guided by the goals of this Plan.

The RMP policies help shape the Region's transportation investments by working with State and local agencies and stakeholders. By implementing smart growth principles and by looking at transportation and land use planning in a comprehensive manner, a long-term strategy can then be developed to better handle the Region's many transportation and transit related concerns. The RMP contains a Smart Growth Component and a Transportation Component to provide a plan for transportation system preservation, including all federally mandated projects and/or programs, and recognizing smart growth strategies and principles.

The Act provides that the Council recognize projects that promote a sound, balanced transportation system that is consistent with smart growth strategies and principles. A preliminary evaluation of existing and planned transportation studies in the Highlands Region that are anticipated as near-term (5 years), mid-term (5 to 10 years) and long-term (greater than 10 years) projects was performed for the 2008 Regional Master Plan.

The Council received input from State agencies, transportation planning professionals, non-profits, and county, municipal and local stakeholders in its evaluation of projects. The projects were

evaluated based on input received, research and participation in project studies, the viability of both an anticipated near term project and a longer term project, projects that promote preservation of the transportation system, incorporate transit or multi-modal components, serve a significant portion of the Region, reduce vehicle miles traveled, and improve mobility and accessibility for residents and visitors and support both the Highlands Act and RMP policies.

The RMP identified multiple existing and planned transportation studies in the Highlands Region for further evaluation; however, there have since been no formal evaluations. The Highlands Council is also charged with reviewing certain transportation projects in the Highlands Region under its capital review authority provided in the Highlands Act. These are reviewed on a case-by-case basis. As noted below, the Council has drafted a list of recommendations related to transportation initiatives that will support the RMP. One of these recommendations is to pursue continuing coordination with State and regional transportation agencies. The Council was represented on the Financial Element Technical Advisory Committee for NJTPA Plan 2045 and will continue to coordinate reviews and provide comments on the NJTPA long range plans.

The Highlands Council has recently developed a Draft Monitoring Program Recommendations Report (MPRR) to evaluate implementation of the Highlands Act and the RMP during the statutorily required six-year period since adoption of the RMP. The MPRR included a fiscal impact assessment of the Highlands Region that was completed in 2017. The transportation section of the MPRR contains several recommendations which would continue to advance the goals of the Highlands Act and RMP through continued coordination with NJTPA, NJDOT, NJ Transit, and county and local governments. The MPRR also makes the following recommendations for the development of specific guidelines and standards including:

- Guidelines and methodologies for review of transportation projects;
- Site design guidelines related to walkable and bike friendly design;
- Green streets guidelines;
- Scenic by-ways program and road signage;
- Coordinated trails network;
- Sustainable, center based economic development standards;
- Guidance for linking housing access to employment and transit opportunities; and
- Commercial and industrial specific center designation procedures, including increased freight rail access.

The Council will continue to evaluate and coordinate on transportation projects with its agency partners and stakeholders and support intra- and inter-regional transportation and transit through Plan Conformance, project review, and the Transportation Safety and Mobility Program. The Council will also continue to coordinate with NJTPA and NJ Transit to evaluate potential transit strategies for the Highlands Region in support of the Regional Transportation Plan (RTP) Plan 2045, as well as any ongoing efforts regarding Together North Jersey.

**SCHEDULE:** The Council expects during FY 2019 (July 1, 2018 to June 30, 2019) to continue to work with municipalities and counties in support of Plan Conformance with the RMP and intra- and inter- regional transportation and transit planning needs. The Council anticipates completion of its

RMP Monitoring Program during 2018 and to continue inter-agency coordination with NJDOT, NJTPA and NJ Transit in support of the RMP Monitoring Program and Plan Conformance. To date, the Council has approved 50 of the 61 municipal Petitions pending for Plan Conformance, representing 55% of the Highlands Region or 472,797 acres of the 860,000 acres in the Highlands Region. Particularly in support of transportation and transit enhancement, the Council will focus on Plan Conformance for the 12 municipalities that have approved Highlands Centers, as well as the 11 approved Highlands Redevelopment Areas to ensure that land use, economic development, and transportation and transit needs are coordinated and support regional and local multi-modal connections.

**PRODUCT:** Regional Master Plan, RMP Monitoring Program Report, Land Use Capability Map Series, Transportation System Preservation and Enhancement Technical report, Transportation Safety and Mobility Program, Plan Conformance - Circulation Plan Element and Highlands Project Review procedures.

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**AGENCY: NEW JERSEY MEADOWLANDS COMMISSION**

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**SUBJECT:** Meadowlands District Transportation Plan Update

**DESCRIPTION:** The task will fulfill the requirements of the Hackensack Meadowlands Transportation Planning Act and update the Meadowlands District Transportation Plan (the Plan), adopted on November 28, 2007. The Update will evaluate the District's transportation needs incorporating the recent growths and transportation improvement projects in the District within the past ten years. The Update will review the candidate transportation improvements recommended in the previous Plan, and renew the project recommendations that are needed to address existing transportation needs and support the District's developments over a time frame that reaches to the year 2045. The Update will estimate the cost of the recommended transportation improvements and update the transportation mitigation assessment framework, including fee calculation methodology and VMT factors, to assure fair and sustainable growth in the District.

**SCHEDULE:** RFP is expected to be released in the last quarter of 2018. Project is expected to be completed in 2019.

**PRODUCT:** Updated Meadowlands District Transportation Plan.

**SUBJECT:** Meadowlands Parkway Bike Route, Secaucus, NJ

**DESCRIPTION:** A designated bike lane along Meadowlands Parkway southbound from the Route 3 exit to the parking garage and the enhancement of the gravel path behind the Meadowlands Hospital is a portion of the Secaucus Greenway initiative described in the NJMC Master Plan. The goal is to provide recreational opportunities, alternative transportation routes and a connection to nature for the local communities. NJSEA has funded this project through the Transportation Planning District Act fund.

**SCHEDULE:** Project has been completed in 2017.

**PRODUCT:** A dedicated bike lane along Meadowlands Parkway.

**SUBJECT: Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR) – Phase 5**

**DESCRIPTION:** Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR) is an intelligent transportation system that integrates adaptive traffic signal control software, vehicle image detection, and wireless communication technology to optimize the operating efficiency of existing roadway infrastructure. The project incorporates all of the Meadowlands region's traffic signals into a network of self-adaptive traffic signals to efficiently reduce roadway congestion, delay, travel time, fuel consumptions, and airborne emissions.

This Federally funded project installed an adaptive traffic control system on 123 traffic signals located in Bergen and Hudson Counties in the municipalities of Carlstadt, East Rutherford, Jersey



City, Kearny, Little Ferry, Lyndhurst, Moonachie, North Arlington, North Bergen, Teterboro, Ridgefield, Rutherford, Secaucus, and South Hackensack on US1&9 and US46; NJ 7, 17, and 120. Currently, 123 traffic signals operate adaptively throughout the region.

Originally, the project divided the design and construction of MASSTR into four phases (Phase 1, 2, 3 and 4). However, during the course of the Project, several intersection sites were in the process of upgrading and/or reconstructing. Due to the unavailability of intersections sites and for scheduling purposes, the project had initiated Phase 5. Subsequently, Phase 5 was divided into two sub-phases known as Phase 5A and Phase 5B, which have separate but consecutive construction schedules based on the timing of sites' availability.

**SCHEDULE:** All phases have been completed and the project was concluded on November 1st, 2017.

**PRODUCT:** Fully operational self-adaptive network with 123 traffic signals.

**SUBJECT: Route 1 & 9 Truck Route/New Road**

**DESCRIPTION:** The 2-mile long New Road Project begins at the intersection of New Road/St Paul Ave and ends at the intersection of New Road/Secaucus Road in Hudson County, NJ. Two new Adaptive signals are proposed at St. Paul Avenue and at County Road intersections. NJDOT will take ownership of these two new signals and will have them operated by the NJSEA MASSTR system. The existing signals at County Road to the entrance of NS Rail Road will be moved to the relocated access entrance of USPS and the existing adaptive signal at Secaucus Road will be modified as well. These two signals will continue to be owned by Hudson County and operated by NJSEA.

**SCHEDULE:** The installation of the two new signals and the modification of the two existing signals are scheduled to take place within the period of 2018-2020.

**PRODUCT:** Addition of the two adaptive traffic signals and modification of two existing adaptive signals.

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**SUBJECT: Signalizing New Intersection**

**DESCRIPTION:** A new adaptive traffic signal is proposed at the intersection of New County Road and Castle Road in the Town of Secaucus, Hudson County, New Jersey. The project is proposed as a mitigation measure to address increases in pedestrian and vehicle demands due to the development of new Edison Park Fast facility.

The new parking facility is located in the vicinity of Secaucus Junction and will accommodate about 1,100 parking spaces. It is expected that this additional parking facility will generate more opportunities to rail access for neighboring municipalities. The new adaptive signal will be owned by Hudson County and operated by NJSEA as part of the MASSTR system.

**SCHEDULE:** The project is scheduled to take place within the period of 2018-2019.

**PRODUCT:** A new adaptive traffic signal incorporated into MASSTR system.

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**AGENCY: NEW JERSEY TURNPIKE AUTHORITY  
NEW JERSEY TURNPIKE AND GARDEN STATE PARKWAY**

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**SUBJECT:** NJ Turnpike Interchange 14A Improvement Project

**DESCRIPTION:** This project involves the implementation of capacity and operational improvements at Interchange 14A located on the Turnpike's Newark-Bay Hudson County Extension in Bayonne and Jersey City, Hudson County. Improvements are necessary to address current operating deficiencies at the interchange and to accommodate significant traffic growth anticipated as a result of the expansion of adjacent commercial port operations. Construction is underway

**SCHEDULE:** Construction is anticipated to be completed by the end of 2018.

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**SUBJECT:** NJ Turnpike Interchange 9 Improvement Project

**DESCRIPTION:** This project involves the implementation of capacity and operational improvements at Interchange 9 located in East Brunswick, Middlesex County. The improvements are necessary to improve traffic operations between the Turnpike's interchange ramps and State Route 18. The project is being coordinated with the New Jersey Department of Transportation.

**SCHEDULE:** Construction is substantially complete with final acceptance anticipated by Summer 2017.

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**SUBJECT:** NJ Turnpike Interchange 10 Improvement Project

**DESCRIPTION:** This project involves the implementation of capacity and operational improvements at Interchange 10 located in Edison Township, Middlesex County. The improvements are necessary to improve traffic operations throughout the interchange and will include the lengthening of the deceleration lane from Route 287 southbound to the interchange. The project is being coordinated with the New Jersey Department of Transportation.

**SCHEDULE:** Construction is substantially complete with final acceptance anticipated by Summer 2017.

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**SUBJECT:** GSP Mainline Widening From Interchange 35 to 80

**DESCRIPTION:** This project provides for the widening of the Garden State Parkway between Interchanges 35 and 80. A third lane is being added in each direction to accommodate existing congestion and projected traffic growth.

**SCHEDULE:** Construction between milepost 63 and 80 was completed in May 2011. The construction between milepost 48 and 63 including the widening and rehabilitation of the Bass River Bridge at milepost 51.9 and the rehabilitation of the Mullica River bridge at milepost 49.0 was completed and opened to traffic in May 2015. Construction on the southernmost section between milepost 35 and 48 began in September 2014. The section from milepost 42 and 48 was opened in June 2016. The remaining part of the section is expected to be completed in August 2018.

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**SUBJECT:** GSP Interchange 91 Improvements (Burnt Tavern Road)

**DESCRIPTION:** The purpose of this joint Ocean County/NJTA project is to improve the current traffic flow pattern, relieve congestion on local roads, and enhance traffic safety at the Garden State Parkway Interchange 91 with Burnt Tavern Road and Lanes Mill Road. Currently, this is a partial interchange with an exit ramp in the southbound direction and an entrance ramp in the northbound direction. Ocean County is taking the lead on this project and is administering the feasibility assessment, project scoping, permitting, final design and construction for the proposed construction of a new southbound Parkway entrance ramp and northbound Parkway exit ramp.

**SCHEDULE:** Construction began in the fall of 2014 and is anticipated to be completed by the end of 2017.

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**SUBJECT:** GSP Interchange 105

**DESCRIPTION:** The purpose of this project is to improve access to and from the Garden State Parkway at Interchange 105 as well as safety and operations at the Hope Road/NJ Route 36 intersection in the Boroughs of Tinton Falls and Eatontown, Monmouth County. The proposed interchange improvements include the reconstruction of the Hope Road/NJ Route 36 intersection, construction of a new southbound connection from the GSP local (outer) roadway to Wayside Road, and the addition of a second northbound deceleration lane from the Garden State Parkway local (outer) roadway to Interchange 105. Improvements will be constructed under two separate construction contracts. The first construction contract constructed the improvements at the Hope Road/NJ Route 36 intersection. The second construction contract will construct the southbound connection to Wayside Road and the second northbound deceleration lane.

**SCHEDULE:** The first construction contract was completed in June 2015. The second contract started construction in the summer of 2015 and is anticipated to be completed in spring 2018.

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**SUBJECT:** GSP Interchange 109

**DESCRIPTION:** The purpose of this project is to improve the safety and operations of Interchange 109 in Middletown Township, Monmouth County. Proposed improvements will eliminate vehicular traffic queues extending onto the Garden State Parkway northbound mainline local roadway from the northbound exit ramp at Interchange 109.

**SCHEDULE:** Final design is anticipated to be complete in May 2018. The project is anticipated to start construction in the summer of 2018 and be completed in December 2019.

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**SUBJECT:** GSP Interchange 125

**DESCRIPTION:** The purpose of this project is to improve access to and from the Garden State Parkway at Interchange 125, located in the Borough of Sayreville, Middlesex County. Interchange 125 is a partial interchange that provides limited access to and from the south via a southbound entrance ramp and a northbound exit ramp onto Chevalier Avenue. The interchange will be reconfigured for new ramps from the Parkway southbound and to the Parkway northbound and will provide full access to Chevalier Avenue and the adjacent waterfront development. The project also includes local roadway improvements along Chevalier Avenue and Main Street Extension which will result in capacity and safety improvements at the Interchange.

The project is being coordinated with the NJDOT, Sayreville Economic Redevelopment Agency (SERA), SERA's selected redeveloper of the waterfront (Sayreville Seaport Associates, LP), the Borough of Sayreville and Middlesex County.

**SCHEDULE:** Construction is anticipated to start in the summer of 2016 and be completed at the end of 2019.

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**SUBJECT:** GSP Interchange 145

**DESCRIPTION:** The purpose of this project is to improve the safety and operations of Interchange 145 within the City of East Orange, Essex County to accommodate the high travel volume at this interchange between I-280, the Garden State Parkway and the local road network. The proposed improvements will include the replacement of the Central Avenue bridge over the Garden State Parkway including relocation of the bridge abutments to allow the widening of the Parkway. The widening will allow for two standard width deceleration lanes to the Interchange 145 toll plaza in the northbound direction and two standard width acceleration lanes from the Interchange 145 toll plaza to the southbound Garden State Parkway to be constructed. . The proposed improvements will also include the demolition of the northbound exit toll plaza to I-280 and conversion to one-way tolling (southbound entrance to the Garden State Parkway to remain).

**SCHEDULE:** The project is expected to start construction summer 2018 and be completed by the August 2022.

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**SUBJECT:** GSP Interchange 163

**DESCRIPTION:** This project will result in safety improvements at Interchange 163 located in the Borough of Paramus, Bergen County. Interchange 163 exiting ramps to Route 17 have accident rates in excess of 2 times the statewide average. This is due in part to the existing left side location of the exits. This project involves the relocation of the Route 17 exits from the left side of the Parkway to the right side. This will be accomplished by relocating the Garden State Parkway into the median area. Six new structures will be constructed over Route 17 and four existing structures will be rehabilitated.

**SCHEDULE:** Construction is expected to be completed in May 2018.

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**SUBJECT:** Deck Reconstruction of the Newark Bay – Hudson County Bridge

**DESCRIPTION:** This project will replace the bridge deck and re-paint the structure.

**SCHEDULE:** Construction started in 2010 and is expected to be completed in 2022.

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**SUBJECT:** NJ Turnpike Interchange Newark Bay-Hudson County Extension Study

**DESCRIPTION:** This project will determine the extent of improvements necessary to the Newark Bay – Hudson County Extension to safely and efficiently accommodate existing and projected traffic volumes. The study will provide the Authority with several designs alternatives to address traffic capacity concerns, recommend a plan for implementing the improvements and establish program costs.

**SCHEDULE:** The study is anticipated to be completed by mid 2018.

**SUBJECT:** Deck Reconstruction Interchange 14C to the Columbus Drive Exit

**DESCRIPTION:** This project will replace the bridge deck and re-paint three structures along the eastbound roadway.

**SCHEDULE:** Construction started in late 2017 and is scheduled to be completed in late 2020.

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**SUBJECT:** Rehabilitation of New Jersey Turnpike Passaic River Bridges, Structure Nos. W107.87 and E107.88

**DESCRIPTION:** This project will repair superstructure deterioration.

**SCHEDULE:** Construction anticipated to start in early 2019 and is scheduled to be completed in 2021.

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**SUBJECT:** Jersey Avenue Bridge over Mill Creek

**DESCRIPTION:** This project will construct a new bridge in Jersey City.

**SCHEDULE:** Construction anticipated to start in late 2018 and is scheduled to be completed in 2020.

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**SUBJECT:** Westerly Hackensack River Br. No. W115.36 Pier Reconstruction

**DESCRIPTION:** This project will reconstruct land side bridge piers.

**SCHEDULE:** Construction anticipated to start in late 2018 and is scheduled to be completed in late 2019.

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**SUBJECT:** GSP Deck Reconstruction, MP 140 to 142

**DESCRIPTION:** This project will replace the bridge deck for four structures.

**SCHEDULE:** Construction anticipated to start in early 2019 and is scheduled to be completed in late 2020.

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## AGENCY: NJ TRANSIT

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NJ TRANSIT maintains a series of ongoing programmatic planning efforts involving both the use of in-house staff; and using NJT's on-call consultants, selected through a competitive process, to augment NJT's staff capabilities to undertake specific analyses of proposals, issues and specific needs. In addition, depending on the scale of the proposed work effort and the skills and experience needed to successfully undertake that body of work, NJT will issue RFP's and select consultants this way through a competitive process. All work within these programs is regulated by the availability of funding whether within NJT's budget or through partnerships with other agencies.

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**SUBJECT:** Community Services Planning and Support

**DESCRIPTION:** This program focuses on planning, analysis, and support relating to human services transportation programs. Among NJ TRANSIT's responsibilities is administering the distribution and use of Federal, State and NJ TRANSIT funding intended for providing vehicles and operating assistance for community transportation including paratransit and other related services. Planning efforts include support for the development of local human services transportation plans, analysis of the performance, effectiveness, coordination with and demand for human services transportation programs/efforts, analysis of funding sources and mechanisms, program oversight, and other planning and analyses relating to community transportation services.

**SCHEDULE:** Ongoing, as required

**PRODUCT:** Plans/reports and other services, as required.

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**SUBJECT:** Corridor Planning and Analysis

**DESCRIPTION:** NJ TRANSIT maintains this program area to determine the suitability of transit in a variety of local or regional "corridors". It provides for development and analysis of preliminary implementation concepts for transit capital improvements, transit alternatives, operating schemes, and assessment of conceptual level environmental impacts. Work will be undertaken in select corridors to work with groups of communities where opportunities exist to leverage existing public transit services in support of redevelopment projects or more development because of the existence of underutilized, poorly functioning or vacant parcels of land. Assessments consider a wide range of issues including land use, demographics, existing travel patterns, local planning and zoning, transit modes and environmental impacts. At times within this program, NJT has teamed with MPOs, counties and other agencies in joint planning efforts.

**SCHEDULE:** Ongoing, as required

**PRODUCT:** Analyses and reports as required



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**SUBJECT:** Qualitative & Quantitative Research

**DESCRIPTION:** Through this program, NJ TRANSIT updates knowledge of customer travel characteristics by conducting origin and destination surveys of rail, bus, light rail and Access Link passengers. This information is used to support updating of forecasting models, to conduct Title VI analyses, to support Transit Oriented Development and other planning work, and for other business purposes. Research is conducted to define existing and potential markets through various techniques such as stated preference, public opinion studies and conjoint surveys. Databases are updated and merged in support of corridor planning, air quality initiatives and other planning efforts throughout the region. Focus group research is conducted both in house using the focus group facility rooms at NJ TRANSIT Headquarters and at other locations in the service area. Focus Groups are conducted with customers and employees to obtain opinions and attitudes which provide an understanding and clarity on issues facing the corporation. In addition, customer satisfaction studies are conducted on a regular basis. The customer satisfaction survey was designed to provide actionable data by identifying specific areas needing attention, allowing NJ TRANSIT to focus resources on key drivers of satisfaction and improve the overall customer experience. The depth of the information gathered from the surveys will continue to help drive the Corporation in making strategic decisions in the areas of its operating budget, capital programs, customer service and marketing initiatives, as well as its operations and safety and security. The survey also will give our customers, stakeholders, and NJ TRANSIT a clear window into how the Corporation is performing.

**SCHEDULE:** Ongoing, as required

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**SUBJECT:** Rail Operations and Infrastructure Planning

**DESCRIPTION:** This program area provides for planning support for rail-related initiatives and associated infrastructure needs and issues. This work primarily defines infrastructure needs based on proposed operating plans which address projected ridership on rail transit services and/or to address safety, resiliency and reliability concerns. It includes basic operations planning support (schedule development, crew and equipment plans, and train performance analysis), as well as development of network performance simulations and interpretation/reporting. The program also provides for rail infrastructure planning.

**SCHEDULE:** Ongoing, as required

**PRODUCT:** Analyses and reports as required

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**SUBJECT:** Ridership Forecasting

**DESCRIPTION:** This program area involves development of ridership and revenue forecasts, as well as development and updating of forecasting models, in support of major capital projects, transit service planning, major service initiatives, and various other efforts. Much of the work is undertaken to comply with Federal Transit Administration (FTA) requirements and guidelines regarding preparation of travel demand forecasts for use in seeking FTA funding. In addition, this program provides support for MPO travel and air quality model development and training, Census, demographic and other travel data preparation and analyses, and other forecasting work. A continued focus of this work is to complete travel demand forecasts for regional transportation plans, as required for FTA's and NJ TRANSIT's longer term planning. Also, NJ TRANSIT will focus on short term travel demand as the regional economy grows.

**SCHEDULE:** Ongoing, as required

**PRODUCT:** Analyses, data and reports as required

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**SUBJECT:** Stations, Access & Site Planning

**DESCRIPTION:** This program focuses on planning for transit facility needs and prioritization for future capital investment, including specialized facility design, access to transit, and potential ADA station improvements. It includes analysis related to existing physical conditions of stations and facilities, bicycle and pedestrian access to transit facilities, and parking issues including parking lot inventories, parking management and accommodating projected growth. Within this program, NJ TRANSIT broadly monitors station access by all modes as well as parking needs on its transit system, and formulates proposed actions and projects to address those needs.

**SCHEDULE:** Ongoing, as required

**PRODUCT:** Analyses and reports as required

**SUBJECT:** Trans-Hudson Planning

**DESCRIPTION:** NJ TRANSIT maintains this program area to focus on trans-Hudson planning. New York City is a regional and national center of economic activity and strongly drives travel demand and commutation patterns in northern New Jersey. The Trans-Hudson planning focus includes the study of major system investments to support a variety of trans-Hudson travel modes including commuter rail, rapid transit, bus and ferry. In some efforts, NJ TRANSIT serves as the lead agency advancing studies and projects. In other cases, NJ TRANSIT works with other regional agencies, providing staff and other planning resources. Representative Trans-Hudson planning projects include the Hudson Tunnel Project, the PATH extension to Newark Liberty International Airport and the future capacity expansion of the Port Authority Bus Terminal. Under Trans-Hudson planning, additional elements of capital investment in the Northeast Corridor will likely be pursued by NJ TRANSIT in coordination with Amtrak, the Federal

Railroad Administration and other regional agencies.

**SCHEDULE:** Ongoing, as required

**PRODUCT:** Analyses and reports as required

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**SUBJECT:** Transit-Friendly Planning, Land Use & Development

**DESCRIPTION:** Through this program, NJ TRANSIT provides technical planning assistance to interested municipalities to create and implement sensitive, community-based “vision” plans to guide local growth in a comprehensive manner, especially in areas where transit could stimulate new development opportunities and create strong community centers for people to live, work and socialize. Critical components of this work include community outreach, engagement, consensus building and partnerships. Many accomplished projects successfully brought NJ TRANSIT and the targeted community together with state agencies, counties, MPOs, advocacy groups and not-for-profit organizations so that resources could be leveraged and common goals and objectives achieved. In many communities, successful vision plans have been incorporated into Master Plans and/or adopted as enhanced zoning or new redevelopment plans designed to specifically implement mixed-use Transit Oriented Development (TOD).

**SCHEDULE:** Ongoing, as required

**PRODUCT:** Plans/reports as required

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**SUBJECT:** Light Rail Planning

**DESCRIPTION:** Consistent with a multimodal approach, work will focus on light rail facilities, access to light rail stations, and accommodating future demand on our existing light rail services.

**SCHEDULE:** Ongoing, as required

**PRODUCT:** Plans/reports as required

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**SUBJECT:** Bus Planning

**DESCRIPTION:** Work will continue to progress both by singularly by NJ TRANSIT and in partnership with municipalities, counties, and other external parties, to plan for future bus rapid transit projects, and to otherwise improve bus services so they operate faster, more reliably and address changing customer needs. Particular attention will be given to the phasing and scalability of bus improvements to effectively use available capital funding and fit within tight operating funding constraints. Planning efforts may include “traditional” bus vehicles as well as other types of specialized vehicles and propulsion systems.

**SCHEDULE:** Ongoing, as required

**PRODUCT:** Plans/reports as required

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**AGENCY: NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT)**

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**SUBJECT:** Tappan Zee Bridge/I-287 Corridor

**DESCRIPTION:** A Major Investment Study/Alternatives Analysis is currently in progress for this corridor which includes the Tappan Zee Bridge and extends for 30 miles from the I-287/I-87 interchange in Suffern, New York to the I-287/I-95 interchange in Port Chester, New York. The study will identify and evaluate alternative proposals to address identified transportation needs for the corridor while taking into account the structural needs of the Tappan Zee Bridge as well as other existing New York State Thruway infrastructure.

**SCHEDULE:** On-going - Tiered EIS Process

**PRODUCT:** The final product will be a completed EIS.

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**AGENCY: PORT AUTHORITY OF NEW YORK & NEW JERSEY (PANY&NJ)**

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**SUBJECT:** Cross Harbor Freight Movement Program EIS

**DESCRIPTION:** The Port Authority (PA) and the Federal Highway Administration (FHWA) completed and published a draft Tier 1 Environmental Impact Statement (EIS) in November 2014 that evaluated potential diversion of cross-harbor freight shipments from trucks to rail and other alternatives. Following public hearings on the EIS, as well as stakeholder review and comment, the PA and FHWA narrowed the “build” alternatives to two options: an enhanced railcar float service and a cross-harbor freight tunnel. FHWA issued a Record of Decision (ROD) for the Tier 1 study in January 2016, concluding the Tier 1 process. The ROD identified the two Preferred Alternatives (preferred transportation modes and alignments) – Enhanced Railcar Float Alternative and the Rail Tunnel Alternative – and stated that they would be the subject of a subsequent environmental review (Tier 2). In February 2018, the PA announced it had awarded an agreement to a consultant for the Tier 2 study, which will include analyses based on engineering designs and site-specific environmental effects, development of site-specific mitigation measures, and cost estimates, as appropriate.

**SCHEDULE:** PANYNJ initiated the Tier 2 environmental review in February 2018, with anticipation of completing the EIS and receiving a ROD from FHWA by the end of 2020. The project team will conduct analyses for each of the Preferred Alternatives with respect to potential environmental impacts, freight markets, ability to divert freight traffic, and cost. PANYNJ is committed to an extensive public outreach process and there will be multiple opportunities for interagency and public review and comment as the study advances.

**PRODUCT:** Tier 2 Environmental Impact Statement

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**SUBJECT:** PATH Extension to Newark Liberty International Airport/NEC Rail Link Station

**DESCRIPTION:** In February 2017, the Port Authority Board of Commissioners included funding for an extension of the World Trade Center-Newark PATH line from its current terminus at Newark Penn Station to the Northeast Corridor Rail Link Station adjacent to Newark Liberty International Airport, subject to completion of external reviews and approvals and project authorization by the PANYNJ Board of Commissioners.

Previously studied as an additional transit connection to the AirTrain/Newark system for air passengers and airport employees, the current project concept also includes station access for local residents and park-and-ride and bus transfer capacity at the terminus of the PATH system

extension, to accommodate commuters and others traveling to and from Lower Manhattan and other points served by the PATH system. Following consultations with the Federal Transit Administration, the City of Newark, and concerned transportation agencies, the Port Authority has initiated an Alternatives Analysis for the project. The agency held an initial Technical Advisory Committee meeting and two scoping meetings in Newark in November 2017.

**SCHEDULE:** The project team anticipates completing the Alternatives Analysis in the second or third quarter of 2018, and undertaking an Environmental Assessment pursuant to the National Environmental Policy Act (NEPA) under FTA auspices.

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**SUBJECT:** West-of-Hudson Regional Transit Access Alternatives Analysis (WHRTAS)

**DESCRIPTION:** MTA and its affiliate agency Metro-North Railroad (MNR) are conducting the West of Hudson Regional Transit Access Study (WHRTAS) Alternatives Analysis (AA). The study is looking at various transit alternatives to provide improved and more cost-effective commuter service between central Orange County and New York City and improved transit access to/from Stewart International Airport. The AA study is being conducted in two Phases. PANY&NJ jointly funded Phase 1 of the AA initiative with MNR, in close consultation with NJ Transit and other partner agencies.

**SCHEDULE:** The AA commenced in June 2008. MNR released a long-list of alternatives in December 2008. Analysis and public outreach continued through 2009-10. Metro North led interagency and public outreach in 2010, presenting a comparative analysis of a screened list of alternatives, and recommending continued development of both commuter rail and regional bus alternatives. In May 2012, MNR released a Phase I AA Screening Report which identified a short list of alternatives for further study. Metro-North initiated the second and final phase of the WHRTAS AA in 2012. During this phase, Metro-North will be narrowing the short list of alternatives to a Locally Preferred Alternative. The study is being advanced to, at a minimum, determine the most viable mode and alignment for future implementation. It is anticipated that Phase 2 will conclude by 3Q2017.

**PRODUCT:** West of Hudson Regional Transit Access Study

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**SUBJECT:** Port Authority Bus Terminal Replacement Planning

**DESCRIPTION:** In 2013, the Port Authority initiated a Midtown Bus Master Plan process to evaluate options for redevelopment of the Port Authority Bus Terminal (PABT). Opened in 1950 and expanded in 1979, in 2015 the PABT accommodated approximately 260,000 total passenger trips and more than 7,900 bus movements on a busy weekday. The planning initiative addressed a range of considerations, including life-cycle issues for the existing facility, constraints in

accommodating larger and heavier modern buses, operational limitations, anticipated future growth in the market served by interstate commuter and intercity bus services, and development in West Midtown.

In March 2015, staff presented the agency's Board of Commissioners with findings that included the recommendation to replace the outmoded existing terminal, and a range of project concepts. In October 2015, the Board authorized a "Design and Deliverability" competition, launched in March 2016, soliciting conceptual designs for a new facility. The Board also initiated a Trans-Hudson Commuting Capacity Study to examine in greater depth factors likely to affect long-term demand on the interstate bus network as well as multi-modal approaches for addressing the region's trans-Hudson commutation needs. Findings and recommendations of both efforts were presented to the PANYNJ Commissioners in late 2016.

In February, 2017, the agency's board approved a ten-year capital plan including \$ 3.5 Billion toward a project to replace the current facility. In addition, the plan included funding for near-term improvements to maintain efficient operations and improve facilities for customers, as well as authorization and funding to initiate formal planning for a replacement facility as well as intermediate improvements to support operation of the existing terminal based on forecasts of steadily increasing commuter transit demand.

**SCHEDULE:** Planning for short- and intermediate-term improvements is ongoing, to sustain efficient operation of the existing terminal until a replacement facility can be brought on line. The agency has retained a consultant team to support formal planning for a Port Authority Bus Terminal Replacement Program, anticipating the required approvals in time to begin construction of the new terminal before within the 2017-2026 timeframe of the approved capital plan.

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**SUBJECT:** Trans-Hudson Rapid Transit Study

In February 2018, the Port Authority issued a request for proposals to evaluate potential options for future rapid-transit trans-Hudson service to supplement the existing trans-Hudson transit network. Given forecasts for continued population and employment growth in New Jersey, Rockland and Orange counties, and New York City, the demand for trans-Hudson commutation will continue to grow, surpassing the existing capacity of the current trans-Hudson transit options via Penn Station New York, PATH and the Port Authority Bus Terminal. This is likely to require continued significant investment in transit options to support regional mobility beyond programmed and proposed improvements.

The responsible transportation agencies are addressing this challenge in part with the proposed Hudson Tunnel Project and anticipated planning for increased peak-period passenger rail service at the Penn Station New York complex. The Authority is undertaking formal planning and environmental review for a replacement to the Midtown Bus Terminal, as well as ongoing investments to expand peak-period PATH system capacity. Even assuming progress on all three



fronts, long-range demand forecasts suggest uncertainty about whether the overall trans-Hudson network beyond 2040 will have sufficient capacity and redundancy to assure adequate transit access to the Manhattan Central Business District (CBD).

This study is intended to augment the region's current and programmed long-term planning program by examining multiple potential options including possible extensions of the existing transit networks of NJ Transit, the Authority, and the MTA, as well as independent lines, and will remain neutral with regards to the presumed ownership for future capital implementation or operation of projects. It will provide an initial evaluation of multiple potential options that should be considered for future advancement and funding as part of the region's long term strategies for transit capacity expansion. By evaluating the feasibility of multiple potential options, the transportation and planning agencies of the region will gain a clearer picture of the relative value of various future capacity solutions to address long term growth in trans-Hudson transit demand, as well as the challenges to their implementation.

The Port Authority of New York and New Jersey (the Authority) is procuring this study in collaboration with the Metropolitan Transportation Authority (MTA), NJ TRANSIT (NJT), and the City of New York (NYC) to inform long-range planning for regional transportation improvements, supporting the regional transportation planning programs of the North Jersey Transportation Planning Authority (NJTPA) and New York Metropolitan Transportation Council (NYMTC).

**SCHEDULE:** The study is expected to take up to 18 months to complete from issuance of the notice to proceed.

**PRODUCT:** Feasibility Report

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**SUBJECT:** Port Master Plan

**DESCRIPTION:** Port Master Plan (PMP) - This strategic planning initiative will provide a framework to help guide the future growth and development of the bi-state port over the next 30 years. It will examine global market and industry trends, port capacity and land-use policy, landside and logistics capacity, and the use and implementation of advanced technology systems. Various partners and stakeholders will be engaged to develop a vision of the port's future to guide PANYNJ's planning goals and objectives.

**SCHEDULE:** PANYNJ initiated the Port Master Plan process in late 2016 with anticipated completion during the second quarter of 2018.

**PRODUCT:** Port Master Plan Report

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**AGENCY: REGIONAL CATASTROPHIC PLANNING TEAM (“RCPT”)**

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**SUBJECT:** Established in 2008, the Regional Catastrophic Preparedness Grant Program (RCPGP) is a groundbreaking Department of Homeland Security initiative to encourage collaborative emergency planning in America’s largest urban regions.

**DESCRIPTION:** The RCPGP has three primary goals: 1) fix shortcomings in existing plans; 2) build regional planning communities; 3) link operational and capabilities-based resource planning. The regional project site for New York City and northern New Jersey also includes Long Island, several New York counties, and parts of Connecticut and Pennsylvania. With a population of 22 million people, this area is home to nearly 1 in every 14 Americans.

In early 2008, the Urban Area Working Groups in New York City and northern New Jersey came together to charter the Regional Catastrophic Planning Team (RCPT), a steering committee to guide RCPGP-funded activities in their region. RCPT members represent the interests of many stakeholders in their communities, including counties, cities, businesses, non-profit groups and volunteer efforts. In 2009 a program office (the Regional Integration Center) was established with dedicated planners to work with the public agency partners and other stakeholders in the region to strengthen collaboration and preparedness.

**SCHEDULE:** The RCPT received four rounds of RCPGP funding (FY08-FY11), which terminate in August 31, 2015. The Planning Team has been dissolved.

**PRODUCT:** A variety of projects were undertaken to 1) assess the state of regional emergency planning, 2) review existing protocols for regional operations, and 3) describe beneficial opportunities for collaboration, resulting in dozens of plans and tools. The table below lists the RCPT projects completed in 2014-2015.

<b>PROJECT</b>	<b>GOALS</b>
ACCESS AND FUNCTIONAL NEEDS GUIDANCE AND PLANNING ASSISTANCE PROJECT	Provides planning considerations and guidance documents to assist emergency managers with meeting the Americans with Disabilities Act (ADA) guidance and accommodations for people with disabilities and others with access and functional needs in four specific areas: 1) Evacuation, 2) Public Information and Notification, 3) Sheltering and 4) Transportation.
CATEX 2014 PUBLIC-PRIVATE INFORMATION SHARING DRILL	CATEX 2014 is the continuation of a regional public-private exercise series begun in the National Capitol Region and builds on the public-private “regional integrated planning” underway with the East Coast Corridor Coalition and the Multi-State Fleet Response Working Group. Bringing together public agencies and the lifeline sectors of electric, food and fuel, these public-private dialogues are

	<p>developing solutions for private sector response challenges in large scale disasters. The CATEX 2014 drill tested communication protocols for essential elements of information for those lifeline sectors.</p> <p>As a prelude to CATEX 2014, the Lifeline Sectors Response Coordination Workshop brought together representatives of the electric, food and fuel sectors, along with public agencies, to compare practices in disaster preparations and response, to identify operational chokepoints, and to identify essential elements of information. Sector working groups were formed to explore potential solutions to operational challenges and information sharing strategies to expedite private sector response and recovery across the Northeast.</p>
<p>CORPORATE EMERGENCY ACCESS SYSTEM REGIONALIZATION &amp; MOBILE APP</p>	<p>The Corporate Emergency Access System (CEAS) pre-authorization database system is used to facilitate businesses rapid entry for critical employees to restricted areas following a disaster to help them mitigate damage and loss. The RCPT built-system spans jurisdictional boundaries by developing a commonly accessible web-based portal to authenticate credentials, along with an application for use in the field.</p>
<p>CRITICAL INFRASTRUCTURE RESILIENCY PROJECT AND LIFELINE SECTOR RESPONSE COORDINATION WORKSHOP</p>	<p>Focused on improving planning and preparedness for large scale power outage incidents through collaborative engagement with utility operators and emergency service agencies. Initially focusing on electric power restoration support, next on critical system dependencies, and lastly on facility resiliency.</p> <p><u>Phase Three (2013-2015)</u> leveraged previous area studies and partner agency technology to provide infrastructure vulnerability assessments at thirty facilities representing five critical sectors. Information on facility “external critical needs” and “restoration time objectives” was compiled in a data-driven decision support tool to provide scenario-based regional impact reports with recommendations for how public agencies can better prepare to support restoration of critical systems.</p>
<p>DOZER DEBRIS MANAGEMENT ELECTRONIC PLANNING TOOL UPGRADE</p>	<p>This tool newly enhanced Dozer tool guides users through the compilation and organization of essential information to produce a debris response action document. The tool is a stand-alone software application designed for use either prior to or during a debris mission, and containing guidance for new users along with references to more comprehensive sources of information and assistance.</p>

<p>EMERGENCY MANAGEMENT CATASTROPHIC EXERCISE PROGRAM &amp; EXERCISE-IN-A-BOX</p>	<p>The Exercise-in-a-Box contains three exercise modules with three exercise scenarios for a total combination of nine possible exercise-in-a-box deliverables. Exercise modules are at the strategic, operational and tactical levels. Exercise scenarios include an IND detonation, major hurricane and cyber attack. Exercise goals are focused around regional coordination and communication.</p> <p>The RCPT hosted three local pilots to test the concepts and injects in the EMCEP Exercise-in-a-Box product and then conducted a region-wide Trinity Regional Functional Exercise based on the IND scenario and strategic level combination.</p>
<p>EMERGENCY MANAGEMENT COLLOQUIUM TRAINING PACKAGE</p>	<p>A series of five courses that integrate the core principles of emergency management and the plans and tools developed by the RCPT. These courses help to build specific skill sets for emergency managers, executives and agency representatives that will support a catastrophic response:</p> <ol style="list-style-type: none"> <li>1. RCPT Primer - online</li> <li>2. EOC and Catastrophic Emergencies - online</li> <li>3. Just-in-Time EOC - online</li> <li>4. EOC and Catastrophic Emergencies - classroom</li> <li>5. EOC Leadership Development Lab - classroom</li> </ol> <p>Seven pilot sessions hosted around the region were used to hone the learning objectives and activities for these trainings.</p>
<p>ESF JOB AIDS</p>	<p>This set of job aids for Emergency Operations Center staff includes mission, first steps, key and supporting agencies, plans, and tools for each of the 15 federal Emergency Support Functions (ESFs). Tips for success in performing the EOC's three missions of information management, resource management and consequence management are also included.</p>
<p>HOUSING RECOVERY &amp; RAPID REPAIR (H3R)</p>	<p>Provides an actionable plan for rapid housing repair to get residents back into their homes as quickly as possible following a catastrophic incident. The Program Plan outlines how to enable rapid mobilization of coordinated construction efforts across the region and the Bid Specification helps in procuring appropriately qualified contractors quickly.</p>
<p>LIGHTNING BOLT EOC GAME</p>	<p>A total immersion exercise that puts emergency managers in the center of a catastrophic response, challenging their EOC skills. The simulation focuses on breaking down silos, managing resource requests, and processing information. Players are also challenged to identify and solve emerging and cascading problems.</p> <p>Following the successful implementation of three Lightning Bolt Pilot tests, the RCPT is supporting stakeholders as they bring this EOC simulation to their jurisdictions. Support</p>

	includes providing planning milestones, advice on customizing the MSEL, SimCell training, and day of logistics.
MASS FATALITY FIELD OPERATIONS GUIDES	Focuses on three specific operations established in the Mass Fatality Response System: Scene, Postmortem (Morgue), and Antemortem (Victim Information Centers) operations. Serve as tools to assist medicolegal jurisdictions in the establishment and management of mass fatality operations by utilizing checklists, flowcharts, and Job Action Sheets.
MASS FATALITY RESPONSE SYSTEM TRAINING & EXERCISE	Hosted annually since 2010, the week-long program assembles representatives from a number of regional medical examiner/coroner offices and emergency management offices, and representatives from state, federal, private and military entities. Attendees participate in didactic training, facilitated discussions and field training related to command and control, scene investigation and recovery, as well as disaster morgue operations.
NUCLEAR RESPONSE PLAN	Regional plan that focuses on the tools used to handle chaos: coordination, communication and effective management. Gives emergency managers a framework to handle the complexity of an improvised nuclear device response by defining seven key actions for the response and developing procedures and objectives to execute each of these actions to bring order from chaos.
PARTICIPATORY URBAN PLANNING	<p>This Whole Community toolkit addresses long-term planning and recovery challenges by promoting effective coordination between the government, non-governmental organizations (NGOs), community-based organizations (CBOs), faith-based organizations (FBOs) and the public at large. Includes five steps for the government and the community to work together following a disaster: activate, assess, envision, plan and implement.</p> <p>The RCPT hosted three PUP sessions in the region, which brought together 30-40 representatives from all levels of government, local NGOs, academia, and the private sector to strategize interim housing for the gap between short-term emergency shelters closing and the return home after a disaster.</p>
QUICK TOUCH EOC PLAN APP	Provides a one-stop-EOC-shop for users to access and navigate RCPT developed plans and tools. Through a mobile device application, users can easily access plans and quick sheets.
STRATEGIC RISK REVIEW	Identifies inherent and emergent risks facing the region, overarching challenges to effective risk management, specific barriers faced by the region and methods to increase risk

	capacity. Research findings provide a framework for leaders to learn from “near misses” and prioritize risk reduction. The Playbook and Risk Card Deck detail a process for local risk review and tie risk management concepts to national planning scenarios.
SYNDROMIC SURVEILLANCE SYSTEM	The system provides templates and protocols that state and local health departments can use to share information in real-time to detect disease outbreaks, gather data on disease occurrence and communicate situational awareness during a catastrophic health event. A syndromic model that provides synthesized data analyses and visualization to decision makers is also included.
TRINITY REGIONAL FUNCTIONAL EXERCISE	The RCPT conducted a Regional Functional Exercise (Trinity) on October 22, 2014. Using the EMCEP Toolkit, the exercise focused on the emergency management mission of bringing resources from a variety of sources into a common management structure to provide logistical and information support to a catastrophic response. The exercise validated regional coordination, communication, and information sharing among regional organizations during a one day, IND event scenario. Five EOCs were activated, along with a FOB location and the UACG for exercise play.
VIDEO SERIES	Contains five short videos that answer key questions about the role of emergency managers and preparedness in a catastrophic response. Videos include: <ul style="list-style-type: none"> <li>• The Essential Emergency Manager: What They Do and How They Do It</li> <li>• Stronger Community, Better Response: Connecting Community Organizations During Disaster</li> <li>• Managing Consequences During a Disaster: Solving Problems Together</li> <li>• Business Preparedness for Community Resiliency</li> <li>• Strategic Risk in Disaster Planning</li> </ul>

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## AGENCY: TRANSCOM FHWA-FUNDED PLANS AND ACTIVITIES

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**SUBJECT:** TIMED (Travel Information Measured Evaluated Distributed) *formerly TRANSMIT (TRANSCOM's System for Managing Incidents and Traffic) Upgrade and Enhancements*

**DESCRIPTION:** TRANSCOM conducted an FHWA-funded operational test in the early 1990s using electronic toll collection (ETC) technology to detect incidents. The test successfully demonstrated that ETC technology could be used for traffic management and incident detection. TRANSMIT Phase I was a network of 20 roadside readers (at approximately 1.5-mile intervals along 19 miles of the Garden State Parkway and New York State Thruway) that use E-Z Pass toll transponder equipped vehicles as anonymous probes. TRANSMIT collects aggregated travel time and speed data from these vehicles and compares them to a historical database to detect congestion-causing incidents. TRANSCOM's Operations Information Center relays this incident information to the New York State Thruway Authority and the New Jersey Turnpike Authority – GSP Division to allow for rapid response and clearance, as well as directly to motorists (through variable message signs or highway advisory radio) to reduce congestion. The final evaluation reports for the project have been completed.

Since this time, TRANSMIT has been expanded to over 2500 one-way miles of roadway to provide travel times and speeds to our member agencies and the traveling public. TRANSMIT has been deployed on major roadways in Bronx, Kings, Queens, New York, Nassau, Suffolk, Westchester, Rockland, Orange, and Richmond counties in New York; and Bergen, Essex, Morris, Camden, Gloucester, Middlesex, Hudson, and Union counties in New Jersey.

Developed during the mid-1990s, the software reached end-of-life (EOL) with all vendors, such as Microsoft, and was no longer able to be supported. Provided the inter-dependencies of the member agencies' operational and transportation systems, the system had to be upgraded. In August 2017 the TRANSMIT system was migrated to TIMED with TRANSMIT operating as a back-up system. In addition to the baseline system upgrade, the system also underwent several enhancements which included the initial development and integration of Origin-Destination (O/D) data by vehicle class, PATH Travel Times and a new device driver to allow for remote restart of TIMED field sites. This update supports improved system reliability and a more robust dataset for O/D studies.

**SCHEDULE:** The upgrade and enhancement work was started in Q1 2013 and was completed in the middle of 2016. However, the implementation of O/D data will be complete in 2018. TRANSCOM completed the final transition from TRANSMIT to TIMED in January 2018 and the legacy TRANSMIT will be fully retired.

**PRODUCT:** A more dependable and reliable application with increased capabilities to provide travel times and speeds as well as routing information by vehicle class to our member agencies. Data shall be available to agencies to support public information efforts, such as travel times on DMS boards and agile device applications for the traveling public.

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**SUBJECT:** TRANSCOM OpenReach (OR) System Enhancements and Data Interfaces

**DESCRIPTION:** The original Regional Architecture (RA) system provided TRANSCOM Member Agencies' operations centers with a gateway to a wide area network of the region's Transportation Management Centers (TMCs). Through this network, agencies shared incident and construction data, transit schedules, VMS and HAR information, CCTV and real-time traffic & transit conditions. This database of shared data formed the foundation for both the New Jersey and New York 511 Traveler Information Systems. The TRANSCOM RA System provided technical coordination among TRANSCOM Member Agencies to ensure that all ITS technologies implemented in the region are designed to be compatible for communications among the systems and with the ITS National Architecture. The TRANSCOM RA System itself provided the links between systems to make these communications possible. TRANSCOM's OpenReach (OR) Project transformed the TRANSCOM RA system from one that could only be accessed by a centralized workstation at each agency, to a system that is accessible anywhere Internet access is available. The TRANSCOM OR uses the Google map system to improve the user friendliness of the system. Additionally, TRANSCOM OR provides the real-time event and link content that is made available to the public via TRANSCOM's free data service (data.xcm.org).

