# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td>2</td>
</tr>
<tr>
<td>Unified Planning Work Program Purpose</td>
<td>2</td>
</tr>
<tr>
<td>Funding for Planning Activities</td>
<td>2</td>
</tr>
<tr>
<td>Other Federal and State Funds</td>
<td>2</td>
</tr>
<tr>
<td>Metropolitan Planning Organization Member Agencies</td>
<td>3</td>
</tr>
<tr>
<td>UPWP Format</td>
<td>6</td>
</tr>
<tr>
<td>Funding Tables</td>
<td>7</td>
</tr>
<tr>
<td>I. PROGRAM SUPPORT AND ADMINISTRATION (44.21.00)</td>
<td>7</td>
</tr>
<tr>
<td>A. Program Support</td>
<td>7</td>
</tr>
<tr>
<td>B. Community Outreach and MPO Governance</td>
<td>9</td>
</tr>
<tr>
<td>II. GENERAL DEVELOPMENT AND COMPREHENSIVE PLANNING PROJECT (44.22.00)</td>
<td>9</td>
</tr>
<tr>
<td>A. Demographics Monitoring and Data Development</td>
<td>9</td>
</tr>
<tr>
<td>B. Land Use Interface and Sustainable Communities</td>
<td>10</td>
</tr>
<tr>
<td>C. Statewide Initiatives</td>
<td>10</td>
</tr>
<tr>
<td>Carryover Projects:</td>
<td>11</td>
</tr>
<tr>
<td>Relevant Statewide Planning and Research Activities (SPR)</td>
<td>11</td>
</tr>
<tr>
<td>III. LONG RANGE TRANSPORTATION PLANNING PROJECT (44.23.00)</td>
<td>14</td>
</tr>
<tr>
<td>A. Long Range Transportation Planning- Systems Level (44.23.01)</td>
<td>14</td>
</tr>
<tr>
<td>1. MTP PlanDelivery</td>
<td>14</td>
</tr>
<tr>
<td>2. Air Quality/Energy/GHG Review and Planning</td>
<td>16</td>
</tr>
<tr>
<td>3. Asset Management Systems</td>
<td>17</td>
</tr>
<tr>
<td>4. Travel Model - Upgrades and Buildout</td>
<td>18</td>
</tr>
<tr>
<td>B. Long Range Transportation Planning- Project Level (44.23.02)</td>
<td>19</td>
</tr>
<tr>
<td>1. Highway Studies</td>
<td>19</td>
</tr>
<tr>
<td>2. Transit Studies</td>
<td>20</td>
</tr>
</tbody>
</table>
IV. SHORT RANGE TRANSPORTATION PLANNING PROJECT (44.24.00) .................................................. 21
1. Mobility Coordination .................................................................................................................. 21
2. Freight & Logistics Project Development .................................................................................. 22
3. Corridor Improvements/Project Support .................................................................................. 23
4. Management and Operations Integration .................................................................................. 24

TRANSPORTATION IMPROVEMENT PROGRAM (44.25.00) ......................................................... 25
1. TIP Development and Monitoring ......................................................................................... 25
2. Project Funding and Finance .................................................................................................... 25

VI. PLANNING EMPHASIS AREAS PROJECT (44.26.00) ................................................................. 26
1. Coordination of Non-Emergency Human Services Transportation ...................................... 26
2. Participation of Transit Operators in Metropolitan and Statewide Planning ..................... 27
3. Planning for Transit Systems Management/Operations to Increase Ridership ................. 27
5. Incorporate Safety and Security in Transportation Planning .............................................. 27
6. Other Areas ............................................................................................................................... 28

This report was prepared in part with the financial assistance of the U.S. Department of
Transportation. However, the contents represent only the view of the authors and do not
necessarily reflect the review or approval of the U.S. Department of Transportation.
EXECUTIVE SUMMARY

Unified Planning Work Program Purpose
The SFY 2018-2020 Unified Planning Work Program (UPWP) describes the planning activities of the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) in Erie and Niagara Counties. GBNRTC is the Metropolitan Planning Organization (MPO) for the Greater Buffalo-Niagara Region. Developed biannually, in cooperation with federal, state and local agencies, the UPWP provides a comprehensive view of short and long-range transportation planning activities. Designated by the Governor of the State of New York, GBNRTC has the responsibility to perform the continuous, comprehensive, and cooperative planning process for the region. The UPWP identifies the transportation planning activities that are to be undertaken in support of the vision, goals, objectives, and policies identified in the Metropolitan Transportation Plan 2040 adopted in May 2014 and the MTP 2050, anticipated approval May 2018.