Data interfaces (DIs) were developed between the TRANSCOM OR system and ConnDOT's Crescent and NYSDOT Region 10 transportation management systems. In addition, DIs were also developed between the OR system and other member agencies' Transportation Management systems, such as the NYS Thruway Authority's CARS system. These DIs ensure reliable transfer of information between these systems without the double entry currently required by the various operations center staffs.

In 2017, TRANSCOM started to develop the OR Thin Client (TRANSVIEW), a web-based alternative data entry tool. TRANSVIEW will support/work with the OR Group of systems to support Member Agency Event Data Entry functionality via a standalone tool that interfaces with the TRANSCOM Environment via the TRANSCOM Middleware using TMDD messaging. The TRANSVIEW system will offer an alternate solution to the agencies for both data entry as well as improved situational awareness for field personnel as the TRANSVIEW application will be scalable for agile systems such as tablets.

For 2018, the OR update shall include the addition of Traffic Incident Management (TIM) values. TRANSCOM will develop updates to support both TIM Impact and TIM Clearance measures. These new data entry fields and calculations will support the USDOT FHWA TIM performance measurement initiative.

**SCHEDULE:** Implementation of the original RA was completed in 2005. The implementation of the initial TRANSCOM OR system was completed in 2009. The NYSDOT Region 10 DI was completed in 2010. The DI between the TRANSCOM Open Reach system and ConnDOT's system was completed in 2011. The NYS Thruway CARS DI was completed in 2012. The TRANSVIEW system is expected to rollout in Q2 2018 and the TIM enhancements are expected to rollout in Q4 2018.



**PRODUCT:** A seamless communications network for regional traffic operation centers and field personnel accessible from any location with internet access.

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**SUBJECT:** Travel Time Data Acquisition

**DESCRIPTION:** As described earlier, TRANSCOM has implemented the TRANSMIT system to obtain travel time and speed data on many of the roadways in the NY/NJ/CT metropolitan area. TRANSCOM's Member Agencies also have other technologies, such as loops, radar, and video, on certain roadways to determine travel times and speeds. However, many roadways in the region do not have any technologies deployed which could provide this important transportation information. In order to assist in filling this gap, and to support the USDOT Section 1201 Rule for provision of real-time information, this project will purchase this travel time and speed data from transportation information vendors to provide this information for the major roadways within the metropolitan area.

This data will then be incorporated into the TRANSCOM Data Fusion Engine (DFE), along with the travel times obtained from TRANSMIT and the other technology sources, to provide a robust and highly viable database of travel times for the roadways throughout the metropolitan area. The TRANSCOM DFE software is capable of optimizing the travel time data for each segment based on rules established by the Member Agencies.

This data will then be distributed to the Member Agencies through the TRANSCOM DFE system to support both public facing services such as 511 websites and phone systems, personalized traveler information services, variable message signs, and agency-managed apps as well as for agency operations systems/services for regional/local situational awareness.

**SCHEDULE:** TRANSCOM began purchasing this data in mid-2013 and it has been extended through 2022.

**PRODUCT:** Travel time and speed data for major roadways for the states of New Jersey, New York, and Connecticut which will be available to the TRANSCOM Member Agencies via the TRANSCOM DFE.

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**SUBJECT:** TRANSCOM Data Fusion Engine

**DESCRIPTION:** The TRANSCOM Data Fusion Engine (DFE) has been developed to align and coordinate the multiple travel time systems and services that the TRANSCOM Member Agencies have implemented. The DFE system collects and harmonizes the various data sources against a stratified base-map that TRANSCOM has developed for the States of New Jersey, New York, and Connecticut. Through this harmonization process, the TRANSCOM DFE system allows for consistent/structured data to be utilized by all TRANSCOM Member Agencies for both operational and public traveler information purposes, regardless of operation/jurisdictional boundaries.

The DFE system has been updated to include real-time transit information that is available via the following TRANSCOM Members:

- New Jersey Transit Rail;
- New Jersey Transit Bus;
- MTA Long Island Railroad;
- MTA Metro-North Railroad; and
- MTA New York City Subway.
- MTA New York City Bus; and
- MTA Bus.

In 2017, TRANSCOM targeted several enhancements including the following:

- Integration of Origin/Destination (O/D) data generated via the TIMED System;
- Development of Data Interfaces between the DFE and the MTA bus/NYCT Bus/PATH (as available) real-time status data feeds;
- Data Interface between DFE/SPATEL and the private vendor Waze incident and as-available travel time data;
- Integration of real-time roadway weather information systems (RWIS) data into DFE;
- Integration of radar weather;

For 2018, TRANSCOM will focus developments on the following:

- Work shall be undertaken to develop data output feed services for real-time transit data
- Implementation of a real-time data feed to support emerging technologies such as Connected Vehicles.
- Implementation of an O/D Data feed for use by TRANSCOM Member Agencies
- Updated SPATEL tool user interface reflecting 2017 requests like radar layer, etc.
- In 2018 the DFE/SPATEL tool will be further improved to include new features like layer enhancements to the operations map to allow for agency configuration customization and easy search capability.

**SCHEDULE:** TRANSCOM initiated work on the DFE in 2013 and the system became operational in 2014. Updates to add additional data sources and feed outputs have ongoing annually since 2014 with multiple updates denoted above for 2018.

**PRODUCT:** Real-time data (Highway and Transit) for the States of New Jersey, New York, and Connecticut that are available to the TRANSCOM Member Agencies for both operations, planning, and regional traveler information purposes.

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**SUBJECT:** TRANSCOM SPATEL Tool & Enhancements

**DESCRIPTION:** The TRANSCOM SPATEL tool is a web-based data analysis tool (built around the TRANSCOM DFE System) called Selected Priorities Applied to Evaluated Links (SPATEL) that addresses needs of member agencies to allow analysis of transportation system

performance (e.g., travel time and volume) developed in 2014. The SPATEL tool consists of an array of tools/applications that provide utility to a cross section of member agencies users (operations/planning/management, etc.). These tools include:

<b>Feature</b>	<b>Description</b>
Operational Map	Real time information on roadway and transit conditions and well as highway and transit events (incidents, construction, special events), and ITS devices for the region.
Operations Dashboard	Real time performance data for a set of specific trips, showing current operational conditions along these trips.
Historical Travel Time Analysis	A comprehensive application that provides historical average performance data for selected trips.
Travel Time Comparison	Allows a user to view the impact on travel time caused by an event.
Corridor View	Real time performance data and current conditions for specific corridors
Project View	Real time view of the current conditions of roadways that are affected by construction projects.
Zone View	Tool displays a map, which shows the location of events and incidents, and congestion levels on roadways.
Event Playback	Allows users to review historical conditions over a specific timeframe.
Regional Conditions View	Extends the functionality of the Operational Map tool to include a list of active events/incidents occurring, and a set of filters to limit the events shown.
Data Source Comparison	Shows travel time for a trip for all possible data sources available for that trip at a user selected time.
Historical Event Search	Allows users to search for events (including ongoing events), and view the impact of these events on the transportation network.
CCTV Viewer	Allows users to view live video from CCTV cameras.
Video Wall View	Allows users to generate a “video wall” containing multiple CCTV feeds in one view.

In 2017, TRANSCOM targeted several key enhancements including the following:

- Development of member agency requested functional enhancements to the DFE/SPATEL Tool. These include such items as operations dashboard enhancements, transit dashboard development, and intermodal dynamic routing.

- Development of member agency requested DFE/SPATEL map layer enhancements. These include creating layers for weather, freight, and evacuation route information.
- Development of member agency requested DFE/SPATEL performance measures enhancements. These include such items as providing performance measures by county and Vehicle Miles Traveled (VMT)/Person Miles Traveled (PMT) along with updates to the Transportation Performance Measures (TPM) subject to FHWA-issued guidance within existing SPATEL performance measure tools.

For 2018, TRANSCOM will focus developments on the following:

- Development of a major construction/special event dashboard along with an online tool, including a map viewer, to replace the existing annual construction database update will be accomplished. Other minor enhancements, such as before/after comparison capability, real time roadway bans recognition, DMS directional arrows, and regional conditions viewer enhancements will also be produced.
- Implementation of Origin/Destination Tool to allow Member Agencies to view route information throughout the TIMED Network, including delineation of traversals by vehicle class
- Continued update/configuration modification for TPM Tools to support MPOs denoted with the MAP Forum and DOTs.
- Update of SPATEL system to streamline system utility, including such feature updates as user-specific profiles to save desired configuration settings, such as Operations Map zoom location and layers presented, improved basemap used for Regional Condition Viewer and Operations Map, and video Help guide.

**SCHEDULE:** The TRANSCOM SPATEL System was implemented in parallel with the TRANSCOM Data Fusion System in 2014. The 2018 enhancements will be completed by the close of the year.

**PRODUCT:** Data Analysis Tools for Operational/Planning/Assessment as well as situational awareness applications and tools.

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**NORTH JERSEY TRANSPORTATION  
PLANNING AUTHORITY, INC.**

**FY 2019**

**UNIFIED PLANNING WORK PROGRAM  
CHAPTER IV  
OTHER REGIONAL TRANSPORTATION  
PLANNING INITIATIVES**

**SECTION I**

**PART TWO –TRANSPORTATION MANAGEMENT  
ASSOCIATIONS ACTIVITIES**



**AGENCY: NEW JERSEY DEPARTMENT OF TRANSPORTATION  
SAFE ROUTES TO SCHOOLS TMA PROGRAM**

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**SUBJECT:** NJDOT Safe Routes to Schools TMA Program

**DESCRIPTION:** The Federal-aid Safe Routes to School (SRTS) Program provides funds to the States to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The purposes of the program are to:

1. enable and encourage children, including those with disabilities, to walk and bicycle to school;
2. make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
3. facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grades K-8).

The Alan M. Voorhees Transportation Center (VTC) at Rutgers University operates the NJ SRTS Resource Center. The NJ SRTS Resource Center will advance the purposes of the SRTS program by providing a variety of SRTS technical assistance services directly to regional and local governments and other non-governmental organizations throughout the state. The NJ SRTS Resource Center will:

1. develop a statewide community partnership structure that will support increased participation in education, encouragement and enforcement activities without the burden of grant application and administration;
2. provide training to Transportation Management Association staff who will be the community point people for the NJ SRTS program; and
3. deliver technical assistance directly to New Jersey communities.

Under the NJ SRTS Non-Infrastructure Pilot Project, TMAs are being funded and mobilized to work with schools and communities within their jurisdiction to support the implementation of SRTS programs. The NJ SRTS Resource Center will provide a range of advisory technical services to schools and communities based on their level of commitment to the SRTS program. All New Jersey municipalities and K-8 schools will be eligible to enroll as a SRTS partner to receive free, non-construction related services. Partnership levels will signify a community's progress towards implementing SRTS programs.

TMAs must designate a regional SRTS Coordinator for their service area. This person will serve as the main contact for working with communities, NJDOT, and VTC on implementing Safe Routes to Schools programs. This person will be responsible for attending all meetings and trainings, though other staff may attend as well. The regional SRTS Coordinator will have hands-on, intimate familiarity with Safe Routes to School operations as well as programs and opportunities in the service area.

The following tasks are included in the TMA's SRTS work programs:

- Task 1: NJ SRTS Coordination and Partnership Levels
- Task 2: Walk and Bike to School Events (iWalk)
- Task 3: Walking School Bus Train-the-Trainer Technical Assistance
- Task 4: Non-Infrastructure Technical Support – School Travel Plans
- Task 5: Youth Bicycle Education
- Task 6: SRTS Outreach and Assistance
- Task 7: Monitor Program Performance
- Task 8: Additional Safe Routes to School Activities

**SCHEDULE:** The TMA's are currently in Year Two of a new two year SRTS contract that runs through August 31, 2019.

**PRODUCT:** The work products can take many forms and will vary with each TMA depending on the exact needs for their service area. Anticipated products include applications for Safe Routes to School and Transportation Alternative Program infrastructure funding, Walk to School Days, Walking School Buses, pedestrian and bicycle safety education for students in grades K-8, maps of safe corridors leading to the schools and any other acceptable way to encourage Safe Routes Programming within the community.

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**AGENCY: NEW JERSEY TRANSIT  
NJ TRANSIT TMA WORK PROGRAM**

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**SUBJECT:** NJ TRANSIT TMA Work Program

**DESCRIPTION:** The TMAs assist NJ TRANSIT by promoting the use of transit services as a means of assisting in the reduction of traffic congestion, improving air quality and quality of life in the TMA service area. The TMAs further assist NJ TRANSIT in improving mobility and accessibility to all residents in their service area by making commuting a more satisfying experience.

The TMAs use their resources to advocate a transit friendly environment. The TMA services include the provision of transit service information, outreach to potential transit users, and advocacy for employers and feedback to NJ TRANSIT on related activities.

The following is a general outline of the TMA's work program activities and objectives, along with examples of the tasks to be conducted.

**A. Information**

To provide a comprehensive inventory of information on transit related services available within the TMA service area.

**Objective:**

To assist NJ TRANSIT with the dissemination of information available to promote transit usage, inter-modalism, access to jobs, and improve the quality of life by reducing traffic congestion caused by the public's reliance on the use of single occupancy vehicles.

**Sample Tasks:**

1. The TMA staff will maintain a complete and up-to-date inventory of schedules and other transit information. Schedules and/or transit information superseded by updated data will be replaced.
2. The TMA staff will provide a package of commuter alternatives when responding to rideshare questions for information.
3. The TMA staff will update its website with relevant transit service information as it becomes available. They will monitor present links to other transit providers to insure all information is updated in a timely fashion.
4. The TMA staff will utilize its E-mail system to reach out to employers with weather alerts, transit information, emergency disruptions and changes in schedules as they become available.
5. The TMA staff will identify and assist in maximizing distribution points for transit information.
6. The TMA staff will attend NJ TRANSIT sponsored meetings to network and exchange ideas concerning TMA transit promotion ideas and strategies. The TMA staff will also

attend the NJ TRANSIT seasonal marketing campaigns and include NJ TRANSIT marketing material in our newsletters.

7. The TMA staff will distribute all available information to companies in our service area.
8. The TMA staff will provide information and assistance on NJ TRANSIT's Vanpool Sponsorship Program.
9. The TMA staff will provide and make transit information, described above, available to all requestors. The TMA will also provide applicable transit information to employers and their employees at Transportation Fairs.
10. The TMA will provide trip-planning assistance to all requestors, using the NJ TRANSIT Website.

## **B. Advocacy to Employers and Other Service Organizations**

### **Goal:**

To provide an active advocacy role in the promotion of transit service in the TMA's service area.

### **Objective:**

The TMA will assist NJ TRANSIT by developing, providing, improving and promoting existing & new transit services within TMA's service area, inclusive of NJ TRANSIT's Vanpool Sponsorship Program. The activities associated will be the focus of its marketing campaign to promote transit in the TMA service area.

### **Sample Tasks:**

1. The TMA staff will work with local employers, developers and organizations to promote the use of transit services.
2. The TMA staff will continue to serve as a liaison between employers and NJ TRANSIT on local issues.
3. The TMA staff will continue to utilize an up to date list of names, addresses, telephone numbers and wherever possible web site addresses for businesses in their service area.
4. The TMA staff will maintain updated information on all NJ TRANSIT products and transit alternatives.
5. The TMA staff will attend NJ TRANSIT training/refresher courses to ensure that TMA employees are current in their knowledge of these programs.
6. The TMA staff will encourage transit service in its newsletters and through advertisements in local newspapers and/or magazines. The TMA will also provide transit information directly to employers and their employees through transportation fairs.
7. The TMA staff will meet with employers and public entities in need of transit or shuttle services. They will review the availability of existing transit service and further review accessibility to the work site.
8. The TMA staff will work with municipalities to promote community shuttle services through NJ TRANSIT's Community Shuttle Program.

9. The TMA staff will provide any available route and schedule information that is applicable to the employer and their work site.
10. The TMA staff will review current route information, analyze site(s) for potential riderships, make specific route modification recommendations to NJ TRANSIT and work with NJ TRANSIT to include the necessary modifications.
11. The TMA staff will hold public information exchanges, focus groups, and/or forums to provide information and educational awareness to the transit service in our area.

### **C. Outreach to Commuters and Potential Transit Users**

#### **Goal:**

To provide an outreach program in the promotion of transit service in the TMA's service area.

#### **Objective:**

The TMA will assist NJ TRANSIT in promoting the use of existing and new transit services within the TMA service area through the development and distribution of transit information, and to develop and implement a focused marketing plan including targeting outreach and public relations efforts.

#### **Sample Tasks:**

1. The TMA staff will conduct Transit Days, Transportation Fairs or similar events at employer, organization sites, municipal and county offices to inform employees and clients about transit services and to promote transit. They will also distribute NJ TRANSIT resource materials at these events and advertise the advantages of transit.
2. The TMA staff will conduct Customer Appreciation Days at the different transit facilities.
3. The TMA staff will assist in administering the NJ TRANSIT's Bike Locker Lease Program when it is implemented by functioning as the local lease agent with potential locker renters.
4. The TMA staff will collect applications from participants in NJ TRANSIT's Vanpool Sponsorship Program. The TMA will also maintain records for each existing vanpool and provide NJ TRANSIT with updates.
5. The TMA staff will continue to provide information on all NJ TRANSIT programs to interested calls received on the TMA's phone lines.
6. The TMA staff will work in coordination with NJ TRANSIT's Marketing Department to promote and market transit services on the safety in the schools program as part of our educational outreach programs within our service area.
7. The TMA staff will work with NJ TRANSIT staff to determine the range of marketing materials offered by NJ TRANSIT to fit the needs of service seekers in our area.
8. The TMA staff will work with employers, municipalities, economic development organizations, service area shopping malls, and libraries to provide information on transit services.

9. The TMA staff will continue to promote mass transit options to commuters that are affected by traffic due to heavy volume and construction.
10. The TMA staff will continue to work with municipalities and schools where transit service is extended to promote safe usage.

#### **D. Feedback**

##### **Goal:**

To provide feedback to NJ TRANSIT in order to determine reliability and effectiveness of existing transit services in TMA's service area.

##### **Objective:**

The TMA will report, on all activities undertaken and their findings, in a monthly status report to NJ TRANSIT.

##### **Sample Tasks:**

1. The TMA staff will work with employers to determine how well existing transit services meet the employees' needs and work schedules. They will advise NJ TRANSIT's TMA support staff on any findings.
2. The TMA staff will "spot check" performance, routing, timeliness, cleanliness, driver courtesy and other aspects of quality service on existing NJ TRANSIT services.
3. The TMA staff will monitor usage at Park & Ride lots along transit corridors.
4. The TMA staff will respond to all comments and/or complaints conveyed by the riding public, as it refers to NJ TRANSIT service. The TMA will report all findings to NJ TRANSIT's Community Affairs.
5. The TMA will continue to attend meetings requested by Community Relations, Marketing, and will assist in addressing bus service planning & service issues due to construction related activities.
6. The TMA will summarize and forward transit service quality issues to the appropriate NJ TRANSIT Support Unit.
7. The TMA staff will conduct surveys of ridership and forward results to NJ TRANSIT in a timely fashion.
8. The TMA staff will conduct surveys and make recommendations for Community Shuttle routes.
9. The TMA staff will forward all information, as described in the elements above, to NJ TRANSIT in a timely fashion. In general, this information will be formally transmitted, but will occasionally be verbally transmitted in the interests of safety and expediency.

**SCHEDULE:** This effort is an annual program.

**PRODUCT:** The work products can take many forms and will vary depending on the exact needs and opportunities for NJ TRANSIT assistance in the TMA service area.

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**AGENCY: NEW JERSEY DEPARTMENT OF LAW & PUBLIC SAFETY  
NJ DIVISION OF HIGHWAY TRAFFIC SAFETY GRANT PROGRAM**

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**SUBJECT:** NJ Division of Highway Traffic Safety Grant Program

**DESCRIPTION:** The NJ Division of Highway Traffic Safety offers, on an annual basis, federal grant funding to agencies that wish to undertake programs designed to reduce motor vehicle crashes, injuries, and fatalities on the roads of New Jersey. Seven of New Jersey's Transportation Management Associations are currently working under this grant program to raise awareness on pedestrian safety, bicycle safety, and distracted driving.

Tasks will vary with each participating TMA depending on the exact needs for their service area. Example tasks include:

1. Pedestrian Safety – Work with police departments, nonprofits, churches, social service agencies, high schools, and youth organizations to deliver small group presentations about pedestrian safety topics, with an emphasis on vulnerable user populations.
2. Bicycle Safety – Work with community organizations to conduct bicycle safety presentations, events, and media outreach.
3. Driving Safety – Work with community organizations to conduct driving safety presentations, events, and media outreach.
4. Paint the Pavement – Conduct an educational campaign to raise awareness of distracted walking using painted messages or pictures on the sidewalk. Keep Middlesex Moving has conducted this program.
5. Street Smart NJ – Conduct Street Smart NJ pedestrian safety campaigns. Cross County Connection TMA uses this grant program to supplement funding received through the NJTPA Supplemental Street Smart NJ program. This NJ Division of Highway Traffic Safety funding allows them to conduct additional campaigns in their southern NJ service area.

**SCHEDULE:** The fiscal year for the DHTS Grant begins the 1<sup>st</sup> of October of each year and ends on the 30<sup>th</sup> of September.

**PRODUCT:** The work products can take many forms and will vary with each participating TMA depending on the exact needs for their service area. Anticipated products include safety messaging on the topics of pedestrian safety, bicycle safety, and distracted driving.

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**AGENCY: EZ RIDE**

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**SUBJECT:** Shaping NJ – Healthy Community Grant, Long Branch

**DESCRIPTION:** Form community coalition to promote healthier food access in corner stores and physical activity strategies of SRTS program. This project is funded by a Shaping NJ – Healthy Community Grant.

**SCHEDULE:** January 2018 – December 2019

**PRODUCT:** This is the second 2-year grant for similar activities in Long Branch. SRTS walking and biking safety presentations, walk audit, travel plan reports, and healthy community events at stores with health screening, coupons for free healthy items and free samples of healthier snacks

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**SUBJECT:** Communities Moving to Action, Building a Culture of Health – Asbury Park

**DESCRIPTION:** Develop a blueprint for community health, a community coalition and implement a 3-year plan. This project is funded by a grant under Robert Wood Johnson Foundation’s New Jersey Health Initiatives program.

**SCHEDULE:** July 1, 2016 – June 30, 2020

**PRODUCT:** Transportation for limited number of low-income residents of Asbury Park and Ciclovía (PlayStreets) including various events like Family Fitness Olympics.

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**SUBJECT:** NJ Healthy Corner Store Initiatives – Two Mini Grants for Plainfield & Asbury Park

**DESCRIPTION:** Improve healthier food access in local corner stores by recruiting partner stores, providing training, and furnishing equipment and incentives for stocking more fresh produce, and healthier snacks and drinks. The New Jersey Healthy Corner Store Initiative is a partnership between The Food Trust and New Jersey Partnership for Healthy Kids.

**SCHEDULE:** January 2017- June 15, 2018 (will be extended thru December 2018)

**PRODUCT:** Healthy community events at stores with health screening, coupons for free healthy items and free samples of healthier snacks.

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**SUBJECT:** NJ Prevention Network – Get Active NJ mini grants (3) – Orange, Bloomfield & Asbury Park

**DESCRIPTION:** Assist municipalities/school communities to educate stakeholders on policies that can help promote walking and the many benefits they can have on their communities. The Get Active NJ project is funded by the NJ Department of Health.

**SCHEDULE:** May 2017 - May 2018

**PRODUCT:** Help municipalities pass walking/biking policy / environmental change / Master Plan change, or use SRTS program to promote walking and physical activity with City, School District or Mayor’s Wellness Committee

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**AGENCY: GREATER MERCER TMA**

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**SUBJECT:** Mercer County Trail Network Plan

**DESCRIPTION:** Planning study to support development of an interconnected network of multi-use (biking and walking) trails and paths in Mercer County, Montgomery Township in Somerset County, and Plainsboro in Middlesex County. This effort is privately funded by Greater Mercer TMA.

**SCHEDULE:** March–December 2018

**PRODUCT:** Development of a continuous and interconnected pedestrian and bicycle trail network plan for the study area. The concept plan will include maps and descriptions of each segment and viability rankings.

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**AGENCY: GREATER RARITAN WORKFORCE DEVELOPMENT BOARD**

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**SUBJECT:** Work Related Transportation Services for WorkFirst New Jersey Customers in Somerset County and Hunterdon County, New Jersey (Needs Based Work Support).

**DESCRIPTION:** Provision of Work Related Transportation Services for Work First New Jersey Customers in Somerset County and Hunterdon County, New Jersey with the goals of:

1. Educating and training individuals on the use of public transportation and other transportation resources as it related to performing a job search and accessing employment locations.
2. Providing access to transportation resources related to employment and job training consistent with the envisioned outcome of the program.

**SCHEDULE:** Currently in the second year of a two year program (10/1/16- 6/30/18). HART anticipates an invitation to apply for another two year funding cycle.

**PRODUCTS:** Classroom training and curriculum development, "hands-on" training with individual clients, and development of individual transportation plans and budgets.

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## AGENCY: TRANSOPTIONS

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**SUBJECT:** Morris Area Bike Share

**DESCRIPTION:** TransOptions is currently working toward installation of a bike share system in the Morristown-Morris Township-Madison corridor. Timeframe is not yet determined, but a FY19 launch is anticipated. TransOptions will continue to lead stakeholders in the region to inform them of technology platforms, available vendors, bike share trends, costs and fundraising efforts. TransOptions will leverage partnerships in these communities and the region to generate the funding needed for a full system. TransOptions will also provide education and outreach to the community upon launch.

**SCHEDULE:** Yet to be determined, but initial planning is underway and a launch in FY19 is expected.

**PRODUCT:** Bike share system with roughly 30 stations located across Morristown, Morris Township and Madison.

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**SUBJECT:** On-Demand Senior Transportation

**DESCRIPTION:** TransOptions will work with Sussex County Human Services to leverage SCDRTAP funds to offset the costs of on-demand rides for seniors. Additional funds will be sought to assist other disadvantaged populations, such as veterans, people with low incomes, and people with disabilities. The goal is to advance the goals of NJTPA's *Go Farther* Coordinated Human Services Transportation Plan and to replicate successes of the Tri-Town 55+ Coalition's Rides for Seniors program, an effort on which TransOptions provided significant guidance. Provided that funds are identified, TransOptions will help facilitate the partnership between local government and the private providers to improve service availability, establish a subsidy model using non-federal funds, and launch promotional and outreach efforts in the community.

**SCHEDULE:** Funds may be identified as early as Q4 of FY18, with planning, launch, and promotion occurring in FY19.

**PRODUCT:** Greater availability of on-demand rides for seniors in Sussex County to improve mobility and quality of life.

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**SUBJECT:** GoForGood Travel Tracking App

**DESCRIPTION:** In FY19, TransOptions will launch a significant update of the mobile app version of the GoForGood Tracking Tool ([GoForGood.TransOptions.org](http://GoForGood.TransOptions.org)), that "gamifies" alternate modes of transportation (bike, walk, transit, carpool, vanpool). Following this update,

TransOptions will re-establish an intensive marketing campaign to promote the service throughout northwestern New Jersey. The app allows users to simply start and stop the tracking of their trip. The GoForGood system, available on Android and iOS operating systems, uses a Google Maps based platform. This allows TransOptions to collect valuable data about participation, including frequency, general trends and route selection, all of which can be useful to local and regional planners. The new update aims to improve that functionality, and make the app more appealing to users to help boost participation.

**SCHEDULE:** Challenges are hosted in May and October. Planning for additional but unique events is ongoing. Marketing efforts will continue throughout the year.

**PRODUCT:** Challenge-style events with mobile travel-tracker app participation ranging throughout the service area.

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**NORTH JERSEY TRANSPORTATION  
PLANNING AUTHORITY, INC.**

**FY 2019**

**UNIFIED PLANNING WORK PROGRAM  
CHAPTER IV  
OTHER REGIONAL TRANSPORTATION  
PLANNING INITIATIVES**

**SECTION I**

**PART THREE - TRANSPORTATION MANAGEMENT  
ASSOCIATIONS /COUNTY PROJECT HANDOFFS**





**AGENCY: BERGEN COUNTY COMMUNITY TRANSPORTATION DEPARTMENT**

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**SUBJECT:** Bergen County Tri-Boro Shuttle Service

**DESCRIPTION:** This service connects the Ridgewood Train Station with office complexes in the Tri-Boro Area of Park Ridge, Woodcliff Lake, and Montvale. Currently, the vast majority of the 24,000 employees in the Tri-Boro office complex area live outside the area and travel to work by automobile. This service helps relieve traffic congestion and its resultant air pollution due to the congested conditions along the area's local roadways during peak hours. The funding source was from a non-renewable three (3) year CMAQ (Congestion Mitigation Air Quality) grant. It operates Monday through Friday specifically for the morning and evening commutes

**SCHEDULE:** THIS SERVICE WAS DISCONTINUED AS OF MARCH 2015

**PRODUCT:**

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**SUBJECT:** Bergen County Community College Shuttle

**DESCRIPTION:** This service connects the main Bergen Community College Campus in Paramus to its Lyndhurst Campus. It was designed to help reduce congestion along the Route 17 corridor. The shuttle is used by students, faculty, and the general public.

**SCHEDULE:** The Shuttle operates hourly Monday thru Friday while school is in session.

**PRODUCT:** This project began in October of 2013 with a CMAQ Grant. The Grant expired in the fall of 2016. The project is continuing thru an agreement between the county and the college sharing the cost of the operation.

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**SUBJECT:** Bus & Rail Transit Connection

**DESCRIPTION:** This service will be open to the general public and connect the County Complex, Hackensack Bus Station, Essex Street Train Station, and Hackensack Medical Center as well as down town shopping centers.

**SCHEDULE:** The Bus & Rail Transit Connection will consist of three buses running Five Days a Week for a total of Twelve Hours a day except when the County is closed.

**PRODUCT:**

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**AGENCY: CROSS COUNTY CONNECTION TMA, INC.**

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**SUBJECT:** English Creek-Tilton Road Community Shuttle

**DESCRIPTION:**

This shuttle operates in Egg Harbor Township and the City of Northfield in Atlantic County and began operations October 2012. The shuttle serves numerous residential complexes, retail centers, a medical facility and other smaller employment locations. This service connects with three NJ TRANSIT buses, enabling passengers to reach employment opportunities in Atlantic City, Ocean City and other shore points. A reciprocal transfer agreement between the shuttle service and connecting NJ TRANSIT buses enables passengers to ride both systems at a reduced fare. The shuttle service is funded by the Pascale Sykes Foundation and a NJ-JARC grant, and is a partnership between Atlantic County, NJ TRANSIT, SJTA and Cross County Connection.

**SCHEDULE:** This shuttle operates six days per week from approximately 7:00 AM to 8:00 PM.

**PRODUCT:** A deviated route service providing frequent connections with NJ TRANSIT bus services six days per week.

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**SUBJECT:** Rt. 54/40 Community Shuttle

**DESCRIPTION:** This shuttle operates between Hammonton and Richland in Atlantic County and began operations January 2016. The 25 mile route includes rural communities in the municipalities of Hammonton, Buena Vista Township and Buena Borough and is designed to enable residents of rural areas to reach employment opportunities in Hammonton, Vineland and other regional destinations via connections with NJ TRANSIT. The shuttle connects with two NJ TRANSIT bus routes and the Atlantic City Rail Station in Hammonton, enabling passengers to reach employment opportunities in Vineland, Atlantic City, Camden County and Philadelphia. The shuttle service is fare free and is funded by the Pascale Sykes Foundation and a 5311 Innovative grant through NJ TRANSIT. The Rt. 54/40 shuttle is a partnership between Atlantic County, SJTA, the Pascale Sykes Foundation, NJ TRANSIT, community members, municipal representatives and Cross County Connection.

**SCHEDULE:** This shuttle operates five days per week from 6:15 AM to 11:00 AM and 3:00 PM to 8:00 PM.

**PRODUCT:** A deviated route service providing connections with NJ TRANSIT bus and rail services five days per week.

**SUBJECT:** Pureland East-West Community Shuttle

**DESCRIPTION:** This shuttle operates in Gloucester County and travels along the Route 322 Corridor between the Avandale Park and Ride and the Pureland Industrial Complex, and serves numerous communities in Williamstown, Glassboro, Mullica Hill, Swedesboro and Logan. The shuttle began operations June 2015, and serves residential complexes, retail centers, and approximately 150 employers in the Pureland Industrial Complex. This service connects with 11 NJ TRANSIT bus routes, enabling passengers to reach employment opportunities throughout Gloucester and Camden counties and Philadelphia. A reciprocal transfer agreement between the shuttle service and connecting NJ TRANSIT buses enables passengers to ride both systems at a reduced fare. A one-way trip on the shuttle costs \$1.00. The services also includes an internal circulator that travels solely within the Pureland Industrial Complex (3,000 acres) to serve as a “last mile” connector between the Pureland East-West shuttle and NJ TRANSIT’s 402 bus. The shuttle service is funded by the Pascale Sykes Foundation and NJ- JARC grant, and is a partnership between the United Way of Gloucester County, Gloucester County, SJTA, the Pascale Sykes Foundation, NJ TRANSIT, The Heart of Gloucester County, and Cross County Connection.

**SCHEDULE:** This shuttle operates five days per week from 5:00 AM to 11:00 AM and 1:00 PM to 7:30 PM.

**PRODUCT:** A deviated route service providing frequent connections with NJ TRANSIT bus services five days per week.

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## AGENCY: EZ RIDE

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**SUBJECT:** WAVE Shuttle Service

**DESCRIPTION:** In partnership with Essex County, EZ Ride operates four shuttles buses to serve low-income residents access agencies in the Greater Newark Area that provide work training and work assistance. Essex County is responsible for funding this shuttle program.

**SCHEDULE:** The program was launched in October 2008. Shuttles operate along four different routes Monday through Friday from 7:40 am to 4:35 pm.

**PRODUCT:** High frequency shuttle for Essex County low-income residents to access employment/job training centers.

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**SUBJECT:** Essex Night Owl Shuttle Service

**DESCRIPTION:** In partnership with Essex County, EZ Ride operates eight shuttle buses for Essex County residents. The service provides late-night transportation to Newark Penn Station for Essex County resident who work at the Newark Liberty International Airport. In addition to reducing congestion this service provides vital link to jobs for many low-income residents in Essex County. Essex County is responsible for funding this shuttle program.

**SCHEDULE:** The program was launched in January 2004. It operates between the hours of 1:00 am to 5:00 am, Monday-Sunday.

**PRODUCT:** Late-night shuttle service to Newark Penn Station for residents from Irvington, Newark, Orange and East Orange.

---

**SUBJECT:** Route 10 Shuttle Service

**DESCRIPTION:** In partnership with Essex County, EZ Ride launched the Route-10 Shuttle for Essex County residents to help access employment along the Route-10 corridor in East Hanover and Whippany area.

**SCHEDULE:** The program was launched in January 2004. The shuttle operates from the NJ Transit bus stop at Route 10 and New Murray Road (Burger King) between 6 am and 9:30 am and between 3 pm and 7 pm, Monday through Friday. Essex County is responsible for funding this shuttle program.

**PRODUCT:** Demand responsive shuttle service connecting individuals to employment centers along the Route 10 corridor.

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**SUBJECT:** Fairfield-West Caldwell Shuttle Service

**DESCRIPTION:** EZ Ride launched the service for people who work along Route 46 corridor in the townships of Fairfield and West Caldwell. Essex County is responsible for funding this shuttle program.

**SCHEDULE:** The program was launched in July 2006. The shuttle operates from 6 am to 9 am and from 3 pm to 7 pm.

**PRODUCT:** Demand responsive shuttle service connecting low-income Essex County residents to employment centers along Route 46.

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**SUBJECT:** Wayne-Fairfield/West Caldwell Shuttle Service

**DESCRIPTION:** In partnership with Passaic County, EZ Ride operates this last mile shuttle to serve low-income Passaic County residents to help them access jobs in Fairfield & West Caldwell area. Shuttle operates from the bus stop at Willowbrook Mall to businesses in Fairfield and West Caldwell. Passaic County is responsible for funding this shuttle program.

**SCHEDULE:** The program was launched in March 2008. Shuttles operate from 6 am to 9 am and from 3 pm to 7 pm.

**PRODUCT:** Demand responsive shuttle service connecting low-income Passaic County residents with employment centers.

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**SUBJECT:** Elizabeth-Newark Airport Shuttle

**DESCRIPTION:** EZ Ride launched this late-night commuter shuttle to connect low-income Elizabeth residents with jobs at the Newark Liberty International Airport. Shuttle operates seven days a week. Shuttle provides hourly service between residents' homes and Newark Liberty International Airport. The shuttle makes one stop at the Airport: Terminal B (NJ TRANSIT bus stop). This service is funded in part by the NJ-JARC program.

**SCHEDULE:** The program was launched in October 2007. It operates between 2:15 am and 5:15 am, seven days a week.

**PRODUCT:** Demand response shuttle service connecting Elizabeth residents with Newark Liberty International Airport.

---

**SUBJECT:** Long Branch Shuttle Service

**DESCRIPTION:** In partnership with the City of Long Branch and Monmouth University, EZ Ride operates the shuttle program to connect the Long Branch Train Station with Monmouth University, Pier Village and local businesses. In addition to reducing congestion, the shuttle helps mitigate demand for parking at the University. This service is funded in part by FTA under CMAQ program.

**SCHEDULE:** The program was launched in September 2013 and provides service from 7 am to 10 am and from 3 pm to 8 pm.

**PRODUCT:** High frequency shuttle service between the train station and Monmouth University as well as the residential/ business community in Long Branch.

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**SUBJECT:** The Monarch Shuttle Service

**DESCRIPTION:** EZ Ride launched the shuttle program connecting The Monarch residential community in East Rutherford with Secaucus Junction Train Station. The shuttle reduces SOVs/congestion on Route-3 and the demand for parking at Monarch. BNE Real Estate Group is responsible for funding this shuttle program.

**SCHEDULE:** The program was launched in November 2014 and provides service during peak commute hours on all week-days.

**PRODUCT:** High frequency service between residential community in East Rutherford and Secaucus Junction Train Station

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**SUBJECT:** Waters' Edge Shuttle Service

**DESCRIPTION:** EZ Ride launched a shuttle program connecting the residential community known as Waters' Edge in Harrison with the PATH station also in Harrison. BNE Real Estate Group is responsible for funding this shuttle program.

**SCHEDULE:** The program was launched in November 2014 and provides service Monday-Friday during peak commute hours.

**PRODUCT:** High frequency service between residential community in Harrison and PATH Train Station

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**SUBJECT:** Rutherford Shuttle

**DESCRIPTION:** EZ Ride launched the Rutherford shuttle to provide access to local transit for the businesses and the residential community in Lyndhurst. The shuttle connects both the Rutherford Train Station and the Kingsland Train Station with businesses and Vermella Lyndhurst, a residential community. This service is funded in part by the NJ-JARC program.

**SCHEDULE:** The program was launched in January 2010. The shuttle operates weekdays between 5:30 am and 9:15 am and between 4:00 pm and 8:15 pm.

**PRODUCT:** High frequency shuttle service connecting Rutherford and Kingsland Train Stations with residential and corporate community.

---

**SUBJECT:** Route 3 Shuttle Service

**DESCRIPTION:** EZ Ride launched the shuttle program to connect businesses in the Route 3 corridor to the Secaucus Junction Train Station. It was designed to reduce traffic on the corridor and encourage commuters to use public transit. This service is funded in part by FTA under the CMAQ program.

**SCHEDULE:** The program was launched in November 2013 and it operates during peak commuting hours from 6 am to 10 am and from 4 pm to 8 pm Monday through Friday.

**PRODUCT:** High frequency shuttle service between Secaucus Junction train station and businesses in the Meadows Office Complex.

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**SUBJECT:** Lyndhurst Corporate Shuttle Service

**DESCRIPTION:** EZ Ride launched Lyndhurst shuttle service to link businesses at the Lyndhurst Corporate Park with two train stations, Kingsland Station in Lyndhurst and Rutherford Station in Rutherford. This service is funded in part by the NJ-JARC program.

**SCHEDULE:** The program was launched in November 2008. It operates Monday through Friday between 6 am to 10 am and 4 pm to 8:30 pm.

**PRODUCT:** High frequency shuttle service between Kingsland Train Station in Lyndhurst, Rutherford Station in Rutherford and businesses at the Lyndhurst Corporate Park.

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**SUBJECT:** Challenger Road Shuttle Service

**DESCRIPTION:** The service is funded by the Federal Transit Administration's (FTA) Job Access & Reverse Commute (JARC) program and The KABR Group. The shuttle connects four buildings on Challenger Road in Ridgefield Park with the Secaucus Junction Train Station. This service is funded in part by the NJ-JARC program.

**SCHEDULE:** The program was launched in November 2015. It operates Monday through Friday during peak commuting hours.

**PRODUCT:** High frequency shuttle service between Secaucus Junction Train Station in and businesses at the Challenger Road Corporate Park in Ridgefield Park.

---

**SUBJECT:** Harmon Meadow Shuttle Service

**DESCRIPTION:** In partnership with Hartz Mountain Industries, EZ Ride launched the shuttle program to connect people who work at businesses in Harmon Meadow, and residents of Osprey Cove at 45 Meadowlands Parkway with Secaucus Junction Train Station in Secaucus. In addition to reducing congestion, the shuttle helps mitigate demand for parking around Harmon Meadow business district. This service is funded by Hartz Mountain Industries.

**SCHEDULE:** The program was launched in December 2005. Service operates Monday through Friday during peak commuting hours from 7am – 10am and from 4pm – 8pm.

**PRODUCT:** High frequency shuttle service between Secaucus Junction train station and businesses in the Harmon Meadow.

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**SUBJECT:** Harmon Cove Shuttle Service

**DESCRIPTION:** In partnership with Rose Brand and ARRI, EZ Ride launched a commuter shuttle in 2008 that connects Secaucus Junction with these two major employers in the Harmon Cove area. Without this shuttle, there is no connection between Secaucus Junction and Harmon Cove's industrial center. In 2017, another company, Frederick Goldman, moved to Harmon Cove and joined the shuttle program. This service is funded in part by the NJ-JARC program.

**SCHEDULE:** The program was launched in May 2008. Service operates Monday through every 10 minutes from 6:55 am – 9:30 am and 4:05 pm – 7:20 pm.

**PRODUCT:** High frequency shuttle service between Secaucus Junction and employers in Harmon Cove. Free to employees.

---

**SUBJECT:** Kearny Commuter Shuttle

**DESCRIPTION:** The shuttle services local residents along Ridge Road and Kearny Avenue in North Arlington and Kearny, and links them to the PATH station at Harrison. This service is funded in part by the NJ-JARC program.

**SCHEDULE:** The program was launched in January 2010. The service operates from 6:20 am to 9:20 am and from 4:30 pm to 7:35 pm. One-way fare is \$1.50.

**PRODUCT:** High frequency shuttle service connecting residents with Harrison PATH station.

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**SUBJECT:** Kearny Loop Shuttle

**DESCRIPTION:** EZ Ride launched the service to link local businesses and residents along Bergen County Avenue and Harrison Avenue in Kearny with the PATH station in Harrison. This service is funded in part by FTA under the CMAQ program.



**SCHEDULE:** The program was launched in October 2015. The service operates from 6 am to 10 am and from 4 pm to 8 pm. One-way fare is \$1.50.

**PRODUCT:** High frequency shuttle service connecting residents with Harrison PATH station.

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**SUBJECT:** Flex-T Mobility Partner Program

**DESCRIPTION:** EZ Ride launched the Flex-T Program in Monmouth County along Route 35 corridor in Monmouth County. Currently the service has expanded and operates in Bergen, Essex, Union, and Monmouth Counties. Clients use the program to access jobs or job training facilities. This service is funded in part by FTA under the New Freedom program.

**SCHEDULE:** The program was launched in November 2009. Service operates Monday through Friday from 8 am to 4 pm.

**PRODUCT:** Membership based demand-responsive transportation program for people with reduced mobility to access jobs.

---

**SUBJECT:** Montclair Senior Shuttle

**DESCRIPTION:** EZ Ride operates the senior shuttle service for the town of Montclair. The shuttle provides rides for seniors to popular destinations within the town, such as the library, HUMC Hospital, YMCA, Edgemont Park House, Wally Choice Center and ShopRite-Brookdale. Reservations are required to be made 48 hours in advance. This service is funded by Montclair Twp.

**SCHEDULE:** The program was launched on February 1, 2017. Service operates weekdays from 8:30 am to 4:00 pm

**PRODUCT:** Shuttle service for Montclair residents aged 55 and over, and residents with disabilities.

---

**SUBJECT:** Ryde4Life Program

**DESCRIPTION:** EZ Ride launched a state-wide program to provide personalized, curb-to-curb transportation for all riders 18 and older and in particular seniors whose needs are not currently met by other transportation programs. The service is provided using Transportation Network Companies (TNCs) like Lyft and Uber. This program is funded in part by a Federal Transit Administration Section 5310 grant administered by NJ TRANSIT.

**SCHEDULE:** The program was launched in April 2017. Service is provided Monday through Friday from 8 am to 8 pm with plans to expand to weekends from 8 am to 5 pm.

**PRODUCT:** Membership based demand-responsive transportation program for riders 18 and older.

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**AGENCY: GREATER MERCER TMA**

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**SUBJECT:** ZLine Shuttle

**DESCRIPTION:** The ZLine bus provides service from Hamilton Marketplace in Hamilton to the Matrix Business Park in Robbinsville. Three NJ TRANSIT buses connect to the service.

**SCHEDULE:** GMTMA launched the service in July 2014 with a two year NJ JARC grant with the match provided by Amazon and Mercer County.

**PRODUCT:** A “last mile” bus service to the Matrix Business Park with expanded NJ TRANSIT bus service to accommodate the shuttle.

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**AGENCY: TRANSOPTIONS**

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**SUBJECT:** Mack-Cali Parsippany Corporate Campus Shuttle

**DESCRIPTION:** TransOptions plans to continue efforts in FY 2019 to start a shuttle service in the multi-tenant office park at the Routes 10 and 202 intersection. An innovative funding measure is being devised by TransOptions and Mack-Cali staff to treat shuttle transportation as an amenity of the campus. The shuttle would be available to all tenants and the price would be shared through common area charges, much like landscaping and snow removal is treated currently.

**SCHEDULE:** No implementation date has been determined as of yet, but conversations are ongoing as Mack-Cali renovates buildings on the campus.

**PRODUCT:** New and sustainable shuttle service for the corporate office park in Parsippany.

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**NORTH JERSEY TRANSPORTATION  
PLANNING AUTHORITY, INC.**

**FY 2019**

**UNIFIED PLANNING WORK PROGRAM  
CHAPTER IV  
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PLANNING INITIATIVES**

**SECTION I**

**PART FOUR - LOCAL SUBREGIONAL INITIATIVES**



**AGENCY: BERGEN COUNTY**  
**Bergen County Department of Planning and Engineering**

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**SUBJECT:** **Adaptive Signal Program, Hackensack Central Business District**

**DESCRIPTION:** Under the auspices of the NJTPA’s competitive Transportation Clean Air Measures (TCAM) program, Bergen County is seeking to institute an adaptive/intelligent signal program in a phased approach along appropriate corridors in Bergen County. To initiate this, the County has embarked on an Adaptive Signal Program effort in coordination with the City of Hackensack in order to make signalization improvements in the Hackensack Central Business District and the vicinity of the County Courthouse and Administration Complex, with the Hackensack Bus Transfer at the heart of the study area. This joint approach will ideally result in cost and administration efficiencies, and allow the City of Hackensack (as our partners in this effort) to update the signals on Main and State Streets (part of their effort to convert both streets in a one-way couplet to bidirectional traffic, with State Street’s two-way conversion recently completed). This will then enable the signals to accept the Adaptive improvements that will foster more efficient travel through the area. The aim here is to employ the techniques and approaches learned during this effort as a model to implement Adaptive Signal Programs for other appropriate corridors throughout the County.

**SCHEDULE:** Design work underway (including CED and PS&E); Federal authorization to proceed received December 2017; Contract/procurement Winter/Spring 2018; Implementation estimated over the course of FY 2019.

**PRODUCT:** Adaptive Signal Program Implementation

---

**SUBJECT:** **Preliminary Engineering for Bridge & Intersection Improvements at Market Street, Essex Street & Rochelle Avenue/Main Street in the Borough of Lodi, Township of Rochelle Park, and Township of Saddle Brook**

**DESCRIPTION:** A longstanding project in the TIP with federal appropriations, this project involves a heavily-utilized and complicated intersection of county roads at the confluence of multiple municipalities, also involving a crossing of the Saddle River as well as an additional structural component, with Interstate Route 80 passing overhead at this location. The project contract was awarded to Dewberry Engineering, with Project Kickoff in 2017, and subsequent progress meetings held throughout the current fiscal year, which included participation from NJTPA and NJDOT.