Funding for Planning Activities
The most recent authorizing legislation, the Fixing America’s Surface Transportation Act or “FAST Act”, enacted on December 4, 2015 by the United States Congress and signed by the President, authorizes the MPO to receive two primary sources of federal planning funds supporting UPWP activities: FHWA’s Section 104(f) Metropolitan Planning (PL) funds and FTA’s Section 5303 Metropolitan Planning Program (MPP) funds. Federal funds allocated to the MPO in the 2018-2020 UPWP from these programs are forecast as $2,303,628 in each year, exclusive of AMPO dues of $3191 per year.

Some carryover balances in both FHWA and FTA planning funds have been accumulated. These are addressed per the November 3, 2017 NYSDOT UPWP Guidance Letter. As noted, annual operational costs for the organization consume most of annually appropriated funds; some backlog needs to be established to address major episodic consultant contracts relative to MTP 2050 project planning and development and simulation model support for NYSDOT and NYSTA studies. All carryover FTA planning funds are allocated to work tasks in this UPWP. FHWA “backlog” funds of $542,043 and $455,939 respectively were budgeted to continue major contractual activities particularly for MTP 2050 plan deployment in each of the UPWP program years. Similar programming of approximately $1,100,000 are planned in subsequent two year work program to complete the 2050 initiative, leaving a remaining backlog balance of $653,181 in reserves to address continuity of operations in the event of disruption in federal funding post FAST Act, for staff operational costs plus open contractual commitments.

Other Federal and State Funds
In addition to FHWA and FTA funds, other federal and state funded programs impact the transportation planning and decision-making process. Coordination with these activities is effected through the UPWP, with member agencies of the GBNRTC being either directly involved or part of regional and state review mechanisms. The following program is illustrative but not all inclusive of these other activities:

- Federal Aviation Administration (FAA) funds are received for Aviation Facilities Planning;
- Funds from New York State Energy Research Administration for Integrated Corridor Management studies.
- State Planning and Research (SPR) funds for various planning activities affecting the region.
Metropolitan Planning Organization Member Agencies

GBNRTC member agencies include the:

- New York State Department of Transportation (NYSDOT);
- New York State Thruway Authority (NYSTA);
- Niagara Frontier Transportation Authority (NFTA);
- County of Erie;
- County of Niagara;
- City of Buffalo; and
- City of Niagara Falls.

Regional Strategic Stakeholders in the Planning and Coordinating Committee (PCC) include:

- Seneca Nation of Indians
- Logistics and Transportation Council of the Buffalo Niagara Partnership
- Empire State Development Corporation

UPWP Framework for State Fiscal Years 2018-2019 and 2019-2020

FAST Act and other Federal legislation (such as the 1990 Clean Air Act Amendments, the Americans with Disabilities Act of 1990 and the 1994 Executive Order on Environmental Justice), significantly influences the manner in which the cooperative, continuous and comprehensive transportation planning process is administered. GBNRTC continues to implement federal Performance Based Planning requirements. Policy Committee has adopted Transportation Performance Measure (TPM) targets as they have been established, and ongoing monitoring and reporting processes are integrated into the process. Eight planning factors are listed in the legislation and these factors provide a framework for transportation planning and development in the region. These eight factors include:

1. Support the economic vitality of the United States, the States, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for all users.
4. Increase accessibility and mobility options available to people and for freight.
5. Protect and enhance the environment, promote energy conservation, and improve quality of life
6. Enhance integration and connectivity of the transportation system, across and between modes throughout the state, for people and freight.
7. Promote efficient system management and operation
8. Emphasize the preservation of the existing transportation system.
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhance tourism and travel

Within the context of the ten planning factors, GBNRTC has identified five planning goals and related objectives for improving the transportation system. Each goal represents a key issue addressed within the framework of the Metropolitan Transportation Plan 2040. These goals are the primary drivers for work activities planned by the GBNRTC. The goals and associated objectives include:

**Goal: The Buffalo-Niagara region will focus on transportation projects that preserve and enhance existing transportation facilities.**

**Objectives:**
- To achieve and maintain adequate pavement conditions on roadway facilities based on functional class.
- To achieve and maintain adequate bridge conditions based on functional class.
- To achieve and maintain adequate transit infrastructure and maintain the system vehicle fleet on a responsible replacement cycle.

**Goal: The Buffalo-Niagara region’s transportation system will improve user’s mobility and accessibility.**

**Objectives:**
- Create a more balanced transportation system than enhances modal choices.
- Enhance mobility for all members of the community including the transportation disadvantaged.
- Provide an integrated multi-modal transportation system which offers: the efficient and safe mobility of people, seamless and overlapping networks for goods movement, and a variety of accessible mode choices to regional activity sites.
- Provide a regional system that will minimize delay times by implementing effective congestion relief techniques such as: transportation system management (TSM), transportation demand management (TDM), intelligent transportation systems (ITS) and selected linear capacity expansion projects emphasizing areas with existing infrastructure.
- Emphasize the development of effective alternatives to single occupant vehicle (SOV) travel.