The existing intersection approaches are substandard in width and lane configuration and present a choke point for the large traffic volume served at this location. The intersection is currently controlled by a fixed time traffic signal that is not traffic responsive. The Market Street approach to the intersection spans the Saddle River via a County owned bridge which is located directly under the Interstate Route 80 overpass. The bridge was constructed in 1923 and is categorized as functionally obsolete and scour critical with a sufficiency rating of 60.5.

The focus here has remained on continued coordination, including a number of meetings with the NJDOT and their consultant to coordinate design and resolve the conflict issues presented by the State's design of Interstate Route 80 (on an overpass above) and County design for the intersection and bridge alternatives under consideration and being advanced.

**SCHEDULE:** Preliminary Engineering contract awarded in 2017; Coordination with NJDOT ongoing; Estimate date for completion of PE: December 2018

**PRODUCT:** Preliminary Engineering Plans; Documentation to proceed into Final Design

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**SUBJECT:** **East Anderson Street Bridge Local Concept Development Study, City of Hackensack and Township of Teaneck, Bergen County.**

**DESCRIPTION:** Bergen County successfully applied for a \$432,000 grant through the NJTPA's Local Capital Project Delivery Program for this project to study alternatives for rehabilitating or replacing the East Anderson Street Bridge. This critical connector spans the Hackensack River between East Anderson Street in the City of Hackensack and Cedar Lane in the Township of Teaneck. The project will also determine if a pedestrian path could be constructed under the new bridge to provide safer access to the Hackensack Riverwalk. Built in 1971, this four-lane, 302-foot-long bridge serves as a major connector for densely populated commercial and residential areas in the two municipalities, as has historically served as a critical bus transit corridor and river crossing for all users. A high number of motorists and pedestrians traverse the twin six-span bridge, which is located near parks, trails, schools, hospitals, a university, and major employers. In 2012, due to structural deficiencies, a weight restriction was instituted, barring trucks, buses, and other vehicles over 15 tons from crossing the span. The two outer lanes of the bridge were also closed at that time.



This initial investigative work is being conducted under the auspices of the NJTPA's Local Capital Project Delivery Program – namely, the Local Concept Development Phase – with the aim of securing the project's eligibility for eventual construction with federal funds.

**SCHEDULE:** RFP issued in 2017; Consultant Selection and Procurement Winter/Spring 2018; Project Kickoff Spring 2018.

**PRODUCT:** Concept Development and Environmental Documentation

**CONTACT:** Joseph Femia, PE, County Engineer/Department Director  
Bergen County Department of Planning & Engineering  
Phone: (201) 336-6808  
Email: [JFemia@co.bergen.nj.us](mailto:JFemia@co.bergen.nj.us)

**AGENCY: MIDDLESEX COUNTY**

---

**SUBJECT:** Middlesex County Bicycling Atlas

**DESCRIPTION:**

Reference guide that will provide the bicycling public with both a printed and web based document with information about the suitability of important roadways throughout the county for bicycling including the identification of bicycle paths and trails found within public parks and open spaces.

This project will help encourage the reduction in automobile use, the improvement of public health through increased outdoor activities, and the betterment of environmental conditions. We will be working with municipal officials in Middlesex County to provide information in the Bicycling Atlas that will include:

- Existing bicycling routes and designated bike lanes on roadways;
- All roadways with bicycling-related signage, striping, and other “share-the-road” road pavement markings or similar;
- Existing off-road bicycling paths and trails on municipally-owned properties (e.g. parks and open space);
- Other public bicycling accommodations and facilities, including racks, lockers, or shelters situated on municipally-owned properties or public school properties; and/or,
- Municipal bicycle, pedestrian or transportation plans, studies or master plan elements.

This document will also provide valuable assistance in the future update of the Middlesex County Bicycle – Pedestrian Plan component of the County Comprehensive Master Plan.

**SCHEDULE:** Completion FY 2017 – 2018

**PRODUCT:** *Middlesex County Bicycling Atlas*

---

**CONTACT:** Anthony Gambilonghi, Transportation Division Supervisor  
Middlesex County Department of Infrastructure Management  
Phone: 732-745-3843  
Email: Anthony.gambilonghi@co.middlesex.nj.us

**AGENCY: MONMOUTH COUNTY**

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**SUBJECT:** Monmouth County Cultural and Heritage Virtual Tours (Scenic Byways)

**DESCRIPTION:** County-based network of physically interconnected community based assets showcasing the rich, various, and abundant cultural, historic, and natural resources found throughout the 53 towns that comprise Monmouth County

**SCHEDULE:** Ongoing through FY2020

**PRODUCT:** Cultural and Heritage Byway Network Story Map

---

**SUBJECT:** Monmouth County Bike Map

**DESCRIPTION:** Update the Monmouth County Bike Map, last updated in 2010, using a Bicycle Level of Stress analysis, and crowdsourcing information on non-county facilities and features

**SCHEDULE:** Ongoing through FY2019

**PRODUCT:** Updated County Bike Map published on paper and online

---

**SUBJECT:** Improvements to Sharon Station Road between CR 539 and CR 526 and Reconstruction of Bridges U-34, U-35 and U-39, Upper Freehold Township

**DESCRIPTION:** Improvements to Sharon Station Road for the operational safety of the roadway and reconstruction of three County bridges along the limits of the roadway improvements

**SCHEDULE:** Final Design completion FY 2018

**PRODUCT:** Final Design and Construction Documents for improvements to Sharon Station Road and reconstruction of the three bridges

---

**SUBJECT:** Improvements to CR 3 (Main Street – Tennent Road) between CR 527 and Kensington Drive/Woodland Circle, Manalapan Township

**DESCRIPTION:** Improvements to CR 3 for the operational safety of the roadway and reconstruction improvements of five County bridges, three culverts, and four traffic signals, as well as drainage improvements within the project limits

**SCHEDULE:** Segment 1 Final Design FY 2018 – 2019

**PRODUCT:** Final Design and Construction Documents for improvements to Segment 1 of CR 3 and associated bridge, traffic signal and drainage improvements

---

**SUBJECT:** Improvements to CR 3 (Lloyd Road) between Reid’s Hill Road and Church Street, Aberdeen Township

**DESCRIPTION:** Improvements to CR 3 for the operational safety of the roadway including realignment of Reid’s Hill Road intersection and Lloyd Road Elementary School driveway with Ivy Hill Drive, upgrade of two traffic signals and modification or replacement of County Bridge MA-3

**SCHEDULE:** Preliminary Engineering FY 2018 – 2020

**PRODUCT:** Preliminary Engineering Study and Report will provide information to establish Final Design Parameters

---

**SUBJECT:** Improvements to CR 520 (Newman Springs Road), between Stag Place and Hurley’s Lane, Middletown Township

**DESCRIPTION:** To perform studies to address geometric and operational deficiencies, capacity, system linkage, access, projected transportation demands, environmental, and traffic safety issues

**SCHEDULE:** Preliminary Engineering FY 2018

**PRODUCT:** The Preliminary Engineering Study & Report will provide sufficient information to establish final design parameters

---

**SUBJECT:** Improvements to CR 14 (West Park Avenue), between Hope Road/Green Grove Road and CR 15 (Monmouth Road), Ocean Township and Tinton Falls Borough (Segment 1: CR 14 from SR 18 to Cotswold Circle, Ocean Township)

**DESCRIPTION:** To address congestion, roadway capacity, system linkage, geometric deficiencies, projected transportation demands, environmental and traffic safety concerns

**SCHEDULE:** Segment 1 Final Design FY 2018 – 2020  
**PRODUCT:** Final Design and Construction Documents for improvements to Segment 1 of CR 14 and associated traffic signal and drainage improvements

---

**SUBJECT:** Improvements to Three Brooks Road and Reconstruction of Bridges F-26, F-27 and F-28, Freehold Township

**DESCRIPTION:** Improvements to Three Brooks Road for the operational safety of the roadway and reconstruction of three County bridges along the roadway improvements

**SCHEDULE:** Preliminary Engineering & Final Design FY 2018 – 2020

**PRODUCT:** Final Design and Construction Documents for improvements to Three Brooks Road and reconstruction of three bridges

---

**SUBJECT:** Reconstruction of Bridge S-14, Swimming River Road, Tinton Falls Borough

**DESCRIPTION:** Reconstruction of Bridge S-14 and its approach roadway

**SCHEDULE:** Preliminary Engineering & Final Design FY 2017 – 2018

**PRODUCT:** Final Design and Construction Documents for the replacement of Bridge S-14 and associated improvements at its approaches.

---

**SUBJECT:** Reconstruction of Bridge MS-48, Perrineville Road, and Rehabilitation of Perrineville Dam, Millstone Township

**DESCRIPTION:** Reconstruction of Bridge MS-48 and the rehabilitation of Perrineville Dam

**SCHEDULE:** Preliminary Engineering & Final Design FY 2018 – 2020

**PRODUCT:** Final Design and Construction Documents for the replacement of Bridge MS-48 and rehabilitation of Perrineville Dam

---

**SUBJECT:** Reconstruction of Bridge S-32, Shrewsbury River Road, Rumson & Sea Bright Borough

**DESCRIPTION:** Reconstruction of Bridge S-32 and its approach roadway

**SCHEDULE:** Final Design FY 2018 – 2020

**PRODUCT:** Final Design and Construction Documents for the replacement of Bridge S-32 and associated improvements at its approaches

---

**CONTACT:** Joseph Ettore, P.E.  
County Engineer  
Monmouth County Engineering Department  
Phone: 732-431-7760  
Email: [engineer@co.monmouth.nj.us](mailto:engineer@co.monmouth.nj.us)

**AGENCY: CITY OF NEWARK**

---

**SUBJECT:** McClellan Street Underpass Roadway and Drainage Improvements

**DESCRIPTION:** The McClellan Street Underpass is located east of Frelinghuysen Avenue in Newark's East Ward where McClellan Street traverses underneath the northeast Corridor. McClellan Street provides a key gateway between Routes 1 & 9 and Newark Airport to Frelinghuysen Avenue.

The USGS maps show the McClellan Street Underpass lies in a topographical depression. The area is too low to be drained by gravity/velocity so heavy rains result in extreme flooding conditions. The flooding creates a dangerous safety concern as well as impeding the flow of traffic.

The existing vertical clearance of 12'-1" is substandard, the design criteria requires a minimum of 14'-6". The lacks of appropriate vertical clearance prevent tractor trailer (WB-50) from utilizing this crossing and connect from Routes 1 & 9 and the airport to Frelinghuysen Avenue.

The purpose of the McClellan Street Underpass Project is the following:

- a) Improve the drainage system beneath the mainline tracks of the Northeast Corridor Line in order to eliminate the flood prone area.
- b) Improve the vertical clearance below the tracks by lowering the existing roadway profile to accommodate (WB-50) truck traffic.
- c) Widening the roadway through the underpass and underneath the Northeast Corridor to accommodate the full capacity of the roadway.

**SCHEDULE:** Final Design in December 2016 (Consultant: Parsons Brinckerhoff, Inc.)

**PRODUCT:** Final Design and Construction Documents

---

**SUBJECT:** Delancy Street Roadway Improvements

**DESCRIPTION:** Improvements to 1.1 miles of Delancy Street, a two-lane arterial between Avenue I and Rutherford Street/Avenue P.

This industrialized segment of Delancy Street has been historically an important link between Routes 1&9, Newark Liberty International Airport and the Port Newark Terminal, and continues to carry significant heavy truck traffic.

Existing physical and operational deficiencies in this segment of Delancy Street are not consistent with its important existing and future role in freight movement. These deficiencies create traffic congestion and relatively high numbers of accidents. Considering the existing and future use of Delancy Street for access to the ports, the airport and major accessways, these

deficiencies need to be remedied, to enable efficient truck access and freight-carrying industries to continue and grow in this sector of Newark.

In view of these existing conditions and projected freight-carrying demand, the City of Newark retained PB Americas, Inc. (PB) to identify, develop and assess improvement alternatives that would remedy the following deficiencies within this roadway segment: lack of definition of travel lanes and traveled way; inadequate drainage conditions; and constrained roadway geometry. Additionally, traffic operating conditions and drainage at the Delancy Street intersection with Stockton Street and Route 1&9 needs to be improved.

Delancy Street will be widened by 10' to provide one 12' lane and 7' shoulder per direction and a 12' left-turn lane/striped median and only minor revisions to the horizontal and vertical alignment will be made. Proposed improvements will include construction of new drainage inlets and pipes, replacement of pavement with full depth pavement, and new curbing and sidewalks. Utilities to be relocated will include aerial utility lines and poles due to roadway widening and underground water, sanitary and gas as needed for the proposed drainage design.

**SCHEDULE:** Final Design in December 2016 (Consultant: Michael Baker, Inc.)

**PRODUCT:** Final Design and Construction Documents

---

**SUBJECT:** Newark Waterfront Pedestrian and Bicycle Access: Center Street

**DESCRIPTION:** The Newark Waterfront Pedestrian and Bicycle Access project proposes to improve pedestrian and bicycle connections to McCarter Highway (Route 21) in downtown Newark between City Dock Street (Newark Pennsylvania Station) and Bridge Street, along with a connection to Broad St via Center Street. This Phase of the project will consist of the connection between McCarter Highway (Route 21) and Broad St via Center St, and the total project length is approximately 1,050 feet.

The project includes pedestrian and bike connections between Broad St, McCarter Hwy and the Newark Riverfront. These improvements include new traffic signals with pedestrian countdowns, bike lanes, new sidewalks, new street lighting, street furniture, trees and signage.

**SCHEDULE:** Final Design in June 2017

**PRODUCT:** Final Design and Construction Documents

---

**SUBJECT:** NJ DOT Local Bicycle Pedestrian Planning Assistance Program:  
BikeIronbound

**DESCRIPTION:** BikeIronbound is a bicycle circulation plan developed for Newark's Ironbound Neighborhood. The plan identifies bicycle routes as well as facility type. These routes provide circulation and connection to destinations within the Ironbound as well as connection to Newark Penn Station,



Downtown Newark and Port Newark and industrial areas to the east. The plan will result in several demonstration projects and will increase access, mobility and choice for commuters and residents.

**SCHEDULE:** Project start date: April 2015/ Anticipated end date: April 2016

**PRODUCT:** Bicycle master plan for Newark's Ironbound neighborhood, will include recommendations for bike routes, facility type and bicycle parking locations and two demonstration projects.

---

**SUBJECT:** NJ DOT Local Aid Bikeway Program: Station to Station Bike Connection

**DESCRIPTION:** Design and build phase 1 of a separated bikeway connection between Newark Penn Station and Broad Street Station. This connection will facilitate a safe and clearly marked bicycle connection between Newark's two regional rail stations. The route will pass through Downtown Newark and the Rutgers University campus providing bicyclists with many origin and destination points along the route.

**SCHEDULE:** Project start date: January 2016/ Anticipated end date: December 2017

**PRODUCT:** Completion of phase 1 of a fully separated on street bicycle route between Newark Penn Station and Broad Street Station.

---

**CONTACT:** Jack M. Nata, Manager  
City of Newark, Division of Traffic and Signals  
Phone: (973) 733-3985  
Email: nataj@ci.newark.nj.us

**AGENCY: OCEAN COUNTY**

---

**SUBJECT:** Western Boulevard Extension, Berkeley Township, Ocean County

**DESCRIPTION:** The extension completes a bypass to State Highway Route 9 to relieve congestion for through traffic with origin and destination outside Berkeley Township. The Route 9 Corridor is a 2 lane arterial with unrestricted access. Limited Right-of-Way and intense commercial development make it physically difficult, if not impossible, to address capacity. This project will allow an alternate for the majority of vehicles that have destinations beyond this 9-mile segment of Route 9.

**SCHEDULE:** The project has encountered significant Threatened and Endangered Species issues and is currently still in the Conceptual Development Phase.

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**SUBJECT:** New Park & Ride Facility at Garden State Parkway Interchange 58

**DESCRIPTION:** The project proposes an 80 parking stall park and ride lot along the northbound side of the Parkway at Interchange 58 with access from CR 539. Currently, the area is informally used by as many as 40 vehicles a day for this purpose and creates a sometimes unsafe condition.

**SCHEDULE:** Consultant Solicitations are scheduled for early 2014. Design and permits should take 18 months. Construction should advance in late 2015. There is a funding agreement in place between Ocean County and the New Jersey Turnpike Authority.

**PRODUCT:** An 80 stall free Park & Ride facility for commuters accessing the Garden State Parkway at Interchange 58.

---

**CONTACT:** John Ernst, Ocean County Director of Engineering  
Phone: 732-929-2130  
Email: jernst@co.ocean.nj.us

**AGENCY: PASSAIC COUNTY PLANNING DEPARTMENT**

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**SUBJECT:** Morris Canal Greenway Feasibility Study Implementation

**DESCRIPTION:** This effort involves project handoffs and phased implementation products recommended in the Morris Canal Greenway Feasibility Study.

**SCHEDULE:** On-going

**PRODUCT:** Various implementation projects of recommendations stemming from the Morris Canal Greenway Feasibility Study. This includes partnering with the National Parks Service in a year-long coordination effort. In addition the Planning Department continues to apply for various grants to construct new portions of the Morris Canal Greenway, install on-road facilities and signage, and engineer new facilities.

---

**SUBJECT:** Passaic County Open Space, Parks, and Recreational Master Plan

**DESCRIPTION:** The Passaic County Planning Department is updating the Open Space and Recreation Master Plan that was last done in 2001. A consultant will be hired in the early spring to assist with this effort. The update will include an emphasis on County Parks that was not in the last Master Plan Element.

**SCHEDULE:** Work is anticipated to be complete within one year of hiring a consultant.

**PRODUCT:** The product will replace the existing Open Space and Recreation Element of the Passaic County Master Plan. This will include all proposed and potential open space acquisitions and needs for the County Parks system that could attract more visitors.

---

**SUBJECT:** NYS&W Passenger Service Restoration Research Project

**DESCRIPTION:** The Passaic County Planning Department is working with NJ Transit and the NJTPA in creating a white paper on all efforts relating to restoring passenger service along the NYW&W freight railroad corridor. This work is being done in coordination with Morris, Sussex and Bergen Counties. Passaic County Planning staff will also continue working with NJ Transit on moving forward with the portion off the project between Hawthorne and Hackensack that has final design specifications completed

**SCHEDULE:** On-Going

**PRODUCT:** The product will be a white paper detailing all the completed efforts relating to restoration of passenger service along the NYS&W corridor for all counties over recent years. This will be a vital product in moving forward with future coordination of projects along this important transportation corridor.

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**AGENCY: SOMERSET COUNTY**

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**SUBJECT:** Davenport Street Extension (DB 06378)

**DESCRIPTION:** State and local development plans have focused on Somerville Borough's downtown and its landfill which has the potential to house a major Transit-Oriented Development. One of the key constraints is access under the railroad tracks since links between the landfill and downtown are limited to the existing crossings at Somerset Street and South Bridge Street. A new grade separated crossing at Davenport Street would provide the connectivity for the Transit-Oriented Development. The planned redevelopment of the downtown mall also provides an opportunity to extend Davenport Street through the Mall site and then under the railroad tracks into the landfill site. This route will also become the main pedestrian corridor between downtown, the new civic center and other uses planned for the landfill and the Raritan River Greenway.

**SCHEDULE:** Final Design in FY 2017.

**PRODUCT:** Final Design and Construction.

---

**SUBJECT:** Orchard Road Connector (DB 06381)

**DESCRIPTION:** Alternate solutions to relieve congestion were explored and a determination was made to investigate the use of loop roads. One of Montgomery Township Master Plan roads is known as Orchard Road connector which would be a north/south connector roadway to link Orchard Road and CR 518. In order to implement the construction of this connector road, a crossing of Bedens Brook is necessary. NJDOT and Somerset County Engineering Department have supported the concept of improving the Route 206/CR 518 intersection by constructing loop roads such as the Orchard Street connector. This method has been deemed the most cost effective method to alleviate traffic congestion.

**SCHEDULE:** Local Concept Development in FY 2016 and Preliminary Engineering in FY 2018

**PRODUCT:** Concept Development and Preliminary Engineering.

---

**SUBJECT:** Route 22 Sustainable Corridor Long Term Improvements (DB 03318)

**DESCRIPTION:** The proposed project will investigate long term improvements between Route 202/206 and Chimney Rock Road. Proposed improvements should address the high accident rates as well as eliminate congestion in this area. A full alternatives analysis is to be undertaken by Somerset County in order to fully determine the needs and the most cost-effective solution.

**SCHEDULE:** Local Concept Development in FY 2017.

**PRODUCT:** Breakout projects from the concept development study when completed.

---

**CONTACT:** Walt Lane, Somerset County Planning Board  
Phone: 908-231-7178  
Email: [lane@co.somerset.nj.us](mailto:lane@co.somerset.nj.us)

**AGENCY: WARREN COUNTY**

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**SUBJECT:** Warren County Transportation Technical Study Update

**DESCRIPTION:** This study looks at a previous transportation technical study and updates it. The last study was done in 2005.

**SCHEDULE:** The Study is being wrapped up now and should be completed by June 2018.

**PRODUCT:** **The product will be an update to the current 2005 Transportation Technical Study**

**CONTACT:** Brian Appezzato, Senior Transportation Planner  
Warren County  
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**NORTH JERSEY TRANSPORTATION  
PLANNING AUTHORITY, INC.**

**FY 2019**

**UNIFIED PLANNING WORK PROGRAM  
CHAPTER IV  
OTHER REGIONAL TRANSPORTATION  
PLANNING INITIATIVES**

**SECTION II**

**NEW JERSEY DEPARTMENT OF TRANSPORTATION  
STATE PLANNING AND RESEARCH PROGRAM**



**NEW JERSEY DEPARTMENT OF TRANSPORTATION**

**STATE PLANNING AND RESEARCH /  
MANAGEMENT SYSTEM  
WORK PROGRAM**

Work to be done in cooperation with the  
U. S. Department of Transportation  
Federal Highway Administration

**CY 2017-2018 WORK PROGRAM**

**PART I, PLANNING**

SPR-C00S(983)  
NHP-D00S(003)  
NHP-D00S(005)  
STP-D00S(004)  
TAP-D00S(002)  
STP-D00S(009)  
STP-D00S(011)  
STP-C00S(999)

**PART II, RESEARCH**

SPR-C00S(974)

**PART III, MANAGEMENT SYSTEM**

STP-D00S(010)

**PART IV, PLANNING**

CM-BIKE(150)

**JANUARY 2018**

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## **CY 2017-2018 PROGRAM GOALS**

The mission of the New Jersey Department of Transportation is to improve lives through improving transportation. The Department accomplishes this mission by providing reliable, environmentally and socially responsible transportation and motor vehicle networks and services to support and improve the safety and mobility of people and goods in New Jersey.

The State Planning and Research and Management System Work Program supports that mission by striving to optimize transportation, community, and environmental needs within available resources. The activities that constitute this work program pursue the following goals.

- Comply with federal rules and regulations and fully report programmatic and financial progress
- Use performance objectives and measures to ensure work is measurable and valuable
- Optimize the safety of the highway transportation and the response to emergencies
- Integrate transportation and land use decision making to increase transportation options, promote livable communities, and identify fiscally responsible transportation investments.
- Optimize the mobility of people and goods by minimizing congestion and improving travel time reliability on all modes
- Use context sensitive multimodal project planning to produce project scopes for assigned highway problem statements
- Achieve cleaner air and reduce greenhouse gas emissions
- Collect data and perform technical studies of transportation plans, programs, and decision making
- Involve fully the public and local government in transportation decision making
- Ensure the appropriateness of the Department's response to transportation issues
- Advance the state-of-the-art in transportation planning
- Take better advantage of the research program to bring state-of-the art technologies to bear on transportation issues
- Optimize the programs for asset management of the highway transportation

## **CY 2017-2018 PROGRAM PRIORITIES**

1. Identify and integrate performance measures consistent with FAST Act requirements and final rules issued in 2016 and 2017.
2. Maximize available funds by closing out prior year projects and releasing funds for reuse consistent with the Department's federal funds management policy and procedure.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Performance-based Planning and Asset Management – 4510017 / 5900  
**MANAGER:** James B. Lewis  
**UNIT:** Statewide Strategies

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### **VISION:**

NJDOT is a national leader in performance-based planning (PBP) and asset management (AM). NJDOT implements transportation improvements and multimodal strategies that provide the most comprehensive benefits to a range of transportation objectives. NJDOT implements cutting edge preservation and renewal strategies that keep our assets in a state-of-good repair in the most cost-effective means possible to enable access to essential services such as housing, employment and commerce, healthcare, schools/education, and recreation.

### **MISSION:**

Maximize performance-based decision making in capital investment planning and programming. Enhance linkages between NJDOT's various processes, plans and programs in order to analyze all transportation priorities and risks at various levels (agency/enterprise, program and project risks), i.e. results of environmental conditions such as resiliency with regard to extreme weather and climate change, in concert so multiple transportation objectives are advanced in a transparent and most effective manner, while making progress toward national performance goals as required by the FAST legislation (formerly MAP-21). This would include the project delivery process; STIP, SCIS and NJDOT CIS; transportation asset management plans for physical highway infrastructure assets including structures, pavements, drainage, etc.; statewide long range transportation plan; MPO's metropolitan transportation plans; the state's freight plan; congestion management process; comprehensive strategic highway safety plan; the state development and redevelopment plan, etc.

- A. All PBP/AM related activities are not captured in this thumbnail activity. Portions are covered in various other activities and through coordinated and collaborative efforts with regional entities such as the MPOs and local entities, NJ TRANSIT, various transportation authorities, neighboring state DOTs and federal agencies. A number of activities in the work program can be considered PBP/AM in their entirety. They include:

1. Pavement Program Planning
2. NJDOT Pavement Support Program
3. Drainage Capital Improvement Program Planning
4. Bridge Management System
5. Bridge Resource Program
6. Straight Line Diagrams
7. Digital Roadway Imaging and Video Data
8. Transportation Data Warehouse and Maintenance
9. Transportation Systems Information Management and Data Integration
11. Traffic Monitoring System – Traffic Volumes Data Collection
12. Traffic Monitoring System – Database Maintenance
13. Traffic Monitoring System – Truck Weights
14. Traffic Monitoring System – Infrastructure Renewal
15. Functional Classification System and Federal Aid System
16. Highway Performance Monitoring System
17. Transportation Systems Management and Operations

Activities with some PBP/AM elements include:

- Statewide Planning
- Transportation and Livable Communities
- Technical Analysis
- Goods Movement

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Performance-based Planning and Asset Management – 4510017 / 5900  
**MANAGER:** James B. Lewis  
**UNIT:** Statewide Strategies

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### *MISSION (continued):*

- Environmental Resources
- TIP/STIP Preparation
- TSRC
- Technology Transfer and Implementation
- LTAP
- Maintenance Decision Support
- TSM&O/ITS

It is very difficult to isolate all the expenditures that are associated with PBP/AM. We will be able to easily track PBP/AM costs for activities that fully encompass PBP/AM and we will track costs associated with the efforts of this activity.

- B. Enhance NJDOT's Performance and Inventory Information Center by updating and maintaining the internal repository of key performance information and inventory data used by staff for response to requests from the public and outside entities about the condition of our roads and bridges, fatalities, congestion on our roads, programs, services, and other key information. The repository is primarily used for the dissemination of consistent information to the general public via an internal webpage. The information primarily consists of data reported and maintained on the Governor's Performance Center.
  - a. Routinely update on a quarterly basis, or as needed, working with units such as Budget, Communications and management system owners and SMEs.
  - b. Respond to specific requests from staff or refer to SMEs for more detailed requests or additional information and context.
  - c. Collaborate with a core group of units including, Budget, Communications and IT, to provide enhancements to the performance/inventory information center intranet webpage.
- C. Prepare a strategy to begin an update of the Statewide Long-Range Transportation Plan (SLRTP). An update of the SLRTP shall be consistent with the goals of the State Development and Redevelopment Plan (SDRP) and meet the requirements of the FAST legislation.
  - a. Review applicable FAST Act final rules for Statewide Planning for statewide plan requirements and conceptualize a strategy for the development of the next statewide long-range transportation plan in accordance with other federally required plans, collaborating with NJ TRANSIT, the state's MPOs, various transportation stakeholders and federal partners. The TAMP will also serve as a basis to inform many of the SLRTP's components, i.e. the transportation system assessment.
  - b. Ensure that NJDOT and NJ TRANSIT policies, programs, investments, and functional and operational plans reflect national goals and performance management measures, targets and requirements, in addition to state planning factors and requirements, that are expressed through various efforts, including the NJDOT & NJ TRANSIT TAMPs, HSIP, CMAQ, SDRP, a high-level performance-based capital investment plan or NJDOT CIS, SCIS, STIP, Statewide Freight Plan, Bicycle and Pedestrian Master Plan, New Jersey Travel Demand Management Strategic Plan, New Jersey Statewide ITS Architecture – "The Connected Corridor", New Jersey State Rail Plan, NJDOT's Complete Streets Policy, etc.
  - c. Continue to provide an awareness of the SLTRP and its vision, mission and goals through various public involvement and public participation techniques in order to inform staff, stakeholders and the public about the ongoing efforts to develop and achieve the plan's vision primarily through the use of our website and in collaboration with NJ TRANSIT and the MPOs.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Performance-based Planning and Asset Management – 4510017 / 5900  
**MANAGER:** James B. Lewis  
**UNIT:** Statewide Strategies

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### **GOALS/ACTIVITIES:**

1. Manage and coordinate the preparation of the NJDOT Transportation Asset Management Plan (TAMP) in line with FAST Act requirements. Preparation of the TAMP consist of consultant assistance under a consultant contract for this activity in the work program. The following activities are also associated with the development of the TAMP:
  - a. Collaborate with MPOs, counties, independent transportation authorities and federal agencies to establish methodology to gather and report on pavement condition on non-state NHS routes in line with FAST Act requirements. In addition to the collaborative efforts on the development of FAST Act performance measures reporting, these entities will also collaborate with NJDOT on target-setting for both the state and MPO targets for bridge and pavement assets in order to devise an on-going process for establishing targets for bridge and pavement assets on the NHS, including non-NJDOT NHS assets and their owners in accordance with 23 CFR Part 490 (PM2 Final Rule).
  - b. Continue to identify innovative strategies for how technology can be utilized to keep NJ assets in a state-of-good repair.
  - c. Collaborate with various units and initiatives to identify how technology can support PBP/AM and enhance program/project delivery.
  - d. Building upon previous related study efforts in New Jersey on the subject of extreme weather and climate resiliency, evaluate NJDOT's asset management practices with regard to risks associated with extreme weather and climate resiliency factors for culverts and their vulnerabilities to such factors, including the identification of potentially new proxy indicators.
2. Continually enhance, update and report various key performance indicators (KPIs) and inventory data for NJDOT's Performance and Inventory Information Center, in addition to the periodic updates and reporting of KPIs to the State of New Jersey Transparency Center/Governor's Performance Center.
3. Coordinate NJDOT's TPM activities associated with the FAST Act performance requirements including the establishment and reporting of performance measures and targets by the Department for various performance areas as required by the National Performance Management Measure Rules for safety (PM1), infrastructure (PM2) and system performance (PM3). TPM activities shall be reflected in the TAMP and SLRTP, in addition to the NJDOT and Governor's performance center reports, including the state-defined and reported KPIs.
4. Prepare draft high level NJDOT investment strategy/plan (NJDOT CIS) for inclusion in the SCIS supported by performance information. Support MPO development of performance-based regional capital investment strategies drawing from the SCIS.



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Performance-based Planning and Asset Management – 4510017 / 5900  
**MANAGER:** James B. Lewis  
**UNIT:** Statewide Strategies

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### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

1. Completion of NJDOT's Initial TAMP and Draft Final TAMP, with consultant assistance and collaboration from the MPOs, counties, independent transportation authorities, federal partners, and staff SMEs..
2. Presentations to Asset Management Steering Committee.
3. A process for establishing bridge and pavement targets for the NHS in NJ as per FHWA requirements.
4. Deliverables for FHWA Pilot Project on Asset Management, Extreme Weather & Climate Resiliency.
5. Developed NJDOT policy and procedure for TPM and devise a "Table of Ownership" for NJDOT established/reported targets identifying staff SME owners and support staff for targets as defined in PM1, PM2 and PM 3 final rules.
6. Integrate technology, and operational (TSM) and innovative strategies that support PBP/AM into an enhanced project delivery process.
7. Posted inventory data and FAST Act performance measures and targets as they are established by the Department to NJDOT's Performance and Inventory Center and website.
8. Draft high-level investment strategy/plan, NJDOT CIS, in collaboration with the update of the SCIS.

### **CONTRACTS:**

Existing multi-year contract:

C00S(970) - NJDOT Transportation Asset Management Plan, \$925,383.81, previously authorized. Also includes consultation, coordination and collaboration with staff SMEs associated with activities for maintenance/operations, oversight and delivery of local projects, management of drainage, stormwater and environmental resources, as well as management and senior-level staff (NJDOT Asset Management Steering Committee).

Consultant Agreement Modification to the existing TAMP Contract:

FHWA D00S(117) Extreme Weather Pilot Project Grant (\$150,000.00 FHWA and \$150,000.00 state funded match) to evaluate asset management, extreme weather, climate risks and proxy indicators. TAMP consultant will conduct a study on resiliency issues associated with NJDOT's culverts for inclusion in NJDOT's TAMP. Study to be completed by October 2018 with submission of deliverables to FHWA.

### **TRAVEL:**

Requested for Year 2 - \$5,550.00

- 12<sup>th</sup> National Asset Management Conference, July 15-17, 2018 in San Diego, CA (Registration \$530, Air Fair \$325, Hotel \$640, Meals \$285). Recommend 3 staff representations from Statewide Strategies, Pavement Management and Structural Evaluation & Bridge Management to attend event so infrastructure SMEs are able to participate, share and gain valuable insights and information on the subject. - Estimated cost \$5,400.00
- NJ TransAction Conference 2018, Date TBD, April 17-19, 2018, 1 attendee/1-day - \$75.00
- TRB/AASHTO, State, APA, etc. Local/Regional Access Mgt. Event, 1 attendee/1-day - \$75.00
- TPM Pooled Fund Project, 1 attendee, Funded by third party sponsor – Cost TBD

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Performance-based Planning and Asset Management – 4510017 / 5900  
**MANAGER:** James B. Lewis  
**UNIT:** Statewide Strategies

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### *EQUIPMENT:*

None.

### *STAFFING:*

Danielle Graves, Project Manager	0.70 PY
Joseph Burdulia, Senior Planner	0.50 PY
Basseyy Onyile, CET	1.00 PY

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation and Livable Communities – 4510017 / 5400  
**MANAGER:** James B. Lewis  
**UNIT:** Bureau of Statewide Strategies

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### ***VISION:***

NJDOT plays a leading role in providing long-term sustainable and context sensitive solutions to transportation problems, in collaboration with our federal partners, other state agencies and transit entities, MPOs, counties and municipalities, to develop and implement alternatives to single-occupant vehicle (SOV) travel such as trip reduction, mass transit, walking, biking and local street connectivity that ultimately create livable economically-thriving communities.

### ***MISSION:***

To maximize the efficiency of the transportation system statewide and in local communities by employing such initiatives as Transit Village designation and access management planning to create a stronger link between transportation and land use according to the smart growth principles of the State Development and Redevelopment Plan (SDRP) and the federal Partnership for Sustainable Communities' six livability principles, as well as the federal emphasis areas including Regional Models of Cooperation and Ladders of Opportunity.

### ***GOALS/ACTIVITIES:***

1. Shape the Capital Investment Strategy with infusion of Smart Growth and State Strategic Plan (SSP)/State Development and Redevelopment Plan (SDRP) principles into the Department's policies, programs, practices and investment decisions, along with requirements of federal legislation (FAST Act and MAP-21).
  - a. Spearhead participation in New Jersey's economic growth agenda through coordination with other agencies in the evolving statewide effort to implement the goals, strategies and policies of the State Strategic Plan (SSP)/State Development and Redevelopment Plan (SDRP) and Smart Growth principles.
  - b. Increase awareness among Department units, county and local governments and the public about federal, regional and statewide Smart Growth, Sustainable Transportation and Livable Communities endeavors including implementation of the Together North Jersey Regional Plan for Sustainable Development, through interagency coordination, information and resource distribution and activities of the Department's State Plan/Smart Growth Implementation Team (I-Team).
  - c. Improve the existing process of internal Department review of local plans for transportation elements that embody Smart Growth concepts and underpin sustainable land use objectives according to principles of the anticipated new SSP/SDRP.
  - d. Advocate the use of SSP/SDRP concepts in NJDOT's Asset Management and problem intake process by continuing to implement and further develop a "Smart Growth Management System" that works together with the other Department Management Systems to evaluate and prioritize transportation studies and capital projects for consistency with the SSP/SDRP and Smart Growth.
  - e. Provide resources and technical assistance to communities to link transportation and land use in municipal master plans using the principles of Mobility and Community Form (MCF).

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation and Livable Communities – 4510017 / 5400  
**MANAGER:** James B. Lewis  
**UNIT:** Bureau of Statewide Strategies

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### **GOALS/ACTIVITIES:** (continued)

2. Foster development of compact, mixed use Centers, as embodied in the New Jersey State Development and Redevelopment Plan (SDRP), by designating more Transit Villages.
  - a. Designate at least two new Transit Villages
  - b. Monitor progress of designated Transit Villages.
  - c. Meet with interested Transit Village potential applicants and regularly coordinate with existing designated Transit Villages.
3. Develop an enhanced State Highway Access Management Code (SHAMC) that contains provisions and planning elements that support New Jersey's smart growth and livability goals and objectives to ensure consistency with policies and strategies of the SDRP/SSP and Statewide Long Range Transportation Plan (SLRTP), which reiterate federal requirements and national priorities.
  - a. Advance recommendations from the New Jersey Access Code Reevaluation Study, such as transit trip credits and a Main Street designation process.
  - b. Update the Desirable Typical Sections (DTS) in Appendix B of the State Highway Access Management Code by developing a standard approach to the appropriate sizing of the DTS consistent with State policies.
  - c. Provide guidance about the SHAMC for local officials and practitioners to promote the use of planning tools such as municipal zoning conformity with the Access Code and Access Management Plans.
  - d. Evaluate requests and provide recommendations on changes to access classifications as permissible in the Code's subchapter on "Procedure for Changes in Classification" and consistent with State policies and direction.
  - e. Review and provide DTS determinations to NJDOT Right of Way unit and NJ State Agricultural Development Committee on Excess Parcel and Farmland Preservation inquiries/requests.
4. Develop Access Management Plans as directed by the Department to preserve and improve the safety and performance of state and local highways.
  - a. Develop plans to minimize and coordinate highway access points as a means for reducing crashes and improving highway operations.
  - b. Partner with municipal governments, the public and appropriate MPOs to coordinate land use and transportation planning in corridor areas as a means of preserving future highway capacity.
  - c. Maintain and update existing Access Management Plans, as required by New Jersey statute.
5. Collaborate with federal and state agencies, NJ Transit, MPOs, counties, municipalities, and regional stakeholders to develop, recommend and advance viable transportation improvements that encourage innovative technology and implement context sensitive multimodal strategies and solutions as a result of planning/corridor studies and non-transportation initiatives that support the SLRTP, SDRP, MTPs, Complete Streets policies, The Connected Corridor, etc., and federal sustainability and livability initiatives.
  - a. Participate in and evaluate planning and corridor studies and problem statements recommending multi-modal strategies for the Department's problem intake phase of the project delivery process.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation and Livable Communities – 4510017 / 5400  
**MANAGER:** James B. Lewis  
**UNIT:** Bureau of Statewide Strategies

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### **GOALS/ACTIVITIES:** (continued)

- b. Provide staff resources to participate in MPO, county and municipal-led initiatives, serving as members of technical evaluation/advisory committees, for the development of feasible problem statements that lead to sustainable transportation projects.
- c. Partner with MPO, local entities and various regional stakeholders to advance priorities that achieve sustainable livable communities. Provide staff resources to serve as liaison to the Central Jersey Transportation Form (CJTF), which is an example of one of the federal emphasis areas.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Coordination of NJDOT's Smart Growth Implementation Team (I-Team) activities to foster sustainable transportation and community livability elements in the way the Department conducts its business, such as transportation mode choice, Complete Streets, Context Sensitive Solutions (CSS), transit-oriented development (TOD), highway and transit connectivity and transportation infrastructure resiliency.
- Arrangement of at least one I-team sponsored field visit to localities with smart growth, sustainability and livability potential or achievements.
- Contribution of transportation and land use integration perspective to any outstanding Plan Endorsements of municipalities by the State Planning Commission.
- Performance of any required Department activities associated with the current or future SDRP/SSP.
- Participation in Brownfields Interagency Work Group meetings and Brownfields Redevelopment and Development Opportunity Interagency Team meetings.
- Continuation of state-funded consultant work to complete the second phase of the Smart Growth Management System (SGMS), which would encompass physical roadway and project type factors.
- Provision of SGMS scores for proposed projects upon request to Capital Program Management.
- Designation of new Transit Villages (TV) that meet the TV criteria.
- Monitoring progress of existing designated Transit Villages through a state-funded consultant effort to highlight accomplishments of the Transit Villages.
- Deployment of Form-Based Code Users' Manual that emerged from the Mobility and Community Form Program and posting of the manual on the Department Web site.
- Participation in Together North Jersey Plan implementation as appropriate.
- Preparation of Route 34/Colts Neck AMP revisions for publication in the NJ Register.
- Advancement through the State of New Jersey's rulemaking process the revised NJ SHAMC, including Appendix B changes/corrections and revised subchapter on "Procedures for Changes in Classification".
- Completion of the state-funded consultant-led study, Evaluation of the NJ Access Code Desirable Typical Sections (DTS Study).
- Advancement of proposals for inclusion of Transit Trip Credit and Main Street provisions in NJ SHAMC.
- Issuance of guidance and/or educational material for planning tools related to access management; i.e. Zoning Conformity and Access Management Plans.  
Make deliberative recommendations on access classification/DTS change requests resulting from procedures in the SHAMC and advancement to rulemaking proposed amendments to access classification/DTSs in Appendix B of the Code.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation and Livable Communities – 4510017 / 5400  
**MANAGER:** James B. Lewis  
**UNIT:** Bureau of Statewide Strategies

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

- Reviews, determinations and responses to requests on Excess Parcel and Farmland Preservation inquiries related to the DTS in Appendix B.
- Represent the Department, as requested, on federal, state, regional and local planning initiatives.
- Advancement of planning initiatives and/or projects from the RTIRGS vision championed by the CJTF, i.e. Central Jersey/Route 1 BRT project w/NJ TRANSIT.
- Actively participate in MPOs subregional efforts upon request, in an effort to facilitate NJDOT subject matter expertise and collaboration with locals.

### **CONTRACTS:**

None.

### **TRAVEL:**

Mileage - \$75.00  
Travel - \$2,140.00

- NJ Sustainability Summit - \$35.00
- NJ State Data Center Network Meeting - \$55.00
- TRB Annual Meeting, Washington, DC, Jan. 7-11, 2018, 1 attendee/2-days - \$800.00
- 12<sup>th</sup> TRB Access Mgt. Conference, July 17-19, 2018, Madison, WI, 1 attendee - \$1,250.00

Conferences/Training - \$150

- TransAction Conference 2018 (Access Mgt. Rep.), April 2018, 1 attendee/1-day - \$75.00
- TRB/AASHTO, State, APA, etc. Local/Regional Access Mgt. Event, 1 attendee/1-day - \$75.00

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TOTAL: \$2,365.00

### **EQUIPMENT:**

None anticipated.

### **STAFFING:**

Susan Weber, Supervising Transportation Analyst	1.00 py
LeRoy Gould, Principal Planner, Transportation	1.00 py
Richard Rabinowitz, Planner, Transportation	1.00 py
Danielle Graves, Project Manager	0.30 py
Joseph Burdulia, Senior Planner, Planning	0.50 py
Thomas Houck, Planner, Planning	1.00 py

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Metropolitan Planning Organization (MPO) Liaison - 4510017 / 5690  
**MANAGER:** James Lewis  
**UNIT:** Statewide Strategies

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### ***VISION:***

New Jersey's three MPOs will undertake regional planning and data collection that is coordinated with the NJDOT, as well as adjoining MPOs, that promotes the advancement of projects in the NJDOT pipeline, and provides measurable benefits to New Jersey's transportation system, communities, environment, and economic vitality.

### ***MISSION:***

To manage federal projects and task orders necessary to carry out the MPO work programs; to ensure that MPO regional planning efforts and procedures meet federal and state requirements; as well as to promote, coordinate, and advance the state's transportation agenda through the integration of state and regional transportation plans, policies, procedures, and improvement programs with the activities of the MPOs.

### ***GOALS/ACTIVITIES:***

1. Act as liaison between the NJDOT and New Jersey's three MPOs: the South Jersey Transportation Planning Organization; the Delaware Valley Regional Planning Commission; and the North Jersey Transportation Planning Authority.
  - a. Participate in MPO technical committee meetings and serve as a NJDOT resource to MPO board members, staff and sub-regional representatives.
  - b. Facilitate point-of-contact collaboration between MPO and NJDOT planning activities.
  - c. Support NJDOT voting member at MPO board and committee meetings.
2. Proactively work with MPOs and host organizations to meet annual milestones and requirements.
  - a. Work with MPOs to ensure work plans, regional transportation plans and task orders are completed and executed on time.
  - b. Submit MPO annual work programs to FHWA and FTA for approval.
  - c. Secure federal authorization for annual work programs prior to June 30th.
  - d. Submit MPO regional transportation plans, conformity determinations, and self-certifications to FHWA, FTA, and EPA consistent with approval schedule.
  - e. Conduct a Risk Assessment of each MPO as required by 2 CFR 200.
  - f. Develop and maintain basic agreements with MPOs and/or hosting agencies as required.
3. Provide timely and accurate contract administration for MPO work program contracts and FHWA/FTA grants and agreements.
  - a. Review and submit MPO progress reports internally and to federal agencies as required.
  - b. Ensure prompt processing of invoices.
4. Close out completed task orders and associated federal project agreements within six months of completion or as soon as practicable.
  - a. Participate in federal and state financial, programmatic, and certification audits /reviews as required.
  - b. Support departmental use of basic agreements for non-work plan activities as required.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Metropolitan Planning Organization (MPO) Liaison - 4510017 / 5690  
**MANAGER:** James Lewis  
**UNIT:** Statewide Strategies

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### **GOALS/ACTIVITIES: (continued)**

5. Develop a memoranda of understanding between the MPOs and NJDOT to clarify expectations regarding the development, modification, and execution of the annual work programs.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Maintain the schedule outlined in the Mutual Service Standards.
- Participate in the development of a Data Sharing Memorandum of Understanding (MOU) between the NJDOT and the MPOs which will provide the MPOs with access to NJDOT data.
- Strive for federal agreements to be closed within three years.

### **CONTRACTS:**

None

### **TRAVEL:**

Mileage reimbursement to MPO meetings - \$630.00  
Travel expenses (parking fees, train fares) to MPO meetings - \$240.00  
TransAction Conference registration - \$195

### **EQUIPMENT:**

None

### **STAFFING:**

<u>Name</u>	<u>Title</u>	<u>Person Years</u>
Monica Etz	Supervising Planner, Transportation	1.00
Brian Leckie	Planner, Transportation	1.00
Cherie Shreve	Contract Administrator 2	.50
	Total PY	2.50



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Air Quality/Travel Demand Modeling Program – 4510017 / 5970  
**MANAGER:** James Lewis  
**UNIT:** Bureau of Statewide Strategies

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### **VISION:**

New Jersey will have its most efficient, sustainable and healthy transportation system since the advent of the automobile.

### **MISSION:**

To support Air Quality (AQ) conformity, strategies and transportation project development with models and analysis tools. To assist the NJDOT make use of CMAQ funds as efficiently and cost effective as possible.

### **GOALS/ACTIVITIES:**

1. Update the unit's technical toolbox.
  - a. Keep the unit's computers updated with the latest versions of MOVES and Cube (ongoing)
  - b. Updated Statewide Model network/trip tables with latest MPO model updates by December 2017.
  - c. Add automation features to the Statewide Model including growth rates and data summary tables by December 2018.
  - d. Explore adding Transportation Economic Modeling capabilities to the unit's technical toolbox by December 2017.
2. To enhance NJDOT's in-house modeling capability.
  - a. To possess updated versions of Cube-based supported models – North Jersey Regional Transportation model (NJRTM-E), (re-validated) South Jersey Travel Demand Model (SJTDM), South Jersey Regional Transportation Model (SJRTM), New Jersey Statewide Model (NJSWM), and MOVES. (ongoing)
  - b. To expand in-house capability to perform more complex regional modeling analyses.
  - c. To develop capability to perform benefit/cost analyses of transportation and air quality projects.
  - d. Participate in any TACs related to the development/enhancement of MPO travel demand models.
3. Support the MPO conformity processes.
  - a. Participate in all MPO interagency consultation group (ICG) activities (ongoing)
  - b. Alert upper management or any potential disruptions to the capital program (ongoing)
4. Assist in implementing Green House Gas (GHG) strategies
  - a. Support development on selected GHG plan strategies.
  - b. Participate in multi-state, state and regional GHG activities.
    - i. Work to advance the Transportation Climate Initiatives Electric Vehicle project.
    - ii. Participate in/support the multi-state Transportation Climate Initiative (TCI) as needed
  - c. Help to advance NJ's state of the practice in climate change adaptation planning.
5. Assist in the State implementation of the CMAQ program
  - a. Develop a CMAQ tracking database accessing multiple NJDOT databases
  - b. Assist in development of NJDOT CMAQ strategy to maximize air quality benefits
  - c. Develop the air quality benefits piece for the Department's annual CMAQ report.
  - d. To assist (when needed) in requesting funds and managing CMAQ projects.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Air Quality/Travel Demand Modeling Program – 4510017 / 5970  
**MANAGER:** James Lewis  
**UNIT:** Bureau of Statewide Strategies

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### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

1. Updated technical toolbox.
2. Enhanced in house modeling capability
3. Ongoing, effective coordination of MPO conformity process.
4. Ongoing support of the CMAQ program.
5. Maximum participation in GHG activities, subject to resource constraints.

### ***CONTRACTS:***

No federally funded projects expected.

### ***TRAVEL:***

None.

### ***EQUIPMENT:***

None.

### ***STAFFING:***

James DeRose, Section Chief	1.0 py
Charles Grill, Project Engineer, Planning	1.0 py
Albert Forde, CET	1.0 py
Total PY	3.0 py

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** SPR Program Management – 4510017 / 5395  
**MANAGER:** James B. Lewis  
**UNIT:** Statewide Strategies

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### ***VISION:***

A planning program that improves the transportation system to benefit the state's economy and the traveling public.

### ***MISSION:***

Manage the State Planning and Research (SPR) / Management System work program in compliance with federal and state program and financial requirements to support state policy, planning studies and programs.

### ***GOALS/ACTIVITIES:***

1. Manage CY 2017-2018 SPR/Management System Work Program.
  - a. Execute Federal-aid agreements to fund SPR Program.
  - b. Monitor federal agreement expenditures and secure modifications as needed.
  - c. Ensure federal and state regulatory compliance with FHWA funded planning study programs.
  - d. Recommend integration of federal and state program policies.
  - e. Submit contract scopes of work to FHWA for review and approval.
  - f. Submit program revisions required by Department priorities to FHWA for review and approval.
  - g. Prepare and submit half year progress reports to FHWA within 45 days of end of reporting period.
2. Manage development and approval of CY 2019-2020 SPR/Management System Work Program.
3. Close out remaining projects of completed program CY 2015-2016.
  - a. Prepare and submit final acceptance requests to close out completed projects.
4. Streamline program delivery.
  - a. Monitor existing practices to identify and recommend improvements.
5. Update SPR activities.
  - a. Monitor FHWA guidance and rules for changes in planning requirements.
  - b. Scan program implementation and external sources for new opportunities.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

- CY 2015-2016 SPR/Management System Work Program Final Reports and close outs.
- CY 2017-2018 SPR/Management System Work Program 12 and 18 Month Progress Reports.
- CY 2019-2020 SPR/Management System Work Program Year 1 approval.

### ***CONTRACTS:***

None.

### ***STAFFING PLAN:***

Cherie Shreve                      Contract Administrator 2                      .50 py

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Technical Analysis/Congestion Management – 4510017 / 5700  
**MANAGER:** Andrew Swords, Director  
**UNIT:** Commuter & Mobility Strategies

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### **VISION:**

Moving people and goods quickly, efficiently and reliably.

### **MISSION:**

Through multi-organizational collaboration and cooperation, develop measurable, cost-effective and targeted congestion-fighting strategies for New Jersey's highway system that enhances the quality of life for its citizens and supports a vibrant State economy and conserves natural resources.

### **GOALS/ACTIVITIES:**

1. Maintain and Update the Congestion Management System
  - a. Work with NJDOT-IT and NJ OIT to continue updating the recently completed Department's new Congestion Management System (CMS-21) for traffic volume data.
  - b. Support and coordinate with MPOs and other agencies to transition to Performance Based Planning and Programming by fulfilling requests for data available from the newly developed CMS-21.
2. Advance the Congestion Relief Program Problem Statement Development Process
  - a. Revise the Problem Statement Development Process (PSDP)
    - i. Using Process revision example presented at the 5/22/14 Complete Team meeting, members to improve and formalize an overall new and more integrated process.
    - ii. Coordinate with the Smart Growth Management Committee (SGMC) to discuss and consider integration of the Smart Growth Management System into the Problem Prioritization Process of the PSDP.
    - iii. Coordinate with the Complete Team in formally integrating ITS/TSM problem identification/project development into the overall PSDP.
    - iv. Achieve buy-in, total agreement by all stakeholders to the new PSDP version.
  - b. Develop a framework for Problem Area Interchange Identification and Vetting Process
    - i. Meet with Stakeholder group to lay out a general approach.
    - ii. Coordinate with the SGMC, Complete Team and Freight Services to develop a specific, comprehensive process.
    - iii. Achieve buy-in, total agreement by all stakeholders to the new PSDP version.
  - c. Generate problem statements for high need signalized intersections
    - i. Develop problem statements for agreed upon final list of up to 6 signalized intersection locations. **NOTE:** This could be a combination of using the old PSDP and newer version.
  - d. Generate problem statements for problem area interchanges
    - i. Generate manageable short list of project locations.
    - ii. Complete one pilot to test process, including a complete Problem Statement.
    - iii. Develop problem statements for agreed upon final list of up to 3 problem area interchange locations.
3. Respond to NJDOT's Congestion Relief Investment needs
  - a. Develop congestion screenings used to advance projects through the development process
    - i. Up to 200 (100 per year) Problem Statement project scoping screenings.
    - ii. Up to 40 (20 per year) project assessments for CPSC meetings.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Technical Analysis/Congestion Management – 4510017 / 5700  
**MANAGER:** Andrew Swords, Director  
**UNIT:** Commuter & Mobility Strategies

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### **GOALS/ACTIVITIES:** *(continued)*

- iii. Develop three to four alternative investment scenarios for the Congestion Relief Program.
  - iv. Make recommendations on appropriate funding levels for each element of the Congestion Relief Program.
4. Advance Planning/Operations Relationship to Facilitate Linkage Opportunities (Complete Team)
- a. Organize and attend quarterly meetings to coordinate and integrate Planning/Traffic Operations and Mobility and Systems Engineering activities
    - i. Scope and attend four meetings.
  - b. Establish process and tracking protocols for performing, integrating and optimizing linkages between Planning and Operations (on-going)
  - c. Explore and Evaluate Innovative Solutions
    - i. Collaborate with TSM (Transportation Systems Management) and other Divisions and Regional Partners in researching, devising, instituting and evaluating new technologies and strategies, such as adaptive signal control, ramp metering, Integrated Corridor Management (ICM), “Green” technology, etc. (on-going)
  - d. Participation in Traffic Operations/Mobility & Systems Engineering Strategic Plan
    - i. Coordinate with Regional Partners (as needed)
    - ii. Provide technical support, e.g.; CMS analysis for ITS candidate corridors (as needed)
    - iii. Conduct report review/comment (as needed)
5. Foster Performance-based Planning and Programming
- a. Coordinate and collaborate with the State MPOs, NJT, NJTA and other State agencies through the Complete Team meetings in developing System Performance Measures and targets, analytical processes and reporting in line with MAP-21 System Performance Measures guidance as per the Final Rule (23 CFR Part 490, Subpart E).
    - i. Through the Complete Team meetings, discuss the System Performance Measures requirements for Target setting in the final rule (PM 3) published on January 18, 2017 (on-going).
- Using the results and recommendations from the NJ Pilot Study, and other work by FHWA and AASHTO, engage the Complete Team to coordinate and collaborate on the development of New Jersey’s strategy for addressing MAP-21 System Performance Measures: the analytical processes, assumptions, targets, and reporting (on-going). Establish subcommittees (e.g. Data subcommittee) to review data requirements and calculations required to generate appropriate performance measures and targets.
- ii. Engage the Complete Team and the Department’s Data Development bureau in reconciling the (approximately) 128 miles of NJ’s enhanced NHS network, which is not part of the CMS-21 network, and therefore it lacks traffic volume (and other) data.
  - iii. Develop and execute a proposal to integrate the missing enhanced NHS roadway segments into the CMS-21 tool.
  - iv. Specifically discuss the need for and use of an analytical tool like PDA (Probe Data Analytics) Suite-to do the analysis and results summaries (reporting) for MAP-21 System Performance Measures.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Technical Analysis/Congestion Management – 4510017 / 5700  
**MANAGER:** Andrew Swords, Director  
**UNIT:** Commuter & Mobility Strategies

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### **GOALS/ACTIVITIES: (continued)**

- b. Incorporate archived operations data into the Planning Process
    - i. Establish processes for integrating, summarizing and presenting archived operations data for performance-based planning (on-going).
    - ii. Develop an annual bottlenecks ranking process on the NJ Interstate Routes and State Routes to enhance annual problem statement development and MAP-21.
    - iii. Participate in comprehensive training programs on the use of new tools and data, such as PDA Suite, RITIS, SPATEL, INRIX data, etc. (on-going).
    - iv. Integrate/coordinate the use of tools and data to minimize overlap/confusion and maximize output efficiency.
  - c. Initiate a comprehensive Project Assessment Program for Congestion Relief Projects
    - i. Enhance the Project Assessment Summary Template to include a Safety/Incident aspect and other potential summaries.
    - ii. Develop a companion (or standalone) one page summary document that provides simplified progress reporting in meeting performance goals and targets.
    - iii. Develop and use the new congestion tools to enhance mobility and reliability (on-going).
    - iv. Incorporate new tools (CMS-21, PDA Suite, etc.) to evaluate up to 3 recently completed projects for performance improvement, such as travel time reduction, speed increase, etc.
  - d. Progress the use of “Shared Measures” recommended by the Partners in Using Archived Operations Data for Planning Purposes.
    - i. Develop protocols and testing procedures for using the “shared measures” in various applications (e.g.; project before and after analyses) and formalize the process.
6. Encourage and Assist in Regional Collaboration
- a. Coordinate with each MPO in their Congestion Management Process (CMP).
    - i. Attend two coordination meetings per MPO in their yearly update cycle.
    - ii. Provide expert guidance on tools provided, such as CMS-21 (on-going).
    - iii. Provide coordination and technical support to the South Jersey Transportation Planning Organization (SJTPO) in their enhancement of a fully functional CMP (on-going).
  - b. Coordinate with regional stakeholders through the Complete Team.
    - i. Meet as needed during the SCIS cycle to develop the Congestion Relief portion of the overall document (as needed).
    - ii. Meet with the Complete Team up to four times a year to report out on congestion relief activities, MAP-21 System Performance Measures, share data and analytical techniques, and ensure consistency and clarity in communication to senior leadership and the general public (on-going).
  - c. Coordinate with the Users of Archived Operations Data Committee to establish baselines, data use, summary protocols, shared measures, etc. The Archived Operations Data is available from many sources, and I-95 Corridor Coalition’s Partners Using Archived Operations Data Committee is one of them (on-going).
  - d. Participate in the Probe Data Analytics Suite webinars and provide suggestions and comments to assist UMD staff in further enhancing the tool to meet the needs of regional stakeholders, including the addition of volume data and event data (e.g.; Map-21 System Performance Measures Widgets, incidents, construction, etc.) (on-going).
  - e. Coordinate with other groups, such as the I-95 Corridor Coalition, ITS-NJ and TRANSCOM, to further the collaboration, understanding, sharing and use of archived ops. data, system performance tools and techniques and the communication of results to a wide range of audiences (ongoing).

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Technical Analysis/Congestion Management – 4510017 / 5700  
**MANAGER:** Andrew Swords, Director  
**UNIT:** Commuter & Mobility Strategies

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### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

1. Utilize the fully functional CMS-21 that supports project development/evaluation and possibly for the MAP-21 System Performance Measures development and evaluation. Provide updated Traffic Volume data (2015) generated from CMS-21 to MPOs when complete.
2. A revised Congestion Relief Problem Statement Development Process.
3. Completed vetting process for problem area interchanges.
4. 100 Problem Statement Project Scoping screenings; 20 Project Assessments for CPSC meetings; 1 Capital Investment Strategy document.
5. 4 quarterly meetings with TSM (exact outcomes TBD).
6. Progress innovative solutions to congestion relief, such as a ramp-metering, Integrated Corridor Management (ICM) and adaptive signal control.
7. Contribution to TSM's Strategic Plan through analytical support and congestion relief expertise.
8. Development of a NJ (System Performance) Strategy for addressing the requirements of MAP-21 System Performance Measures final rule (PM 3). Collaborate with MPOs on target-setting for congestion-related MAP-21 System Performance Measures.
9. In coordination with the MPO's and other State agencies, incorporation of archived operations data (speed and incident data) into the planning process.
10. Institute a Project Assessment Program for congestion relief projects.
11. Participate in MPOs CMP Advisory Committee, coordinate and provide Technical support to the MPO's CMP processes.
12. Coordination with regional stakeholders through the Complete Team (Planning and Operations Collaboration)
13. Coordination with the Users of Archived Operations Data Committee. The Archived Operations Data is available from many sources, and I-95 Corridor Coalition's Partners Using Archived Operations Data is one of them.
14. Participate in the Probe Data Analytics Suite webinars and provide suggestions and comments to assist UMD staff in further enhancing the tool to meet the needs of regional stakeholders, thereby enhancing project performance analyses at the Department.
15. Coordination with other groups (I-95 Corridor Coalition, ITS-NJ, TRANSCOM) to further the use, understanding and collaboration of archived ops data and tools.

### **CONTRACTS:**

We anticipate need for a Consultant for performing the MAP-21 System Performance Measures as per the final rule. \$250,000 (Term: Three Years)

### **TRAVEL:**

TRB's annual conference – "International Conference on Transportation System Performance Measures and Data Conference" - \$1,500.

### **EQUIPMENT/SOFTWARE:**

Computers with higher processing power are needed for the staff to perform massive NPMRDS data analysis for the MAP-21 System Performance Measures (PM 3) (\$2,000 requested to update software year one).

### **STAFFING:**

Sudhir Joshi, Section Chief	1.0 py
Ira Levinton, Project Engineer, Planning	1.0 py
Neha Galgali, Principal Engineer, Planning	1.0 py
Sushant Darji, Civil Engineer Trainee	1.0 py

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Project Development - 4510017 / 7000  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### ***VISION:***

New Jersey will be a place where people of all ages and abilities are able to bicycle and walk. Those who live, work, or visit will be able to conveniently walk and bicycle with confidence, a sense of security in every community, and with the respect of all modes. Both activities will be a routine part of the transportation and recreation systems.

### ***MISSION:***

The purpose of the Bicycle and Pedestrian Program is to ensure the broadest implementation of the Statewide Bicycle and Pedestrian Transportation Master Plan, NJDOT's Complete Streets policy and FHWA's policies related to bicycle and pedestrian travel for the State of New Jersey.

Because New Jersey is a Pedestrian Safety Focus State, the objectives and tasks/actions relate to developing and funding capital projects to meet the needs of pedestrians and bicyclists and ensure that all studies, projects and programs include full consideration of bicycle, pedestrian and complete streets policy elements in order to help reduce pedestrian fatalities.

### ***GOALS/ACTIVITIES:***

Assist in the development and funding of capital projects on state system roadways and grant funded projects on other roadways and locations throughout the state to meet the needs of bicyclists, pedestrians and transit users of all ages and abilities.

Encourage and support the development and implementation of bicycle and pedestrian strategies, Complete Streets policies and multi-modal project development by MPOs, Counties, Municipalities, and TMAs via resource centers and advisory committees.

Provide appropriate technical assistance and professional development opportunities to department staff, outside agencies, and transportation professionals throughout the state.

Disseminate information to local governments on bicycle and pedestrian planning, Complete Streets and project implementation occurring throughout the state.

Obtain training on the Highway Safety Improvement Program and other bicycle- and pedestrian-related programs and issues from the Federal Highway Administration and other providers.



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Project Development - 4510017 / 7000  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:*

Task 1: Utilizing consultant assistance under existing and new Task Order Agreements, initiate concept development and other planning studies. These will address bicycle/pedestrian access and safety needs or opportunities on state system roadways or other high hazard pedestrian locations resulting in independent bicycle and pedestrian projects. Initiate policy studies as needed to support the full implementation of FHWA and NJDOT bicycle and pedestrian policy initiatives.

- Deliverable: Planning Studies with recommendations for implementation.
- Timeline: Two years
- Previous Year Progress:
  - Studies Completed: 0
  - Tech Memos Completed: 1
- Calendar Year 2018: Continue Task

Task 2: Utilizing consultant assistance under existing and new Task Order Agreements, implement the Pedestrian Safety Initiative through programs such as Pedestrian Road Safety Audits, Safe Routes to School and/or Safe Streets to Transit Programs.

- Deliverable: Up to six (6) new Pedestrian Road Safety Audits using data from NJDOT Safety Programs of high pedestrian crash corridors and recommend and implement improvements.
- Timeline: Two years
- Previous Year Progress:
  - Pedestrian Road Safety Audits Scheduled: 2
  - PSRAs Completed: 0
- Calendar Year 2018: Continue Task

Task 3: Initiate a study of school zones on state and county highways to determine if crash rates are higher than at other locations and if traffic regulations conflict with school zone design best practices. (New)

- Deliverable: Best Practice Guide
- Timeline: One year
- Calendar Year 2018: Complete Task

Task 4: Continue “before and after” studies to track performance of pedestrian and bicycle safety improvements. Develop a template of measures that indicate a project’s effectiveness.

- Deliverable: Pedestrian and Bicycle Safety Case Studies
- Deliverable: Performance Measure Template (New)
- Timeline: One year
- Calendar Year 2018: Initiate Task

Task 5: Convene a task force within the NJ BPAC to overhaul Title 39 and develop legislation on E-bikes. (New)

- Deliverable: Recommendations for overhauling Title 39
- Deliverable: Proposed legislation on E-bikes
- Timeline: Two years
- Previous Year Progress:
  - A task force has been established and has asked for consultant assistance.
  - Task order with consultant will be initiated for Year 2.
- Calendar Year 2018: Continue task
  - Will utilize memo from Bicycle and Pedestrian Resource Center dated 2014.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Project Development - 4510017 / 7000  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

Task 6: Utilize the Pedestrian Safety Management System, Safety Voyager crash data, roadway inventory data, and the bicycle and pedestrian master update to identify and prioritize pedestrian and bicycle crash locations and corridors for improvement.

- Deliverable: A prioritized list of pedestrian safety projects, sidewalk, shoulder and bike lane projects along state highways. (Ongoing)
- Timeline: Two years
- Previous Year Progress:
  - Awaiting contract with new safety management consultant to initiate
- Calendar Year 2018: Continue Task

Task 7: Evaluate and prioritize projects to improve bicycle and pedestrian access to and safety at transit facilities.

- Deliverable: A list of locations for bicycle and pedestrian improvements near transit.
- Timeline: One year
- Calendar Year 2018: Initiate Task

Task 8: In coordination with the Bureau of Safety Programs and the Division of Highway Traffic Safety, assist in the implementation of the Strategic Highway Safety Improvement Plan.

- Deliverable: An implementation plan for pedestrian and bicycle safety strategies in the Strategic Highway Safety Improvement Plan
- Timeline: One year
- Calendar Year 2018: Initiate Task

Task 9: Working in cooperation with Data Development, develop a process for obtaining accurate bicycle and pedestrian counts at various locations around the state.

- Deliverable: A Bicycle and Pedestrian Count program.
- Deliverable: A list of locations at which to obtain bike and pedestrian counts.
- Timeline: One year
- Calendar Year 2018: Initiate Task

Task 10: Utilize consultant resources and coordinate with the local city, school board, MPO, TMA and other non-profits to develop a pilot district-wide school travel plan for a large city in New Jersey modeled after Ohio's example in Cincinnati for use as a model for other cities to follow.

- Deliverable: A District-Wide School Travel Plan
- Timeline: Two years
- Previous Year Progress:
  - One district-wide school travel plan completed in Bayonne.
- Calendar Year 2018: Continue Task
  - Task order with consultant has been initiated for Year 2 for the development of a model for other cities in New Jersey.

Task 11: Maintain and enhance the statewide Bicycle and Pedestrian and Safe Routes to School Resource Centers by collecting and adding new information and administering the web sites, list serves and project databases; continue to develop and disseminate technical information on bicycle and pedestrian policy, planning and design issues.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Project Development - 4510017 / 7000  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)

- Deliverables: (all Ongoing)
  - Disseminate information contained in their library of information in response to requests and refer technical requests related to bicycle and pedestrian concerns to various agencies and experts in the field through the Help Desk and Listserv.
  - Organize a bi-annual Complete Streets Summit.
  - Organize a bi-annual Safe Routes to School Summit.
  - Continue with Year 5 of the NJ Ambassadors in Motion (NJAIM) program.
  - Conduct Pedestrian Safety Enforcement Trainings.
  - Convene and facilitate the NJ Bicycle & Pedestrian Advisory Committee (BPAC) and the NJ Safe Routes to School Coalition, which will morph into the SRTS Academy.
  - Develop four topic and or research papers on key issues that affect New Jersey bicycle and pedestrian program activities.
  - Develop and make presentations on Complete Streets, Safe Routes to School and bicycle and pedestrian planning and design topics, organize workshop and participate in panels at appropriate forums such as TransAction, the NJ State League of Municipalities Annual Meeting, the NJ School Boards Association Annual Meeting, the American Planning Association – NJ Chapter Annual Conference, Pro Bike/Pro Walk, and the Safe Routes to School National Conference.
  - Develop and implement criteria and strategies to assist with the implementation of New Jersey’s Safe Routes to School (SRTS) Program. Provide administrative support to an internal NJDOT SRTS steering committee and an external statewide SRTS Coalition. Produce a quarterly newsletter on SRTS success stories across the state.
  - Develop and present a series of up to four webinars on SRTS programs in NJ. Present up to three local trainings across the state. Assist the coordinator with technical requests and presentations on the program. Undertake research to help determine the effectiveness of New Jersey’s program.
  - Continue to develop and distribute the NJ Walks and Bikes Blog that provides information on bicycle/pedestrian planning, design, and project development and other related activities, including progress in achieving the Governor’s commitment to develop bicycle accommodations.
  - Continue to develop and distribute the NJ Safe Routes Scoop Blog that provides information on SRTS programs and activities across New Jersey.
  - Continue to implement the Safe Routes to School Non-Infrastructure Program as a partnership between NJDOT, the NJ SRTS Resource Center and NJ’s eight Transportation Management Associations (TMAs). Train and supervise regional SRTS coordinators to enable them to offer free technical assistance to communities with School Travel Plans, bicycle and pedestrian safety lessons, Walk and Bike to School Day events and Walking School Bus programs.
  - Write up and disseminate case studies of successful projects.
- Timeline: Two years
- Previous Year Progress:
  - Quarterly progress reports from both resource centers are available.
- Calendar Year 2018: Continue Task
  - Proposed work programs for both resource centers are available.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Project Development - 4510017 / 7000  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

Task 12: Utilizing consultant assistance under existing and new Task Order Agreements, carry out a program of local technical assistance to communities in developing bicycle/pedestrian-planning studies to address local bicycle and pedestrian access and safety needs and encouraging them to adopt Complete Streets and school travel policies as well as apply for the LAB Bicycle Friendly designation.

- Deliverable: Local Bicycle/Pedestrian Planning Assistance studies for up to six (6) municipalities and/or two (2) counties per year.
- Timeline: Two years
- Previous Year Progress:
  - Local Planning Studies completed: 6
- Calendar Year 2018: Continue Task

Task 13: Maintain & improve NJ's Bicycle Friendly State Ranking and Designation (currently Bronze, improved from 12<sup>th</sup> to 11<sup>th</sup> in 2015) and assist communities with Walk and Bike Friendly Designation applications.

- Deliverable: Submit yearly application to the League of American Bicyclists.
- Deliverable: Completed applications for up to six (6) municipalities.
- Timeline: Two years
- Previous Year Progress:
  - Awaiting new process from the League of American Bicyclists
- Calendar Year 2018: Continue Task

Task 14: Expand Outreach to Senior Community

- Deliverable: Conduct up to six (6) Senior Walkability Workshops
- Timeline: Two years
- Previous Year Progress:
  - Two walkability workshops held
- Calendar Year 2018: Continue Task

Task 15: Assist in the selection of federal-aid Transportation Alternatives and Safe Routes to School grant funded projects and in the selection of locally initiated bicycle and pedestrian projects submitted as candidates for funding through the Transportation Trust Fund.

- Deliverable: List of TA, SRTS and TTF funded projects
- Deliverable: Provide assistance to SRTS grantees in getting projects authorized and implemented.
- Timeline: Two years
- Previous Year Progress:
  - Municipal Aid and Bikeways grants were awarded.
- Calendar Year 2018: Continue Task

Task 16: Utilizing consultant assistance under existing Task Order Agreements, assist with the implementation of the statewide Safe Routes to School (SRTS) Program under a national umbrella.

- Deliverable: Continue efforts
- Timeline: Two years
- Previous Year Progress:
  - Ongoing.
- Calendar Year 2018: Continue Task

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Project Development - 4510017 / 7000  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

Task 17: Coordinate with the efforts of the Bureau of Local Aid and Economic Development's Safe Routes to School, Bikeways and Safe Streets to Transit grant programs. Coordinate with the efforts of the Division of Highway Traffic Safety's Pedestrian Safety grant program.

- Deliverable: Provide planning assistance
- Timeline: Two years
- Previous Year Progress:
  - Safe Routes Design Assistance is being provided to previous grantees.
  - Design assistance kickoff meetings attended: 2
- Calendar Year 2018: Continue Task

### **CONTRACTS:**

Year three funding for the agreement with Rutgers University, Voorhees Transportation Center (VTC) to carry out additional data collection and other bicycle/pedestrian policy research and professional development activities with the Bicycle/Pedestrian Resource Center

Total: \$647,491

Year three funding of the agreement with Rutgers University, Voorhees Transportation Center (VTC) to carry out the evaluation, ongoing technical assistance, and research associated with the federally-funded Safe Routes to School Program with the NJ SRTS Resource Center

Total: \$566,591

Total Contractual: \$1,214,082

**TRAVEL:** None anticipated at this time.

**EQUIPMENT:** None anticipated at this time

### **STAFFING:**

Nipa Maniar, Transportation Engineer	1.0 py
William Riviere, Principal Planner	0.9 py
Reba Oduro, Civil Engineer Trainee	1.0 py
Shannon Namey, Contract Administrator 2	1.0 py

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Safety Projects - 4510017 / 7100  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### ***VISION:***

New Jersey will be a place where people of all ages and abilities are able to bicycle and walk. Those who live, work, or visit will be able to conveniently walk and bicycle with confidence, a sense of security in every community, and with the respect of all modes. Both activities will be a routine part of the transportation and recreation systems.

### ***MISSION:***

The purpose of the Bicycle and Pedestrian Program is to ensure the broadest implementation of the Statewide Bicycle and Pedestrian Transportation Master Plan, NJDOT's Complete Streets policy and FHWA's policies related to bicycle and pedestrian travel for the State of New Jersey.

Because New Jersey is a Pedestrian Safety Focus State, the objectives and tasks/actions relate to developing and funding capital projects to meet the needs of pedestrians and bicyclists and ensure that all studies, projects and programs include full consideration of bicycle, pedestrian and complete streets policy elements in order to help reduce pedestrian fatalities.

### ***GOALS/ACTIVITIES:***

Develop and fund capital projects on state system roadways and other roadways and locations throughout the state to meet the safety needs of bicyclists, pedestrians and transit users of all ages and abilities.

Ensure that all studies, projects and programs in the Department include consideration of bicycle and pedestrian safety needs in accordance with federal, Complete Streets and other state policies.

Encourage and support the development and implementation of bicycle and pedestrian safety strategies, Complete Streets policies and multi-modal project development by MPOs, Counties, Municipalities, and TMAs.

Provide appropriate technical assistance and professional development opportunities to department staff, outside agencies, and transportation professionals throughout the state.

Disseminate information to local governments on bicycle and pedestrian planning, Complete Streets and project implementation occurring throughout the state.

Obtain training on the Highway Safety Improvement Program and other bicycle- and pedestrian-related programs and issues from the Federal Highway Administration and other providers.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Safety Projects - 4510017 / 7100  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

Task 1: Working in cooperation with the Bureau of Safety Programs, work towards institutionalizing Road Diets in the Department as per the Every Day Counts initiative. Continue pilot studies with the counties and MPOs.

- Deliverable: A study of locations along state highways where road diets may be effective in reducing vehicle speeds and crashes.
- Deliverable: Road diet projects on state highways in the NJDOT project pipeline (New)
- Timeline: Two years
- Previous Year Progress:
  - Pilot process is being revised to include NJTPA.
  - Pilot in DVRPC region has been selected and coordination with county is underway.
- Calendar Year 2018: Continue Task

Task 2: Working in cooperation with the Bureau of Safety Programs, develop a prioritization methodology for Mid-Block Pedestrian Crossings, HAWK signals and transit stop improvements.

- Deliverable: A prioritization methodology for the Mid-Block Pedestrian Crossings and HAWK signals.
- Deliverable: Mid-block crossings, Hawk signals and transit stop improvements on state highways in the NJDOT project pipeline
- Timeline: One year
- Calendar Year 2018: Complete Task

Task 3: Coordinate with FHWA on PEDSAFE and BIKESAFE Countermeasure Design Workshops. These trainings will be useful in our efforts to help counties and municipalities apply countermeasures for pedestrian and bicycle safety.

- Deliverable: PEDSAFE and BIKESAFE Workshops
- Timeline: One year
- Calendar Year 2018: Initiate Task

**CONTRACTS:** None specific to safety

**TRAVEL:** None anticipated

**EQUIPMENT:** None specific to safety

### **STAFFING:**

Khalid Shaikh, Transportation Engineer 1.0 py

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Statewide Goods Movement - 4510017 / 5340  
**MANAGER:** Paul S. Truban  
**UNIT:** Freight Planning & Services

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### **VISION:**

Develop a safe, efficient and integrated intermodal goods movement system throughout New Jersey and its coastline that supports the operation and growth of the region's critical industries while leveraging New Jersey's assets and natural resources with strategic investments in freight transportation infrastructure.

### **MISSION:**

To support the development of an integrated intermodal goods movement transportation system in New Jersey that enhances mobility, network performance, and system reliability across all modes while considering economic development and smart growth opportunities. By working closely with FHWA, FMCSA, MPO's, and other federal, state, and local agencies, this unit will also shape the policy, programs and projects necessary to identify and address priority freight issues.

### **GOALS/ACTIVITIES:**

1. Freight Planning-- Coordinate and manage significant freight related studies, programs, or policy initiatives among all modes on behalf of the Division of Multimodal Services.
  - a) Participate in freight related studies, programs, and regional planning efforts among all modes conducted by the MPOs and other transportation or government agencies (FRIO, DVRPC's Freight Centers, G-MAP, NYMTC Rail Freight Council, Short-line Rail Committee) that help to raise the awareness of the value of freight to New Jersey.
  - b) Develop public/private partnerships and coordinate closely with various agencies to advance the implementation of critical freight projects.
  - c) Advance freight recommendations for Trucking, Rail, Aviation, and Maritime modes as identified in previous freight planning studies. Develop mechanism to track implementation progress.
  - d) Monitor international and national logistics trends and driving forces that may profoundly impact freight delivery demand and patterns.
2. Address the requirements regarding Freight Planning in close coordination with the State's MPO's as noted within the provisions of MAP 21 and the recent "FAST" Act.
  - a) Develop the next Freight Plan in close cooperation with our MPO Partners and key stakeholders that encompasses all modes, provides a list of prioritized freight projects within New Jersey, and meets "FAST" Act requirements. Develop specific *Freight Performance Measures* and communication mechanisms to convey freight trends and assist in the alignment of freight investment and capital improvement strategies. Develop and/or enhance Multimodal freight data collection efforts, analysis tools, databases and models.
  - b) Develop a *Freight Management System* to prioritize capital projects, or segments of the state highway system, based upon weighted factors and measures that are considered important for goods movement in NJ.
  - c) Establish a *Freight Advisory Committee and related sub-committees* that will serve as a forum and place for raising the issues and concerns, identifying problems and needs, and proposing and discussing and advancing rail project and solutions for the freight industry. Coordinate closely with both public and private partners including the MPOs on the establishment and ongoing management of a *Freight Advisory Committee* that will serve as a nexus of statewide freight planning and analysis.



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Statewide Goods Movement - 4510017 / 5340  
**MANAGER:** Paul S. Truban  
**UNIT:** Freight Planning & Services

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### *GOALS/ACTIVITIES: (continued)*

- d) Provide necessary information and perform analysis to support designation of any changes to the National Multimodal or National Highway Freight Networks within the state.
  - e) Designate National Highway Freight Network critical urban and rural freight corridors as well as identify new intermodal connectors to key freight facilities. Maintain data for the state's official National Highway Freight Network (NHFN) and the National Multimodal Freight Network (NHMN), National Highway System (NHS) connectors, and intermodal connectors serving intermodal freight facilities. Coordinate data with parallel efforts being conducted by MPOs (e.g., DVRPC's Philly Freight Finder and NJTPA's Freight Activity Locator).
  - f) Establish priorities to pursue available federal freight programs and funding opportunities (e.g., high priority corridor designation, NHFP, INFRA, TIGER).
  - g) Establish the New Jersey Freight Advisory Committee and subcommittees to work with both public and private partners to continue to address freight related issues (i.e. 286k, truck rest stops, and port issues among others) in New Jersey.
  - h) Maintain data for the state's official National Highway Multimodal Network (NHMN), National Highway System (NHS) connectors, and intermodal connectors serving intermodal freight facilities.
3. Participate in and advance programs or projects that will promote greater usage of the freight rail system in coordination with NJ Transit and MPO partners.
    - a) Support and help advance improvements in the freight rail system to maximize efficiency and effectiveness and improve safety and capacity along key rail corridors.
    - b) Advance projects for restoration and improvement of rail corridors, improved terminal operations and resolution of dimensional issues, particularly height and weight limitations (286K and "Plate F" issues) and Double Stack Clearance.
    - c) Support projects to improve air quality including the procurement of equipment and other emission reduction projects (Truck Replacement, Forklift and Cargo Handling).
    - d) Assist the NJTPA in developing the Pilot Freight Concept Development program. Coordinate Subject Matter Experts from within the NJDOT as needed to advance freight projects in the program.
    - e) Support DVRPC's efforts to improve rail and highway access to designated freight centers.
  4. Monitor and reduce the impact of trucks on infrastructure statewide.
    - a) Work with the NJSP to address recommendations contained within FHWA's 2015 Commercial Vehicle Size & Weight Program Report. Focus on implementation targeted enforcement activities along those roadways with a high percentage of OW vehicles.
    - b) Monitor NJDOT's weigh-in-motion station data to determine where heavy trucks may be operating and the types of truck configurations causing the most impact to the infrastructure in order to guide the implementation of targeted enforcement efforts or changes in legislation.
    - c) Work with neighboring states and the NASTO Subcommittee on Highway Transport to advance harmonization efforts underway to streamline OS/OW Permitting process and regulations among states. The goal is to harmonize permitting requirements and regulations to make it easier for

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Statewide Goods Movement - 4510017 / 5340  
**MANAGER:** Paul S. Truban  
**UNIT:** Freight Planning & Services

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### ***GOALS/ACTIVITIES: (continued)***

truckers traveling across multiple jurisdictions to obtain their permits, which in turn will also help to ensure better compliance with permitting requirements.

- d) Work with FMCSA and NJSP to monitor and improve roadway safety to strengthen commercial truck compliance with hours-of-service regulations that prevent fatigue. Electronic logging devices will reduce the industry paperwork and increase efficiency of roadside law enforcement.
  - e) Work with the trucking industry to develop informational materials for truckers in order to comply with state and federal motor carrier regulations and size/weight regulations. Assist NJTPA as needed in the agency's development of a Truck Management Best Practice Handbook
  - f) Advance recently completed research that quantified the impact that Overweight trucks have on New Jersey pavement and bridges in coordination with national research under MAP-21 Comprehensive Truck Size and Weight Limits Study.
  - g) Incorporate recommended changes from recent research efforts into NJ OS/OW regulations found under N.J.A.C 13:18 and/or Title 39:3-84. Work with NJMVC and NJSP to rewrite and adopt new regulations.
  - h) Modify OS/OW permitting regulations to address new federal requirements regarding the size and weight of vehicles that may travel on the Interstates and National network as defined in "FAST" Act.
  - i) Support projects to improve air quality for trucks (i.e., Diesel Engine Retrofits or Truck Replacement Incentive Programs) and other emission reduction projects.
  - j) Work with MPOs, cities, and municipalities to manage downtown deliveries.
5. Monitor truck volumes and crash data statewide to help track the performance and needs along key highway freight corridors.
    - a) Monitor the movement of trucks throughout the state through the use of weigh-in-motion data and produce a Large Truck Monitoring Program Report every 3 years. Evaluate patterns and trends.
  6. Monitor state-owned freight rail rights-of-way in accordance with FRA Inspection & Reporting Requirements
    - a) Monitor and preserve key freight rail corridors owned by the state for future use.
    - b) Perform stewardship functions for these corridors including the lease, licensing or removal of encroachments from those rights -of-way.
    - c) Utilize the unit's Rail Bridge Management System to schedule and oversee inspection of state owned freight rail bridges.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Statewide Goods Movement - 4510017 / 5340  
**MANAGER:** Paul S. Truban  
**UNIT:** Freight Planning & Services

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### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Complete final draft of new Multimodal Freight Plan, including an “Investment Plan”.
- Continue development of a *Freight Management System*.
- Develop FHWA required *Freight Performance Measures* and reporting mechanisms.
- Continue to develop and advance efforts of the newly formed Freight Subcommittee and associated subcommittees. Establish a Statewide Freight Advisory Committee using the Rail Freight Subcommittee as a foundation.
- Advance efforts to identify critical urban freight corridors and update NHS connectors, the NHFN and the NMFN.
- Incorporate findings from the *Impact of Overweight Trucks on NJ Pavement and Bridges* research study and other research efforts into re-write of N.J.A.C 13:18 & Title 39:3-84 regulations.
- Publish educational materials for changes in Commercial Motor Vehicle registration and OS/OW permitting requirements.
- Complete construction on the state’s first E-Screening Weigh Station Bypass System for trucks which will bring NJ into Core CVISN Compliance.
- Identify and prioritize truck/rest stops parking facilities on NHFN by implementing a plan; authorizing NHFP funds to open and or expand these existing facilities.
- Conduct and perform update to Large Truck Monitoring Program Report (Last completed in 2012).
- Complete “Transportation HazMat Report” to the legislature.

### **CONTRACTS:**

1. \$475,000 additional funding for any work associated with the completion or advancement of the new Multimodal Freight Plan, Freight Advisory Committee and Completion of Freight Management System Tool and Development of Freight Performance Measures.
2. \$100,000 funding to support the continuation of Analysis of Infrastructure Damage from OS/OW Vehicles on NJ Roadway System.
3. \$50,000 to report performance measures: Freight Reliability, Targets and Goals to FHWA.

### **TRAVEL:**

- AASHTO Sub-committee on Highway Transport (SCOHT) conferences
- TRB Truck Size and Weight Committee Meetings/Events
- NASTO OS/OW Permit Harmonization Task Force
- SCRA Annual Heavy Haul Transport Symposium

\$10,000 funding to attend events and conferences (\$5,000 per year).

### **STAFFING:**

Himanshu Patel	Project Engineer	0.75 py
Andrew Ludasi	Principal Engineer	0.90 py
Andrew Clark	Program Specialist 3	0.80 py
Mariyam Kazmi	Planner Trainee	<u>0.95 py</u>
	Total:	3.40 py

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Improvement Programs (TIP/STIP) Preparation – 4510017 / 5985  
**MANAGER:** James Vari  
**UNIT:** Capital Investment Planning and Development

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### ***VISION:***

A capital program seeking the enhancement of safety, preservation and mobility of the transportation system that reflects sound long-range planning, investment strategies and capital program development guided by performance-based, asset management among state, regional and local agencies in New Jersey.

### ***MISSION:***

To implement both highway and transit projects to achieve the statewide long-range transportation plan and capital investment strategy goals and objectives using an asset management, performance-based approach. This involves the development of the state highway, transit and local TIPs for the three Metropolitan Planning Organizations (MPOs) which together constitute the State's STIP. The development, coordination, and MPO and Governor's approval of these TIPs are a prerequisite for the use of federal (FHWA and FTA) capital funds.

### ***GOALS/ACTIVITIES:***

1. Develop and submit the multi-year STIP to the federal agencies by September 1<sup>st</sup>
  - a. Federal and State funding resource projections developed by December 1<sup>st</sup>
  - b. MPO TIPs developed and approved by July 31<sup>st</sup>
  - c. Public participation completed by June 30<sup>th</sup>
  - d. Annual Capital Program approved by June 30<sup>th</sup>
  - e. Public outreach will be conducted and coordinated with the MPOs
  - f. Modifications and amendments will be processed to maintain an accurate and up-to-date TIP/STIP documents
2. eSTIP Enhancements
  - a. New user interface
  - b. Budget request "Pool Sheets" module
  - c. Fiscal Constraint module
  - d. Training and manuals
  - e. Study & Development monthly updates in e-STIP
  - f. New database for Problem Statements
  - g. New module to prepare Problem Screenings
3. Review Problem Statements
  - a. Review and analyze Problem Statements submitted to Dept. by various management systems, MPOs and local entities
  - b. Prioritize Problem Statements for advancement following revised process guidelines implemented 1/2016.
  - c. Purchase 'Decision Lens' to prioritize both Problem Screenings and Concept Development.
  - d. Modify SPR funding for procurement.
4. Development of Transportation Asset Management Plan (TAMP)
  - a. Assist with development of TAMP, focus on financial elements, such as life cycle cost and risk management, investment scenarios and strategies and financial plan

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

- Develop and negotiate with the three MPOs a 5-Year Capital Plan, submit a FY2018-2027 STIP to FHWA/FTA for approval, present to the public and post on the NJDOT website.
- Governor and Legislature approval of a FY 2019 Transportation Capital Program and post on the NJDOT website. Geographical display of Capital Program projects by July 15, 2018.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Improvement Programs (TIP/STIP) Preparation – 4510017 / 5985  
**MANAGER:** James Vari  
**UNIT:** Capital Investment Planning and Development

### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

- Submit a draft FY 2019 Capital Program the State Legislature in April 2018 and post on the NJDOT website.
- Develop and negotiate with the three MPOs a Study and Development Program for FY 2018-2019.
- Work with NJIT, NJ Transit, PANYNJ and FTA to track transit project obligations.
- Provide MPOs with financial plans updates for review and comment.
- Track and provide updates on High Priority Projects.
- Provide agendas and minutes to the MPOs and FHWA regarding the outcome of the Capital Program Screening Committee and Capital Program Committee meetings.
- Review, prioritize and advance Problem Statements into Dept. project pipeline.
- Develop TAMP in collaboration with other state entities (NJT, NJTA, etc.) for FHWA review and approval.

### **CONTRACTS:**

\$30,000 – Overtime budget to develop and update the 10 year STIP database and documents by May 1 (\$15,000 per year)

\$633,909 – Installation of e-STIP modules into the NJDOT web page plus maintenance by NJIT. Development of Problem Screening database and assistance with preparation of Problem Screenings. (Year 1-\$600,000)  
 Modification added \$33,909 to upgrade GIS to ArcSDE technology.

\$210,000 - procurement of ‘Decision Lens’ to help optimize cross-asset prioritization in both the Problem Screening and Concept Development phases. This data-driven program will provide the framework for cross-asset prioritization to help the department with the requirements and implications of MAP 21 and FAST Act.

**TRAVEL:** None.

**EQUIPMENT:** None.

### **STAFFING:**

<u>Name</u>	<u>Title</u>	<u>Person Years</u>
Amy Polachak	Project Manager, Transportation	1.00
John Micikas	Administrative Analyst IV	0.30
George Baier	Budget Analyst	1.00
Stephen Fowler	Budget Analyst	1.00
Smruti Gariwala	Senior Engineer Transportation	1.00
Sheryl Grant	Administrative Analyst IV	0.10
Pam Szargowicz	Administrative Analyst III	0.30
Naomi Barns	GIS Specialist	<u>0.10</u>
	Total:	4.80

## STATE PLANNING AND RESEARCH PROGRAM, 2017 – 2018

**ACTIVITY:** Concept Development – 4510017 / 5980  
**MANAGER:** Joseph Dee  
**UNIT:** Division of Project Management

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### ***VISION:***

To sustain and improve New Jersey's multi-modal transportation network by developing project plans in a manner that ensures multi-disciplinary reviews at the earliest stages.

### ***MISSION:***

Guided by Performance Based Programming and the Capital Investments Strategy, to wisely invest federal resources in a way that enables the Department to advance the project planning process as efficiently as possible.

NJDOT utilizes the Concept Development phase to assess the condition existing infrastructure within the project limits as well as to take note of nearby educational, cultural and other resources that could be affected by the project. During Concept Development, NJDOT Subject Matter Experts (SMEs) and consultants assess a wide range of factors, including environmental impacts, pedestrian and bicycle accommodations, and compliance with the Americans with Disabilities Act within the project limits.

Concept Development studies result in a Preliminary Preferred Alternative (PPA) that will fulfill the need and purpose of the project, and informs the Preliminary Engineering and Final Design phases.

### ***GOALS/ACTIVITIES:***

1. Maximize the use of FHWA-approved strategies to create pools of eligible consultants from which selections for multiple projects can be made.

- a. Term Agreements and Multi-project solicitations significantly reduce staff time and expense to solicit and evaluate technical proposals from consultants
  - i. conserve federal resources
  - ii. efficiently advance projects through the pipeline toward Preliminary Engineering/Final Design.

2. FHWA is part of the review and approval process for all CD studies, including studies for those projects designated to be a Project of Departmental Interest (PODI). FHWA approval of CD studies is required for the NJDOT Capital Program Committee (CPC) to advance any project to Preliminary Engineering, or in the case of a limited scope project, to Final Design. The STIP/TIP is updated on a two-year cycle. The MPO Policy Boards approve their Planning and Development Work Programs, which combined form the Study and Development Program of the Department.

3. Those bridge and pavement projects that are proposed for advancement via the limited scope process are screened at the beginning of the CD phase to reveal any fatal flaws and uncover basic information. Screenings are utilized to verify the appropriateness of a project advancing as a limited scope project. Those projects deemed appropriate for the limited scope process advance from CD to FD. Projects deemed inappropriate for the limited scope process follow the standard delivery process, which includes a PE phase after CD and prior to FD.

4. Major elements of the screenings and studies are data collection, field investigations, internal coordination with subject matter experts and development of the scope of work and cost estimate. Screenings can also be performed for other transportation needs such as drainage, safety, pedestrian, motorcycle, etc.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Concept Development – 4510017 / 5980  
**MANAGER:** Joseph Dee  
**UNIT:** Division of Project Management

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### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Provide status to MPOs upon request for CD phase-specific information on projects beyond that information which the Department already makes available to the MPOs. Meet with MPOs if requested to coordinate and clarify project/program compatibility.
- Work with lead engineers and MPO's to support the refinement of corridor/sub-area plans
- Identify the appropriate assignment and preliminary scope of the problem. Tier 2 Screening identifies the potential path of a problem but will not necessarily identify any solutions to the problem(s) identified or encountered.
- Identify any fatal flaws and uncover any other items that should be included to develop a thorough and complete scope of work for the bridge deck, culvert, pavement rehabilitation or any other screenings.
- Conduct concept development studies, as programmed, that have adequately assessed the community impacts for consideration by NJDOT and the MPO's for advancement to preliminary engineering in CY 2018.

In May 2017, NJDOT selected twelve (12) consultants to perform federally funded Concept Development studies via term agreement task orders. NJDOT anticipates issuing several task orders by the end of FFY 17, and approximately two dozen more in FFY 18.

### **CONTRACTS:**

Existing Multi-year contracts previously authorized prior to CY 2017-2018:

- C00S (328) - Route 3 & 495 Concept Development Study: \$ 1,454,489
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Existing contracts authorized in the current 2017-2018 program period

- 0007(301) Route 71, Bridge over Shark River, Concept Development: \$1,035,940 (\$788,284 consultant; \$247,656 in house)

CY 2017 Multi-year contracts to be authorized:

Term Agreements for a variety of bridge, pavement, rockfall and safety projects: 12 three-year term agreements, capped at \$2 million each, were established in FFY 17 for this purpose. Each task order emanating from these term agreements will be treated as a distinct federal project.