- Enhancement of highway safety techniques, incident management plans, and access management techniques.

- Promote increase security of transportation facilities and activities to increase the region’s ability to protect and respond to potential threats and hazards.

**Goal:** The Buffalo-Niagara region’s transportation system will improve the region’s economic competitiveness.

**Objectives:**

- Improve the mobility of the transit dependent and low-income to employment opportunities.

- Maintain the existing system to support existing and future development through the reuse of existing facilities and sites.

- Provide transportation services to promote higher density urban redevelopment and infill development projects in, and adjacent to, existing neighborhoods.

- Encourage the concentration of employment and activity sites within transit corridors to maximize transportation efficiency.

- Promote the efficiency and the reliability of freight movement (truck and rail) within and through the region and improve multi-modal facilities and system connectivity to capitalize on growing international and trans border trade opportunities.

- Correlate transportation investments to employment growth opportunity.

- Focus transportation system improvements to support and promote tourism.

**Goal:** The Buffalo-Niagara region will plan and develop a transportation system that enhances and protects the region’s natural environmental quality, cultural and historic resources, and communities.

**Objectives:**

- Enhance the attractiveness, convenience, safety and availability of non-motorized transportation systems.

- Provide transportation services that not only mitigate adverse environmental impacts but also protect, enhance, and restore the environment.
• Improve the resiliency and reliability of the transportation system and reduce or mitigate
  stormwater impacts of surface transportation.
• Promote ways to reduce energy consumption.
• Providing transportation services to those areas with existing infrastructure thereby limiting
  sprawl.

**Goal:** The Buffalo-Niagara region will achieve better inter-jurisdictional coordination of transportation and land use planning.

**Objectives:**

• Promote consistency between transportation improvements and state and local planned growth
  and economic development patterns.
• Coordinate the regional transportation plan with municipal plans. Ensure that all municipalities in
  the region have an adopted master plan (update) or set of planning tools for monitoring or
  directing physical and economic development in a regionally consistent manner.
• Encourage mixed-use development with multi-modal transportation connections.
• Encourage new development to integrate with existing land use and transportation patterns.
• Support legislative efforts for “smart growth” initiatives that promote coordinated planning.
• Integrate and strengthen transportation considerations with land use planning by incorporating a
  land use model within the transportation planning process.
• Establish communication and an informational process with municipalities to emphasize the land
  use-transportation connection.

**UPWP Format**

This document is organized into seven chapters, each describing work tasks with specific concerns. These include:

• Program Support and Administration;
• General Development and Comprehensive Planning;
• Long Range Transportation Planning;
• Short Range Transportation Planning;
• Transportation Improvement Program;
Planning Emphasis Areas

Other Activities

Funding Tables

- Total Cost Summary Table by UPWP Work Element and Funding

Appendices one through three delineate the total UPWP funding program with respect to the following:

- Appendix 1: Agency Participation and New Funding;
- Appendix 2: A - Task and Auditable Budget by Participant, FHWA PL Funding Source;
  B - Task and Auditable Budget by Participant, FTA Section 5303 Funding Source and Shared Cost Initiative Funding;
- Appendix 3: A - Carryover FTA Planning Funds Resources;
  B - Description of Other Funds Included in Program

I. PROGRAM SUPPORT AND ADMINISTRATION (44.21.00)

A. Program Support and Administration

- Support the function of the GBNRTC in carrying out the multimodal transportation planning process. Includes clerical, graphic, procurement, accounting and related support services to maintain the process. Reimburse host agency for related costs.

- Comply with Title VI of the Civil Rights Act of 1964, the American with Disabilities Act of 1990, and related statutes and implementing regulations; to the end that no person shall on the grounds of race, color, national origin, handicap, age, sex or religion be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination. To meet this goal, GBNRTC has prepared Title VI Plan detailing agency activities, which is revisited and reaffirmed with each recertification.

- Maintain agency information systems availability and upgrade hardware based on an ongoing replacement schedule

- Acquire and deploy new software needed for daily administrative operations of the GBNRTC as well as enhanced planning capabilities.

- Manage email accounts and Internet DSL access for GBNRTC staff.

- Provide hardware and software support for Geographic Information Systems (GIS) to enhance our digital mapping capabilities and interface with other agency systems and data.
- Provide hardware and software support for transportation modeling and micro-simulation efforts using the TransCAD, TransModeler, Synchro, AimSun, VISSIM, CIMS and TranSIMS software packages.

- Manage the GBNRTC website contract. Oversee website changes and additions. Enhance website functionality by adding features and services as needed for use by the public and member agencies.