Contracts worth a total of \$3,903,662.54 are anticipated to be authorized by the end of CY 2017 as part of a multi-project solicitation for Concept Development for three complex projects:

- Rt 3 EB Bridge over Hackensack River and Meadowlands Parkway - \$1.1 million estimate \$1,074,093.91
- Rt 9W, Bridge over Rt 95, Rt 1&9, and Rt 4 - \$1.4 million estimate \$1,461,442.92
- Rt 46, Bridges over Rt 17 - \$1 million estimate \$1,368,125.71

In CY 2018, NJDOT anticipates issuing approximately 24 task orders worth approximately \$10 million for federally funded Concept Development studies.

**TRAVEL:** None.

**EQUIPMENT:** None.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Concept Development – 4510017 / 5980  
**MANAGER:** Joseph Dee  
**UNIT:** Division of Project Management

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**STAFFING:**

Roadway Design: 19 employees multiplied by 0.09 person-years for a total of 1.71 person-years

Dante Sadama – Supvg. Engr. 2	Binh Vo – Supvg. Engr. 2
Mario Ritualo – Supvg. Engr. 2	Vinu C. Patel – Proj. Engr.
Asma Hussain – Pr. Engr,	Edward D’Zurilla – Proj. Engr.
Aurel Dogaru – Proj. Engr.	Indravadan M. Patel – Proj. Engr.
Stephen Rizzuto – Proj. Engr.	Daud M. Ferozan – Pr. Engr.
Nalinkumar Patel – Proj. Engr.	Jairo Forero – Proj. Engr.
Parvaneh Mahgerefteh – Pr. Engr.	Nanda Kumar – Pr. Engr.
Ashokkumar A. Patel – Pr. Engr.	Arthur Christian – Pr. Engr.
Glenn Adams – Pr. Engr.	Mahendraku Shah – Pr. Engr.
KimVan Le – Pr. Eng. Trans.	

Division of Project Management: 92 employees multiplied by 0.33 person-years each for a total of 30.36 person years.

Alam, Muhammad – Pr. Engr	Dhulesia, Babulal - Proj Manager
Antala, Chiman - Project Manager	Dogias, Nick - Proj Manager
Assad, Hanaa - Principal Engr	Eindhoven, Nicole - Proj Manager
Ayub, Muhammad - Principal Engr	Estrada, Javier - Principal Engr
Bhavsar, Nilesh - Principal Engr	Jeyamohan, Jay – Project Manager
Bisda, Roland - Principal Engr	Ezeuka, Paul – Proj Engr Utilities
Campi, John - Project Manager	Fakhouri, Ahmad - CET
Carr, Mike - Project Manager	Figaro, Gaelle - Senior Engr
Challender, Mearl - Proj Manager	Galarza, Luis - Principal Engr
Chivulescu, Nina - Proj Engr SD	Gandhi, Anupam - Project Manager
Colquitt, Willie – Proj.Engr Planning	Gusovskaya, Emma - Senior Engr
Dalwadi, Nisharg - CET	Hameed, Omar - Proj Manager
D’Arcy, Ed - Project Manager	Hebert, Miguel - Principal Engr
Dave, Bhagirath - Asst Engr	Henry, Charles - Project Manager
Davé, Hardev - Project Manager	Henry, Kevin - Principal Engr
Davis, Ashley - Asst Engr	Hurst, Aimee - Asst Engr
Deeck, Scott – Project Manager	Patel, Dishitikumar – CET



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Concept Development – 4510017 / 5980  
**MANAGER:** Joseph Dee  
**UNIT:** Division of Project Management

*STAFFING: (continued)*

Kasbekar, Mike - Project Manager	Patel, Pankesh - Project Manager
Kaushal, Kunal - Project Manager	Patel, Rashmin - Project Manager
Kennard, Amy - Project Manager	Patel, Vandna - PMS 3
Kuhn, George - Project Manager	Patel, Vijaykumar - Asst Engr
Kurcon, Piotr - PMS 1	Weldegebreal, Abel – CET
Locke, Don - Project Manager	Thorn, Scott – Project Manager
Maevsky, Andrew – Proj Manager	Patel, Meeta - Asst Engr
Manz, Chris - Project Manager	Qureshi, Ahmad - Project Manager
Marcellus, Evens - Project Engr SD	Ramirez, Sara - Asst Engr
McCleerey, John - Project Manager	Rana, Dhananjay - Principal Engr
Mejia-Aragona, Zoila - Proj Manager	Patel, Mahesh - Project Manager
Middleton, Lynn - Proj Manager	Rasheed, Yousef - CET
Molavi, Towfigh - Senior Engr	Sohn, Thomas – Project Manager
Mortaja, Nader - Principal Engr	Shah, Bhavesh N. PMS 2
Mulcahy, Brian - Project Manager	Shah, Bhavesh V. - Asst Engr
Patel, Niranjana – PMS 1	Shah, Bhupendra - Project Engr SD
Najem, Frozan - PMS 2	Shah, Dinesh - PMS 2
Nasef, Nirmin - Project Manager	Shah, Kamlesh - Supervising Engr II
Obidike, Anthony – Proj Engr Planning	Shah, Pankaj - Principal Engr
Pandya, Jay - Project Manager	Shah, Samir - Project Manager
Parmar, Pooja - Asst Engr	Shamali, Taimur - Senior Engr
Patel, Ashish - Asst Engr	Shelat, Hemant - Principal Engr
Patel, Chirag - Asst Engr	Tran, Nam Giao T. - CET
Verner, Bob - Project Manager	Vijayakumar, Sangarat –PMS 2
Upadhyay, Arpita - Principal Engr	Worth, George - Project Manager
Varone, Greg - Principal Engr	Yousoufzai, Wahida - Senior Engr
Zim, John - Project Manager	Urbano, Alec -- CET
Bhatt, Prakash – CET	Majeed, Aliaa –Asst Engr
Singh, Jeevanot – PMS 2	Yoon, Jae – CET

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Travel Projections – 4510017 / 5350  
**MANAGER:** Joseph Dee  
**UNIT:** Project Management

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### ***VISION:***

Provide technical expertise in travel projections and traffic analysis to various areas of NJDOT as it relates to traffic design data, pavement design data and future year travel projections.

### ***MISSION:***

To support various NJDOT units by projecting future travel volumes and developing related data to ensure that proposed projects have adequate capacity and are economically designed. The mission includes:

- Providing specific traffic analyses, e.g., regional vs. local travel characteristics determination, that may be required for project development/advancement
- Providing review, consultation, and advice to those units when travel projections and/or traffic analyses are undertaken by their consultants
- Providing planning support/input during concept development by participating in scoping meetings and plan reviews.

### ***GOALS/ACTIVITIES:***

The Division of Project Management (DPM) relies on the Bureau of Transportation Data & Safety's (BTDS) Traffic Monitoring System-Traffic Volumes Data Collection Activity. DPM reviews BTDS's files for available data and requests counts if none are available to complete DPM's Travel Projections Activity.

DPM worked with BTDS to develop an internal Data Warehousing project to make traffic counts (Phase I) and other traffic related information (Phase II) readily available to anyone in the Dept. This effort has been completed and provides for immediate count access improving on the monthly updates located on the web site.

Additionally, consultant agreements include a new provision in the standard articles requiring consultants to submit any traffic data to BTDS. This Activity – Traffic Monitoring System-Database Maintenance – also provides the seasonal and axle correction factors necessary for calculating the projections under the DPM Travel Projections Activity. The DPM Activity also makes use of the BTDS activity of Weights and Speed Monitoring using Weigh-In-Motion (WIM) sites for classification. DPM also identifies locations of defunct WIM stations during Pavement screenings to consider updating or repairing sites as related to the Infrastructure Renewal activity. DPM continually uses the Straight Line Diagrams, Road Inventory and Mileposting and the Functional Classification System and Federal Aid System Products in the Travel Projections Activity.

NJDOT is aware that the MPOs also gather traffic volume data. NJDOT is working with the MPOs to develop a Memorandum of Understanding (MOU) to implement this initiative.

Through accepted procedures, and in a timely manner, provide future year travel projections and other requested traffic analyses or consultation in support of concept development, preliminary engineering and design for requesting NJDOT units. Provide planning support/input during concept development.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

Complete approximately 40 travel projections and other analyses/consultation requests.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Travel Projections – 4510017 / 5350  
**MANAGER:** Joseph Dee  
**UNIT:** Project Management

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**CONTRACTS:** None.

**TRAVEL:** None.

**EQUIPMENT:** None.

**STAFFING:**

Davis, Ashley – Assistant Engineer	.01py	Tran, Nam Giao – Asst Engineer	.01py
Dalwadi, Nisharg – Asst Engineer	.01py	Parmar, Pooja – Asst Engineer	.01py
Patel, Ashish – Assistant Engineer	.01py	Fakhouri, Ahmad – Asst Engineer	.01py
Figaro, Gaelle - Senior Engineer	.01py	Meeta Patel – Asst Engineer	.01py
Henry, Kevin - Principal Engineer	.01py	Yousoufzai, Wahida - Senior Engineer	.01py
Patel, Niranjan – Assistant Engineer	.01py	Molavi, Towfigh – Senior Engineer	.01py
Ramirez, Sara – Asst Engineer	.01py	Patel, Chirag – Asst Engineer	.01py
Shamali, Taimur – Senior Engineer	.01py	Patel, Vijaykumar – Asst Engineer	.01py
Vijayakumar, Sangarant -PMS 2	.01py	Shah, Bhavesh -PMS 2	.01py
Jeyamohan, Jey – Project Manager	.01py	Mortaja, Nader – Principal Engineer	.01py

Total Person years: 0.20 py

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Concept Development – Environmental Support Services – 4510017 / 5111  
**MANAGER:** Joseph Sweger  
**UNIT:** Bureau of Landscape Architecture and Environmental Solutions, Office of Environmental Solutions

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### ***VISION:***

Transportation projects will be developed to avoid and or minimize impacts to the natural and man-made environments.

### ***MISSION:***

Establish environmental parameters to be considered in the development of the Preliminary Preferred Alternative (PPA) while balancing the transportation needs identified in this phase. Based on sufficient environmental analysis, determine the appropriate NEPA classification (Categorical Exclusion, Environmental Assessment, Environmental Impact Statement) for the PPA that will be prepared in the next project development phase.

### ***GOALS/ACTIVITIES:***

1. Ensure a thorough and comprehensive environmental constraint analysis is conducted during this phase consistent with the FHWA planning and environmental linkages approach for CD projects
2. Ensure socioeconomic factors, particularly community concerns related to Environmental Justice, livability, sustainability, and quality of life issues are identified and considered in the initial project development phases
3. Determine the appropriate environmental document consistent with NEPA requirements for the PPA
4. Gain Agency support for Purpose and Need that can be used to assess future alternatives in the NEPA process
5. Ensure appropriate community involvement has been initiated to fulfill NEPA requirements

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

- Environmental screening reports for CD reports
- Identification of probable NEPA classifications for PPAs

### ***CONTRACTS:***

N/A

### ***TRAVEL:***

N/A

### ***EQUIPMENT:***

N/A

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Concept Development – Environmental Support Services – 4510017 / 5111  
**MANAGER:** Joseph Sweger  
**UNIT:** Bureau of Landscape Architecture and Environmental Solutions, Office of Environmental Solutions

### STAFFING:

#### OES Year 1

Adams, Laura, Env Specialist 2 (provisional)	.35py	Mikusa, J. P., Env. Specialist 3	.35py
Asadpour, J., Section Chief (provisional)	.35py	Nguyen, Henry, Sr. Engineer Trans.	.25py
Asadpour, Z., Env. Engineer 4	.35py	Osian, Edmund, Env. Specialist 3	.35py
Bancroft, Kevin, Sr. Engr. Transportation	.35py	Pandya, Sunay, Sr. Engineer Trans.	.25py
Bevans, K., Env. Engineer 4	.25py	Patel, Bakula, Prin. Engr. Trans.	.35py
Bird, Robert, Env. Specialist 3	.35py	Patel, Kairavi, Env Specialist 1	.35py
Blick, Sandra, Env. Engineer 4	.25py	Patel, Vishal, Assistant Engineer Trans.	.25py
Britton, James, Prin. Engr. Transportation	0.0py	Rathbun, Ryan, Env. Spec. 2(provisional)	.35py
Cheney, Amber, Env. Specialist 4	.35py	Rauzino, David, Prin. Engr. Transportation	.25py
Ciappi, Michael, Env Specialist 1	.35py	Reali, Ryan, Sr. Engr. Transportation	.35py
Coe, Sharon, Env Specialist 1	.35py	Szczepkowski, S., Env. Specialist 3	.35py
Dekovitch, Rachel, Env Specialist 1	.35py	Shutz, T., Env. Specialist 4	.35py
Dill-Wendrzycki, Susan, Env. Specialist 3	0.0py	Trivedi, Meeta, Assistant Engineer Trans.	.25py
Fairfax, Brenna, Env. Specialist 4	.35py	Wilityer, M., Env. Specialist 3	.35py
Gervasi, Cecilia, Env. Specialist 1	.35py	Wolfram, T., Superv. Engr. II	.23py
Gupti, Aarti, Env. Specialist 3	.35py		
Hawkinson, Bruce, Project Manager Trans.	.35py		
McCue, J., Env. Comp. Insp. 1	.23py		

Total Person Years: 9.91

#### OES Year 2

Adalumo, Tomi, Env. Services Trainee	.35py	McCue, J., Env. Comp. Insp. 1	.23py
Asadpour, J., Section Chief (provisional)	.35py	Mikusa, J. P., Env. Specialist 3	.35py
Asadpour, Z., Env. Engineer 4	.35py	Nguyen, Henry, Sr. Engineer Trans.	.25py
Bancroft, Kevin, Sr. Engr. Transportation	.35py	Osian, Edmund, Env. Specialist 3	.35py
Bevans, K., Env. Engineer 4	.25py	Pandya, Sunay, Sr. Engineer Trans.	.25py
Bird, Robert, Env. Specialist 3	.35py	Patel, Bakula, Prin. Engr. Trans.	.35py
Blick, Sandra, Env. Engineer 4	.25py	Patel, Kairavi, Env Specialist 1	.35py
Cheney, Amber, Env. Specialist 4	.35py	Patel, Vishal, Assistant Engineer Trans.	.25py
Ciappi, Michael, Env Specialist 1	.35py	Rauzino, David, Prin. Engr. Transportation	.35py
Coe, Sharon, Env Specialist 1	.35py	Szczepkowski, S., Env. Specialist 3	.35py
Dekovitch, Rachel, Env Specialist 1	.35py	Shutz, T., Env. Specialist 4	.35py
Dill-Wendrzycki, Susan, Env. Specialist 3	0.0py	Swanton, Kristin, Env. Services Trainee	.35py
Doherty, Morgan, Env. Services Trainee	.35py	Trivedi, Meeta, Assistant Engineer Trans.	.35py
Fairfax, Brenna, Env. Specialist 4	.35py	Vaidya, Charu, Env. Specialist 3	.35py
Ferris, Ariela, Env. Services Trainee	.35py	Wilityer, M., Env. Specialist 3	.35py
Gervasi, Cecilia, Env. Specialist 3	.35py	Wolfram, T., Superv. Engr. II	.25py
Gupti, Aarti, Env. Specialist 3	.35py	Hawkinson, Bruce, Project Manager Trans.	.35 py
Magar-Chhabra, R., Env. Svc. Trainee	.25py		

Total Person Years: 11.08

Year 2 table reflects loss of four staff from Year 1 and addition of six staff.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Geodetic Survey Services – 4510017 / 5100  
**MANAGER:** Mike Martynenko  
**UNIT:** Geodetic Survey

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### ***VISION:***

To ensure projects are developed avoiding and or minimizing impacts to the human, manmade, and natural environments by gathering data for base maps

### ***MISSION:***

Gathering this mapping information during Concept Development will help ensure that projects minimize impacts and therefore are in compliance with provisions of federal and state environmental regulations. In areas where impacts do occur develop appropriate mitigation commensurate to the impacts generated. Gathering data for base mapping to identify these potential areas is a key function.

This process is done during the Concept Development phase as alternatives are investigated that meet project needs, yet also avoid and/or minimized environmental impacts. The culmination of this process leads to an approved environmental document demonstrating compliance with federal/state environmental regulations and is consistent with the FHWA planning and environment linkages approach. Use completed base map for the alternatives analysis.

The primary mission of the New Jersey Geodetic Survey Unit are to preserve, maintain, densify and inspect the official control survey network, North American Datum 1983 (NAD83) and North American Vertical Datum 1988 (NAVD88), within the state as per Chapter 118 supplementing P.L. 1966, c. 301, to submit precise horizontal and vertical surveying data to the National Geodetic Survey (NGS) for inclusion into the National Spatial Reference System (NSRS); to establish Capital Program Management (CPM) design project specific primary horizontal and vertical control as needed; to give survey support to the Department of Transportation (DOT) mapping, photogrammetry, boundary determination and graphic information system (GIS) activities.

### ***GOALS/ACTIVITIES:***

- Assist in the development of mapping and plans for project study area, including identification of environmental resources/constraints that must be considered in developing alternatives.
- Complete the appropriate level of documentation needed to establish what the formal individual project approvals will be required in the next phase of work (Preliminary Engineering) demonstrating compliance with the National Environmental Policy Act (NEPA).
- Establish monument data into the NSRS maintained by NGS to define NAD83 and NAVD88 framework. This is in compliance with State Law and is published by NGS on the internet for project and public use.
- Continue to contribute to the NGS GPS on Bench Marks Campaign via the NGS Online Positioning User Service (OPUS) to improve future Hybrid GEOID Models, increasing access to NAVD 88 and enabling conversions to the new gravity-based vertical datum in 2022.
- Continue to establish vertical/horizontal control in deficient areas of the State.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

- Establish and maintain survey network required for the base maps required for project study areas using Aerial Photogrammetry and related GPS tools.
- Establish photogrammetric control for three (3) project base maps.
- Establish and maintain statewide NSRS control network.

### ***CONTRACTS:***

None.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Geodetic Survey Services – 4510017 / 5100  
**MANAGER:** Mike Martynenko  
**UNIT:** Geodetic Survey

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**TRAVEL:**

None

**EQUIPMENT:**

None

**STAFFING:**

J. Coyle, Project Engineer	.40py	M. Iorio, Engineering Tech 3	.80py
R. Kuzma, Principal Engineer	.80py	F. Andrescik, Engineering Tech 4	.80py
J. Romer, Engineering Tech 1	.80py	S. Miller, Engineering Tech 5	.80py
M. Kucharski, CET	.80py	J. Bentsen	.30py
J. Vetiaque, CET	.80py		

Total Person Years:        6.3

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Bridge Screening and Scoping – 4510017 / 6100  
**MANAGER:** Jayant Dalal/Eddy Germain  
**UNIT:** Bureau of Structural Design and Geotechnical Engineering/Bureau of Structural and Railroad Engineering Services.

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### ***VISION:***

Develop transportation problem statements for structural work that result in a projects that can proceed through the project delivery process in a timely manner and without delays.

### ***MISSION:***

Develop well-defined and well-justified structural scope of work to improve the condition of Structurally Deficient bridges, Sign Structures and other structures on the State system.

### ***GOALS/ ACTIVITES:***

1. Perform screenings and develop structural scope of work for the Structurally Deficient bridges, and culverts under Limited Scope Project Delivery, and Standard Capital Project Delivery.
  - a. From the list developed by the Bridge Management System, prioritize the list of structures for Deck/Superstructure replacement in accordance with the limited scope program.
  - b. Verify with other units to see if any of these structures are already programmed in any projects.
  - c. Review inspection reports for each structure.
  - d. Perform field screening inspection to determine structural scope of work.
  - e. Prioritize and program structures to advance to Concept Development phase under limited scope program.
2. Perform screenings for Replacement of all deficient sign structures.
  - a. From the list developed by the Bridge Management System, group the sign structures based on the location in the State.
  - b. Program sign structures to proceed to the Concept Development Phase.
  - c. Perform field screening inspection to evaluate various options for sign structure replacement.
  - d. Check conflicts with other projects.
  - e. Coordinate with other units and agencies.
  - f. Prepare the checklist for the structural portion as part of screening.
3. Review and Assist during Concept Development Phase for all projects.
  - a. Attend meetings and act as Subject Matter Expert during Concept Development Phase.
  - b. Review and provide comments on the draft CD report.
  - c. Review and approve structural scope of work as part of CD process

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

1. Continue to perform screenings for the replacement of Deck/Superstructures of Structurally Deficient bridges and sign structures under limited scope program.
2. Continue to program the bridges for Deck/Superstructures Replacement based on the screening under limited scope program.
3. Continue to program replacement of deficient sign structures.
4. Continue to assist and act as an SME for the Concept Development Phase.



## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Bridge Screening and Scoping – 4510017 / 6100

**MANAGER:** Jayant Dalal/ Eddy Germain

**UNIT:** Bureau of Structural Design and Geotechnical Engineering/Bureau of Structural and Railroad Engineering Services.

**TRAVEL / CONTRACTS / EQUIPMENT:** None.

**STAFFING:** Bureau of Structural Design and Geotechnical Engineering (Unit 509-13)

EMPLOYEE	TITLE	CY '17	CY '18
SHIRISH PATEL	SUPER HWY ENGINEER BRIDGE DESIGN SPEC RVW	0.1	0.0
DAN IOSEB	SUPER HWY ENGINEER BRIDGE DESIGN SPEC RVW	0.1	0.0
PRAKASH PATEL	PROJECT ENGINEER STRUCTURAL TRANS	0.1	0.1
HARSHAD PATEL	PROJECT ENGINEER STRUCTURAL TRANS	0.1	0.1
BHARAT SHAH	PROJECT ENGINEER STRUCTURAL TRANS	0.1	0.1
RAMESH SUVAGIYA	PROJECT ENGINEER STRUCTURAL TRANS	0.1	0.1
STEVEN CIAPANNA	ENGINEER STRUCTURES PLANS & SPECS	0.1	0.0
TSHODA LAN	PR ENGINEER STRUCTURAL BRIDGE DESIGN	0.1	0.0
MOHAMMED FASIHUDDIN	PR ENGINEER STRUCTURAL BRIDGE DESIGN	0.1	0.1
MOHAMAD HASAN	PR ENGINEER STRUCTURAL BRIDGE DESIGN	0.1	0.1
ROBERT KUO	PR ENGINEER STRUCTURAL BRIDGE DESIGN	0.1	0.0
MD.IDRISSI HASSANI	SENIOR ENGINEER STRUCTURAL BRIDGE DESIGN	0.0	0.1
DAVID YOON	SENIOR ENGINEER STRUCTURAL BRIDGE DESIGN	0.1	0.0
JUAN JAVIER	SENIOR ENGINEER STRUCTURAL BRIDGE DESIGN	0.1	0.1
WAIJHA FAROOQI	SENIOR ENGINEER STRUCTURAL BRIDGE DESIGN	0.1	0.1
KUNAL BAKHTARWALA	SENIOR ENGINEER STRUCTURAL BRIDGE DESIGN	0.1	0.1
HUMAYUN KABIR	SENIOR ENGINEER GEOTECHNICAL	0.1	0.1
NICHOLAS FACAS	ASSISTANT ENGINEER TRANSPORTATION	0.1	0.1
STEVEN SQUIBB	ASSISTANT ENGINEER TRANSPORTATION	0.1	0.0
SHAISHAV RANA	ASSISTANT ENGINEER TRANSPORTATION	0.1	0.0
ANDREW BRANIN	ASSISTANT ENGINEER TRANSPORTATION	0.1	0.1
ILAN LEVY	ASSISTANT ENGINEER TRANSPORTATION	0.1	0.1
EVODIA IBRAHIM	ASSISTANT ENGINEER TRANSPORTATION	0.1	0.1
PRUTHVI PATEL	ASSISTANT ENGINEER TRANSPORTATION	0.1	0.1
DARRYL SERASPE	ASSISTANT ENGINEER TRANSPORTATION	0.1	0.1
CHAU V TRAN	ASSISTANT ENGINEER TRANSPORTATION	0.1	0.1
MINHAZ KHAN	CIVIL ENGINEERING TRAINEE	0.0	0.1
RYAN WHITLOCK	CIVIL ENGINEERING TRAINEE	0.0	0.1
LEON COLLINS	CIVIL ENGINEERING TRAINEE	0.0	0.1
DINESH DHAKAL	CIVIL ENGINEERING TRAINEE	0.0	0.1
MICHAEL WILCOX	CIVIL ENGINEERING TRAINEE	0.0	0.1
ROBERT GAISER	ENGINEERING TECHNICIAN 1	0.05	0.05

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Bridge Screening and Scoping – 4510017 / 6100  
**MANAGER:** Jayant Dalal/ Eddy Germain  
**UNIT:** Bureau of Structural Design and Geotechnical Engineering/Bureau of Structural and Railroad Engineering Services.

**STAFFING: (continued)** Bureau of Structural Design and Geotechnical Engineering (Unit 509-13)

EMPLOYEE	TITLE	CY '17	CY '18
CHRISTIAN BECKMAN	ENGINEERING TECHNICIAN 1	0.05	0.05
CLAYTON TICE	ENGINEERING TECHNICIAN 1	0.05	0.05
GAVIN SQUIRES	ENGINEERING TECHNICIAN 4	0.05	0.05
DOUGLAS KOPEC	ENGINEERING TECHNICIAN 4	0.05	0.05
FRANCIS BURKE	ENGINEERING TECHNICIAN 4	0.05	0.05
KIMBERLY SHARP	SUPERVISING ENGINEER, C & M	0.05	0.05
EID MORTAGY	PROJECT ENGINEER, GEOTECHNICAL	0.05	0.05
ALEXANDER MURAWSKI	PROJECT ENGINEER, GEOTECHNICAL	0.05	0.05
KAMALA RAVISHANKAR	PROJECT ENGINEER STRUCTURAL TRANSPORTATION	0.05	0.05
KUMAR SELVAKUMAR	PRINCIPAL ENGINEER, GEOTECHNICAL	0.05	0.05
BAVIKERI LAXMANA	SENIOR ENGINEER GEOTECHNICAL	0.05	0.0
MUSSIE EYOB	SENIOR ENGINEER GEOTECHNICAL	0.05	0.0
MD S RAHMAN	ASSISTANT ENGINEER TRANSPORTATION	0.05	0.05
MARIO SAZO	ASSISTANT ENGINEER TRANSPORTATION	0.05	0.05
MOHAB HUSSEIN	ASSISTANT ENGINEER TRANSPORTATION	0.05	0.05
SHARAD DUMRE	CIVIL ENGINEERING TRAINEE	0.0	0.05
JONATHAN CARPIO	CIVIL ENGINEERING TRAINEE	0.0	0.05
GEZAHEGAN EJETA	CIVIL ENGINEERING TRAINEE	0.0	0.05
JOHN JAMERSON	PROJECT ENGINEER GEOLOGY	0.05	0.05
AMANDA MCELWAIN	PRINCIPAL ENGINEER GEOLOGY	0.05	0.05
VANESSA MEADES	SENIOR ENGINEER GEOLOGY	0.05	0.05
ROBERT STINSON	ASSISTANT GEOLOGIST	0.05	0.05
	TOTAL PERSON YEARS:	3.50	3.35

**STAFFING:** Bureau of Structural and Railroad Engineering Services (Unit 509-10)

EMPLOYEE	TITLE	CY '17	CY '18
ALBERT VIRGILIO	SUPER HWY ENGINEER BRIDGE DESIGN SPEC RVW	0.1	0.0
SAM SALIM	PROJECT ENGINEER SURFACE DESIGN	0.1	0.0
ALI J. NAJEM	PROJECT ENGINEER SURFACE DESIGN	0.1	0.1
JESS M. MENDENHALL	SENIOR ENGINEER STRUCTURAL BRIDGE DESIGN	0.1	0.1
MALAY KHETANI	ASSISTANT ENGINEER TRANSPORTATION	0.05	0.1
ADEL KHALIFA	CIVIL ENGINEERING TRAINEE	0.0	0.1
	TOTAL PERSON YEARS:	0.45	0.40

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Rockfall Hazard Management System – 4510017 / 6000  
**MANAGER:** Jayant Dalal  
**UNIT:** Bureau of Structural Design & Geotechnical Engineering

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### ***VISION:***

The Department's Rockfall Hazard Management System (RHMS) directs state investment to maintain the State's inventory of NJDOT-maintained State and Interstate highway rock cut slopes and installed Rockfall prevention measures in order to reduce the hazard of rockfall-related impacts to the motoring public.

### ***MISSION:***

To improve the Department's Rockfall Hazard Management System to assist in developing the Statewide Transportation Plan

### ***GOALS/ACTIVITIES:***

1. Validate accuracy, efficiency and timeliness of RHMS data collection.
  - a. Continuously validate/conduct updates and QA on the RHMS field data.
  - b. Develop new rankings as required due to changes in cut slope ratings through mitigation projects.
  - c. Investigate Rockfall events requiring re-evaluation in site conditions and existing RHMS rating factors.
2. Increase the proportion of NJDOT-maintained highway rock cut slopes rated 'moderate' to 'low' in RHMS.
  - a. Develop appropriate project priorities and recommendations for Asset Management and Capital Investment Strategy.
  - b. Program rockfall mitigation projects for implementation through the Capital Project Delivery Process.
  - c. Develop Rockfall mitigation alternatives for implementation through Maintenance Engineering.
  - d. Develop and implement methods of tracking progress in meeting established goals.
3. Maximize the effectiveness of the investment in Rockfall mitigation on NJDOT-maintained highways.
  - a. Develop long-term funding projections. Modify as appropriate.
  - b. Evaluate innovative and cost-effective mitigation methodologies to maximize available funding.
  - c. Continue development/refinement of performance measures.
  - d. Conduct risk assessment to identify specific risks with potential of preventing the meeting of performance targets.
  - e. Develop procedures to assist in project development to ensure goals are met for all assets in the system.
  - f. Develop and utilize multiple design solicitations to streamline mitigation project design activities.
4. Transition to Performance Based Planning and Programming.
  - a. Development of a Performance-Based Capital Investment Plan approach to transportation planning and programming to support achievement of transportation system performance outcomes.

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Rockfall Hazard Management System – 4510017 / 6000  
**MANAGER:** Jayant Dalal  
**UNIT:** Bureau of Structural Design & Geotechnical Engineering

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### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

1. Conduct update and refinements to RHMS rating data.
2. Evaluate and validate prioritization of Rockfall mitigation for project programming.
3. Review accuracy, efficiency and timeliness of RHMS data collection.
4. Develop and program capital projects to meet established performance goals.
5. Review recent rockfall mitigation projects to further develop long-term funding projections.

***TRAVEL / CONTRACTS / EQUIPMENT:*** None.

### ***STAFFING:***

John Jamerson, Project Engineer, Geology	.60 Person-years
Amanda McElwain, Principal Engineer, Geology	.50 Person-years
Vanessa Meades, Senior Engineer, Geology	.50 Person-years
Robert J. Stinson, Assistant Geologist	<u>.50 Person-years</u>
Total:	2.10 Person-years

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** New Jersey Scenic Byways Program Management – 4510017 / 5600  
**MANAGER:** Joseph Sweger  
**UNIT:** Landscape Architecture

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### **VISION:**

Improve the effectiveness and the sustainability of the NJ Scenic Byways Program through the implementation of the updated program guidelines and work with the byways sponsors on increasing mobility with respect to travel and tourism activities and improve the byway travelers' experiences as they travel the byways.

### **MISSION:**

To provide support and technical assistance to the NJ Scenic Byway Program, the byway users, and the byway sponsors, to ensure compliance with the federal regulatory requirements of the Federal Highway Administration (FHWA), and to work with the byways sponsors on sustainability and livability of the byways and on matters relating to the role of intermodal transportation in facilitating mobility with respect to travel and tourism activities.

### **GOALS/ACTIVITIES:**

1. Maintain the role of the Scenic Byway Advisory Committee and hold two meetings per year.
2. Complete and close the Scenic Byway Projects awarded through previously received National Scenic Byway Grant Cycles.
  - a. Delaware River Scenic Byway: Land Acquisition – Devil's Tea Table
  - b. Palisades Interstate Parkway: Fort Lee Museum
3. Educate the public and the sponsors about the New Jersey Scenic Byway Program and the individual byways.
  - a. Educate the NJ byway sponsors and other groups that can assist with moving the program forward by holding one byway workshop.
  - b. Create a byway app/website for the byway traveler to obtain information for each of the byways and their byway stories, points of interest and other information helpful to the traveler.
  - c. Incorporate the overarching inclusion of travel and hospitality as defined by the National Advisory Committee on Travel and Tourism Infrastructure (NACTTI) through the FAST Act and provide information, advice, and recommendations to the byways on matters relating to the role of intermodal transportation in facilitating mobility with respect to travel and tourism activities.
4. Foster livable communities through place-based investments that increase transportation choices and access to transportation services along the scenic byways and increase the quality of life through having positive experiences along the scenic byways.
  - a. Educate and train byway sponsors on ways to work on implementing their corridor management plans and sustaining their byways.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Work with the byway sponsors on finishing the remaining projects from the federal funded grants.
- Hold 1 Scenic Byway workshop as project kickoff with Travel and Tourism initiative.
- Work with the byway sponsors in strengthening the sustainability of their byways and on matters relating to the role of intermodal transportation in facilitating mobility with respect to travel and tourism activities.

### **CONTRACTS / TRAVEL/ EQUIPMENT:**

None

### **STAFFING:**

Cindy Bloom-Cronin      Project Engineer, Landscape      .5

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Emergency Response Planning – 4510017 / 5500  
**MANAGER:** Robert Burd  
**UNIT:** NJDOT Office of Emergency Management/ Operations Support

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### **VISION:**

Achieve a reliable, prepared, and resilient transportation system, by ensuring an optimum level of awareness and preparedness by key personnel for all hazards

### **MISSION:**

To build, sustain and improve New Jersey Department of Transportation's capability to prepare for, protect against, respond to, recover from and mitigate all hazards that may affect the Department's infrastructure, personnel and the State of New Jersey.

### **GOALS/ACTIVITIES:**

1. Ensure the continuity and resiliency of NJDOT's Internal Operations during and after significant emergency events through the development and implementation of NJDOT's Continuity of Operations Plan (COOP)
  - a. Update the COOP Plan
    - i. Research Department of Homeland Security, Transportation Research Board, and American Association of State Highway and Transportation Officials guidance and reports to develop an appropriate planning format for NJDOT COOP.
    - ii. Develop a planning team with representatives from key units within the Department.
    - iii. In consultation with Human Resources, develop a process to manage continuous updating of business continuity status for Department personnel.
    - iv. Each major business unit to complete an identification of essential supporting activities and staff.
    - v. In coordination with Facilities and Information Management, develop a plan to support implementation of the COOP through identification of alternate work facilities and equipment resources.
  - b. Conduct training of key personnel
    - i. Develop a COOP training plan for the following groups at a minimum:
      1. Executive Policy Team
      2. COOP Planning Team
      3. Emergency Relocation Group personnel
      4. Essential Personnel
  - c. Conduct at least a Table Top exercise with key personnel
    - i. Prepare After-Action Report (AAR) and Improvement Plan (IP)
    - ii. Implement corrective actions consistent with IP
  - d. Research number and location of resources and assets in support of the plan

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Emergency Response Planning – 4510017 / 5500  
**MANAGER:** Robert Burd  
**UNIT:** NJDOT Office of Emergency Management/ Operations Support

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### *GOALS/ACTIVITIES: (cont'd.)*

2. Maintain and improve New Jersey's Reverse Lane/Contraflow Plans to support the evacuation of State residents prior to significant emergency events
  - a. Update five current Contraflow/Reverse Lane Plans, with input from allied support agencies and field personnel
  - b. Conduct Contraflow plan training of the following groups at a minimum:
    - i. key field personnel
    - ii. Senior Executives
    - iii. Operations Support personnel
    - iv. Traffic Systems Management personnel
  - c. Conduct at least a Table Top (Executives) and a Full Scale exercise of the plans
    - i. Participation from NJ State Police, NJ Turnpike Authority, South Jersey Transportation Authority, NJ Department of Corrections, NJ Transit, and affected counties.
    - ii. Prepare After-action Report (AAR) and Improvement Plan (IP)
    - iii. Implement corrective actions consistent with IP
  - d. Research number and location of assets in support of the plan
  - e. Research and Assess the need to further develop similar plans for other regions of the State.
  
3. Develop a resiliency strategy in relation to the Departments long range plan and asset tracking.
  - a. Collaborate with other NJ and regional transportation agencies on resilience projects.
    - i. Work with PANYNJ, NJTRANSIT, and Stevens Institute of Technology to link our efforts to improve our flood stage situational awareness to an existing situational awareness product they have developed.
  - b. Develop the strategy in concert with the FEMA National Frameworks.
  - c. Research and assess the need for a separate Department Mitigation Plan.
  - d. Assess how to better leverage Geographic Information System assets (such as HAZUS) to develop a better situational awareness for resilience planning and decision making.
  - e. Coordinate externally with MPOs, academia and non-profits to enhance community resilience and climate adaptation planning by engaging in the planning efforts across the state and through the sharing of information and data regarding transportation infrastructure and resources.
  - f. Improve resiliency through the establishment of evacuation zones in the State to support emergency plans and response.
  - g. Develop a storm water asset management program/plan to ensure storm water assets function as intended assisting in minimizing roadway flooding enabling the state highway system to be resilient in storm events.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Emergency Response Planning – 4510017 / 5500  
**MANAGER:** Robert Burd  
**UNIT:** NJDOT Office of Emergency Management/ Operations Support

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### *GOALS/ACTIVITIES: (cont'd.)*

4. Maintain and expand Emergency Support Function (ESF) #1 Stakeholder Group.
  - a. Convene quarterly meetings of the ESF 1 Stakeholder Group.
  - b. Conduct planning meetings with County OEMs to develop a protocol for interaction with a County ESF #1 Lead.
  - c. Conduct planning meetings with New Jersey's three Metropolitan Planning Organizations to ensure coordination of emergency management planning activities with regional assessments of resiliency and climate change implications.
  - d. Develop communications and information sharing (Situational Awareness) procedures with member agencies in order to develop a focused and current common operating picture during incidents and events.
  - e. Exercise plans and procedures with member agencies to improve the effectiveness of planning actions.
  - f. Plan and convene an annual Statewide ESF#1 Stakeholder Seminar.
5. Develop a plan to place NJDOT in compliance with NIMS (National Incident Management System).
  - a. Implement training plan to ensure compliance with NIMS training objectives for key personnel
  - b. Develop a plan to conduct NIMS training for new hires.
  - c. Participate on and contribute to the State Hazard Mitigation Planning process.
6. Update and maintain NJDOT Emergency Operations Plan (EOP)
  - a. Review and revise the current NJDOT EOP to be consistent with the updated State EOP.
  - b. Develop and implement an annual review process and schedule to ensure timely updates to the plan as needed.
7. Ensure the protection and resilience of NJDOT's critical transportation infrastructure assets and compliance with NIPP (National Infrastructure Protection Plan)
  - a. Provide guidance and support to NJ-OHSP on the Transportation Systems Sector-Specific Plan and the Transportation Sector Working Groups
  - b. Ensure "Best Practices", when updated, are consistent with transportation industry standards (e.g., AASHTO Security Guidelines)
  - c. Encourage NJDOT's Subject Matter Experts to participate fully in the seven Transportation Sub-sector Working Groups (Passenger Rail, Freight Rail, Maritime/Port, Ferries/Water Taxis, Motor Coach, Motor Truck, and Highways, Bridges, and Tunnels)
  - d. Participate in identifying and accommodating transportation security considerations during special events.
  - e. Identify and collect critical infrastructure resiliency information to support resiliency planning and priorities.
    - i. Conduct infrastructure walk-throughs identifying vulnerabilities and attack pathways for inclusion into threat and risk assessments to support resiliency strategy development.
    - ii. Conduct outreach with County OEMs to identify local planning consequences and concerns related to the loss of critical infrastructure and subsequently identify resilience, mitigation and climate adaptation strategies.
    - iii. Analyze the general vulnerability of infrastructure to climate change, specifically sea level rise, to determine future resiliency and climate change adaptation planning needs.



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Emergency Response Planning – 4510017 / 5500  
**MANAGER:** Robert Burd  
**UNIT:** NJDOT Office of Emergency Management/ Operations Support

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### *GOALS/ACTIVITIES: (cont'd.)*

8. Develop and complete a Jurisdictional Threat and Hazards Risk Assessment
  - a. Establish target communities.
    - i. Based upon risk, vulnerability, or history
  - b. Develop a geographical risk assessment.
    - i. Examine the characteristics and components of risk to those communities in geographically sensitive areas.
  - c. Conduct risk assessment.
    - i. Based on target communities and transportation infrastructure assets.
  - d. Develop risk management process / system.
  - e. Use the findings to develop transportation input into the State Threat and Hazards Risk Assessment.
9. Maintain and improve New Jersey Emergency Support Function (ESF) #1 Transportation Annex to the State's Emergency Operations Plan and participate in the Region's/State's Catastrophic Planning initiatives
  - a. Develop an assessment of important information and intelligence needs of the transportation agencies within NJESF1.
    - i. Identify critical situational awareness information as it relates to the operating status of transportation infrastructure assets to develop a better common operating picture for executive decision makers.
    - ii. Collaborate with other transportation agencies to establish a plan for information sharing of this intelligence during emergency incidents.
  - b. Develop a Statewide Evacuation Plan as part of the State Emergency Operations Plan and Regional initiatives.
  - c. Participate in regional emergency planning effort with other states, contiguous to New Jersey, and MPOs.

### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:*

- Update Emergency Operations Plan
- Improve Continuity of Operations Plan
- Draft an overall resiliency strategy
- Draft of a Statewide Evacuation Plan
- Implement NIMS Training Plan for the Department
- Update of the five contraflow plans
- Train & Exercise the five contraflow plans
- Train & Exercise the Continuity of Operations Plan
- Update the ESF 1 Annex to the State Emergency Operations Plan
- Conduct a Statewide ESF 1 Stakeholders seminar & a one meeting per quarter

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Emergency Response Planning – 4510017 / 5500  
**MANAGER:** Robert Burd  
**UNIT:** NJDOT Office of Emergency Management/ Operations Support

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### **CONTRACTS:**

Emergency Planning contractor for emergency response planning support. Specifically the update of the Department's Emergency Operations Plan, Statewide Evacuation plan, training plans, develop a resiliency strategy, and Jurisdictional Threat and Hazards Risk Assessment

2017: \$561,600;            2018: \$374,400

### **TRAVEL:**

American Association of State Highway and Transportation Officials (AASHTO) - Special Committee on Transportation Security and Emergency Management (SCOTSEM) Annual Meeting - This special committee meeting supports the accomplishment of the Emergency Response planning activities through increased education. The topic and theme focus of the Special Committee meeting is focused on Resilience, Evacuation Management, Cyber Security to name a few. The increased emphasis on security and infrastructure protection directly relates to the development of long term resiliency and mitigation planning.    Budget: \$2,082 (one attendee each year)

### **EQUIPMENT:**

None.

### **STAFFING:**

Edward Rogacki, Principal Engineer	0.90
Thomas Flanagan, Confidential Assistant	0.90
Ryan Whytlaw, Sr. Trans. Analyst	0.90
Kristen Buddenbaum, Administrative Analyst 3	0.90
Total	3.60

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Systems Management - Concept Development – 4510017 / 5300  
**MANAGER:** Wasif Mirza  
**UNIT:** TSM Mobility and Systems Engineering

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### ***VISION:***

Develop solutions to transportation problem statements that result in a project that can proceed through the project delivery process in a timely manner and without delays.

### ***MISSION:***

Deliver well-defined and well-justified Purpose and Need Statements focusing on the primary transportation requirement to be addressed and concludes in the selection of a Preliminary Preferred Alternative (PPA) that addresses a problem using advanced technology solutions that are cost effective, considerate of the environment, safe, secure and preserve existing systems that are supported by the community.

### ***GOALS/ACTIVITIES:***

Concept Development (CD) Studies assess the present and future transportation needs of a specified roadway segment or area and define recommended physical and/or operational concepts that should be pursued to satisfy those needs and achieve sustainable solutions. The CD Phase will deliver a well-defined and well-justified Purpose and Need Statement focusing on the primary transportation need to be addressed and concludes in the selection of the Preliminary Preferred Alternative (PPA). The following major elements can be included in the CD Process: evaluation of needs, analysis of physical deficiencies, early and intensive public involvement, environmental screening using the FHWA planning and environmental linkages approach, integration of the federal Congestion Management process, analyses of multi-modal alternatives, definition of potential concepts and/or complementary strategies as well as staging and phasing opportunities, and order of magnitude construction cost estimate. As part of this pipeline process, the Capital Program Screening Committee and the Capital Program Committee ultimately will endorse a project to advance from CD to Final Design Engineering. FHWA is part of the review and approval process for CD reports. FHWA approval of the CD report is required for the Capital Program Committee (CPC) to advance the project to Final Design.

In addition to the above, Concept Development screenings will be done on proposed ITS/ATDM/Adaptive projects that are generated from Mobility Systems Engineering/Transportation Systems Management projects. The process will be achieved with a detailed review of the purpose and need, determining fatal flaws and uncover any basic information to inform necessary decisions about the scope of work. The CD will also evaluate any environmental impact, constructability, order of priority, schedule and effectiveness of the PPA. Major elements of the CD studies are data collection, field investigations, cost estimating, internal coordination with subject matter experts and development of scope of work.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

Prepare scope of work and procure consultants

Assign work to consultants to produce Concept Development reports.

Review reports from consultants.

Conduct in-house CD checklists for projects not requiring the work effort of a consultant.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Systems Management - Concept Development – 4510017 / 5300  
**MANAGER:** Wasif Mirza  
**UNIT:** TSM Mobility and Systems Engineering

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**CONTRACTS:**

Multiyear contract to prepare Concept Development studies: 1<sup>st</sup> year - \$4,000,000 / 2<sup>nd</sup> year - \$4,000,000.

**TRAVEL / EQUIPMENT:** None.

**STAFFING:**

Division of Mobility Systems and Engineering

N. Shah	Asst. Engineer	.05
C. Ononiwu	Prin. Engineer	.05
B. Patel	Prin. Engineer	.05
J. Romero	Asst. Engineer	.05

Total PY 0.20

## **STATE PLANNING AND RESEARCH PROGRAM, CY 2017 – 2018**

### **BUREAU OF RESEARCH CONTINUATION STUDIES – 4500017**

- Local Access Management Regulations - 7022
- Detection of Damage Precursors in Steel Components for Life-Cycle Assessment – C00S969
- Route 139 Rehabilitation: Pulaski Skyway Contract 2 – 7151
- Evaluation of Different Paint Systems for Over-Coating Existing Structural Steel – 7159
- HVS Evaluation of Flexible Overlays on Composite Pavement – 7160
- Analysis of Local Bus Market Phase II – 7162
- Defining the Hudson Bergen Light Rail Catchment Area - 7163
- Evaluation of Raised Pavement Markers – 7163
- Scour Evaluation Model Implementation Phase – 7164
- Evaluation of Semi-Circular Bend Test for HMA Speciality Mixes (BRIC, High-RAP and HPTO) – 7168
- Real Time Traffic Signal Performance Measurement – 7169
- Demonstration of Research Web-based Program Management Tool - 7172
- Calibration of Safety Performance Functions for Use in NJ - 7173
- Treasury Contract (SPR Portion) – Infrastructure and Non-Infrastructure – TBD
- Rail Freight Assistance Program Grant Application Revaluation – TBD
- Evaluation of Precast Concrete Pavement Systems and Cast IN-Place - TBD

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Management of Research Activities – 4500017 / 7021  
**MANAGER:** Amanda K. Gendek  
**UNIT:** Bureau of Research

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### **VISION:**

The Bureau of Research is a premier transportation research organization that New Jersey transportation research customers/professionals think of first to help them with their transportation problems.

### **MISSION:**

Our core purpose is to provide current and quality information, analysis, and value added research solutions to transportation professionals within New Jersey and throughout the Nation.

### **GOALS/ACTIVITIES:**

- 1) Manage research studies that are contracted to consultants and universities.
  - a) Solicit research problem statements at least once during calendar year
    - i) Send a notice to the Research Oversight Committee for call for research needs
    - ii) Develop ten new research need statements for study
    - iii) Solicitation and negotiation of proposals
    - iv) Conduct meetings with universities and consultants
    - v) Preparation, execution and review of Task Orders, invoices, progress reports, preliminary reports and final reports
  - b) Close out of projects
  - c) Preparation of department action for project closeout upon payment of final invoice
- 2) Coordination of mid-cycle problem statements/research studies
  - a) Arrange promising innovative transportation research awards

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Complete ten research studies collecting final reports and technical briefs making them available via technology transfer mechanisms
- Initiation of ten new research studies which may include basic, applied or development research in any sub discipline of transportation research including maritime, freight, rail, highway, pavement, safety, structures, Additional problem statements will be forwarded for approval upon receipt.

### **CONTRACTS:**

University Contracts  
New Projects (FY 2017) \$2,750,000 (FY 2018) \$2,750,000

### **TRAVEL:**

Bureau of Research employees travel to transportation meetings related to specific research projects.  
(FY 2017) \$5,000 (FY 2018) \$5,000

### **EQUIPMENT:**

None

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Management of Research Activities – 4500017 / 7021  
**MANAGER:** Amanda K. Gendek  
**UNIT:** Bureau of Research

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### *STAFFING:*

Manager staff time charged to MN

<u>Name</u>	<u>Title</u>	<u>Staff Time</u>
S. Potapa	Project Engineer	.9 person-year
K. Davis	Project Engineer	.6 person-year
P. Ukpah	Principal Engineer	.7 person year
P. Shah	Principal Engineer	.8 person-year
T. Howard	Principal Engineer	.9 person-year
G. Venkiteela	Senior Engineer	.7 person-year
S. Rizzo	Contract Administrator	1.0 person year
	Total	5.6 py

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Technology Transfer and Implementation – 4500017 / 7030  
**MANAGER:** Amanda K. Gendek  
**UNIT:** Bureau of Research

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### ***VISION:***

The Bureau of Research is a transportation research organization that New Jersey transportation research customers/professionals think of first to help them with their transportation problems.

### ***MISSION:***

Our core purpose is to provide current and quality information, analysis, and value added research solutions to transportation professionals within New Jersey and throughout the Nation.

### ***GOALS:***

1. To provide a forum for transportation related agencies to convene for the purpose of shared knowledge in the advancements being made in the field of transportation research and technology.
2. To highlight and enhance NJDOT research and technology initiatives.
3. To offer the transportation community effective academic and scientific research opportunities.
4. To promote poster session quality and involvement through a “Best Poster Award” competition.
5. To identify and select an “Innovator Award” winner to acknowledge a NJDOT sponsored project that has had significant positive impact through implementation.
6. To recognize outstanding students involved in transportation research through an “Outstanding Student in Transportation Research” award competition, which is awarded at the Annual Research Showcase.

### ***ACTIVITIES:***

1. Maintain division web page;
2. Conduct lectures or webinars on transportation research topics
3. Literature Review
4. Project Work Plan
5. Document best practices in technology transfer in use at other state DOTs.
6. Survey NJDOT Subject Matter Experts (SMEs) to determine technology transfer needs
7. Develop and implement technology transfer training and event programs for workforce development
8. Develop a Peer Exchange program
9. Develop knowledge capture program
10. Develop a tool for solicitation of research ideas
11. Ideas in innovation ~ Build a Better Mousetrap Competition
12. Provide support for attendance of NJDOT staff at TRB Annual Meeting & other research events
13. Plan, organize, and administer an annual TRB field visit to NJDOT
14. Research communications and newsletter
15. Prepare annual implementation status report
16. Project Management and Quarterly Reporting
17. Design a process to share NJDOT research
18. Facilitate implementation initiatives
19. Activity Coordination for the Strategic Highway Research Program 2 (SHRP2), Every Day Counts (EDC), and State Transportation Innovation Council (STIC)
20. Pooled Funds Transfer (see listed projects below, ongoing pooled fund studies)
  - a. Eliminate or reduce the potential for the duplication of research studies across the nation by providing a way to pool resources and share results through Technology Transfer.



**STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018**

**ACTIVITY:** Technology Transfer and Implementation – 4500017 / 7030  
**MANAGER:** Amanda K. Gendek  
**UNIT:** Bureau of Research

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**ACTIVITIES: (continued)**

- b. Provide funding commitment to the lead state
- c. Interested NJDOT customer, as the stakeholder, will monitor the progress of the study

TPF Number	Title
TPF-5(417)	NCHRP – <i>Research Portion</i> (\$319,840)
TPF-5(360)	TRB Core Program Services for a Highway RD&T Program – FY'18 (\$175,415)
TPF-5(351)	Self De-Icing LED Signals (\$20,000)
TPF-5(346)	Regional Roadwide Turfgrass Performance Testing Program (\$20,000)
TPF-5(326)	Dev/Support Trans. Perform. Mgmt. Capacity Dev. Needs for State DOTs (\$12,000)
TPF-5(316)	Traffic Controlled Device Consortium (\$20,000)
TPF-5(308)	The Use of Bridge Mgmt Software in the Network Analysis of Big Bridges (\$35,000)
TPF-5(299)	Improving the Quality of Pavement Surface Distress and Transverse Profile Data Collection/Analysis (\$15,000)
TPF-5(297)	Improving Specs to Resist Frost Damage in Modern Concrete Mixtures (\$17,500)
TPF-5(255)	Highway Safety Manual Implementation (\$20,000)
TPF-5(206)	Research Program to Support the Research, Development, and Deployment of System Operations Applications of Vehicle Infrastructure Integration (VII) (\$25,000)
TPF-5(193)	Midwest States Pooled Fund Crash Test Program (\$65,000)
TPF-5(176)	Traffic Analysis and Simulation (\$35,000)
<b>TOTAL:</b>	<b>\$779,755</b>

**ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Ensure the activities are going forward as per the work plans
- Conduct monthly meetings and call-ins for the Tech Transfer Program PI
- Present the program to upper management (Director, Asst. Commissioner)
- Define IHE's role in the STIC initiative, utilize their resources to administer the program
- Continue to develop processes for the STIC
- Review the status reports, deliverables, and invoices, and process them as per guidelines
- Quarterly meetings, review quarterly reports, monitor project progress
- Evaluate PI and research team performance
- Review and process invoices, monitor and evaluate project expenditures

**CONTRACTS:**

University Contract (Rutgers)	(CY 17) \$	(CY 18) \$ 362,994
Implementation Contracts-	(CY 17) \$	(CY 18) \$ 300,000
FHWA Pooled Funds –	(CY 17) \$400,000	(CY 18) \$779,775

**TRAVEL:**

Attendance for 8 DOT employees for two (2) nights at annual TRB Annual meeting, FHWA EDC meetings, Peer Exchanges, visiting scholar seminars and other sessions or meetings related to the transfer of knowledge or technology for completed research projects to assist in the assimilation of research products at NJDOT, NJ Transit or Motor Vehicle Commission.

(CY 17) \$3,816; (CY 18) \$ 7,632

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Technology Transfer and Implementation – 4500017 / 7030  
**MANAGER:** Amanda K. Gendek  
**UNIT:** Bureau of Research

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***EQUIPMENT:***

None

***STAFFING:***

Manager staff time charged to MN

Name	Title	Staff Time
S. Potapa	Project Engineer	.1 person-year
K. Davis	Project Engineer	.1 person-year
P. Ukpah	Principal Engineer	.1 person year
P. Shah	Principal Engineer	.1 person-year
Tineen Howard	Principal Engineer	.1 person-year
G. Venkiteela	Senior Engineer	<u>.1 person-year</u>
		.6 Total py

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Research Showcase – 4500017 / 7165  
**MANAGER:** Amanda Gendek  
**UNIT:** Bureau of Research

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### **VISION:**

The Bureau of Research is a transportation research organization that New Jersey transportation research customers/professionals think of first to help them with their transportation problems.

### **MISSION:**

Our core purpose is to provide current and quality information, analysis, and value added research solutions to transportation professionals within New Jersey and throughout the Nation.

### **GOALS:**

The goal of this project is for NJDOT customers to experience the broad scope of ongoing research initiatives, technology transfer activities, and academic research being conducted by university research partners and their associates. This event also serves to showcase the benefits of the NJDOT Research program.

### **ACTIVITIES:**

Secure the event location for Annual Research Showcase, space accommodations; and additional logistics.

1. Marketing, registration, and event coordination for Annual Research Showcase
2. Participation and on-site logistics for Annual Research Showcase
3. Procurement and Reporting.
  - a. Process requisitions and payment for host location and catering.
  - b. Provide quarterly reports to NJDOT.
  - c. Maintain attendance records.
4. Provide a forum for transportation related agencies to convene for the purpose of shared knowledge in the advancements being made in the field of transportation research and technology.
5. Highlight and enhance NJDOT research and technology initiatives.
6. Offer the transportation community effective academic and scientific research opportunities.
7. Promote poster session quality and involvement through a “Best Poster Award” competition.
8. Identify and select “Implementation Award” winner to acknowledge a NJDOT sponsored project that has had significant positive impact through implementation.
9. Identify and select “Innovator Award” winner to acknowledge a state employee that has had significant improved upon a product, process, method or system.
10. Recognize outstanding students involved in transportation research through an “Outstanding Student in Transportation Research” award competition.
11. Arrange for Professional Development Hours (PDHs)

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Ensure the project is going forward as per the work plan
- Review the quarterly reports and invoices, and process them as per the guideline
- Receive and approved final report package which documents the accomplishment of the project activities.
- Processing the final invoice that would include the costs of producing the final report package.

### **CONTRACTS:**

University Contract (Rutgers) (CY 17) \$ (CY 18) \$ 59,000

### **TRAVEL:**

None

### **EQUIPMENT:**

None

**STAFFING:** In-house staff time will be charged to Management of Contracted Research Initiatives (7021).

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Research Library Operations – 4500017 / 7510  
**MANAGER:** Amanda K. Gendek  
**UNIT:** Bureau of Research

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### ***VISION:***

The Bureau of Research is a premier transportation research organization that New Jersey transportation research customers/professionals think of first to help them with their transportation problems.

### ***MISSION:***

Our core purpose is to provide current and quality information, analysis, and value added research solutions to transportation professionals within New Jersey and throughout the Nation.

### ***GOALS/ACTIVITIES:***

1. Operate and improve the Research Library as a major resource for transportation knowledge management.
  - a. Provide library reference and referral services to government employees, transportation and other professionals, and the general public.
    - i. Respond to requests for information or documents.
    - ii. Provide reference, database searching and interlibrary loan services to NJDOT staff.
  - b. Select, acquire, process, store, and maintain library materials for use by NJDOT staff and others.
    - i. Process new acquisitions and donated items in a timely manner.
    - ii. Send materials to the NJ State Library for cataloging and/or list materials in new materials database.
  - c. Maintain and add content to the Research Library website.
    - i. Work with IT and Communications to update website.
2. Provide technology transfer through dissemination of library-related activities and transportation knowledge resource availability on a quarterly basis.
  - a. Compile quarterly list of new materials and make available via Intranet Newsletters and website.
    - i. Add new materials received into Shared Resources Catalog, edit entries, and generate quarterly report.
  - b. Send notification of research reports and upcoming webinars to relevant units.
    - i. Forward electronic versions of reports and notices of webinars.
3. Foster new research and networking opportunities for NJDOT staff and other professionals.
  - a. Participate in transportation library groups such as the Eastern Transportation Knowledge Network (ETKN), the Transportation Library Connectivity & Development Technical Advisory Committee and the TRB Standing Committee on Library and Information Science for Transportation (LIST).
    - a. Attend telephone and virtual meetings of the Transportation Librarians Roundtable and other various transportation library network groups/committees.
    - b. Maintain membership in the Special Libraries Association Transportation Division, monitor discussion list, and attend conferences and meetings when possible.
    - c. Refer staff to other NJDOT units and to other researchers outside of NJDOT.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

- Provision of literature searches and access to documents
- Purchase of new materials at request of NJDOT staff

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Research Library Operations – 4500017 / 7510  
**MANAGER:** Amanda K. Gendek  
**UNIT:** Bureau of Research

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### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)***

- Processing of new and donated items
- Quarterly list of new materials received in the Research Library
- Monthly and quarterly reports to NJDOT

### ***CONTRACTS:***

University Contract (Thomas Edison) – (CY 17) - \$257,686; (CY 18) - \$288,377

### ***TRAVEL:***

Transportation of personnel to and from State Library meetings by Carol Paszamant and Laurie Strow included in contractual costs.

Attendance at TRB conference for two night's hotel, meals and entrance fees (Federal per diem rates for Washington, DC) for Carol Paszamant - Technology Transfer in accordance with Fixing America's Surface Transportation Act. Travel will be reimbursed within the library contract.

(CY 17) \$ (CY 18) \$1,900

### ***EQUIPMENT:***

None

### ***STAFFING:***

In-house staff time will be charged to Management of Contracted Research Initiatives (7021).

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Local Technical Assistance Program (LTAP) – 4500017 / 7158  
**MANAGER:** Amanda Gendek  
**UNIT:** Bureau of Research

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### **VISION:**

The Bureau of Research is a premier transportation research organization that New Jersey transportation research customers/professionals think of first to help them with their transportation problems.

### **MISSION:**

Our core purpose is to provide current and quality information, analysis, and value added research solutions to transportation professionals within New Jersey and throughout the Nation.

### **GOALS/ACTIVITIES:**

The CY 2018 work plan is organized into six task areas which address the Federal Highway Administration's mandated four focus areas for the national LTAP/TTAP program: Safety, Infrastructure Management, Workforce Development, and Organizational Excellence. In order to meet the objectives of the NJLTAP for 2018, the following tasks will be conducted:

1. Training (non NJDOT) – workshops for municipal and county officials and consultants performing work on behalf of public agencies. Topics selected in partnership between NJLTAP and NJDOT.
2. Training for NJDOT – workshops specifically requested by NJDOT and for NJDOT personnel.
3. Technical Assistance – upon request, the team will provide guidance on technical, transportation-related problems that municipal agencies may be experiencing. The team will not perform any studies or engineering work that is more appropriately conducted by private entities.
4. Communications – website, e-newsletter, printed newsletter, technical briefs.
5. Outreach – exhibits, Every Day Counts Webinar Exchanges, meetings and conferences.
6. Reporting and Evaluation – quarterly reports, Annual Program Assessment Report, Annual Center Assessment Report, annual customer survey, and continual course evaluation.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Every Day Counts (EDC)

### **CONTRACTS:**

University Contract (Rutgers) – (CY 18) – \$ 450,000

### **TRAVEL:**

Travel to Annual LTAP meeting 1 NJDOT staff person  
(CY 18) - \$2,200

### **EQUIPMENT:**

None

### **STAFFING:**

In-house staff time will be charged to Management of Contracted Research Initiatives (7021).

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Straight Line Diagrams – 2206279 / 5140  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### **VISION:**

Provide easily accessible roadway inventory characteristic data for engineering tasks and decision making support.

### **MISSION:**

To maintain and continue the availability of the Straight Line Diagrams as a platform to access data elements describing the physical and network characteristics of all public roadways in the state. Included in this activity are tasks associated with maintaining the current application, adding new features to the application, user education, and providing user access to the database for analytic purposes and maintaining a geographic index for referencing this data.

### **GOALS/ACTIVITIES:**

1. Provide convenient access to roadway characteristic data stored in the Straight Line Diagrams database.
  - a. Deploy the Automated Straight Line Diagrams application to the NJDOT, FHWA and public facing web site.
    - i. Provide training
    - ii. Provide technical support
    - iii. Provide application updates
2. Provide convenient access to the NJDOT VideoLog to view digital roadway images.
  - a. Deploy the NJDOT VideoLog application to the NJDOT, FHWA and public facing website.
    - i. Provide training
    - ii. Provide technical support
    - iii. Provide application updates
3. Provide access to the Maintenance Management System features inventory through the Automated Straight Line Diagrams application.
  - a. Develop symbology to display MMS features on the Straight Line Diagrams
  - b. Maintain point-and-click technology to retrieve MMS features data
    - i. Link MMS feature symbology to the Straight Line Diagrams database
    - ii. Link MMS feature symbology to digital imagery
4. Maintain a reference and indexing system for all roadways in New Jersey. ([Straight Line Diagrams](#))
  - a. Implement the Standard Route Identifier (SRI) system for all public roads in NJ.
    - i. Identify route hierarchy
    - ii. Assign logical SRI's to the routes
    - iii. Promote the SRI to be the department wide-standard for indexing public roadways
5. Provide coordination with internal and external agencies that request information from the Straight Line Diagrams database.
  - a. Perform ad-hoc queries for data as requested by customers
  - b. Educate customers on how to best utilize the Straight Line Diagrams
    - i. Provide training and demonstrations

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Straight Line Diagrams – 2206279 / 5140  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Provide maintenance for the Automated Straight Line Diagrams and NJ VideoLog on the web for internal and public use.
- Obtain the consultant services necessary to maintain and enhance the web enabled Automated SLD and VideoLog.
- Provide maintenance of the Straight Line Diagrams application.
- Provide maintenance of the NJDOT VideoLog application.
- Provide customer support and training for the Straight Line Diagrams and VideoLog applications.
- Provide an efficient method to integrate user comments and suggestions into the SLD program.
- Continue to provide roadway mileage statistics and ad-hoc queries for SLD data as requested by our customers.
- Develop mobile platform for the Automated SLD and VideoLog

### **CONTRACTS:**

CURRENT CONTRACT – State of New Jersey GIS Services Contract (through OIT / Treasury)

CURRENT BUDGET - \$361,000.00 each year.

**TRAVEL:** None.

**EQUIPMENT:** None.

### **STAFFING:**

Conti, B.	0.50
Ali, D.	0.50
King, E.	0.50
Haji, S.	0.05
Perry, D.	0.45
Nwachukwu, S.	0.10
Thomas, P.	0.10
Jahan, N.	0.10
Total Staff Time:	2.30 person years



## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Digital Roadway Imaging and Video Data – 2206279 / 5150  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### **VISION:**

To maintain a pictorial inventory and obtain data on State Highways and other principal roadways in New Jersey.

### **MISSION:**

This activity uses digital imaging technology and includes photographic archives recorded on both videotape and 35mm-film technology to provide for the needs of users throughout the NJDOT. Provide digital and videotape documentation for special projects and requests.

### **GOALS/ACTIVITIES:**

1. Ensure that all roadway imaging data on highways under State jurisdiction is no older than three (3) years.
2. Ensure that video archives are copied and that this redundant set of images is stored at a secured location.
3. Provide convenient and responsive access to users of roadway imaging data.
4. Provide timely and flexible response to customer requests for specialized video needs.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Update the SLD videolog directory with new digital data collected during the duration of this work program.
- Provide video services for 120 requests made by NJDOT units.
- Provide 30 video and/or photographic submittals to the DAG's Office (or other requesters) requiring special services.
- Maintain an updated Roadway Image Library of all State Highways. This library will consist of roadway images portraying current and historical conditions.
- Maintain a redundant set of the Roadway Image Library of all State Highways (mainly for any future disaster recovery effort).

### **CONTRACTS:**

None

**TRAVEL:** None.

**EQUIPMENT:** None.

### **STAFFING:**

Thomas, P	0.10
Total Staff Time:	0.10 person years

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Transportation Data Warehouse and Maintenance – 2206279 / 5160  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### ***VISION:***

Develop and maintain a one stop shop for all transportation related data.

### ***MISSION:***

Provide a Transportation Data Warehouse which contains accurate, complete and up-to-date transportation data for user groups, FHWA and other related agencies.

### ***GOALS/ACTIVITIES:***

1. Develop and maintain inventory and data collection programs to keep data current.
2. Make available all current and archived data to department decision makers, i.e.: roadway, digital images, MMS and other various asset management data through both the SLD suite of products and through the NJDOT's Business Objects program.
3. Develop and maintain NJDOT's GIS LRS system.
4. Develop and maintain NJDOT's Roadway Network GIS file.
5. Assist in the development and maintenance of New Jersey's Enhanced Roadway Network GIS file. (This activity is being conducted in collaboration with NJOIT's office of GIS.)
6. Develop and maintain NJDOT's mile posting program.
7. Provide support and database management of BT&S's HPMS database.
8. Maintain New Jersey's Functional Classification and Federal Aid system.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

- Publish the 2018 version of NJDOT's Roadway Network GIS file.
- Provide convenient access to data related to roadway characteristics for interested users of the data.
- Maintain Roadway images and databases in cloud storage.
- Data attributes related to roadways included as part of the National Highway System (NHS) will be no older than three (3) years.
- Data assets related to roadways included as part of the Highway Maintenance Management System program (HMMS) will be no older than five (5) years.
- Data assets related to bridges included as part of the Highway Maintenance Management System program (HMMS) will be no older than five (5) years.
- Data attributes related to roadways included as part of the STP Federal-aid roadway system will be no older than five (5) years.
- Additions of and revisions to roadways that are part of the Local System (non-Federal Aid category) will be indexed and updated using the Standard Route Identification (SRI) and data attributes related to these roadways will be no older than ten (10) years.
- Assist in the maintenance of a reference and indexing system for all roadways in New Jersey. ([Straight Line Diagrams](#))
- Maintain updated digital images of all State jurisdiction roadways for the Department's user groups and others on a three year cycle. A complete re-inventory of roadway images for the State system is to be completed in August 2018 and updated images will be available to Department user groups by September, 2018.
- Provide assistance in collecting/developing MIRE data elements for use in Safety Analyst.

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Transportation Data Warehouse and Maintenance – 2206279 / 5160  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### **CONTRACTS:**

The “Data Warehouse and Maintenance III, Statewide” maintains all Public Road Inventories for 2015 - 2017. This three year project will cover data maintenance tasks for calendar years 2015, 2016 and 2017. Major tasks of this project will continue to: provide updates to the standard SLD data that will be collected and processed, Non-standard SLD data, data from NJDOT’s Maintenance Management Systems Feature inventory, ADA related data on the State system, and various other data that is part of the BTD&S’s Transportation Data Warehouse. Also, pavement surface features for County roadways and roadway horizontal curve and grade data for use in HPMS / MAP-21 reporting. Provide MIRE Fundamental Data Elements for State highways and NHS routes.

PROPOSED 2017 BUDGET: \$2,000,000.00

**TRAVEL:** None.

**EQUIPMENT:** None.

### **STAFFING:**

Perry, D.	0.45
Nwachukwu, S.	0.15
Total Staff Time:	0.60 person years

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Traffic Monitoring System (TMS) – Traffic Volumes Data Collection – 2206279 / 5310  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### ***VISION:***

Traffic data collected under New Jersey's Traffic Monitoring System for Highways will have a 95% confidence level of accuracy as we continue to install more sites, maintain existing sites and collect more samples.

### ***MISSION:***

Collect and process traffic volumes and vehicle class data throughout the state. Provide traffic data to various units of the Department, the MPOs, Local governments and individual constituents. Provide traffic data required in Highway Performance Monitoring System (HPMS) program. Submit traffic volume and vehicle-type classification data to Federal Highway Administration (FHWA) monthly.

### ***GOALS/ACTIVITIES:***

1. To complete the third year (2018) of current TMS Data Collection Cycle (2016-2018), which was executed on June 2016. This Traffic Monitoring System is required by the FHWA and is intended to monitor approximately 7,500 sites throughout the state for calendar year 2017 and 2018. These sites will be collected as a short term coverage sites and will track travel trends over the short – term (minimum 48 hours). The spread of these counts and the type of activities are as follows:
  - a. The assigned TMS locations are counted using Automatic Traffic Recorder (ATR)
  - b. The assigned Automatic Vehicle Classification sites (AVC's)
  - c. The new HPMS sample sections on mainlines and the ramps using ATR's
  - d. The performance of special counting program to support NJDOT operations and other management Systems including:
    - i. Special Manual (visual) turning movement counts
    - ii. Special ATR's
    - iii. Special Pedestrian counts
  - e. Major Stations will be counted for one week every month using Automated Vehicle Classification (AVC) equipment.
2. Raw data will be retrieved and processed from continuous and major stations
3. Innovative concepts will include an application of new technology; communications, relational database design, development and management automation of processes; statistical analysis; data presentation and dissemination.
  - a. Safety Voyager Phase 3
  - b. DVRPC Data Integration 2017
  - c. WIM Data Analysis
  - d. Explore new technologies for data collection
  - e. Update AADT segmentation Map hosted on ARC GIS online with 2017 data.
  - f. TMS Processor, Weight module.
  - g. Short Term Counts raw data cloud database.

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Traffic Monitoring System (TMS) – Traffic Volumes Data Collection – 2206279 / 5310  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:

- Complete approximately 3,500 TMS short term coverage counts Minimum of (48 hours) and up to 7-days including new HPMS sample sections, AVC counts, major stations and special counts (Turning movement counts, volume counts and AVC counts)
- Collect about 300 ramp counts including 700 and 600 series county routes for the HPMS sample sections.
- Collect volumes data for MIRE project in 1,500 locations statewide.
  
- Innovative Concept applications for the following:
  - Database and Websites Maintenance, Update and Technology Transfer
  - 2016-2017 DVRPC Data Integration
  - WIM Website enhancements.
  - TMS Processor, Weight module.
  - Short Term Counts Storage in Amazon environment.
    - Design tables to store raw data.
    - A loader of the following formats: 48 hours volumes, 48 hours and seven days classification (FHWA CLA format), seven days volumes (FHWA VOL format) and Wavetronix data.
  - Safety Voyager Phase 3 (Individual Profiles, Custom Queries)
  - Annual Safety Reports – 2017 Reports
  - Data integration for Safety Analyst application.
  - Dual- Use Concept for vehicle classification and real-time traffic monitoring including speed.
  - Update the inventory of Weigh In Motion (WIM) and Traffic Volume Stations (TVS) Statewide.
  - Complete “Laser technology” Concept.
  
- Continue to support all units of the Department with the traffic data as needed
- Continue to process and analyze data collected from all permanent TMS stations statewide.

### CONTRACTS:

Software Annual license: Arc GIS Server license – Safety Voyager application – \$ 5,000

PROPOSED CONTRACTS: To fund the year 2018 of the current three years TMS Data Collection Cycle (2016-2018).

Traffic Monitoring System Data Collection- Northern New Jersey	\$ 1,483,285.00
Traffic Monitoring System Data Collection- Central New Jersey	\$ 1,724,000.00
Traffic Monitoring System Data Collection- Southern New Jersey	<u>\$ 1,897,705.00</u>
	\$ 5,104,990.00

MIRE Data Collection to obtain volumes data in 1,500 locations statewide.  
Proposed Budget: \$ 2,052,300.00

PROPOSED BUDGET: \$7,162,290 for year two, 2018 of SPR CY (2017-2018)

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Traffic Monitoring System (TMS) – Traffic Volumes Data Collection – 2206279 / 5310  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### *STAFFING:*

Abraham, A	0.50
Brzostowski, P.	0.10
Griffis, R..	0.20
Jahan, N.	0.50
Mordenti, M.	0.30
Oberle, E.	0.30
Zajac, K.	0.10
Total Staff Time:	2.00 person years

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Traffic Monitoring System (TMS) – Traffic Data Processing and Analysis – 2206279 / 5320  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### **VISION:**

Traffic data collected under New Jersey's Traffic Monitoring System (TMS) will have a 95% confidence level of accuracy and user-friendly electronic internet access.

### **MISSION:**

Provide traffic volume and classification data to Federal Highway Administration (FHWA) and various units of the Department to support transportation studies, funding allocation, and maintenance of infrastructure. Provide traffic data updates for the Highway Performance Monitoring System (HPMS) program.

### **GOALS/ACTIVITIES:**

1. Submit monthly to FHWA volume and classification data collected from continuous monitoring stations.
2. Review and process traffic volume and classification data collected by consultants at over 3,000 HPMS sample sections sites and about 500 ramp locations and data collected for other transportation related studies.
3. Maintain the database of all traffic data collected and regularly update the internet home page.
4. Calculate annually and update the tables for the seasonal adjustment factors, axle correction factors, and the annual average growth rates.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Summarize classification data for the HPMS Travel Activity by Vehicle Type report.
- 2017 tables of seasonal adjustment factors, axle correction factors and, the annual average growth rates.
- Online monthly submittal via TMS2 to FHWA of volume data collected from WIM and TVS stations by the 3<sup>rd</sup> week of the following month.
- Migrate TRADAS traffic processing software to a new online application, Jackalope.
- Combine Rural and Urban seasonal and axle correction factors.

### **CONTRACTS:**

Software Licensing:

Jackalope – Traffic Counts processing software - \$ 99,000.00 each year  
Viper PEEK Traffic software package – \$ 4,000 a single seat license

### **TRAVEL:**

2018 NATMEC Conference, July 2018, Irvine California - \$ 3,600.00

### **STAFFING:**

Oberle, E.	0.20
Zajac, K.	0.20
Total Staff Time:	0.40 person years

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Traffic Monitoring System (TMS) – Weights and Speeds – 2206279 / 5330  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### **VISION:**

Traffic data collected under New Jersey's Traffic Monitoring System for Highways will have a 95% confidence level of accuracy as we continue to install more sites, maintain existing sites and collect more samples.

### **MISSION:**

Collect truck weights, speed and vehicle classification data from Weigh-in-Motion (WIM) system sites. Provide traffic loadings and speed data needed in designing bridges and roadways. Provide truck weight data, and classification counts to Freight Planning and Services unit for the implementation of the Comprehensive Statewide Freight Plan. Assist the NJ State Police with their truck weight enforcement activity.

### **GOALS/ACTIVITIES:**

1. Collect truck weight, speed and classification data needed for roadway and bridge design. Update and maintain the Flowed Network of 18 kip Equivalent Single Axle Load (ESAL) factors for pavement design.
2. Provide traffic data needed for the Highway Performance Monitoring System (HPMS) program.
3. Share truck data with Freight Planning & Services unit for the implementation of the Comprehensive Statewide Freight Plan.
4. Provide monthly, traffic volume, classification and weight data at 10 Strategic Highway Research Program (SHRP) Long Term Pavement Performance (LTPP) program sites to FHWA consultant.
5. Re-calibrate thirty (45) WIM sites by December 31 of each year.
6. Update the monthly summary of vehicle classification and speed report.
7. Update the Roadway Information and Traffic Counts Web page.
8. Update the NJDOT Traffic Monitoring Guide as needed.
9. Prepare quarterly reports on overweight trucks for interstate highways.
10. Planning activities to maintain all permanent Weigh-in-Motion (WIM) stations and Traffic Volume Stations (TVS) sites in good working condition.
11. Select the sites in need of repair or replacement of in-pavement failed sensors and electronics to continuously collect quality data.
12. Coordinate between different CPM and Maintenance resurfacing projects impacting existing WIM and TVS station.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Update traffic data reports at "<http://www.state.nj.us/transportation/refdata/roadway/truckwt.shtm>" web site.
  - Monthly Average Weekday Traffic (MAWDT)
  - Monthly Average Weekend Traffic (MAWET)
  - Monthly Average Daily Traffic (MADT)
  - Monthly Average Weekday Speed
- Monthly submission of Classification and Weight Data from the 10 WIM systems at SHRP/LTPP sites to consultant no later than the 3<sup>rd</sup> week of the following month of data.
- Continue to provide various units of NJDOT, State Police and other agencies with truck weight, classification and other traffic data from permanent WIM stations.



## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Traffic Monitoring System (TMS) – Weights and Speeds – 2206279 / 5330  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (cont'd.)*

- Online monthly submittal via TMS2 to FHWA of classification, speed and weight data collected from WIM stations by the 4<sup>th</sup> week of the following month.
- Update and post in our website the correction factors needed to calculate AADT for short term counts by September 2018.
- Properly maintained WIM, AVC, TVS and VWS sites collecting reliable data.
- Collect Weight, Classification, and Traffic Volume data continuously 24 hrs. daily.
- Utilize FHWA TMS 2.7 application to develop ESALs factors.
- Calibrate 10 WIM sites in collaboration with the Division of Purchase and Property of the NJ Department Treasury which provides a five axle truck and a driver.
- Develop a new specification for Wavetronix volume counters.
- Develop a new construction contract funded by National Highway Freight Plan.

### *CONTRACTS*

Proposed: \$ 6,000 - Division of Purchase and Property (Calibration Truck driver salary).

### *TRAVEL:*

2018 TRB Conference, January 2018 , Washington, DC - \$ 2,840.00

### *STAFFING:*

Oberle, E.	0.50
Griffis, R	0.80
Mordenti, M.	0.70
Zajac, K.	0.40
Abraham, A.	0.40
Brzostowski, P.	0.80
Technician 1	0.06 (Construction Services and Materials Bureau 120 hours)
Principal Engineering Traffic	0.20 (Traffic Engineering Bureau 418 hours)

Total Staff Time: 3.86 person years

### Overtime budget

\$28,390- The Bureau staff plays a subject matter expert role in different CPM and Maintenance resurfacing projects impacting our WIM/TVS monitoring stations. The activities related to the construction contracts require overnight working hours due to Traffic Operations regulations to conduct in-road construction during off-peak hours. BTDS staff have an obligation to be present during sensor installations to make sure that all Quality Assurance rules are followed.

\$3,000 – Operations Staff assists with electrical

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Functional Classification System and Federal Aid System – 2206279 / 5650  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### **VISION:**

To provide and maintain New Jersey's Urban Boundary and Functional Classification System; performing modifications to these systems; and, maintaining / updating the data in associated databases when requests for updates are received.

### **MISSION:**

The designating and maintaining of the Federal Aid System and to provide the most current and accurate Urban Boundary and Functional Classification System for the state of New Jersey.

### **GOALS/ACTIVITIES:**

From the developed 2010 update:

1. Analyze any data or mapping that is made available through requests for updates.
2. In cooperation with the MPO's and through them the counties, update the Urban Boundary and Functional Classification System for each request if required.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Review requests as received.
- Analyze any revised source data if provided.
- Perform field verification to resolve questions if required.
- Meet with NJDOT staff and requestor if required.
- Meet individually with the MPO involved to present revised update.
- Evaluate comments received from the meetings with the MPO's and incorporate updates as necessary.
- Obtain resolutions of support/concurrence from the MPO regarding update.
- Incorporate changes to map products or various databases.
- Create and submit revised GIS polygon feature class in geo-database format to NJDOT's Information Management & Technology Planning Bureau for inclusion in the Department's GIS if required.

### **PRODUCTS:**

- Maintenance of maps for New Jersey's current Urban Boundary, Functional Classification System and Federal-Aid System. Maps are made available to interested users via the Roadway System Section's website.
- Route List's of all NHS and STP roadways if revisions are required.
- Revise various mileage statistics by county and jurisdiction of the Functional Classification System if required.

**CONTRACTS/TRAVEL/EQUIPMENT:** None

### **STAFFING:**

Haji, S.	0.05
Nwachukwu, S.	0.05
Thomas, P.	<u>0.10</u>
Total Staff Time:	0.20 person years

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Highway Performance Monitoring System – 2206279 / 5930  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### **VISION:**

To continue providing the most current HPMS data and its submittal; to ensure federal decisions are based on the best available and most accurate data for New Jersey.

### **MISSION:**

To maintain and monitor an integrated database, using random selection of road sections with predetermined functional classification system and volume groups, in accordance with procedures outlined in FHWA's "HPMS Field Manual." A submittal of HPMS will be done on a yearly basis as required by FHWA representing the New Jersey Department of Transportation and the state of New Jersey.

### **GOALS/ACTIVITIES:**

1. Numerous design changes and enhancements need to be made to the NJDOT Highway Performance Monitoring System (HPMS) field and office version software.
  - a. Michael Baker Jr., Inc (MBJ) will review and make the needed updates/changes to both versions.
2. Staff will inventory seven of the twenty-one counties for the 2015 data year.
  - a. All of the HPMS sample sections for the seven counties will be field inventoried by in house staff.
    - i. Sections will be checked for both consistency and accurate data elements.
3. Staff will begin to identify, investigate, and if suitable, inventory new sample sections throughout the State.
  - a. All sections will be field inventoried for data and roadway features/elements to be homogeneous.
4. Staff will provide a list of all and or any new HPMS sample sections to our Traffic Counting Section for current AADT volumes.
  - a. The new HPMS sections list will include mile-posting, SRI number and the county of that route.
5. Staff will participate in several HPMS webinars regarding the HPMS Software. These Webinars will take place at the FHWA headquarters in Washington D.C.
  - a. Webinars will inform the states of what procedures and steps should be followed in order to meet all of FHWA's requirements.
6. Complete the 2015 Certification of Public Road Mileage and the 2016 HPMS submittal, 2015 data year.
  - a. Submittal is to be forwarded to the FHWA headquarters in Washington D.C.
    - i. Copies of the certification and the HPMS submittal package will also be hand delivered to the local FHWA West Trenton Division office.
7. Update the Department's website with the 2014 Mileage and Vehicle Miles Traveled (VMT) statistics reports.
  - a. After approval from FHWA of the 2016 HPMS submittal NJDOT's website will be updated. This will be completed before December 31<sup>st</sup>.
8. Update the HPMS dataset with new local road mileage for the data year 2015.
  - a. Any new inventoried local road mileage will be checked and reviewed before being updated to the HPMS dataset.
9. Provide continuous feedback concerning the new software and submittal procedures to the FHWA headquarters in Washington D.C.
  - a. Any concerns and questions will be directed to FHWA for guidance and direction.
10. Update the HPMS dataset to include the correction of anomalies between NHS and the Functional Classification in the FHWA/HPMS application.
  - a. Run a validity check between the HPMS dataset and the SLD NHS tables to ensure accuracy exists between both datasets.
    - i. Provide details and documentation for any changes or updates to both datasets.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Highway Performance Monitoring System – 2206279 / 5930  
**MANAGER:** Sophia Azam  
**UNIT:** Bureau of Transportation Data and Safety

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### **GOALS/ACTIVITIES: (cont'd.)**

11. Complete the updating of all twenty-one county sample section maps.
  - a. Show all existing HPMS sample sections on maps that are to be inventoried.
12. Identify and investigate all HPMS full extent sections that need updated or current AADT's.
  - a. Updates will be applied to the HPMS dataset after each AADT is validated.
13. Begin analyzing all HPMS volume groups that are oversampled.
  - a. Delete sample sections that are oversampled per each volume group.
    - i. Review clustering of too many sample sections when mapping samples on county maps.
14. Field inspect random HPMS sample sections.
  - a. Review and field inspect random sample sections through-out the twenty-one counties.
    - i. As per FHWA guidelines for HPMS, all sections need to be reviewed and checked for both the accuracy and consistency of each data element.
15. Collect the various needed pavement data items per FHWA's guidelines for both full extent and sample sections.
  - b. Review and then process the pavement data items to the HPMS dataset for the 2015 data year.
16. Update all NHS International Roughness Index (I.R.I.) data each year as required by FHWA for the 2016 HPMS Submittal.
17. Request funds for overtime to review and update all HPMS full extent sections with either a flowed AADT or an actual.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- New Jersey's Annual HPMS submittal to the FHWA.
- New Jersey's Annual Certification of Public Roadway Miles.
- VMT estimates by Urbanized Area and County.
- Mileage statistics by Urbanized Area and County.

**CONTRACTS:** Reference - Data Warehouse and Maintenance Contract 5160

**TRAVEL / EQUIPMENT:** None.

**Overtime budget** - \$3305. Request funds for overtime to review and update all HPMS full extend sections with either a flowed AADT or actual AADT's.

### **STAFFING:**

Conti, B.	0.50
Dhargham, A.	0.50
Haji, S.	0.90
King, E.	0.50
Nwachukwu, S.	0.60
Thomas, P.	0.10
Jahan, N.	0.10
<b>Total Staff Time:</b>	<b>3.2 person years</b>

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Statistics – Data Dissemination – 2206280 / 5420

**MANAGER:** Samuel Braun

**UNIT:** Division of Accounting and Auditing

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### ***VISION:***

New Jersey will have reliable, accurate & timely Transportation Statistics submissions.

### ***MISSION:***

To compile and report to FHWA statistical data prescribed by the FHWA publication: “A Guide to Reporting Highway Statistics” and to ensure that the data produced and published by FHWA and used by independent research organizations (i.e. Reason Foundation) properly reflects state highway capital spending and maintenance metrics.

### ***GOALS/ACTIVITIES:***

- Series 500 forms that contain NJ fiscal year (ending June 30) data will be submitted timely. The reports due on a fiscal year basis are 531, 532, 534, 541, 542, 556, 561,562 and 566. Report due on bi-annual basis is 536
- Fuel statistics submitted on a monthly basis will be submitted within 60 days after the close of the month for which the data is being reported.
- Respond to periodic inquiries from FHWA to verify reports produced by the FHWA.
- Continue working with FHWA to redesign certain forms that will more accurately account for the state’s bond issue by allocating proceeds and related annual debt service among state highway, mass transit, and local aid capital spending directly impacting FHWA methodology in compiling annual state by state reporting on state highway expenditures that can be misused by independent research organizations (i.e. Reason Foundation).
- Work toward having the MVC assume responsibility for data compilation effort related to the 561/562/566 reports (vehicle registrations and licenses) as they own the data.
- Reports compilation to transition from supervisor (S.Braun) to accounting analyst (J.Lippincott)

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

- The timely submission of the reports to the FHWA for each category cited in the above Activities section. The FHWA utilizes the data to compile various reports comparing data from all States.
- The completion of the bi-annual 536 report study/compilation of state municipalities local roads data by the independent research firm at the Voorhees Transportation Center of Rutgers University – study is being spearheaded by Jon Carnegie
- Compile the monthly fuel statistics from which the FHWA compiles the annual motor fuel usage tables.
- Review annual motor fuel data for final publication by the FHWA.

### ***CONTRACTS:***

Outsourcing of the FHWA-536 to Jon Carnegie, Voorhees Transportation Center, Rutgers University \$19,449

### ***TRAVEL:***

\$500.00 for training in DC for accounting analyst

### ***EQUIPMENT:***

None.

### ***STAFFING:***

Samuel Braun	0.125 person year
Albert Weierman/Jessica Lippincott	0.125 person year

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Geographic Information Systems – 2206280 / 5210  
**MANAGER:** Cynthia Dey  
**UNIT:** Bureau of Information Management & Technology Planning / GIS

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### **VISION:**

To provide NJDOT with the most accurate, reliable and productive geo-spatial data.

### **MISSION:**

To develop, manage, maintain and provide GIS applications and support to the New Jersey Department of Transportation (NJDOT) to support department-wide activities.

### **GOALS/ACTIVITIES:**

1. Coordinate efforts with federal, regional, county and local agencies in GIS development to avoid data redundancy and increase GIS presence.
2. The unit will continue to support a standard GIS software interface and maintain GIS databases in the Enterprise Shared Server Infrastructure.
3. Assess technological advances in GIS hardware and software and to plan implementation when appropriate.
4. Training of Department staff to support the GIS environment.
5. Collect, organize, retrieve and manage attribution and link to the GIS land base.
6. Maintain the State Transportation Data Model.
7. Update data and resource to data utilizing and consuming current database table information from the Enterprise Data Warehouse (EDW) to reflect current conditions. (Some examples include; Bridge, Capital Plan, SLD, Pavement, Traffic Counts, etc.)
8. Complete and Maintain a Rail GIS application to enhance rail analysis.
  - a) This project is funded through the Bureau of Multimodal Grants and Programs.
  - b) Michael Baker began Build portion using the GIS Services T-1841 Contract - August 2014.
9. Complete and Maintain Dredged Materials Management System (DMMS) to enhance use of dredged materials throughout the state.
  - a) This project will be funded through the Office of Maritime Resources.
  - b) Applied Geographics, Inc. began the Build portion using the GIS Services T-1841 Contract - September 2014.
10. Complete and Maintain Waterway Linear Segmentation (WLS) to provide a linear reference system for NJ navigational waterways similar to the NJDOT roadway LRS.
  - a) This project will be funded through the Office of Maritime Resources.
  - b) Michael Baker Inc. began the Build using the GIS Services T-1841 Contract – October 2014
11. Maintain the National Boating Infrastructure Grant (NBIG) application which provides increased service along, and navigability of New Jersey's waterways.
  - a) This project is funded through the Office of Maritime Resources.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Geographic Information Systems – 2206280 / 5210  
**MANAGER:** Cynthia Dey  
**UNIT:** Bureau of Information Management & Technology Planning / GIS

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### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Continued updates to GIS database.
- Respond to GIS Help Desk requests.
- Test and install software upgrades and patches as they become available.
- Using data from NJDOT Data Development update the roadway network file.
- Complete, deploy and start maintenance of the Rail GIS application.
- Complete, deploy and maintain the DMMS application.
- Complete, deploy and maintain the WLS application.

**CONTRACTS:** None

### **TRAVEL:**

Year One - TRAVEL – \$10,000 – Needed for staff to attend the next ESRI User Conference in California, which provides 5 days of Esri software training, hundreds of user presentations that share best practices, and user-to-user communication opportunities essential for learning about real-life GIS experiences, best practices, and tips. (I did not spend – I was unable to send staff to this event in Year one.)

Year Two - TRAVEL - \$10,000 – Needed for staff to attend the next ESRI User Conference in California, which provides 5 days of Esri software training, hundreds of user presentations that share best practices, and user-to-user communication opportunities essential for learning about real-life GIS experiences, best practices, and tips.

### **STAFFING:**

Tim Stewart	0.25
Len Chetti	0.25
Carla Calderone	0.40
Ellis K. Williams	0.25
Magdy Guirguis	0.35
Nirali Patel	0.30
Total	1.80

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Automated Mapping - Graphics – 2206280 / 5220  
**MANAGER:** Cynthia Dey  
**UNIT:** Bureau of Information Management & Technology Planning / GIS

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### **VISION:**

To provide NJDOT with the most accurate, reliable and productive geo-spatial data.

### **MISSION:**

To develop, manage, maintain and provide GIS applications and support to the New Jersey Department of Transportation (NJDOT) to support department-wide activities.

### **GOALS/ACTIVITIES:**

1. Rapidly respond to NJDOT's special GIS mapping requests, by providing digital and hard copy graphic and cartographic materials.
  - a) Custom map requests will be turned around in 5 business days
  - b) Standard plots will be turned around in 2 business days.
2. Update county digital landbase using digital orthophotography to add new local roads and realign the existing hydrography, as well as cultural and environmental features.
3. Provide support for Department plotting, including the newly provided consolidated plotters located throughout the department facilities.
4. Providing new GPS units for various applications, including mapping, allowing users to collect points and enabling position accuracy to the National Spatial Reference System, both horizontally and vertically.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Continue updates to county and municipal base maps.
- Continue updates to cultural and environmental features.
- Generate plots and presentation materials for NJDOT users, as requested.
- Provide custom mapping to NJDOT users.
- Provide GPS assistance, including instructions on using unit, exporting of data off unit, creation of text, database, or shapefile, to be used to input to GIS software.

**CONTRACTS:** None.

### **EQUIPMENT:**

Year One - \$10,000 GPS Units Purchase - This will provide for multiple units and software that is required for the field data collection and uploading data in order to support GPS portion of this work program.

Year Two - \$15,000 Plotter Purchase - This is for the replacement of 42" plotter.

### **STAFFING:**

Tim Stewart	0.25
Len Chetti	0.25
Carla Calderone	0.30
Ellis K. Williams	0.50
Magdy Guirguis	0.25
Nirali Patel	0.30
Total	1.85



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** New Jersey State Transportation Map – 2206280 / 5230  
**MANAGER:** Cynthia Dey  
**UNIT:** Bureau of Information Management & Technology Planning / GIS

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### ***VISION:***

To provide NJDOT with the most accurate, reliable and productive geo-spatial data.

### ***MISSION:***

To develop, manage, maintain and provide GIS applications and support to the New Jersey Department of Transportation (NJDOT) to support department-wide activities.

### ***GOALS/ACTIVITIES:***

1. Manage the cartographic and digital production of the Official New Jersey State Transportation Map for free distribution to the public. This map is also available in a pdf file format:  
<http://www.state.nj.us/transportation/gis/map.shtm> .
2. Maintain the New Jersey State Transportation base maps to reflect current information.
3. Creation of theme, appearance and layout template for the planned map.
4. Selection of photography, including cover and backside artwork.
  - a. Ensure permissions and waivers are obtained
5. Inclusion of other transit agency info, and Travel & Tourism information.
6. Assist in the state procurement process to select a vendor for printing.
7. Press proof color separations and quality assurance prior to printing.
  - a. Ensure that color accuracy and map registration is perfect prior to going to press.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

- Continued updating of the base maps, and insets to reflect current information.
- Continued development of new layouts, themes and content for the next official state map printing.
- Prepare, edit and complete the 2016 State Map “Reprint”, with estimated delivery in Fall 2017.
- Start the redesign, layout and thematic plan for the new production of the 2018 Map, available Fall 2018.

### ***CONTRACTS:***

None

### ***STAFFING:***

Tim Stewart	0.25
Len Chetti	0.25
Total Person Years	0.50

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Digital Data Distribution – 2206280 / 5240  
**MANAGER:** Cynthia Dey  
**UNIT:** Bureau of Information Management & Technology Planning / GIS

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### **VISION:**

To provide NJDOT with the most accurate, reliable and productive geo-spatial data.

### **MISSION:**

To develop, manage, maintain and provide GIS applications and support to the New Jersey Department of Transportation (NJDOT) to support department-wide activities.