- Project management of the UPWP Tasks and preparation of project status and performance summaries. Overall management of staff, committees and stakeholders. Includes staff training and development. Preparation of progress reports for all MPO activities, including work performance of tasks and financial status of federal and non-federal expenditures, including consultant billings as required for management control purposes and for inclusion in reports to the GBNRTC, state and federal agencies.

- Preparation of the UPWP and associated budget documentation, as well as amendments as required. Complete new UPWP document will be prepared and approved by March 2020.

- Ensuring compliance with air quality, planning certification, and other legislation.

- Preparation of reimbursement billings and quarterly expense activity to report in-kind services.

- Preparation by the host agency of a Single Audit of GBNRTC Grant Accounts.

- Preparing progress reports for all MPO activities, including work performance of tasks and financial status of federal and non-federal expenditures. These include previous year(s) active FTA planning grants.

- Provision of staff training and development.

- Provide documentation to federal agencies regarding programmatic aspects of the MPO planning program. Prepare for onsite Certification Review of the transportation planning process. Refine and upgrade the program and closeout any recommendations based on review of the process.

- GBNRTC membership and participation in recognized organizations, such as the New York State MPO Directors Association and the Association of Metropolitan Planning Organizations (AMPO). All NYS MPO’s FHWA-PL allocations are adjusted to account for annual AMPO dues.

  **Objective: Administer the MPO Planning Process**  
  **Performed by: MPO staff and consultants**  
  **Forecast Start: Ongoing support activity**  
  **Products: UPWP prepared by March 2020**
B. Community Outreach and MPO Governance

- Provide comprehensive community outreach focused on several related activities incorporating the following:
  -- Media and Communications
  -- Environmental Justice Planning
  -- Local Government/MPO Outreach

- Overall intent is to provide a community involvement process which promotes planning that is open and responsive to concerns expressed by all segments of the public, provides early and adequate opportunity for involvement by the public and by private enterprise, and furnishes subjective values to supplement technical planning work in evaluation and decision-making. The 1994 Executive Order 12898 on Environmental Justice directs that transportation programs, policies, and activities should not have a high and adverse health and environmental effect on minority and low-income populations. GBNRTC will review plans and products to assess and ensure compliance with environmental justice requirements of Title IV. Continued outreach to towns, villages, Native American nations and stakeholders will be afforded access to the planning process and appropriate interface.

  Objective: Provide Community Involvement Process
  Performed by: MPO Staff
  Forecast Start: Ongoing activity
  Products: Comprehensive public outreach process

- GBNRTC Governance Review: existing governance of the GBNRTC process will be reviewed in a full day work session to examine current practices and potential opportunities to continuously improve the program. Amended governance documents will be prepared based on member recommendations.

  Objective: Review MPO Governance, produce updated documentation
  Performed by: MPO Staff
  Forecast Start: October 2018 - Forecast Complete: January 2019
  Products: Amended MPO Governance Documents

II. GENERAL DEVELOPMENT AND COMPREHENSIVE PLANNING PROJECT (44.22.00)

A. Demographics Monitoring and Data Development

- Incorporate annual residential building permit data and commercial development database information into existing GBNRTC databases, for development trends analysis.

- Provide as requested, municipal and regional level data including demographics, traffic count data, accident data, and other transportation data for use in planning.
• Maintain demographic database information in a central GIS system, to allow access to employment, household, land use and probable development activities.

• Maintain the GBNRTC Dataset on www.gbnrtc.org. Expand datasets and public access through coordinating data with NYSDOT and developing shared web formats for use by members and public, especially in regard to transportation data and projects. Provide links on www.gbnrtc.org to free ESRI GIS data viewers.

  Objective: Acquire and display regional demographic data  
  Performed by: MPO Staff  
  Forecast Start: Ongoing support activity  
  Products: Comprehensive Demographics database

B. Land Use Interface and Sustainable Communities

• Manage the One Region Forward Implementation Council and provide support for implementation of the Regional Plan for Sustainable Development. Details on the plan and implementation activities can be found at www.oneregionforward.org. Integrate with MTP planning and project development. Include integration with NYSDOT Smart Growth efforts and NYS Smart Growth legislation.

  Objective: Provide regional planning integration into the transportation planning process  
  Performed by: MPO Staff  
  Forecast Start: Ongoing support activity, recommendations on process by June 2018  
  Products: Integrated land use and transportation approach and performance measures

C. Statewide Initiatives

• A number of transportation planning tasks have been identified that can benefit many or all of the metropolitan planning organizations in New York State. These typically are research tasks or those related to data collection. The Metropolitan Planning Organizations in New York State and New York State Department of Transportation have recognized the efficiency of pooling a portion of their Federal metropolitan planning funds to undertake these tasks, and NYSDOT has typically provided a 50 percent match with SPR funds for most of the tasks. The MPO Directors and the Director of the NYSDOT Statewide Planning Bureau identify potential tasks, reach consensus on those that are proposed for the year, and develop a scope of work for each. In general, these projects are undertaken by a consultant under contract to one of the MPOs or NYSDOT.