### **GOALS/ACTIVITIES:**

1. Maintain the New Jersey Department of Transportation GIS web home page to provide county and state base information providing maps in digital format. <http://www.state.nj.us/transportation/gis/>
2. Distribute data via various storage media including cd's, dvd's, mounted boards, ArcGIS Server web Applications, etc. as well as pdf, .jpg and other images.
3. Maintain the GIS portion of the NJDOT Internet web page [www.state.nj.us/transportation/gis](http://www.state.nj.us/transportation/gis)
4. Continue developing the newer version of GeoTrans, the interactive web-based mapping system, which provides data from every major area of NJDOT, to allow analysis, display, map and plot data.  
<http://gis/geotrans/>
  - a) Customize and design the new web interface.
  - b) Customize map interface to include enhancements such as: map tools to further enhance analysis, map tips, transparency, buffers, plot template, export template, sql queries, clip, conversion tools, select tools, etc.
5. Development and maintenance of web based viewers to be used to feed information to be populated on base maps, and provided to general public via web applications, such as SRI/NHS, Aviation, Agreement & Jurisdictional Map, Park & Ride and Geodetic Monuments.
6. Continued development of ArcGIS Online platform and environment which will allow the creation of interactive web maps for the various divisions within NJDOT.
7. Develop a complete LIDAR imagery collection, by collecting new imagery in collaboration with OIT, OGIS, NJDEP, NGA, Corps of Engineers, OHSP, and NJ Transit.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Continued development/enhancement of the new version of GeoTrans; including added functionality.
- Maintain the GIS presence on the New Jersey Department of Transportation GIS Intranet page.
- Maintain the GIS presence on the New Jersey Department of Transportation GIS Internet page.
- Distribute data via pdf's and other storage media.
- Develop special web applications per project, as needed/requested from various NJDOT groups.
- Continued development of NJDOT's ArcGIS Online environment & platform.
- Collect and authenticate new LIDAR imagery collection, by starting collection project along the six northern counties at Quality Level 2 Standard outlined by USGS, and as specified in the NJ State GIS Strategic Plan. (*Project on hold due to weather restrictions.*)

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Digital Data Distribution – 2206280 / 5240  
**MANAGER:** Cynthia Dey  
**UNIT:** Bureau of Information Management & Technology Planning / GIS

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### *CONTRACTS:*

Year One - \$50,000 funding LIDAR imagery collection project along six northern counties at Quality Level 2.  
Year Two - \$50,000 funding for statewide Orthoimagery subscription/flight.

### *STAFFING:*

Tim Stewart	0.25
Len Chetti	0.25
Carla Calderone	0.30
Ellis K. Williams	0.25
Magdy Guirguis	0.40
Nirali Patel	0.40
Total Person Years	1.85

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Systems Information Management and Data Integration - 2205535/5250  
**MANAGER:** Cindy Dey  
**UNIT:** Bureau of Information Management & Technology Planning/Information Management Unit

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### ***VISION:***

To provide NJDOT with Departmental data resources in a manner that avoids duplication and promotes easy and open access to data throughout the Department.

### ***MISSION:***

To offer analysis, design and implementation of integration of the NJDOT Transportation Management Systems that support department-wide activities.

### ***GOALS/ACTIVITIES:***

The New Jersey Department of Transportation (NJDOT) has several internal data systems that are critical to the effective management of New Jersey's transportation infrastructure. These systems provide decision support to management in the areas of planning, design, construction, maintenance, and operations of NJDOT's wide array of infrastructure. TransINFO is part of the Department Enterprise Data Warehouse (EDW) that combined datasets from eight transportation management systems to support NJDOT planning efforts and facilitate analysis across multiple disciplines. The current Enterprise Data Warehouse is Oracle 10g and it is hosted by NJOIT.

Optimize Enterprise Data Warehouse and Business Intelligence tools within our environment, to leverage the existing system and to support additional components for a seamless and transparent product. Meet the informational and administrative needs necessary to support the day-to-day management of the Department. Provide the ability to query the Enterprise Data Warehouse and retrieve data from all integrated systems.

Areas of particular interest will be providing planners with answers to allow for better decisions and to make data available through maps. Data Marts have been created to facilitate quick retrieval of data and reports. Business Objects Universes continue to be built to satisfy user community reporting needs. The EDW allows user community, system owners and planners, to better advise for new projects and investments and to answer questions that have not been previously possible. Provide Business Objects training and education to NJDOT user community.

The Information Management Unit will continue with the responsibility to monitor the various management systems as well as the integrated solution. Additional data sources are to be identified and integrated to better support our planners and DOT's user community to better advise for new projects and investments and to answer questions that have not been previously possible. Data sharing with DOT's business partners such as the TMA's, MPO's, FHWA, and other transportation entities is being addressed as well.

Develop a multi-phased plan for enabling MPOs access to DataMart via Business Objects. The MPO representatives will provide their anticipated data needs, categorized by management system, identifying how the data will be used. An MOU for the MPO data sharing project will be drafted and approved. Per the Models of Regional Planning Cooperation; this project will promote the cooperation and coordination across MPO and State boundaries to ensure a regional approach to transportation planning and reporting via the Enterprise Data Warehouse. Provide the analytical tool available via Business Intelligence; including training.

The Department of Transportation has developed an Executive Information System (EIS) as Phase III of the existing TransINFO Data Integration project. The goal of the EIS project is to provide senior leadership and project/program managers with a single source of information for key management data and thus improve financial oversight, project scheduling, contract management and federal grant administration. The system enables NJDOT to shift from a reactive posture to a pro-active approach for all project phases (including federal pre-authorization, implementation and closeout) and heighten accountability among NJDOT staff.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Systems Information Management and Data Integration - 2205535/5250  
**MANAGER:** Cindy Dey  
**UNIT:** Bureau of Information Management & Technology Planning/Information Management Unit

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### ***GOALS/ACTIVITIES: (continued)***

NJDOT is looking to strengthen its grants management effort to ensure the proper stewardship of various projects from “cradle to grave”. The EIS also provides project specific information for the project authorization and implementation phase of work (i.e., defined to include the usual sequence of planning, right of way, design and construction phases) for capital and Local Aid projects. The EIS offers a comprehensive project specific data warehouse.

The EIS incorporates all capital projects funded by the FHWA and the TTF, as well as grants issued for Local Aid, multimodal projects (e.g., airports and rail freight) and planning and research, certain road maintenance projects that are presently tracked separately and contracts issued for dredging work on the State’s navigable channels.

The EIS/TransINFO update/enhancement project consists of adding data from several new source systems and integrating that data with the existing ten management systems in the EDW. In addition this phase will enhance existing EDW tables with new and modified data from updated DOT sources systems.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

- Ability to report across all existing Transportation Systems in TransINFO and the Project Cross-Referencing System (PCRS) to provide integrated information to the Department’s decision makers (e.g. for a given SRI and milepost limits a planner should be able to identify all deficiencies such as drainage, pavement, safety, bridge or congestion issues, traffic counts or maintenance work as well as project information).
- Include new data sources to the NJDOT EDW such as Fleet Management Data and EMS data.
- Provide Business Objects access, training and education to MPO’s/ FHWA for the new TransINFO Planning Data Mart and EIS dashboards.
- Continue training of the NJDOT user community for new users, etc.
- Support the NJDOT user community for the development of Business Objects reports and Dashboards as requested.
- Support the NJDOT EDW Production environment including ETL processes and Business Intelligence.
- Work with DOT data source stewards to correct data exceptions as reported during load process into Enterprise Data Warehouse to improve data quality and reporting capabilities.
- Source System changes will need to be incorporated into the Enterprise Data Warehouse which will impact data load processes and Business Objects anticipate the following source system changes: PRMS, MMS.
- NJOIT is planning to upgrade Business Intelligence to version 4.1 this will involve migration of existing universes and reports. NJDOT will be responsible for the testing and validating of all our universes and reports to ensure a successful migration. NJDOT Data Warehouse staff will also need to learn this new version for both universe design and reporting. Hiring of vendor maybe needed for migration effort.
- Maintenance and enhancement of the EIS which enables Federal Reporting and monitoring of inactives.
- Perform maintenance and complete additions and enhancements to the Enterprise Data Warehouse.

### ***PRODUCTS:***

- New NJDOT Enterprise Data Warehouse (3NF) to hold data from all nine source systems currently in scope, with accommodation for Historical data where required.
- New jobs to Extract/Transform/Load data from source systems to Data Warehouse.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Transportation Systems Information Management and Data Integration - 2205535/5250  
**MANAGER:** Cindy Dey  
**UNIT:** Bureau of Information Management & Technology Planning/Information Management Unit

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**PRODUCTS** (continued)

- New ORACLE Star Schema (Dimensional) Dependent Data Marts designed to accommodate reporting requirements of User Groups. Data in the Data Marts is stored at the one-tenth of a mile granularity. The Planning Data Mart is available for reporting via business objects.
- New jobs to Extract/Transform/Load data from the Data Warehouse to ORACLE Star Schema Data Marts.
- Business Objects Universes to satisfy user community reporting needs.
- Business Objects Dashboards to satisfy user’s informational needs.
- New requirements and use cases for DOT’s different user groups.
- MPO data sharing project.
- A Departmental EIS application.

**CONTRACTS:**

Year One - \$1,150,000 this funding will provide EIS and TransINFO Enterprise Data Warehouse (EDW) maintenance activities such as universe design, dashboard and report development, tuning queries and data loads, data modeling, ETL procedures and testing.

\$145,000 - To enhance existing EDW tables with new and modified data from updated DOT sources systems – PRS replacement EBuilder PRMS.

\$355,000 - Operational Data Store project – This project will create an Operational Data Store (ODS). This ODS will include the FMIS legacy system data which will be collected at a greater frequency to allow a view of the up-to-the-minute FMIS data. As the data ages it will then be passed to the Enterprise Data Warehouse. This effort will alleviate the current lag time in FMIS loads which causes discrepancies in reporting.

\$240,000. This funding will provide for 2 consultants to assist with the migration effort to upgrade the Business Intelligence environment; which includes reports, dashboards and universes to the new version 4.1. Contingent on NJOIT leading this migration and their implementation plan.

Year Two - \$1,150,000 This funding will provide EIS and TransINFO Enterprise Data Warehouse (EDW) maintenance and enhancements. The goal of this project phase is to continue to add data from new source systems and integrate that data with the existing management systems in the EDW.

\$145,000 - To enhance existing EDW tables with new and modified data from updated DOT sources systems

**STAFFING:**

Pamela Robertori, Administrative Analyst 4	1.0
Erum Malik, Information Technology Specialist	1.0
Hua Xu, Information Technology Specialist	1.0
Kavita Kaushal, Software Development Specialist 2	1.0
Silpa Reddy, Software Development Specialist 2	1.0
Minakshi Arora, Information Technology Specialist	1.0
Kiranmai Sadineni, Information Technology Specialist	1.0
Pavani Pittala, Information Technology Specialist	<u>1.0</u>
Total Person Years	8.0

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Local Concept Development - Environmental - 2206277 / 5000  
**MANAGER:** Elkins Green, Director  
**UNIT:** Division of Environmental Resources

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### **VISION:**

Dismiss projects with fatal flaws and identify projects that can be delivered in the Local Concept Development program as administered by the MPOs.

### **MISSION:**

Establish environmental parameters to be considered in developing the Initially Preferred Alternative (IPA) that addresses transportation needs established in this phase. Based on sufficient environmental analysis, determine the appropriate NEPA classification (Categorical Exclusion, Environmental Assessment, Environmental Impact Statement) for the IPA that will be prepared in the next project development phase.

### **GOALS/ACTIVITIES:**

1. Ensure viable projects enter the LCD phase by providing subject matter expertise regarding candidate applications.
2. Ensure a thorough and comprehensive environmental constraint analysis is conducted during this phase consistent with the FHWA planning and environmental linkages approach.
3. Ensure socioeconomic factors, particularly community concerns related to Environmental Justice, sustaining livability and quality of life issues are identified and considered in the initial project development phases.
4. Ensure alternatives are fully investigated that meet the purpose & need and consider environmental factors in selecting the IPA.
5. Determine the appropriate environmental document consistent with NEPA requirements for the IPA that will be required in the subsequent Preliminary Engineering Phase of work.
6. Consistent with Planning & Environmental Linkages (PEL) complete the NEPA environmental document as appropriate.
7. Coordinate input from Stakeholders and Agencies regarding the purpose and need, the development of alternatives, and environmental issues.
8. Ensure appropriate community involvement has been initiated.

To achieve these goals the following activities are required

- Field visits of the project location to identify site specific design and constraint issues.
- Provide subject matter expertise guidance related to Scopes of Work, Man-Hour Estimates, RFPs and consultant proposals.
- Review RFP's for evaluation and short listing.
- Review and rate proposals solicited by the MPO's for LCD efforts
- Complete environmental impact analysis as needed

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

Approve LCD studies for selected projects and coordinate new LCD starts with MPOs and Local Aid  
Complete NEPA documents for Limited Scope projects graduating from Limited Scope Concept Development phase

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Local Concept Development - Environmental – 2206277 / 5000  
**MANAGER:** Elkins Green, Director  
**UNIT:** Division of Environmental Resources

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***TRAVEL:***

\$5,000 (\$2,500 each year) to attend training and/or conferences.

***EQUIPMENT:***

None.

***CONTRACTS:***

No contracts associated with this activity.

***STAFFING:***

This program is managed by staff from the Division of Environmental Resources. Person years vary for staff as indicated below due to assigned LCD efforts in their respective units.

Division of Environmental Resources

Lauralee Rappleye	0.20
Pamela Garrett	0.50
Sean Ream	0.60
Marie Limage	0.40
Sean Warren	0.10
Jeff Gendek	0.10
John Riggi	0.10
James Sweet	0.10
Chirag Patel	0.10
Caroline Birsner	0.10
Total	2.30 py



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Local Concept Development – Local Aid – 2206277 / 4999  
**MANAGER:** Laine Rankin  
**UNIT:** Division of Local Aid

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### ***VISION:***

Establish and identify projects through concept development that can be delivered in the various Local Aid Programs.

### ***MISSION:***

Work with the MPO's in developing Initially Preferred Alternative (IPA) that addresses transportation needs established in this phase. Also to assist the MPO in determining project local concept development key tasks such as coordination with stakeholders

### ***GOALS/ACTIVITIES:***

1. Participation on Consultant Selection Committee for advertisement of RFP.
2. Provide technical expertise and local knowledge towards the development of Purpose & Need.
3. Participation in Project Selection Team to provide expertise towards identification of fatal flaws and selection of Preliminary Preferred Alternative at a planning level detail.
4. Participation on Interagency Review Committee to conduct periodic reviews as subject matter experts towards project eligibility in the next phase.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

Approve LCD studies for selected projects and coordinate new LCD starts with MPOs, Local Aid and BEPR.

### ***CONTRACTS:***

No contracts associated with this activity.

### ***TRAVEL:***

No travel associated with this activity.

### ***EQUIPMENT:***

No equipment associated with this activity.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Local Concept Development – Local Aid – 2206277 / 4999  
**MANAGER:** Laine Rankin  
**UNIT:** Division of Local Aid

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### *STAFFING:*

This program is managed by staff from the Division of Local Aid. Each individual listed represents 0.07 person years for this activity.

#### Division of Local Aid

Eileen Schack  
Nabil Ayoub  
Richard Loveless  
Frank McCombs  
Jonathan Mojsoski  
Adam Iervolino  
Deval Desai  
Milan Lambachia  
Richard Nusser  
Adam Iervolino  
Thomas Berryman  
Arun Kumar  
Art San Jose  
Vijesh Darji  
David Cihocki  
Kyle Skala  
Lauren Coe  
Bert Gonzales

Total Person Years: 1.26

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** TAP Planning and Development - 2206278  
**MANAGER:** Laine Rankin  
**UNIT:** Division of Local Aid & Economic Development

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### ***VISION:***

The Division of Local Aid plays a leading role in the planning and selection of viable projects that meet the spirit and vision of the Transportation Alternatives Program set-aside (TAP). The purpose of this program is to enhance the cultural, aesthetic, historic and environmental aspects of our intermodal transportation system. Also expand travel choice, strengthen local economies of counties and municipalities and make travel to school safer and healthier for students from K-8 under the Safe Routes to School (SRTS) provisions.

### ***MISSION:***

- To develop the selection process for the TAP program in cooperation with New Jersey's three Metropolitan Planning Organizations (MPOs), with the SRTS component as a separate program.
- Ensure that the State TAP goals are aligned with the MAP-21 and FAST Act requirements.
- Develop program guidance and management, particularly of a programmatic, procedural and financial nature, for the Transportation Alternatives Program including SRTS as a separate component.
- Provide program guidance and support in environmental matters for the Transportation Alternatives Program during the selection process.
- To solicit applications, gather data and perform a competitive project selection process as required by MAP-21 and FAST-Act.
- To ensure compliance with federal regulatory and environmental requirements for the Federal Highway Administration TAP Set-aside and SRTS funding component.

### ***GOALS/ACTIVITIES:***

Solicitation and selection of new eligible TAP Set-aside and SRTS projects:

- Develop selection process including guidance documents and FAQ's to assist counties and municipalities and other eligible applicants of the program in submitting better applications
- Updates and development of applications annually, for TAP and SRTS to meet current updates and changes using the System for Administering Grants Electronically (SAGE) software. These updates are developed with full input and cooperation with the three MPO's and the NJDOT Division of Environmental Resources and the Office of Bicycle and Pedestrian Programs (OBPP).
- Develop methodology for planning and implementation of project screening and evaluation for the project selection committee
- Database management and development and distribute listings of projects eligible for rating and evaluation.
- Conduct workshops for perspective applicants to assist in their submittal of better applications.
- Conduct field reviews to evaluate information submitted in the applications
- Prepare for and participate in selection meetings with the MPO's and other units in the Departments such as Office of Bicycle and Pedestrian Programs and BEPR to Select projects that best meet program goals
- Consistent with Planning & Environmental Linkages, complete NEPA compliance documents as appropriate
- Organized the lists of selected projects and create reports for the Commissioner's office, MPO's, and FHWA. Efforts will also include making the information available to the public via NJDOT website.
- Network with other States TAP and SRTS coordinators, including webinars, conference calls and attend conferences and related events.

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** TAP Planning and Development - 2206278  
**MANAGER:** Laine Rankin  
**UNIT:** Division of Local Aid & Economic Development

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### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

- Conduct selection meetings with MPO's and the Bureau of Environmental Program Resources and the Office of Bicycle and Pedestrian Programs.
- Project Selection of FY 2016 TAP Program for by April of 2017.
- Complete NEPA documents where feasible

**CONTRACTS:** None.

**TRAVEL:** None.

### **STAFFING:**

This program has involvement of all staff throughout the Division of Local Aid and Economic Development and some staff from the Bureau of Environmental Program Resources and the Office of Bicycle and Pedestrian Programs.

Division of Local Aid: Each individual listed represents .07 person year for this activity.

ABUHUZEIMA, SHUKRI	AYOUB, NABIL	WILLIAMS, GEORGE
BISWAS, ARNAB	GHALY, MIRIANA	CIHOCKI, DAVID
BRUCCOLERI, DAVID	LOVELESS, RICHARD	COE, LAUREN
KHANDAKAR, MAHMOOD	McCOMBS, FRANK	DARJI, VIJESH
PANDIT, KOMILA	MOJSOSKI, JONATHAN	GONZALES, NENEBERT
SEAMAN, JULIE	NOGUEIRA, ALBERTO	KASPRZAK, FRANCIS
ANDERSON, LINDA	PATCHAK, SHAIKESH	MASCIANDARO, VINCENT
DUKE, JOHN	SCHACK, EILEEN	MCKEE, FRANCIS
EDWARDS, CHERYL	YAOUSSEF, CECIEL	SAN JOSE, ARTURO
IERVOLINO, ADAM	BERRYMAN, THOMAS	SHAH, ALKABEN
LIMBACHIA, MILAN	DESAI, DEVAL	SKALA, KYLE
AHMAD, AHMAD	KUMAR, ARUN	WIRTZ, BRIAN
MIRANDA, PAUL	NUSSER, RICHARD	ZAMAN, QAMAR
PATEL, DHRUV	SOMARATNA, M. KUMUDIKA	

Division of Environmental Resources Staff person years are as follows:

Lauralee Rappleye	0.10	Paula Scelsi	0.05
Sean Warren	0.50	Chirag Patel	0.50
Jeff Gendek	0.60	John Riggi	0.50

Office of Bicycle and Pedestrian Programs: Each individual listed represents .1 person years for this activity

William Riviere

Total Staff Person-Years: 5.22

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Pavement Program Planning– 2206282 / 9000  
**MANAGER:** S. Gresavage  
**UNIT:** Pavement and Drainage Management & Technology

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### ***VISION:***

The Pavement Management Unit will be the premier resource for pavement planning and condition information in NJ not only for the Department, but for all interested parties.

### ***MISSION:***

As a component of the Department's Asset Management (AM) program, provide information, recommendations and expertise in planning a comprehensive performance-based pavement program that will assist the Department in making sound short term and long term pavement investment decisions to maximize network condition levels in the most cost effective manner with an emphasis on a performance management approach as specified by MAP-21 and FAST legislation.

### ***GOALS/ACTIVITIES:***

- Collect, analyze and report pavement condition data including surface distress, smoothness and skid resistance for the State Highway System to support pavement program development.
- Coordinate with MPO's, Authorities and Agencies in the collection and reporting of NHS pavement data to FHWA HPMS database as required by MAP-21 and FAST Legislation.
- Maintain a pavement condition database to permit data driven programming decisions.
- Maintain and enhance pavement project tracking database to provide current and accurate pavement project information for pavement project planning purposes.
- Provide multi-year pavement performance information to pavement management software for validation of performance curves.
- Investigate and implement new technologies and approaches in the collection and analysis of pavement condition data to insure that the highest quality data is used to drive the Department's pavement planning and programming decisions.
- Prepare annual Pavement Report on New Jersey's roadway pavement system.
- Participate in the exchange of information and technology transfer through outreach, workshops, conferences and users groups.
- Provide data and support for the Department's Asset Management, Dashboard and Data Integration initiatives.
- Perform Ride Quality testing on new pavement and calculate pay adjustments based on test results to insure compliance with NJDOT ride quality specification.
- Recommend annual pavement program funding levels in order to meet the Department's pavement condition goals.
- Prepare investment, budget and network condition scenarios to Capital Investment Strategy Committee, Asset Management Task Force, and Senior Leadership for program planning purposes.
- Recommend achievable and maintainable pavement network condition goals for program planning purposes.
- Utilize pavement management software to provide forecasted network pavement condition levels based on various budget scenarios and mix of fixes.
- Optimize the Department's capital investment in pavements resulting in the maximum benefit from the network condition perspective.
- Evaluate, support and implement new treatments and materials related to pavements in order to maximize pavement service life and effectiveness of pavement program funding.
- Provide cost effective strategies for constructing, maintaining and rehabilitating pavements in order to maximize pavement service life and effectiveness of pavement program funding.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Pavement Program Planning – 2206282 / 9000  
**MANAGER:** S. Gresavage  
**UNIT:** Pavement and Drainage Management & Technology

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### *GOALS/ACTIVITIES: (cont'd.)*

- Develop and recommend annual paving programs that reflect cost effective pavement investment strategies in order to achieve the above stated objectives.
- Prepare annual and multiyear Pavement Program for CPM and Operations.
- Identify pavement projects and treatments that optimize network pavement condition with available funding.
- Perform pavement screening for recommended treatment locations for pavement scope development.
- Prepare problem statements for pavement preventive maintenance, resurfacing, rehabilitation and reconstruction projects.
- Prepare problem statements for pavement safety projects based on skid resistance and wet weather crash data.
- Provide for continuing training and professional development programs for Pavement Program Planning staff.

### *ANTICIPATED ACCOMPLISHMENTS FOR 2018:*

- Collect and analyze surface distress and smoothness data on 100% the State Highway System. Collect and analyze skid resistance data as required on the State Highway System.
- Update the pavement condition database with **2017** condition data.
- Update pavement project tracking database with CPM, Operations, and Maintenance pavement project information. Develop graphical project mapping feature to assist with project identification.
- Enhance the analysis of multi-year pavement condition data to include additional pavement performance related information such as construction QA data to improve reliability of performance curves.
- Evaluate the use of ProVAL software for processing Ride Quality Pay Adjustments.
- Prepare Annual Pavement Condition Report on New Jersey's Roadway Pavement System based on **2017** data collection.
- Update the Department's Asset Management Plan and Dashboard based on **2017** data collection.
- Upload **2017** pavement condition data into the Department's Data Warehouse.
- Perform Ride Quality testing on all new pavement and calculate pay adjustments based on test results.
- Prepare investment, budget and network condition scenarios to Capital Investment Strategy Committee, Asset Management Task Force, and Senior Leadership for program planning purposes.
- Utilize pavement management software to provide forecasted network pavement condition levels based on various budget scenarios and mix of fixes.
- Evaluate BRIC mix, Warm Mix, AROGFC, Microsurfacing, HPTO, and SMA for continued and expanded use.
- Prepare annual and multiyear Pavement Program for CPM and Operations based on **2017** pavement condition data and **2019** 10 year STIP.
- Prepare problem statements for pavement preservation, rehabilitation and safety projects based on **2017** pavement condition data and **2019** STIP.
- Complete pavement screening for recommended treatment locations for pavement scope development
- Provide input to the Transportation Asset Management Plan (TAMP) development team to prepare NJDOT's first TAMP submission as required by MAP-21/FAST
- Evaluate NJDOT's Pavement Management software and databases for compliance with MAP-21/FAST analysis and reporting requirements and continue to refine modifications as required.
- Evaluate the automated distress data collected by the Pavement Management vehicle and the semi-automated windshield survey and continue to refine algorithms to determine and correlate pavement distress rating based on this data rather than the windshield survey.
- Investigate data storage and back-up solutions to better protect pavement management data.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Pavement Program Planning – 2206282 / 9000  
**MANAGER:** S. Gresavage  
**UNIT:** Pavement and Drainage Management & Technology

**CONTRACTS:**

PMS data storage and archival (\$50,000/year)

**TRAVEL:**

Deighton User Group conference (approx. \$3,000 ea. Year)

**EQUIPMENT:** None.

**STAFFING:**

K. Ranganathan	Supervising Engineer 2	0.7	R. Blight	Supervising Engineer	0.8
H. Matthews	Admin Analyst 4 Info Sys	0.9	N. Kohli	Project Engineer	0.8
K. Sereni	Admin Analyst 3 Info Sys	0.9	N. Morshed	Principal Engineer	0.6
B. Kotwal	Info Tech. Specialist	0.9	F. Reeves	Principal Engineer	0.6
S. Rana	Project Engineer	0.7	V. Gervasoni	Senior Engineer	0.8
H. Abdu	Principal Engineer	0.6	W. Kettleston	Senior Engineer	0.6
L. Zhao	Assistant Engineer	0.1	V. Ganarajan	Senior Engineer	0.6
M. Kianka	Engineering Tech 1	1.0	O. Thomas	Assistant Engineer	0.6
G. Walters	Engineering Tech 2	1.0	B. Islam	Civil Engineer Trainee	0.6
N. Hayduk	Engineering Tech 3	1.0	N. Desai	Civil Engineer Trainee	0.6
J. Spizz	Engineering Tech 4	1.0	S. Sadeghloo	Civil Engineer Trainee	<u>0.6</u>
R. Surin	Engineering Tech 5	1.0			

TOTAL PERSON YEARS **17.0**

Overtime (**\$25,000/year**). Overtime is essential so that pavement condition data can be collected on high volume roads during off-peak hours with extended days and on weekends.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Pavement Support Program– 2206282 / 9100  
**MANAGER:** S. Gresavage  
**UNIT:** Pavement and Drainage Management & Technology

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### ***VISION:***

Improve the health of NJDOT's pavement network as a component of the State of New Jersey's performance-based planning (PBP) and asset management (AM).

### ***MISSION:***

The primary mission of the NJDOT Pavement Support Program is to identify and evaluate innovative Pavement Management and Engineering strategies to support the New Jersey Department of Transportation (NJDOT)'s Pavement and Drainage Management and Technology Unit in the following areas:

- Cost effective preservation and renewal strategies to keep the state's pavement assets in a state of good repair.
- Optimization of the overall condition of the State's Pavement network within the available funding levels
- Compliance with FAST Legislation

### ***GOALS/ACTIVITIES:***

The overall goal of this program is to use the tools and resources of the Pavement Support Program (PSP) to optimize the funds available to preserve the State's pavement assets and optimize the overall conditions of New Jersey's state-maintained highway pavements. The goals for the **2018** program are:

1. Innovative Materials: Research and test new or innovative materials or additives or mix designs to enhance pavement performance, constructability, material production, sustainability, etc. Examples include rubber modified gap graded mix, fiber additives, warm mix technologies, trackless tack coat, recycled materials, etc. Assist in the development of related design guidance, construction specifications and quality assurance test procedures to aid in successful implementation.
2. Innovative Technologies: Research innovative pavement technologies that offer benefits with regard to cost, quality, performance, constructability or sustainability through surveys, literature reviews, equipment demonstrations, etc. Examples include Intelligent Compaction, Thermal Profiling, etc. Assist in the development of related design guidance, construction specifications and quality assurance test procedures that will aid in successful implementation.
3. Pavement Management system development: Assist the Department in the development and continuous improvement of its Pavement Management System. Examples include evaluating alternative methods for incorporating automated distress data into the Pavement Management System network condition analysis, refining treatment triggers, budget analysis and program development. Investigating the impacts of the MAP-21 data collection and reporting requirements, identifying gaps and developing potential strategies to bring New Jersey's Pavement Management System into compliance. Refine the Data Workflow User Manual of pavement condition data collected during NJDOT highway network condition assessment and the quality assurance manual for data collection and analysis.



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Pavement Support Program– 2206282 / 9100  
**MANAGER:** S. Gresavage  
**UNIT:** Pavement and Drainage Management & Technology

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### *GOALS/ACTIVITIES: (cont'd.)*

4. Pavement Design Procedures: Assist the Department in evaluating its current Pavement Design procedures and software. Research and recommend alternatives to improve reliability of pavement designs. Investigate and develop NJ specific inputs and templates to improve productivity and develop related design guidance documents.
5. Life Cycle Cost Analysis: Assist in developing a methodology to evaluate and compare the life cycle costs of new pavement materials and technologies that have been implemented with those of more traditional materials and technologies. Examples include Binder Rich Intermediate Course (BRIC) w/Stone Matrix Asphalt (SMA), High Performance Thin Overlay (HPTO), rubber modified mixes, etc. Refine the Cost Benefit Analysis (CBA) to assess the benefits of Pavement Preservation Treatments in improving the NJDOT Pavement Network.
6. Conduct Research in support of pavement policy decisions: Assist in gathering and presenting information to help guide and justify DOT pavement policy through data mining, surveys, and literature searches.
7. Technology Transfer: Provide pavement related presentations and demonstrations to highlight relevant pavement information to keep NJDOT staff abreast of the current state of the practice and promising developments in the fields of pavement management, pavement design, materials engineering and pavement construction.

### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:*

1. Innovative Materials
  - a. NJDOT Full Depth Reclamation
    - i. Observe preparation and construction of NJDOT Rt 72 FDR project
    - ii. Evaluate materials and early field performance of the NJDOT Rt 72 project
    - iii. Refine the current NJDOT Specification for Full Depth Reclamation
  - b. NJDOT Performance Based Specialty Asphalt Mixtures
    - i. Perform more detailed evaluation of the HPTO, SMA and BRIC mixes based on the results of the performance evaluations completed in the 2017 PSP to try to better isolate critical variables in the performance results including material quality, construction quality, traffic levels, truck percentages, pre-existing conditions, etc.
    - ii. Air void tolerance testing for NJDOT performance mixes for trends on how air voids affect the results of performance tests including APA, Overlay, and Beam Fatigue.
  - c. NJDOT Performance Related Specifications – Precision and Bias Statements for Performance Testing
    - i. Develop, manage, and conduct a Round Robin experiment to develop a Precision and Bias statement for the Flexural Beam Fatigue (AASHTO T321)
  - d. NJDOT Skid Resistance Thresholds
    - i. Review current NJDOT specification for High Friction Surface Treatment (HFST) and evaluate potential QA acceptance test parameters to ensure a quality application.
  - e. Pavement Preservation Asphalt Mixture Performance Related Specifications
    - i. Evaluate potential test methods and thresholds for Ultra Thin Friction Course (UTFC), Microsurfacing, Slurry Seals and HFST preservation treatments for

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Pavement Support Program– 2206282 / 9100  
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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

- inclusion in performance related specifications as QA acceptance for these treatments.
      - ii. Revise NJDOT preservation specifications as appropriate based on results of evaluation of test methods
    - f. Evaluate alternative test methods for asphalt mix QC testing during production
      - i. Pilot study of tools for production material QC testing to predict Overlay and Rut test performance.
- 2. Innovative Technologies
  - a. NJDOT Surpro Walking Profiler Test Method Specification
    - i. Develop R-56 companion specification for Surpro Walking Profiler to provide guidance to regional Materials staff in bridge deck construction smoothness QA testing
  - b. Pavement Generated Noise on NJDOT's Highways
    - i. Maintain the QPPP data collection on the "quiet pavement surfaces" for the 5th of the required 7 year data collection program
    - ii. Collect data on a minimum of 10 pavement sections at least three times per year.
    - iii. Measure pavement noise levels on any innovative pavement surfaces developed and implemented on New Jersey's State-maintained roads.
  - c. NJDOT Longitudinal Joints – Post Construction Specification
    - i. Finalize Longitudinal joint specification based on results from 2017 pilot study program evaluating a proposed Longitudinal Joint Acceptance specification for the NJDOT. The pilot studies would consist of different asphalt mixture surface courses, potentially including but not limited to; 9.5 and 12.5 mm nominal maximum aggregate size mixtures; stone mastic asphalt (SMA); Asphalt mixtures with PG64 and PG64E-22 asphalt binders; HPTO; warm mix asphalt (WMA) technologies.
  - d. Asphalt Core Delivery Process
    - i. Modify certain elements of core delivery process and specification to improve timely and tamper-proof delivery of asphalt cores. Several of the changes may consist of requiring a particular type of delivery container, issuing written warnings, and changing amount of companion asphalt cores allowed to be taken.
  - e. Asphalt Mixture Performance Tester
    - i. Implement use of the AMPT to conduct the Overlay Tester performance test and any other tests deemed necessary by NJDOT
- 3. Pavement Management System (PMS) Development
  - a. Manage data workflow of pavement condition data collected during NJDOT highway network condition assessment
  - b. Review and update the NJDOT's PMS Quality Assurance manual to include feedback from FHWA HPMS Data Quality Audit as well as coordination of all PMS data sources including HPMS, SLD, NJDOT Materials QA data and As-Built data to make it a comprehensive PMS data integrity document
  - c. Finalize automated distress migration
    - i. Review cracking parameters and refine NJDOT's Surface Distress Index (SDI) using automated distress collection system capabilities if required.
    - ii. Evaluate and refine dTIMS v.9 inputs, triggers, and models if required

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Pavement Support Program– 2206282 / 9100  
**MANAGER:** S. Gresavage  
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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

- iii. Update and document the Annual dTIMS v.9 analysis and results as required
  - d. Update the dynamic NJDOT dTIMS User Manual for v.9
  - e. Refine the HPMA replacement application based on user input
  - f. Work with NJDOT to implement MAP-21 data collection and reporting requirements, identifying gaps and developing potential strategies to bring New Jersey's Pavement Management System into compliance
    - i. Refine and automate where possible, NHS network condition analyses for NHS, NJDOT NHS, Non-NJDOT NHS, and individual NHS owners as required based on Federal analysis requirements
    - ii. Develop and assist NJDOT in running budget analyses as required for TAMP
  - g. Evaluate feasibility and methodology of incorporating NJDOT Materials QA data into PMS database
- 4. Pavement Design Procedures
  - a. Continue the refinement of the NJDOT Pavement-ME Materials Catalog
    - i. Anticipated that an additional 4 to 6 dense-graded asphalt mixtures and 2 to 3 Specialty asphalt mixtures will be collected and evaluated including samples of asphalt mixtures from Region South HMA suppliers that are using out of state sources of Pennsylvania aggregates for calibration of pavement performance models
  - b. Continue the calibration of pavement performance models in the Pavement-ME using NJDOT pavement locations and regional conditions including asphalt mixtures from Region South HMA suppliers that are using out of state sources of Pennsylvania aggregates
    - i. Models proposed, but not limited to, for evaluation include; asphalt mixture rutting, fatigue cracking, and reflective cracking models.
  - c. Refinement of a NJDOT Pavement Design Guideline for Pavement ME design of pavements of varying structures, materials and traffic levels
    - i. Review, enhance and provide support to NJDOT and consultants based on feedback from users on Design Guidelines
- 5. Life Cycle Cost Analysis
  - a. Assist NJDOT Pavement Management Unit as needed with Life Cycle cost component of NJDOT Transportation Asset Management Plan development as required by 23 CFR 515
- 6. Research in Support of Pavement Policy Support
  - a. Develop, manage, and analyze a pilot study that looks at using Traffic Speed Deflectometer (TSD) to measure pavement strength/integrity of NJDOT's highways at highway traffic speeds for network level data collection
  - b. Assist NJDOT Pavement Management unit as needed with Performance Management policy initiatives as a result of compliance with 23 CFR 490
- 7. Technology Transfer
  - a. Develop, manage, and conduct training activities to include but not limited to;
    - i. Pavement-ME Use and Guidance
    - ii. NJSAT Hot Mix Asphalt Materials Refresher
    - iii. NJDOT's Performance-Based Specifications
    - iv. dTIMS user training for NJDOT PMS staff

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Pavement Support Program– 2206282 / 9100  
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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

- v. Surpro Walking Profiler Test Method Specification
- vi. Preservation Treatments and concepts for Construction/Geometric Design/Materials/Pavement Design

### **CONTRACTS:**

Consultant Activities–\$2.0 million Year 2.

### **TRAVEL:**

Attendance for 1 DOT employee at annual North East User Producer User Group (NEAPUG) meeting (approx. \$500 ea. Year)

### **EQUIPMENT:**

None

### **STAFFING:**

None

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Drainage Capital Improvement Program Planning - 2206282 / 9200  
**MANAGER:** S. Gresavage  
**UNIT:** Pavement and Drainage Management & Technology

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### ***VISION:***

Reduce statewide motorist impacts of functionally obsolete drainage facilities resulting in increased mobility, improved safety and increased pavement performance of NJDOT's highway network.

### ***MISSION:***

Through performance-based planning and asset management, provide drainage information, recommendations and expertise in coordination with Pavement Program Planning to better address drainage factors and infrastructure that impact mobility, safety and pavement life.

### ***GOALS/ACTIVITIES:***

The goals and activities listed below are consistent with the FHWA MAP-21/FAST Implementation in that they directly support the Department's Drainage Management System (DMS) which is a component of the Department's performance based planning and asset management.

- Collect, analyze, prioritize and report flooding impact data for the State Highway System to support drainage program development.
- Investigate and implement new technologies and approaches in the collection and analysis of flooding impact data to insure that the highest quality data is used to drive the Department's pavement planning and programming decisions.
- Maintain a prioritized list of drainage issues to permit data driven decisions.
- Participate in the exchange of information and technology transfer through outreach, workshops, conferences and users groups.
- Coordinate with other Divisions to implement cost effective innovative solutions for prioritized drainage issue where possible.
- Provide data and support for the Department's Asset Management, Dashboard and Data Integration initiatives.
- Recommend achievable and maintainable drainage condition goals and annual drainage capital improvement program funding levels in order to meet the Department's drainage condition goals for program planning purposes.
- Prepare investment, budget and drainage condition scenarios to Capital Investment Strategy Committee, Asset Management Task Force, and Senior Leadership for program planning purposes.
- Provide data to optimize the Department's capital investment in drainage improvements resulting in the maximum benefit to motorists.
- Coordinate drainage and pavement solutions for projects to maximize cost efficiencies and pavement performance.
- Evaluate, support and assist in the implementation of new technologies and treatments related to drainage in order to maximize effectiveness of drainage program funding.
- Provide cost effective strategies for constructing, maintaining and rehabilitating drainage facilities in order to maximize effectiveness of drainage program funding.
- Recommend and develop annual drainage capital improvement programs that reflect cost effective drainage investment strategies in order to achieve the above stated objectives.
- Prepare annual and multiyear Drainage Capital Improvement Program for CPM and Operations.
- Prepare problem statements for drainage capital improvement projects.
- Prepare problem statements for drainage safety projects.
- Provide for continuing training and professional development programs for Drainage Management staff.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Drainage Capital Improvement Program Planning - 2206282 / 9200  
**MANAGER:** S. Gresavage  
**UNIT:** Pavement and Drainage Management & Technology

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### **ANTICIPATED ACCOMPLISHMENTS FOR 2018:**

- Update and improve data analysis technique to better identify chronic flooding locations that require capital improvements.
- Update the prioritized list of drainage issues based on 2017 flooding data.
- Update the prioritized list of icing areas based on 2017 icing data.
- Update the Department's Asset Management plan and Dashboard based on 2017 flooding data.
- Upload updated DMS data to Department's data warehouse.
- Provide updated investment, budget and drainage condition scenarios to Capital Investment Strategy Committee, Asset Management Task Force, and Senior Leadership based on 2017 flooding and icing data.
- Cross check all proposed CPM pavement rehabilitation projects with DMS ranked locations to identify projects that should include drainage enhancements to enhance pavement performance.
- Evaluate porous pavement installations for expanded use in problematic drainage areas.
- Prepare annual and multiyear Drainage Capital Improvement Program for CPM and Operations based on 2017 flooding and icing data and 2017 10 year budget forecast.
- Prepare problem statements for drainage capital improvement projects based on 2017 flooding and icing data and 2019 STIP.
- Prepare problem statements for drainage safety projects based on 2017 flooding and icing data.

### **TRAVEL:**

None

### **EQUIPMENT:**

None

### **STAFFING:**

Name	Title	Person Years
K. Ranganathan	Supervising Engineer	0.3
S. Rana	Project Engineer	0.3
H. Abdu	Principal Engineer	0.4
V. Gervasoni	Senior Engineer	0.1
L. Zhao	Civil Engineer	0.8
H. Mathews	Admin. Analyst 4	0.1
K. Sereni	Admin. Analyst 3	0.1
B. Kotwal	Info. Tech Specialist	<u>0.1</u>

TOTAL PERSON YEARS 2.2

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bridge Management System – 2206285  
**MANAGER:** Gregory T. Renman  
**UNIT:** Bureau of Structural Evaluation & Bridge Management

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### ***VISION:***

The Department's overall Bridge Management System (BMS) effort directs state investment to maintain the state's bridges, and other transportation structures, in optimal condition.

### ***MISSION:***

To improve the Department's Bridge Management System effort to assist in developing the Statewide Transportation Plan, the State Transportation Improvement Program (STIP), to support the development of Department's Transportation Asset Management Plan (TAMP), and to enable more pro-active and cost-efficient methods of managing the Department's structural assets.

### ***GOALS/ACTIVITIES:***

1. Improve accuracy, efficiency and timeliness of BMS data collection.
  - a. Complete the final validation portion of Phase 2 of the NBIS Bridge Inspection data implementation in the Combined Inspection System (CombIS) and AASHTOWare BrM (BrM), focusing on capability and final optimization. We will continue to expand CombIS for collection and use of inspection information for most NBIS bridges, and all State minor bridges and other structural assets (including the overhead sign structures and high mast light poles, and basic data for dams).
    - i. Perform the typical cleanup effort needed at the end of any major upgrade to ensure all aspects of the system (mostly outliers and seldom used items) are functioning properly.
    - ii. Continue to add additional fields to CombIS and/or BrM as needed to support the MAP-21 data requirements determined to be necessary due to the Final Rulemakings due out in Nov/Dec. 2016 for bridge performance measures and asset management.
  - b. Continuously perform QA on the SI&A and National Bridge Element data.
    - i. Develop new reports as needed, in both CombIS and BrM to improve ease, and thus results, of data quality checking and reporting.
    - ii. Develop reports that make it easier to track and report on the 23 Federally-mandated Metrics.
  - c. Perform all necessary actions to enable the provision of the federal "Tapes" from BrM 5.2.3.
  - d. Begin the development of Phase 3 of the NBIS Bridge Inspection data implementation in CombIS and BrM. We will continue to expand CombIS use to capture complete bridge inspection information for the largest and most complex NBIS bridges.
    - i. Determine what capabilities have "matured" in the previous couple of years that we can take advantage of in implementing this Phase.
    - ii. Develop a plan (in 2018) for how to implement Phase 3 of the NBIS Bridge Inspection data implementation in CombIS (Phase 3 consists of implementing complete inspection reports, field-by-field, for the remaining NBIS bridges within CombIS as well as underwater inspection reports, and possibly mechanical/electrical reports for movable structures).

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bridge Management System – 2206285  
**MANAGER:** Gregory T. Renman  
**UNIT:** Bureau of Structural Evaluation & Bridge Management

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### **GOALS/ACTIVITIES: (cont'd.)**

2. Establish appropriate data linkages, and/or manual methods (especially initially), to enable the optimized flow of information to support the Department's decision-making. Work with the Department to adjust/refine the structural project identification and prioritization process such that, for major efforts, the right work happens at the right time. As part of this, develop appropriate project priorities and recommendations for effective Asset Management, and provide this information for use in the Capital Investment Strategy, the STIP, and the TAMP. Also, ensure that work accomplished, both major and minor (maintenance items), flows into CombIS and BrM.
  - a. Develop a way of obtaining data on existing asset-related work from all maintenance activities (This will likely require a link from the proposed Maintenance Fieldbook software to CombIS).
  - b. Develop a way of obtaining data on major work performed (bridge and structure major rehabilitations and replacements) from the Department's construction activities. This will require developing a data flow (initially manual and then later via data transfer) from eBuilder, and possibly other data sources, to CombIS, with CombIS providing this data to BrM as needed.
  - c. Develop appropriate project priorities and recommendations for Asset Management and the entire Capital Investment effort, and develop ways of adjusting these recommendations over time to maximize value and minimize cost.
    - i. Work with the Department as necessary to adjust the project development and delivery process to be more compatible with computerized methods of project identification, development, and time-based (delivery-date-focused) optimization.
    - ii. Based on this, develop and identify Project/Maintenance recommendations for the yearly Capital Program, the Capital Investment Strategy, the STIP, and the TAMP.
    - iii. Develop and implement methods of tracking progress with regards to meeting established goals.
2. Maximize the effectiveness of the investment in bridge and structural asset infrastructure.
  - a. Improve BrM data and deterioration model refinements.
    - i. Continue Development/Refinement of Performance Measures to monitor the health of our bridges. Also, provide tasks each year for, and implement the results of, the Bridge Resource Program activities.
    - ii. Develop procedures and mechanisms to enable development of projects to ensure goals are met for bridges and all assets in the system.
    - iii. Maintain current data regarding NJDOT Capital Program projects and STIP.
    - iv. Modify cost models yearly to reflect current NJ unit prices.
    - v. Modify/augment BrM formulas to support the NJ risk-based approach.
    - vi. Develop procedures and analysis to support the identification of bridge cyclic maintenance and preservation efforts.
  - b. MAP-21 Implementation and data sharing/integration
    - i. Improve Integration of the BMS with the other Department management systems to ensure that projects are coordinated between disciplines (partly described in section "2" above).
    - ii. Working with the Department, develop and provide an appropriate level of support to the MPO's with regards to their data needs as they endeavor to comply with the MAP-21 requirement to: *Transition to Performance Based Planning and Programming*.



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bridge Management System – 2206285  
**MANAGER:** Gregory T. Renman  
**UNIT:** Bureau of Structural Evaluation & Bridge Management

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### GOALS/ACTIVITIES: (cont'd.)

- iii. Implement all required aspects of the Rulemakings involving the Bridge Performance Measures and the TAMP.
- c. Implement a bridge preservation strategy, and methods to support this strategy.
  - i. Continue to develop the “*Playbook*” (a task-by-task method of documenting why we chose each action we make available for a bridge, what benefit we can take credit for in BrM deterioration modeling, what the cost benefit is, and the specifics of the action).
    - 1. Working with maintenance, develop/document in the *Playbook* methods that provide information to us on what maintenance work is being performed on State bridges and when.
    - 2. Working with maintenance and others, develop a list of actions that result in demonstrable bridge preservation results.
    - 3. Make the *Playbook* information available to the FHWA as part of the TAMP implementation and delivery.
  - ii. Develop procedures and mechanisms (including the creation of necessary fields in CombIS and BrM) to enable development, initiation, and eventually the tracking, of projects for executing specific bridge preservation actions.
  - iii. Develop and document various methods and decision trees for determining when to implement the various alternatives listed in the *Playbook*.
- d. Develop the capabilities to deliver the TAMP, as well as a 10-year capital program and 25-year capital plan, utilizing BrM directly to the extent possible and utilizing other support capabilities where required.
  - i. After implementing BrM 5.2.3, begin to test its capabilities to generate the capital program. Determine its strengths and weaknesses.
  - ii. Develop and implement a plan for implementation of the creation of the capital plan through BrM. This “plan” needs to especially identify the weaknesses found, and how to either adjust BrM to bring the models in alignment with our expectations, or look to data sources and methods external to BrM for developing supporting information (preferably, data that can be added to the BrM data to supplement the ability of the system to make valid decisions). If significant weaknesses are discovered, get involved in the BrM development effort.
  - iii. Develop and deliver all data required for the TAMP, including Lifecycle and funding alternatives analysis.
  - iv. Develop appropriate project priorities and recommendations for the yearly Capital Program.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bridge Management System – 2206285  
**MANAGER:** Gregory T. Renman  
**UNIT:** Bureau of Structural Evaluation & Bridge Management

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

1. After the implementation of the web services utility for Data Transfer from CombIS 7.5 to BrM 5.2.3, test and stabilize the connection between the systems for data integrity.
2. Implement work candidates within BrM 5.2.3 by utilizing Major/Interim Work Items from CombIS.
3. Based on the *Fieldbook* vendor being in place, develop an initial plan for how to feed maintenance activities into CombIS 7.5 and BrM 5.2.3, which will include implementation of preservation policies, and alignment of preservation *Playbook* with the maintenance *Fieldbook* system.
4. Initiate project-level as well as program-level analyses in BrM 5.2.3 using different scenarios (such as financial needs to meet the CIS and STIP requirements), structural conditions, mobility, risk, etc. to obtain the most optimal benefit/decision based on the minimal cost.
5. Utilize BrM 5.2.3 capabilities to meet the NBIS Bridge Performance Measures (PM2) and TAMP requirements.
6. Configure BrM 5.2.3 reporting modules to support the other management systems through data sharing to ensure the effective coordination within the department, and to develop various management reports.
7. Continue to develop the plan for Phase 3 of CombIS.