• No new SCI projects are currently planned for the next two fiscal years.
Carryover Projects:

- **MPO Training** – Funding for this work will provide timely training appropriate for progressing MPO programs through advancement of staff skills and increased awareness of MPO membership. Cost is $92,513 FHWA PL and $3,076 FTA MPP/$769 State Match IKS

- **NYSMPO Staff Support** – Contract activity to provide technical and administrative support to the NYSMPO organization. Total cost is $250,000 ($150,000 FHWA PL and $100,000 NYSDOT SPR)

- **ESRI ArcInfo ArcGIS License** - This project will provide for an ESRI ArcInfo ArcGIS license in each upstate MPO. The ArcInfo license provides an expanded GIS toolset for visualization, spatial modeling and analysis, and high-end cartography and allows for spatial data management in more modern data structures.

Relevant Statewide Planning and Research Activities (SPR)

- NYSDOT summarizes its consultant planning projects and staff-planning activities in its State Planning & Research (SPR) Program and each MPO summarizes their planning projects in their respective Unified Planning Work Plans. Following is a list of SPR programmed activities of significance to GBNRTC area or specifically supporting GBNRTC initiatives:

**C-17-55 Buffalo Smart Corridor Plan**
**SPR Funding:** $80,661
The primary objective of the Corridor Plan will be to facilitate a greener, safer, more efficient and integrated transportation system for the future Main Street Corridor achieved through an in-depth exploration of potential Internet of Things (IoT) applications.

**C-14-57 Integrated Corridor Management for Niagara Frontier**
**SPR Funding:** $323,202
The objective of this Border Crossing Corridor Management Project is to optimize traffic operations by identifying effective traffic management strategies to mitigate congestion and environmental impacts.

**C-15-52 Statewide Planning, Policy & Technical Research Tasks In Support of ATDM**
**SPR Funding:** $3,000,000
This project will progress and support specific task-order based assignments related to planning, policy, technical assistance, and research needs that may be inter-regional, or statewide in scope and aim to reduce congestion, energy consumption, greenhouse gas emissions, improve mobility, increase transportation efficiency through multimodal measures, and promote or foster a sustainable transportation system.

**C-16-52 Continuous Traffic Count Program Zone 2**
**SPR Funding:** $2,225,000
This initiative is the Continuous Count (CC) Traffic Count Program for Zone 2 with full performance based maintenance and upgrade services in Zone 2 to provide better coverage, distribution, and differentiation by functional classification of roadway, geographic area, and seasonality of traffic patterns.

**C-14-63 Short Count Traffic Count Program (2015 -2019)**  
**SPR Funding: $7,650,308**  
The project goal is to provide for the collection of traffic data in NYSDOT Regions 1 through 11 (divided into Zones). This will be achieved by contracting for the collection of that data.

**C-17-56 Statewide Coordination of Metropolitan Planning Programs**  
**SPR Funding: $100,000**  
The goal of this project is to support and maintain the ongoing coordination of the metropolitan planning programs in NYS for statewide benefit; the ongoing collaboration of the fourteen (14) metropolitan planning organizations (MPOs); and the on-going coordination of metropolitan and statewide planning programs.

**C-13-57 Highway Oversize/Overweight Credentialing System (HOOCS)**  
**SPR Funding: $5,000,000**  
The goal is to implement a Commercial Off-the-Shelf (COTS) HOOCS software solution and obtain the accompanying integration services necessary to fulfill NYSDOT's Central Permitting Bureau's business requirements.

**C-14-53 Program & Project Management Software and Training**  
**SPR Funding: $1,850,000**  
The goal of this project is to provide support services for the ongoing configuration and implementation of a Department-wide enhanced and improved enterprise level program and project management system to facilitate improvements to the capital program delivery.

**C-14-51 New York State Freight Transportation Plan**  
**SPR Funding: $1,300,000**  
The goal of this project is to develop a New York State freight transportation plan that provides a comprehensive plan for the immediate and long-range planning activities and investments of the State with respect to freight.

**C-14-54 Global Inc. Trend Data, Analysis and Forecasts**  
**SPR Funding: $2,000,000**  
The goal of this project is to update the socio-demographic and business economic projections, VMT model and forecasts.

**C-14-61 Technical Support for Use of National Performance Management Research Data**
SPR Funding: $884,068
The goal of this project is to develop and make accessible to NYSDOT and partner planning agencies a hosted National Performance Management Research Data Set (NPMRDS) geo-database and analytic framework for performance analysis and visualization of congestion, mobility and reliability.

C-14-60 TDR Toolbox for New York Municipalities
SPR Funding: $105,045
The goal of this project is to create a toolkit for New York State municipalities to implement TDR and to produce three demonstration projects in partnership with municipalities selected during the project. The demonstration projects will create a case for the feasibility of the implementation of TDR in New York State municipalities, while also providing a framework that specific municipalities will be able to enact as local policy.

C-14-62 Roadway Inventory Data and Performance Measure Enhancements
SPR Funding: $400,000
The goal of this project will progress and support improvement of existing data in the Roadway Inventory System (RIS), as well as modify and/or add new data items to support the Enterprise Linear Referencing System (ESRI Roads & Highways) implementation, Asset Management System (Agile Assets) implementation, upgrades to the traffic data system to replace the unsupported TRADAS, new data items in support of performance measurement requirements being developed as part of the FHWA implementation of MAP-21, and other evolving roadway inventory requirements and short term data modification efforts.

C-15-54 Bus Safety Inspection System (BusNET)
SPR Funding $2,000,000
The goal of this project is to replace the existing 25+ year old mainframe with a new modern server-based IT system.

C-17-53 Pavement Condition Data Collection Services
SPR Funding: $20,500,000
The goal of this project is to collect pavement condition data as necessary to comply with annual state and federal requirements and NYSDOT pavement management practices and to develop and maintain a system by which to track location, dimension and condition of other highway related assets.

C-17-57 Asset and Project Tradeoff Analysis Software Tool
SPR Funding: $600,000
The goal of this project is to develop models and configure software to analyze a group of projects from multiple asset classes (pavement, bridge, safety, and sustainability) to determine the best selection of projects within available resources to optimize improvements to infrastructure conditions, and the safety and utility of the overall transportation system.
C-17-59 Traffic Data System  
SPR Funding $2,500,000  
The goal of this project is to implement an automated traffic data management system application to replace the existing, outdated and labor-intensive TRADAS database application with a “Commercial-off-the-Shelf” (COTS) solution able to import, process, store, and make available traffic data necessary to support internal NYSDOT planning, operational, and design needs, as well as to meet the FHWA traffic data reporting requirements.

C-17-51 Highway Work Permit - New System Development  
SPR Funding $1,200,000  
The goal of the project is to design and implement a replacement for the existing legacy computer software that will provide a web-based customer interface for highway work permit application and processing, utilizing a workflow management

C-17-52 Improvement of Safety Management System Planning and Implementation  
SPR Funding: $3,500,000  
The goal of this project is to assess the Department’s safety analysis methods and safety programs and implement new strategies using updated technologies and enterprise platforms.

III. LONG RANGE TRANSPORTATION PLANNING PROJECT (44.23.00)

A. Long Range Transportation Planning- Systems Level (44.23.01)  
1. MTP Plan Delivery  
• Final Plan approval by May 2018 will be completed and subsequent Plan distribution also. Outreach meetings will be conducted in person or digitally to communicate activation of the Plan and build continued support for implementation.

Objective: Complete and print MTP 2050 and regional distribution
Performed by: MPO Staff
Forecast Start: April 2018 - Forecast Complete: December 2018
Products: MTP 2050 Plan document

• Main Street Comprehensive Plan: the Main Street arterial in the metro area is a significant employment corridor, crosses multiple jurisdictions, and is served by various modes of transportation. A plan will be prepared to coordinate needs and projects among the jurisdictions and modes and an implementation strategy. Schedule coordination for the upcoming Main Street project in the vicinity of BNMC will also be provided.
Objective: Coordinate planning and infrastructure investment in the Main Street corridor
Performed by: MPO staff and consultants
Forecast Start: August 2018 - Forecast Complete: September 2019
Products: Main Street Plan document; schedule and coordination management for upcoming Main Street subproject

- Villages Improvement Template: there are 20 villages of varying size in the MPO area, MTP 2050 describes treatments for walkability improvements and vehicular access in them. A basic template will be developed for use in localized situations to emerge and refine projects in Villages.

  Objective: Create a template(s) for use in the twenty Villages to guide infrastructure investment and development
  Performed by: MPO staff and consultants
  Forecast Start: January 2019 - Forecast Complete: August 2019
  Product: Functional template for startup of Village renewal projects

- Agricultural Access Needs: MTP 2050 referenced the strength of the agricultural economy in the region and the changing nature of agriculture in terms of farm and equipment size and access needs. A review documenting the issue and identifying potential locations for access improvements and infrastructure upgrades will be prepared.

  Objective: Determine contemporary agricultural access needs and impact on capital projects in the region
  Performed by: MPO staff and consultants
  Forecast Start: October 2018 - Forecast Complete: May 2019
  Product: Review document of issues and recommendations

- Rt 5 South land use and mobility function: in southwestern Erie County the Route 5 corridor traverses several jurisdictions and place types. Future development, population and land uses will be examined along with trip characteristics in the corridor to suggest appropriate land use interface and mobility needs. A report will document findings and implementation path.