### **CONTRACTS:**

CombIS contract - Bentley (*InspectTech*) – Approximately: \$250,000 in CY2017; \$275,000 in CY2018

### **STAFFING:**

<u>Name</u>	<u>Title</u>	<u>CY2018 Person-Years</u>
Jack Evans	Supervising Engineer 2 Structural Evaluation	0.30
Harjit Bal	Project Engineer Structural Evaluation	0.60
Gina Rossi	Project Engineer Structural Evaluation	0.40
Nirav Patel	Project Engineer Structural Evaluation	0.10
Douglas Tintle	Project Engineer Structural Evaluation	0.05
Dhaval Jagirdar	Principal Engineer Structural Evaluation	0.05
Vincent Shu	Principal Engineer Structural Evaluation	0.05
Chandrasah Shah	Principal Engineer Structural Evaluation	0.30
Talal Abdalla	Senior Engineer Structural Evaluation	0.10
Yashesh Patel	Senior Engineer Structural Evaluation	0.10
Muhammad Asif Khan	Senior Engineer Structural Evaluation	0.40
Naveed Zaki	Senior Engineer Structural Evaluation	0.05
Vijay Sampat	Assistant Engineer Transportation	0.40
Bhaveshkumar Patel	Assistant Engineer Transportation	0.20
Amar Patel	Assistant Engineer Transportation	0.20
Mira Ayad	Civil Engineer Trainee	<u>0.20</u>
		<b>3.50</b>

## STATE PLANNING AND RESEARCH PROGRAM 2017 - 2018

**ACTIVITY:** Bridge Resource Program (BRP) - 2206281  
**MANAGER:** Eddy Germain  
**UNIT:** Structural Engineering and Infrastructure Management

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### ***VISION:***

Developing and supporting sustainable management policies to preserve and renew NJDOT's structures as a component of the State of New Jersey's Asset Management System.

### ***MISSION:***

The primary mission of the Bridge Resource Program (BRP) is to provide ongoing engineering evaluation and research support to the New Jersey Department of Transportation (NJDOT)'s Division of Bridge Engineering and Infrastructure Management to (1) Preserve the State's Bridge and Structural Assets, (2) Optimize the overall condition of the State's structures within the available funding levels, and (3) Assist with the development of policy based on new technologies and guidelines.

### ***GOALS/ACTIVITIES:***

The foundation for a successful Bridge Resource Program is to ensure that its core functional areas are aligned with NJDOT's needs, and are flexible, responsive and can efficiently enhance the overall performance of State assets. As such the BRP plan will be focused on the following core work areas:

1. Enhance the NJDOT's Structural Management Activities
  - a. Evaluate the existing activities and practices, find improvement needs in the existing activities and develop methods to mitigate deficiencies in the NJDOT's Bridge Management System.
  - b. Develop methods and procedures of performing Risk Based Prioritization work on assets in order to maximize safety and structural life at the optimal cost.
  - c. Coordinate, learn and develop management strategies for other structural assets (culverts, noise walls, sign structures, high mast light poles, dams etc.)
  - d. In accordance with MAP-21, support and enhance the Department's more comprehensive and methodical bridge preservation effort.
  - e. Research and recommend technical tools, develop guidelines and manuals for the Bureau of Structural Evaluation and Bridge Management.
  - f. Develop, refine and validate bridge deterioration modeling. Develop and research methods of efficiently analyzing bridge component data with the intention to utilize the data in such a manner that the desired performance and results are achieved. Provide asset data mining & technical assistance as needed.
2. Structural and Geometrics
  - a. Research methods for performance modeling and rating analysis on complex structures.
  - b. Evaluate the effectiveness of various methods used for the SUPERLOAD System. Evaluate and recommend best practices for performing Load Rating.
  - c. Develop methods to evaluate and validate currently implemented overweight truck route analysis.
  - d. In-depth structural inspection and evaluation to investigate structural emergencies
3. Advanced Materials
  - a. Research, review and pilot NDT/NDE methods and techniques in accordance with the NJDOT requirements.
  - b. Evaluate innovative material and technologies in the areas of Structural Engineering, bridge design and preservation.
  - c. Provide technology transfer and training to NJDOT's Division of Bridge Engineering & Infrastructure Management staff on topics pertaining to but not limited to new products, policy guidelines and research products.
4. On-Call Services
  - a. Standards Updating
    - i. Review AASHTO documents, TRB documents and other literature, as directed.
    - ii. Address specific topics in Standard Specifications updates, as directed.
    - iii. Address specific topics in the NJDOT Design Manual for Bridges and Structures, as directed.
    - iv. Address specific topics in standard plans and standard details, as directed.

## STATE PLANNING AND RESEARCH PROGRAM 2017 - 2018

**ACTIVITY:** Bridge Resource Program (BRP) - 2206281  
**MANAGER:** Eddy Germain  
**UNIT:** Structural Engineering and Infrastructure Management

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### *GOALS/ACTIVITIES: (continued)*

- b. Rapidly respond to the NJDOT's need for advanced bridge engineering tools and services to address forensic and construction, or maintenance, issues:
  - c. BRP staff will respond to the requests within one day and develop an appropriate work plan to supply the needed support and respond to NDE field evaluation upon NJDOT request within 3 days.
5. Provide Technology Transfer
- a. Develop and provide technical training modules and technology transfer for BRP related presentations and demonstrations to highlight relevant information to keep NJDOT staff abreast of the current state of practice and new developments in the fields of Design, Materials Engineering, Maintenance and Preservation, Construction and Bridge Management.
6. Local Aid Future Needs Program:  
Evaluate applications for Local Bridges Future Needs-**2018** (LBFN) program as part of the Statewide Capital Investment Strategy, which focuses on preventive maintenance, rehabilitation and selective replacement of bridges.
7. Bridge Design Manual, Standards and Policy Update  
Review AASHTO ballots for adoption in design specifications, NCHRP documents on bridge design/construction, design and construction practices of other state agencies, and other technical research documents in order to provide requirements and guidance on bridge design methods and policies. This will be achieved by using the research information to maintain and update the NJDOT Design Manual for Bridges and Structures, the structural portion of the Standard Specifications for Road and Bridge construction, and the Standard Drawings for Bridges and Structures so that these documents reflect current design and construction practices.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

#### Task 1: Enhance NJDOT's Structural Management, and Design Policy & Standard Unit Activities in collaboration with the Department's Structural Evaluation and Structural Engineering staff

##### 1a. Investigate BrM 5.2.3 modules

- After completing the investigation of default BrM 5.2.3 actions, utility and other features, recommend initial changes/modification to default settings by evaluating the NJDOT's historical data and maintenance policies. Recommend improvement/changes to the default actions, utility and new features of BrM 5.2.3 to align with the data and current NJDOT maintenance policy.
- Also, review and analyze the initial bridge deterioration model for deck, girder, and other bridge components, and recommend changes to create NJDOT specific deterioration models, and then implement in the BrM 5.2.3.

##### 1b. Risk Based Prioritization

- Develop methods, and validate procedures of identifying risks, their impact on the structural deterioration, and their mitigation plans in order to maximize safety and structural life at optimal cost. Implement the identified risk component along with its mitigation strategy in BrM 5.2.3 deterioration model.

##### 1c. Management Strategies for Other Structural assets

- This effort is deferred to Year 3 or 4.

## STATE PLANNING AND RESEARCH PROGRAM 2017 - 2018

**ACTIVITY:** Bridge Resource Program (BRP) - 2206281  
**MANAGER:** Eddy Germain  
**UNIT:** Structural Engineering and Infrastructure Management

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

1d. Support and Enhance bridge preservation efforts in accordance with Map-21 requirements

- Continue to complete the remaining portion of the asset preservation “manual” as described in Year 1 task 1e.
- Recommend all possible intervention actions for bridge component deterioration based on asset preservation “manual”. Based on the actions taken, also demonstrate improvement in the condition of the component.
- In collaboration with Department’s structural evaluation staff, investigate default BrM 5.2.3 project planning and preservation planning tools and compare with state-specific preservation protocols to identify strategies that may be undertaken by the Department towards a comprehensive integration of maintenance projects into a long-term preservation program.

1e. Research and Recommend technical tools, develop guidelines and manuals

- Evaluate and recommend best practices for asset preservation manual in terms of credits and costs utilized during LCCA.

1f. Refine and validate bridge deterioration models

- Apply the Asset Preservation Playbook processes for implementation within BrM 5.2.3 w.r.t actions, benefits groups, credits and cost analysis.
- Validate and improve the existing BrM 5.2.3 deterioration curves w.r.t NJDOT historical bridge data.
- Currently, the NJDOT considers the effects of ADTT on bridge deterioration. Since NJDOT has multiple years and sites of WIM data available, investigate how to take the effect of weight into consideration in action items for implementation in BrM 5.2.3 for bridge deterioration.

Tasks 1b, 1d and 1f were expected to be carried out in CY 2017, however due to a delay in BrM 5.2.3 implementation, they have now been shifted to CY 2018. The funds associated with these tasks will not be utilized in the year 2017, and will be carried forward to year 2018. We are only seeking authorization for the new activities other than above, anticipated in the Year 2018.

## STATE PLANNING AND RESEARCH PROGRAM 2017 - 2018

**ACTIVITY:** Bridge Resource Program (BRP) - 2206281  
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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

#### Task 2: Structural and Geometrics

##### 2a. Refined Load Rating

Evaluate and recommend best practices for performing load rating, and provide appropriate load rating training to NJDOT Bridge Engineering staff.

- Develop and implement an approach (if there is one) for the load rating of Concrete Encased Steel I-girders without removing the encasement and Load Testing, when plans are not available.
- Suggest various approaches and implement the best approach in improving the load rating for the prestressed concrete bridges without plans. At this moment, our policy is to code an inventory rating factor of 1 and operating rating factor of 1.67 for the design truck.
- Suggest and implement an approach for the load rating of Prestressed Concrete bridges with no plans where deterioration was observed in the strands and/or in the shear reinforcement.
- Suggest and implement an approach for the load rating of reinforced concrete bridges with no plans where deterioration was observed in the *reinforcement*.
- Suggest and implement an approach for the load rating of Masonry Arches with no plans using existing information where deterioration was observed in the superstructure.
- Develop a load rating manual for finite element method for the New Jersey using the existing manual, based on the FHWA *Guidance* and present a webinar for the approach of the finite element method.
- Develop a report with respect to traversing of Special hauling trucks, based on the available Weigh-in-Motion data.
- Based on the existing Weigh-in-Motion data, develop a parametric study between the following live load models and Special Hauling Trucks (SU4 to SU7)
  - 2-Axles 42,000 lb. Gross weight garbage trucks
  - 3-Axles 60,000 lb. Gross weight with rear two axles are tandems garbage trucks
  - 4-Axles 60,000 lb. Gross weight with rear three axles are tandems garbage trucksNJMVC gives commercial registration to trucks 70,000lb /80,000lb gross weight without any restriction on axle weight/axle spacing/number of axles.

##### 2b. Evaluate the effectiveness of current practices used for the SUPERLOAD System.

- Evaluate the effectiveness of current practices used for the SUPERLOAD System in terms of bridge analysis.

##### 2c. Develop methods (using Sensors, WIM etc.) to evaluate and validate currently implemented Overweight Truck route analysis for load carrying capacity and performance measures.

##### 2d. In-Depth structural inspection to investigate Structural emergencies

- This efforts will be performed on emergency basis.

#### Task 3: Advanced Materials

##### 3a. Advanced Materials – review and performance

In collaboration with the Department, develop a protocol to rapidly assess bridge decks and deploy rapid interventions that will greatly extend service life. The findings will inform state-specific adjustments or credits that may be applied to the remaining service life of bridge decks following the intervention.

#### Task 4: On-Call Services

##### 4a. Review proposed amendments to AASHTO publications submitted to the Subcommittee on Bridges and Structures (SCOBS). Present results and guidance in technical memorandums.

##### 4b. Review technical publications, journals and other resources including but not limited to FHWA, UTC and TRB to discover new technologies and construction techniques. Present result in technical memorandums.

## STATE PLANNING AND RESEARCH PROGRAM 2017 - 2018

**ACTIVITY:** Bridge Resource Program (BRP) - 2206281  
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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

- 4c. Assist with research for development of updates to Standard Specifications, Plans and Details, as directed.
- 4d. Develop Standards for new materials and construction techniques as selected by NJDOT from the technical memorandums developed in other tasks.
- 4e. Respond to urgent structural management, materials and technology issues that arise throughout the year.
- 4f. Rapidly respond to NJDOT's needs for advanced bridge engineering tools and services to address forensic and construction, or maintenance issues. Perform In- depth structural inspection and evaluation using innovative testing technology to investigate structural emergencies due to unforeseen and/or special events for individual structures as well as a corridor and provide recommendations.

#### Task 5: Provide Technology Transfer

Provide BRP related presentations and demonstrations to highlight relevant information to keep NJDOT staff abreast of the current state of practices and new developments in the fields of Design, Materials Engineering, Maintenance and Preservation, Construction and Bridge Management

- Research, review and pilot nondestructive testing/evaluation (NDT/NDE) methods and techniques in accordance with the NJDOT requirements. Provide technology transfer and training to NJDOT's Division of Bridge Engineering & Infrastructure Management staff on topics pertaining to but not limited to new products, policy guidelines and research products for Bridge design, construction, maintenance and preservation.

#### Task 6: Local Aid Future Needs Program

Evaluate applications for Local Bridges Future Needs 2018 (LBFN) program which focuses on preventive maintenance, rehabilitation and replacement of bridges. This is an ongoing task that needs to be completed every year.

#### Task 7: Bridge Design Manual, Standards and Policy Update

Adoption of current practice to State Standards and Policy.

Assist with research and academic input for updates to the NJDOT Design Manual for Bridges and Structures.

Review all sections of the manual and provide recommendation to update sections if necessary. Also recommend new sections. Department is planning to issue 7<sup>th</sup> edition of Design Manual for Bridges and Structures.

- The team will assist NJDOT to update current Design Manual for Bridges and Structures in following aspects:
  - A new section about Quality Assurance and Quality Control (QA/QC) process guide;
  - A new section about bridge security;
  - A new guideline when to rehabilitate or when to replace substructure during superstructure rehabilitation. To add subsections for the substructure under the section for superstructure.
  - A new section about Bridge Life Cycle Cost Analysis (BLCCA) required by FHWA;
  - A policy for Accelerated Bridge Construction (ABC);
  - Better outline for the design manual; and other ideas that would be beneficial to include in the 7th Edition of Design Manual.

#### **CONTRACTS:**

2017 – \$1.6 million; 2018 - \$1.6 million.

## STATE PLANNING AND RESEARCH PROGRAM 2017 - 2018

**ACTIVITY:** Bridge Resource Program (BRP) - 2206281  
**MANAGER:** Eddy Germain  
**UNIT:** Structural Engineering and Infrastructure Management

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**STAFFING:**

<u>Name</u>	<u>Title</u>	<u>CY 2018 PY</u>
Jayesh Patel	Supervising Engineer Bridge Design	0.600
Hannah Xicheng	Project Engineer Bridge Design	0.700
To be Filled	Principal Engineer	0.700
Kiranben Patel	Senior Engineer Bridge Design	0.800
Ankur Patel	Senior Engineer Bridge Design	0.800
Joseph Warren	Civil Engineer Trainee	0.800
Ankitkumar Shah	Civil Engineer Trainee	0.800
Mujahid Khan	Supervising Engineer Structural Evaluation	0.033
Jack Evans	Supervising Engineer Structural Evaluation	0.075
Harjit Bal	Project Engineer Structural Evaluation	0.075
Mula Reddy	Project Engineer Structural Evaluation	0.075
Yasotha Rishindran	Project Engineer Structural Evaluation	0.075
Gina Rossi	Project Engineer Structural Evaluation	0.033
Douglas Tintle	Project Engineer Structural Evaluation	0.033
Chandahas Shah	Principal Engineer Structural Evaluation	0.033
Yashesh Patel	Senior Engineer Structural Evaluation	0.010
Talal Abdalla	Senior Engineer Structural Evaluation	0.010
Muhammad A Khan	Senior Engineer Structural Evaluation	0.066
Mushtaq A Nasim	Assistant Engineer Transportation	0.050
Amar Patel	Assistant Engineer Transportation	0.010
Bhaveshkumar Patel	Assistant Engineer Transportation	0.033
Vijay Sampat	Assistant Engineer Transportation	0.075
Jonathan Yrrizarri	Assistant Engineer Transportation	0.010
Nhan Do	Assistant Engineer Transportation	0.010
Mira Ayad	Civil Engineer Trainee	0.010
Juan Fan	Civil Engineer Trainee	0.010
Total Person Years		5.926



## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Pool Fund for Accelerated Testing of Untreated Reinforced Concrete Deck and Other Superstructure Components  
**MANAGER:** Eddy Germain  
**UNIT:** Structural Engineering and Infrastructure Management; Structural Engineering

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### ***VISION:***

Department's vision is to increase the service life of a highway bridge decks. Currently, the standard service life of a highway bridge deck is considered to be 40 years or less, while the standard design life for a highway bridge is 75 years.

### ***MISSION:***

Maintenance and repair of concrete bridge decks is a costly and disruptive process for the Department of Transportation. With limited funding available to keep all bridge decks in a state of good repair, analysis tools are needed to better understand what parameters drive the deterioration of untreated concrete bridge deck and other superstructure components and what the expected performance and service-life are for a given set of parameters.

### ***GOALS/ACTIVITIES:***

This proposed research will collect and integrate state specific data set to address questions and practices specific to NJDOT and other members of the project. The research team will identify parameters and methods needed to assess and forecast the performance of concrete bridge deck, coating system, elastomeric bearing, and various joints. These parameters may affect the design, detailing, construction, environmental exposure, traffic load, use of deicers, and other maintenance practices.

1. Determine base deterioration curves and difference in long term performance of the following systems and bridge components during the accelerated testing:
  - a. Untreated reinforced concrete decks with various type of reinforcement
  - b. New Jersey specific three coat painting system for steel girder
  - c. Elastomeric bearing and various types of joints
  - d. Influence of axle weights on the deterioration and service life of untreated reinforced concrete decks.

### ***ANTICIPATED ACCOMPLISHMENTS FOR 2018:***

- 1.1 – Literature Survey
  - Provides an important comparative benchmark for the accelerated testing program.
- 1.2 – Development of Detailed Experiment Plan
  - Detailed plan to satisfy the above Goals/Activities
  - Full scale bridge superstructure design and justification for all design decision
- 1.3 – Specimen Construction and Instrumentation
  - Detailed documentation of construction process as well as testing of material
- 1.4 – Test execution and Data Collection
  - Perform accelerated testing and ongoing interpretation of all data
- 1.5 – Data Interpretation
  - Detailed analysis of all data collected to satisfy goals/activities
- 1.6 – Reporting

## STATE PLANNING AND RESEARCH PROGRAM, 2017-2018

**ACTIVITY:** Pool Fund for Accelerated Testing of Untreated Reinforced Concrete Deck and Other Superstructure Components  
**MANAGER:** Eddy Germain  
**UNIT:** Structural Engineering and Infrastructure Management; Structural Engineering

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### **CONTRACTS:**

Rutgers CAIT  
2018 - \$350,000

### **EQUIPMENT:**

None.

### **STAFFING:**

<u>Name</u>	<u>Title</u>	<u>Role</u>	<u>Person-year</u>
Xiaohua Cheng	Project Engineer Bridge Design	Lead State Contact	0.04
Ankur Patel	Senior Engineer Bridge Design	Technical Reviewer	0.06
Joseph Warren	Civil Engineer Trainee	Assistant Reviewer	0.06
Ankitkumar Shah	Civil Engineer Trainee	Assistant Reviewer	0.06

Total cost of research                      \$850,000  
New Jersey DOT's contribution        \$350,000  
In house budget                                \$ 13,660  
Project's duration                                16 months

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Intelligent Transportation Systems Resource Center (ITSRC) – 2206275  
**MANAGER:** C. William Kingsland  
**UNIT:** Transportation Systems Management

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### ***VISION:***

Utilize the Intelligent Transportation System Resource Center (ITSRC) as a premier technical, research, education, and knowledge transfer program to provide resources and assistance to NJDOT in improving safety, mobility, and efficiency of New Jersey's surface transportation systems through implementation of Intelligent Transportation Systems (ITS), and innovative transportation planning and management methods and strategies. The resource center is a partnership between federal and state transportation agencies, academia, private industry, and other entities that promote and advance implementation of ITS technologies to New Jersey's transportation system.

### ***MISSION:***

The primary mission of ITSRC is to assist NJDOT in enhancing the quality and efficiency of New Jersey's surface transportation systems through an effective implementation of ITS via a TSM&O pipeline. This is accomplished by conducting a robust combination of planning and research studies, operational tests, evaluation of deployment scenarios and strategies, training, and outreach. These activities specifically focus on technology assessment, development of new technology applications, testing deployments of new technologies, evaluation of ITS implementation strategies and scenarios, application of advanced transportation and traffic modeling tools for ITS deployment evaluation and planning, maintaining the ITS information database, traveler information via multiple methods, and technology transfer. This approach ensures that NJDOT is at the forefront of adopting the latest technological advancements in transportation technology, and makes the right decisions in investing in the most effective ITS applications and deployments, which maximizes benefits to the traveling public.

### ***GOALS/ACTIVITIES:***

The objectives of this work program address the three current FHWA Planning Emphasis Areas: MAP-21 Implementation and Regional Models of Planning Cooperation are addressed with multiple goals. The provision of free travel time information on the roads and via free access to 511NJ, integrated corridor management and related strategies also supports transportation disadvantaged communities and Ladders of Opportunity. These objectives are addressed through the following activities:

1. Conduct Annual Best Practices Research and Strategic Planning/Policy Development
  - a. Conduct Annual Best Practices Scan of ITS and TSM&O
  - b. Support TSM&O Management System: Develop Conceptual Design of the TSM Management System and commence development of management system analytical tool.
  - c. Support Implementation of NJDOT ITS Strategic Deployment Plan: conduct annual review of ITS and TSM&O deployment accomplishments and assist TSM with updating the TSM&O Strategic Deployment Plan.
  - d. Support Implementation of Connected Corridor and CMM: complete development of the TSM&O Communication Plan, participate in meetings of the CMM implementation team, as well as in meetings related to advancement of the Connected Corridor and Statewide ITS Architecture.
  - e. Assist NJDOT TSM with updating the TSM website and promoting TSM&O concepts and practices within the Department and externally
2. Develop and conduct TSM&O and ITS Training, Technology Transfer and Outreach
  - a. Identify TSM knowledge and technology transfer (KTT) needs, including specialized (focused) training, and develop a plan of training courses, workshops, and seminars to be delivered in the calendar year.
  - b. Organize and carry out training and KTT events addressing the identified needs.
  - c. Prepare the training materials and hand-outs for the attendees of training and KTT events
  - d. Maintain the ITSRC website hosted at NJIT, which will serve as the main KTT and outreach tool for the ITSRC program. This will include regular posting of published reports, papers, brochures, presentation, and other informational materials as appropriate.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Intelligent Transportation Systems Resource Center (ITSRC) - 2206275  
**MANAGER:** C. William Kingsland  
**UNIT:** Transportation Systems Management

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### **GOALS/ACTIVITIES:** *(continued)*

3. Data acquisition, integration, analysis and visualization support for transportation planning and traffic operations
  - a. Conduct research on Data Acquisition, Processing, Storage, and Analytics in support of urban mobility and traffic management applications. This may include data other than probe-vehicle data, including the data from emerging and innovative sensor technologies, as well as crowd-sourced data.
  - b. Conduct research and demonstration of mobile data collection and utilization in TSM&O practice.
4. Traffic Operations Capacity Building and Integration of Arterial and Freeway Management
  - a. Provide assistance with advancement of innovative technologies, such as on-board vehicle camera.
  - b. Provide assistance to NJDOT and NJSP personnel as a facilitator of multi-agency Task Force to update and/or develop detailed diversion routes by County.
  - c. Support the Safe Passage Program Outreach and Awareness
  - d. Document the CONOPS for Integrated Freeway and Arterial Traffic Management (IFAM) and analyze the effectiveness of specific IFAM concepts and strategies.
  - e. Facilitate Traffic Incident Management (TIM) training and outreach activities, and support advancement of the Statewide TIM Strategic Plan.
  - f. Maintain and update NJTIM.org hosted at NJIT, which serves as the main Traffic Incident Management Resource Portal for New Jersey. This will include developing an automated training reporting system to share training statistics with FHWA and developing bi-yearly program brochure and other informational materials as appropriate.
5. Improve Work Zone Mobility Monitoring
  - a. Support implementation of the Work Zone Performance Measures in the work zone management practice.
  - b. Carry out the Work Zone Monitoring Program, by identifying work zones to be instrumented and analyzing the effectiveness of applied ITS technologies in work zone mobility and safety management practice.
6. Provide Technical Support for Technology Evaluation and Deployment
  - a. Carry out pilot deployment and evaluation of innovative ITS technologies using the testbeds developed as part of the ITSRC Program, including the Connected Vehicle, Urban Mobility, and Unmanned Aerial Systems (UAS) testbeds.
  - b. Apply Traffic Simulation and Analysis Models and Tools to conduct evaluation and analysis of ITS technology deployment. This will include to use of High Fidelity Driving Simulator (DS) and Simulation-based Virtual Adaptive Traffic Control System (Virtual ATCS).
  - c. Carry out research of Video Analytics (VA) applications in traffic monitoring and data collection, including development (improvement) and Tier 2 evaluation of the effectiveness of VA system(s).
7. Conduct ITS Feasibility, Concept Development and Systems Requirements Studies for ITS and TSM&O
  - a. Develop CONOPS for Freight Real-Time Advanced Traveler Information System (FRATIS) pilot deployment.
  - b. Develop CONOPS for Truck Parking Management System pilot deployment.
  - c. Conduct system requirements assessment for the proposed pilot deployment of FRATIS and Truck Parking Management systems, as well as select Integrated Corridor Management (ICM) applications identified in the NJNE ICM CONOPS.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Intelligent Transportation Systems Resource Center (ITSRC) - 2206275  
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**UNIT:** Transportation Systems Management

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### **GOALS/ACTIVITIES:** *(continued)*

- d. Conduct research and develop CONOPS and system requirements assessment documentation for select traffic operations applications in collaboration with the Division of Traffic Operations.
  - e. Conduct Analysis, Modeling and Simulation (AMS) tasks in support of ITS pilot deployment projects.
  - f. Develop implementation plans and prepare documentation that can be used to advance the implementation of select ITS and TSM&O applications.
8. Program Management
- a. Conduct regular progress reviews, identify any problems (or issues) impacting the progress according to the work plan, and implement any corrective actions needed to ensure successful completion of the work program.
  - b. Provide continuous project monitoring and management.

### **ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:**

1. Conduct Annual Best Practices Research and Strategic Planning/Policy Development
  - a. Annual report on the review of the best-practices scan.
  - b. Briefing papers summarizing the state of practice pertaining to specific topics.
  - c. PowerPoint presentations summarizing the annual report of the best-practices scan and briefing papers.
  - d. Conceptual System Design for the TSM&O Management System.
  - e. Annual review of ITS and TSM&O deployment accomplishments relative to deployment goals/targets set out in the TSM&O Strategic Deployment Plan.
  - f. Meeting Notes, PowerPoint presentations, and other relevant materials for meetings organized in relation to TSM&O CMM, and advancement of Connected Corridor and Statewide ITS Architecture as appropriate.
2. Develop and conduct TSM&O and ITS Training, Technology Transfer and Outreach
  - a. Meeting Notes, PowerPoint presentations, and other relevant materials for meetings organized in relation to this activity.
  - b. Handouts and other materials delivered as part of training courses, seminars, and workshops
  - c. Certificates of attendance.
  - d. Annual report on training and outreach activities completed as part of this program.
  - e. Content for the ITSRC website.
3. Data acquisition, integration, analysis and visualization support for transportation planning and traffic operations
  - a. Technical memorandum summarizing strategies for effective integration of emerging data sources in traffic and transportation data analytics practice.
  - b. Technical memorandum describing a prototype of an integrated transportation data application.
  - c. Final report summarizing the accomplishment of the research on Data Acquisition, Processing, Storage, and Analytics.
  - d. Technical memorandum documenting the collected data and data integration methodology in the application of mobile (vehicle-based) data collection and utilization research study.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Intelligent Transportation Systems Resource Center (ITSRC) - 2206275  
**MANAGER:** C. William Kingsland  
**UNIT:** Transportation Systems Management

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

- e. Technical memorandum documenting the outcomes of the pilot application and demonstration of the vehicle-based data collection and utilization.
  - f. Technical memorandum documenting a web-based data analytics tool developed in conjunction with the vehicle-based data collection and utilization application.
4. Traffic Operations Capacity Building and Integration of Arterial and Freeway Management
    - a. Technical memorandum summarizing the Diversion Route task force activities, products and outcomes.
    - b. Technical memorandum summarizing the results of the on-board vehicle camera pilot deployment.
    - c. Interim progress report on the Safe Passage Program Outreach and Awareness support activities.
    - d. Technical memorandum describing the model for analyzing the effectiveness of IFAM.
    - e. Annual progress report summarizing TIM outreach efforts (working groups, regional meetings)
    - f. Technical memorandum summarizing the evaluation of specific TIM program(s) and/or initiative(s).
    - g. Technical memorandum summarizing the TIM training activities, including training materials, and post-training summary reports.
    - h. Updated NJTIM.org business requirement specifications and user documentation, as appropriate.
  5. Improve Work Zone Mobility Monitoring
    - a. Technical memorandum summarizing findings from the instrumented (monitored) work zone sites.
    - b. Technical memorandum summarizing updates and improvements in the web-based work zone monitoring system.
  6. Provide Technical Support for Technology Evaluation and Deployment.
    - a. Technical reports summarizing the progress and the results of the ITS pilot deployment studies.
    - b. Technical memorandum outlining the models and methodologies for evaluation of deployed ITS technologies.
    - c. Updated CONOPS and system requirements documentation for ITS pilot deployments.
    - d. Software applications and algorithms developed as part of ITS pilot deployment.
    - e. Technical report providing a detailed overview of the assessed effectiveness of UAS in performing site (infrastructure) inspection and traffic surveillance, as well as synthesis or training and safety guidelines, and standard operating procedures.
    - f. Technical report summarizing the results of the research studies conducted using Driving Simulator.
    - g. Technical report summarizing the results of the research conducted using virtual ATCS platform.
    - h. Technical report summarizing the improved features and properties of the video analytics system for traffic monitoring and data collection applications, as well as results of the Tier 2 system evaluation using video archive from NJDOT CCTV system.
  7. Conduct ITS Feasibility, Concept Development and Systems Requirements Studies for ITS and TSM&O
    - a. Technical report summarizing the conceptual design and high-level system requirements for the FRATIS pilot deployment.
    - b. Technical report summarizing the conceptual design and high-level system requirements for the Truck Parking Management System pilot deployment.
    - c. Technical report providing detailed system requirements for the NJNE ICM system.

**STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018**

**ACTIVITY:** Intelligent Transportation Systems Resource Center (ITSRC) - 2206275  
**MANAGER:** C. William Kingsland  
**UNIT:** Transportation Systems Management

**ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)**

- d. Technical report(s) summarizing performed AMS activities and results of the analysis of effectiveness of evaluated ITS and TSM&O applications.
- 8. Program Management
  - a. Quarterly progress reports
  - b. Project Management Plan and revisions of the plan as appropriate.
  - c. Additional memoranda documenting any project management issues and their resolution.

**CONTRACTS:**

University Task Order to conduct Intelligent Transportation Systems Resource Center with a budget of \$3,000,000 per year for Year 1 and Year 2.

**TRAVEL:**

Travel Estimates	#Staff/ Mtg	Mileage Reimbursement	Hotel	Meals	Travel Expenses	Registration
UMD/I-95 CC	2/ 2	280	0	0	0	\$120
TRB conference	2/ 1	0	\$1,500	\$360	\$320	0
ITSA conference	2/1	0	\$900	\$240	\$550	\$400
ITSNJ conference	2/1	50	0	0	0	\$100
APANJ conference	1	0	0	0	\$75	\$375
TIM Meeting	4/ 2	30	0	0	0	0
Column Total		@0.50/mile 360 miles \$180.00	\$2,400	\$600	\$945	\$995
Grand Total				\$5,120.00		

**EQUIPMENT:** None.

**STAFFING:**

S. Catlett	Proj. Mgr	0.90
J. Martinez	Principal Engineer, Traffic	0.90
G. Yazersky	Planner, Trans.	1.00
R. Ahmed	CET	1.00
P. Amin	Supvr. Engr.	0.05
R. Casmer	Supvr. Engr.	0.05
M. Pilsbury	Supvr. Engr.	0.05
D. Caltagirone	Sr. Trans. Analyst	0.05
E. Falcon	Sr. Trans. Analyst	0.05
J. Garcia	Comm. Officer	<u>0.05</u>
		4.00

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Program Coordination - 2206093  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### ***VISION:***

New Jersey will be a place where people of all ages and abilities are able to bicycle and walk. Those who live, work, or visit will be able to conveniently walk and bicycle with confidence, a sense of security in every community, and with the respect of all modes. Both activities will be a routine part of the transportation and recreation systems.

### ***MISSION:***

The purpose of the Bicycle and Pedestrian Program is to ensure the broadest implementation of the Statewide Bicycle and Pedestrian Transportation Master Plan, NJDOT's Complete Streets policy and FHWA's policies related to bicycle and pedestrian travel for the State of New Jersey.

Because New Jersey is a Pedestrian Safety Focus State, the objectives and tasks/actions relate to developing and funding capital projects to meet the needs of pedestrians and bicyclists and ensure that all studies, projects and programs include full consideration of bicycle, pedestrian and complete streets policy elements in order to help reduce pedestrian fatalities.

### ***GOALS/ACTIVITIES:***

Develop and fund capital projects on state system roadways and other roadways and locations throughout the state to meet the needs of bicyclists, pedestrians and transit users of all ages and abilities.

Ensure that all studies, projects and programs in the Department include full consideration of bicycle and pedestrian needs in accordance with federal, Complete Streets and other state policies.

Encourage and support the development and implementation of bicycle and pedestrian strategies, Complete Streets policies and multi-modal project development by MPOs, Counties, Municipalities, and TMAs.

Provide appropriate technical assistance and professional development opportunities to department staff, outside agencies, and transportation professionals throughout the state.

Disseminate information to the public on safe and desirable places to bicycle and walk and on progress made in advancing bicycle projects and programs in New Jersey.

Obtain training on the Highway Safety Improvement Program and other bicycle- and pedestrian-related programs and issues from the Federal Highway Administration and other providers.

### ***ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018:***

***Task 1:*** Utilizing consultant assistance under existing and new Task Order Agreements, and working in cooperation with the Division of Traffic Engineering and the Division of Project Management, provide input to all projects in the scoping and design work program regarding Complete Streets, bicycle and pedestrian access and safety needs. Coordinate and track this process. Provide technical assistance to various entities of the department for projects going through the department pipeline process. Investigate problems and potential opportunities to implement



## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Program Coordination - 2206093  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

Complete Streets through improving access and safety for bicycle, pedestrian, transit and ADA travel. Prepare problem statements and initiate the project development process to implement these improvements.

- Deliverables: Technical Memoranda, Reports and Problem Statements providing bicycle/pedestrian input to NJDOT Capital Project Delivery Process.
- Timeline: Two years
- Previous Year Progress:
  - o Scoping meetings attended: 38
  - o Scope Statements signed off: 17
  - o Access Reviews: 18
  - o Problem Statements submitted: 4
  - o Permit/Plan review: 15
  - o Compliant Field Reviews: 8
- Calendar Year 2018: Continue task

Task 2: Utilizing consultant assistance under existing and new Task Order Agreements, and working in cooperation with the Bureau of Access, provide input to projects seeking to obtain access to state highways. Coordinate and track this process. Investigate problems and potential opportunities to implement Complete Streets through improving access and safety for bicycle, pedestrian, transit and ADA travel. Prepare recommendations to Bureau of Access staff to require locals and developers to implement these improvements.

- Deliverables: Recommendations to the NJDOT Bureau of Access to require the provision of bicycle and pedestrian facilities on local projects along state highways.
- Timeline: Two years
- Previous Year Progress:
  - o Access meetings attended: 2
  - o Recommendations submitted: 1
- Calendar Year 2018: Continue task

Task 3: Participate as Subject Matter Experts on committees such as Scenic Byways, Title VI/Environmental Justice, the Smart Growth I-Team, the ADA Unit and the Transit Village Task Force and provide advice and expertise to the Department, the MPOs, the TMAs, Sustainable Jersey, Shaping NJ, the Chronic Disease Task Force, the NJ Healthy Communities Network, the New Jersey Trails Council and other advisory groups in the state.

- Deliverable: Provide technical expertise and guidance. (Ongoing)
- Timeline: Two years
- Previous Year Progress:
  - o Staff attended all relevant meetings as Subject Matter Experts
- Calendar Year 2018: Continue task

Task 4: Organize a Pedestrian Safety Task Force through the NJ Bicycle and Pedestrian Advisory Council (NJBPAAC) that would include state agencies, regional, county and local representatives to ascertain the status of pedestrian safety initiatives, track progress and prepare an annual report based on the Pedestrian Safety Action Plan.

- Deliverable: An annual report on Pedestrian Safety in New Jersey.
- Timeline: Two years
- Previous Year Progress:
  - o The NJBPAC and Sub-Committee meeting memos are on the Bicycle and Pedestrian Resource Center website in place of a Task Force Report.

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

**ACTIVITY:** Bicycle and Pedestrian Program Coordination - 2206093  
**MANAGER:** Elise Bremer-Nei, Section Chief  
**UNIT:** Commuter and Mobility Strategies

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

- Calendar Year 2018: Continue task

Task 5: Review all NJDOT Problem Statements submitted to the Division of Capital Planning and Investment and complete a Tier I Screening for inclusion of Complete Street elements.

- Deliverables: Complete Streets review for all NJDOT Problem Statements.
- Timeline: Two years
- Previous Year Progress:
  - Reviewed 0 Problem Statements for Tier 1 Complete Streets Screening
- Calendar Year 2018: Continue task

Task 6: Assist with additions and revisions to the Department's Roadway Design Manual (RDM) as it pertains to bicycle, pedestrian and traffic calming issues, as needed. Participate in the update of the Desired Typical Section (DTS) to include shoulders and sidewalks.

- Deliverable: Comments and revisions to the RDM and DTS.
- Deliverable: Updated Roadway Design Manual (Ongoing)
- Timeline: Two years
- Previous Year Progress: None
- Calendar Year 2018: Task order with consultant will be initiated for the DTS.

Task 7: Continue with the update to the Statewide Bicycle and Pedestrian Master Plan.

- Deliverable: An Updated Statewide Bicycle and Pedestrian Master Plan (Complete)
- Deliverable: Implementation of the Bicycle and Pedestrian Master Plan
- Timeline: Two years
- Previous Year Progress:
  - Master Plan Update has been completed.
- Calendar Year 2018: Continue with implementation tasks

Task 8: Participate in the development of a cooperative effort between NJDOT/NJDEP and other agencies to identify opportunities for the development of multi-use trails and coordinate activities to achieve implementation. Serve as the Department's designated representative to the New Jersey Trails Council and ensure that other regional trail efforts are supported by staff, including the Circuit Trails, the Delaware River Heritage Trail, The Morris Canal Trail, The Capital to Coast Trail, and others.

- Deliverable: An update to the route of the East Coast Greenway through the Meadowlands and across various rivers in northern New Jersey. (New)
- Timeline: One year
- Calendar Year 2018: Complete task

Task 9: Work with NJDEP to revise Storm Water Regulation pertaining to sidewalks.

- Deliverable: Revised Storm Water Permit or Waiver for installation of sidewalk above the 2,000 feet threshold in Pedestrian Crash Corridors/Safety Areas.
- Timeline: Two years
- Previous Year Progress:
  - Task order with consultant has been initiated for Year 2.
- Calendar Year 2018: Continue task

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

Task 10: Utilizing consultant assistance under existing and new Task Order Agreements continue to develop and implement regional Complete Streets training workshops for municipalities, counties and the MPOs on the benefits of Complete Streets, including policy elements, design, cost, liability and implementation.

- Deliverable: Regional Complete Streets Workshops as needed.
- Timeline: Two years
- Previous Year Progress:
  - Complete Streets Design Guide is complete.
- Calendar Year 2018: Initiate training and workshops across the state.

Task 11: Utilize consultant resources and initiate a study of bicycle and pedestrian connections across arterial roadways and interstates. Major arterial roadways and interstate interchanges have historically been designed to move vehicles and not accommodate pedestrians. This study will examine how to safely move pedestrians along and across these facilities. (New)

- Deliverable: Best Practice Guide
- Timeline: One year
- Calendar Year 2018: Initiate task

Task 12: Develop and submit best practices for Complete Streets for the next edition of Smart Growth America's, "The innovative DOT." (New)

- Deliverable: An article on Best Practices in Complete Streets in New Jersey
- Timeline: One year
- Calendar Year 2018: Initiate task

Task 13: Coordinate with the Motor Vehicle Commission to emphasize pedestrian and bicycle safety in the drivers' education curriculum. (New)

- Deliverable: Updates to the NJ Driver's Manual, the Drivers Training Course and the New Driver's Exam.
- Timeline: Two years
- Previous Year Progress:
  - Legislation has been introduced to include questions on bicycles and pedestrians in the new written examination for a New Jersey Driver's license.
- Calendar Year 2018: Initiate task

Task 14: Utilize consultant resources to develop and implement a Traffic Safety Education Curriculum for schools in New Jersey that includes walking, bicycling, scootering, skateboarding, riding the school bus and taking transit.

- Deliverable: A NJ Traffic Safety Curriculum and Implementation Plan (New)
- Timeline: One year
- Calendar Year 2018: Initiate task

Task 15: Provide access to the Department's bicycle and pedestrian safety information & materials. Periodically update the njcommuter.com bicycling and walking web site to include updated materials and information. Track the interest for the materials through the Department's website.

- Deliverable: Updated NJDOT Bicycle & Pedestrian Website
- Timeline: Two years

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

- Previous Year Progress:
  - Consultant work is complete. Coordination is underway with communications and IT to implement the changes on the NJDOT website.
- Calendar Year 2018: Install the updated pages on the NJDOT website.

Task 16: Provide access to the Department's Safe Routes to School information and materials. Periodically update the Safe Routes to School web pages to include updated materials and information. Track the interest for the materials through the Department's website.

- Deliverable: Updated NJDOT SRTS Web page
- Timeline: Two years
- Previous Year Progress:
  - Consultant work is complete. Coordination is underway with communications and IT to implement the changes on the NJDOT website.
- Calendar Year 2018: Install the updated pages on the NJDOT website.

Task 18: Create videos and/or infographics on head-out angle parking and protected bike lanes for state, county and local distribution. (New)

- Deliverable: Head-Out Angle Parking Video and/or Info Graphic
- Deliverable: Protected Bike Lane Video and/or Info Graphic
- Timeline: Two years
- Previous Year Progress:
  - Storyboards and filming is underway for the protected bike lane video.
- Calendar Year 2018: Continue task

Task 19: Assist the Bureau of Legislative Analysis with the review and revision of proposed legislation as it relates to bicycles and pedestrians in New Jersey as needed.

- Deliverable: Research on best practices and recommendations on legislation
- Timeline: Two years
- Previous Year Progress:
  - Ongoing.
- Calendar Year 2018: Continue task

Task 20: In coordination with the Bureau of Project Development and the Bureau of Legislative Analysis, develop and implement a methodology for meeting the requirements of Public Law 2007, chapter 308 (the Terrell James Law).

- Deliverable: A procedure for the review of proposed school sites and/or highway ramps within 1,000 feet of one another, including mitigation for those sites where there is no feasible alternative
- Timeline: One year
- Calendar Year 2018: Initiate task

Task 21: Continue to populate the NJ Bicycle Touring Route Guides

- Deliverable: Three additional New Jersey Bicycle Touring Routes in digital format compatible with smart phones
- Timeline: One year
- Calendar Year 2018: Initiate task

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

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### *ANTICIPATED ACCOMPLISHMENTS FOR CALENDAR YEAR 2018: (continued)*

Task 22: Provide outreach to stakeholders and coordination with other agencies and partners by participating in meetings, conferences, workshops and panel presentations in New Jersey and around the country.

- Deliverables: Presentations and participation at meetings and conferences as the opportunities arise
- Timeline: Two years
- Previous Year Progress:
  - Presentations at grant information sessions across the state. Presentations at the APA-NJ Statewide Conference in New Brunswick, the TransAction conference in Atlantic City and the NJ Bike and Walk Summit in Princeton.
- Calendar Year 2018: Continue task
  - Presentations at the APA-NJ Statewide Conference in New Brunswick, the NJ Bike and Walk Summit in Princeton and the national Pro-Walk/Pro-Bike/Pro-Places conference in New Orleans.

Task 23: Administer the federally funded Bicycle and Pedestrian Program to include developing a work program and budget; managing program implementation, project selection and implementation, and reporting requirements to FHWA as agreed in the Mutual Service Standard.

- Deliverable: A work program and budget based upon previously identified bicycle and pedestrian safety, access and/or mobility issues with semi-annual project update reports
- Timeline: Two years
- Previous Year Progress:
  - Ongoing.
- Calendar Year 2018: Continue task

Task 24: Document the processes used to initiate and maintain the NJDOT Bicycle and Pedestrian Program. (New)

- Deliverable: A Bicycle and Pedestrian Program Procedures Handbook

### ***CONTRACTS:***

All of the funding for the on-call consultant contracts that began in July 2016 to perform Bicycle and Pedestrian Planning Work for NJDOT has been authorized. The Department selected three (3) consultants at a ceiling of \$1.5 million dollars each for a 3-year Term Agreement in the Spring of 2016.

Michael Baker International, Inc.  
NV5 (formerly The RBA Group)  
Parsons Brinckerhoff

### ***TRAVEL:***

Previous years' travel has included the National Safe Routes to School Conference and SRTS Coordinators' Meeting, the Pro-Walk/Pro-Bike/Pro-Place Conference and the State Bicycle and Pedestrian Coordinators' Meeting, the American Planning Association National Conference, the APA NJ State Conference, the State League of Municipalities Conference and the NJ Bike and Walk Summit.

Total: \$10,000

## STATE PLANNING AND RESEARCH PROGRAM, 2017 - 2018

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### *EQUIPMENT/SUPPLIES:*

\$2,000

### *STAFFING:*

Elise Bremer-Nei, Section Chief	1.0 py
Joseph Powell, Principal Planner	1.0 py

**NORTH JERSEY TRANSPORTATION  
PLANNING AUTHORITY, INC.**

**FY 2019**

**UNIFIED PLANNING WORK PROGRAM  
CHAPTER IV  
OTHER REGIONAL TRANSPORTATION  
PLANNING INITIATIVES**

**SECTION III**

**NJTPA STUDY AND DEVELOPMENT PROGRAM**





The NJTPA Study & Development Program (S&D) is a schedule of project planning, environmental reviews and other work that will be conducted during the coming year to advance proposed improvement projects toward possible federal funding. The S&D was formerly known as the Project Development Work Program (PDWP). The latest S&D is available on the NJTPA's website at <http://www.njtpa.org/project-programs/project-development/study-and-development-program>.

All projects scheduled for work in the S&D were drawn from or referenced in NJTPA's long-range plan. Many have been further investigated through regional or subregional studies. As such the projects reflect the goals and long-range strategy of the NJTPA for improving access and mobility in the northern New Jersey region.

Projects in the S&D undergo concept development. This identifies and compares reasonable alternatives and strategies that address the purpose and need statement and selects a preliminary preferred alternative (PPA). At the conclusion of this project development work, projects become candidates for inclusion in the NJTPA Transportation Improvement Program (TIP). The TIP allocates federal funding to actually implement projects including the completion of design, right-of-way acquisition and construction.

More information on the S&D program, including how projects are selected for inclusion in the document, can be found in the S&D introduction and in the introduction to the TIP found on the TIP page.