  Objective: Rationalize infrastructure needs and community development in this vital transportation corridor
  Performed by: MPO staff and consultants
  Forecast Start: July 2018 - Forecast Complete: Sept 2019
  Product: Summary report of findings
• Smart Mobility Corridor Concept Refinement: MTP 2050 identified several corridors for upgrades through a Smart Mobility concept, providing multimodal options and initial autonomous interface. A demonstration corridor will be selected and the concept refined with specific attributes and functions. Initial schematics will be developed as well as conceptual cost estimates.

  Objective: Develop and organize an approach to new corridor concept
  Performed by: MPO staff and consultants
  Forecast Start: May 2018 - Forecast Complete: January 2019
  Product: SEMA corridor definition document for potential investment

• East-West Arterial Connectivity: automobile and transit access in east-west metropolitan arterials has been identified as an issue for examination. Trip origins and destinations will be plotted and screenlines identified to determine adequacy of existing facilities and to test possible improvements. Results will be documented and any proposed new linkages identified.

  Objective: Examine east-west connectivity and identify issues
  Performed by: MPO staff
  Forecast Start: October 2018 - Forecast Complete: May 2019
  Product: Summary report on issues and potential projects

• Highway/Arterial Reconfiguration Demo: MTP 2050 discussed possible reconfiguration of some higher capacity facilities more in context with current land uses and travel needs. One potential facility will be identified and alternatives developed, identifying capacity, access and maintenance cost differentials, summarized in a report.

  Objective: Define attributes of one reconfigurable corridor
  Performed by: MPO staff
  Forecast Start: October 2018 - Forecast Complete: July 2019
  Product: Report documenting opportunity and project definition

2. Air Quality/Energy/GHG Review and Planning

• Evaluation of project(s) impacting the Transportation Improvement Program (TIP) or Metro Transportation Plan (MTP) to assure consistency with the approved State Implementation Plan (SIP) as required and assessment of energy and greenhouse gas elements as appropriate. Evaluations will be produced dependent on NYSDOT ESB requirements and attainment status during this UPWP period.
Objective: Maintain AQ/energy/GHG evaluation capabilities  
Performed by: MPO staff  
Forecast Start: Ongoing support activity  
Product: Models capable of analyzing AQ/energy/GHG as needed

3. Asset Management Systems

- Examine/Acquire Real time traffic data: full implementation of the Integrated Corridor Management (ICM) project will require use of real time traffic data. In conjunction with NITTEC, potential sources will be examined and a data acquisition plan will be prepared including specifications for storage and access. Data acquisition will commence as appropriate.

  Objective: Determine real time traffic availability and acquisition  
  Performed by: MPO staff and NITTEC partners  
  Forecast Start: October 2018 - Forecast Complete: May 2019  
  Product: Data plan and acquired real time data

- Road Scoring including methodology change: road scoring will continue with a two year cycle of manual road scoring for local facilities and data integration for state owned roads. Data will be compiled and reported through on line access and analysis software. Collection will transition either fully or in duplicate as statewide approach changes to accommodate FAST Act performance requirements.

  Objective: Score roads and determine transition to new NYSDOT methodology  
  Performed by: MPO staff  
  Forecast Start: December 2019 - Forecast Complete: September 2020  
  Product: Road scores for member use in tabular form and through web based application. Transition to new NYSDOT methodology

- Traffic Monitoring-including cyclists: GBNRTC traffic monitoring program will continue with collection of approximately 450 segments and 150 intersection counts, also uploaded to online access. Cyclist data will be collected through existing equipment and new techniques developed for more counts.

  Objective: Monitor traffic in the region  
  Performed by: MPO staff and consultants  
  Forecast Start: February 2018 - Forecast Complete: September 2020  
  Products: Link and intersection counts available in web based application
• Performance Measurement – FAST Act results: in conjunction with NYSDOT, reporting against FAST Act performance targets will be initiated. Procedures for performance based planning and programming will be prepared as required.

  Objective: Satisfy FAST Act requirements for performance targets and reporting  
  Performed by: MPO staff in conjunction with NYSDOT  
  Forecast Start: This will commence consistent with NYSDOT cycle and proceed in a coordinated manner  
  Product: Performance targets and reports on progress

• I-190 Niagara Street/Virginia Ramps: data will be collected for this location to understand the traffic characteristics, especially ramp weave to support project development. This will be summarized in a document including all data for NYSDOT utilization.

  Objective: Support NYSDOT needs in project development  
  Performed by: MPO staff and consultants  
  Forecast Start: April 2018 - Forecast Complete: June 2018  
  Product: Document summarizing data at this location

• Acquisition and delivery of Transit Ridership data in cooperation with NFTA and transmittal to NTD database at the national level. Transit ridership is monitored through NFTA’s Metro ridership count program and is supplemented with additional counts conducted by GBNRTC when necessary. A listing of route changes for the previous fiscal year is identified. This information is updated annually and input into a transit ridership file for use in planning studies and also incorporated into the national database.

  Objective: Maintain annual transit ridership data  
  Performed by: MPO staff in conjunction with NFTA  
  Forecast Start: Completed as data becomes available  
  Product: Updated transit ridership database

4. Travel Model - Upgrades and Buildout

• Regional Travel Model/Aimsun/Simulation buildout: Staff support is included for continuous regional model upgrades and also further buildout of Aimsun simulation capabilities as the model will be built out beyond the current ICM corridor.

  Objective: Maintain and buildout suite of models  
  Performed by: MPO staff and consultants  
  Forecast Start: Ongoing activity
Product: Traffic models at several tiers in various platforms to support analytical work at the MPO

B. Long Range Transportation Planning - Project Level (44.23.02).

1. Highway Studies

- ICM Completion and Expansion: the current Integrated Corridor Management (ICM) project, funded by NYSERDA and NYSDOT is projected to complete in June of 2018. This provides GBNRTC staff support for the original project completion as well as support for ICM in the expanded ICM area as funded through the ATDMTC grant received by NITTEC/NFTA. Specifics of ICM expansion will be determined in the contract currently being competed by NFTA. Scope development will be included in that consultant contract.

  Objective: Complete current ICM corridor project and expand to support ATDMTC
  Performed by: MPO staff and consultants in conjunction with NITTEC partners
  Forecast Start: April 2018 - Forecast Complete: September 2019
  Product: Completed ICM corridor study and support of ICM in ATDMTC

- I-90 Corridor Improvements: Some specific projects noted in the Buffalo Corridor Study will be analyzed in simulation per the request of NYSTA. These include an updated review of a possible interchange at Broadway and also potential segment widening from Exit 54 to William Street

  Objective: Assist NYSTA in deploying interim and preferred alternative solutions in the I-90 corridor
  Performed by: MPO staff
  Forecast Start: April 2018 - Forecast Complete: December 2018
  Product: Simulations and project analyses as requested by NYSTA specific to the Buffalo Corridor Study

- NYSDOT/NYSTA Project Analyses: staff time is reserved in this work element for simulation of potential projects by NYSDOT and NYSTA as they are identified in the two year work program period. These include traffic management during projects being implemented as well as analyses of potential project alternatives. PCC will maintain control of simulation project approvals through a request process currently in use

  Objective: Support NYSDOT and NYSTA in major facilities project development and management
  Performed by: MPO staff
  Forecast Start: These projects are on demand from NYSDOT and NYSTA
**Product:** Simulations and analyses supporting new project development, alternatives analysis and traffic management in construction

- Binational Summit Meeting/Plan Coordination: new long range plans for the GBNRTC region, as well as Region of Niagara and Ministry of Transport Ontario (MTO) have been recently completed, links to supporting documents below. A meeting will be assembled to discuss binational integration points and coordinated planning for deployment going forward. A summary document will be prepared indicating projects and integration mechanism.

  Objective: Establish BiNational planning integration
  Performed by: MPO staff
  Forecast Start: May 2019 - Forecast Complete: November 2019
  Product: Summit level meeting and agreement on integrated planning process
  [https://www.niagararegion.ca/living/icp/policy-plan.aspx](https://www.niagararegion.ca/living/icp/policy-plan.aspx)
  [http://www.gghtransport2051.ca/](http://www.gghtransport2051.ca/)

2. Transit Studies

- Transit Oriented Development Phase II: upon completion of the TOD study the station area buildout plans will be reviewed for supporting infrastructure needs. These will be assembled with transit related needs and sequenced for potential project development through the TIP and other sources.

  Objective: Develop supporting infrastructure project identified in the TOD study
  Performed by: MPO staff
  Forecast Start: May 2018 - Forecast Complete: April 2019
  Product: Infrastructure projects listing

- LRT Extension EIS support/STOPS estimates: the EIS for the preferred alternative in the LRT extension project will be in process. GBNRTC staff will continue to participate on the process team to develop the EIS including support for ridership estimates in the STOPS process and traffic implications on surface locations. Depending on NFTA contract with consultant team GBNRTC will run STOPS ridership model or supply inputs to consultants to run STOPS.

  Objective: Support the LRT extension project EIS
  Performed by: MPO staff in conjunction with NFTA partners and their consultant
  Forecast Start: April 2018 - Forecast Complete: March 2020
  Product: Support for EIS through ridership estimates and traffic implications

- Transit Project Development: support of NFTA strategic initiatives will continue with one additional project developed upon final determination of location.
Objective: Perform transit project analysis consistent with MTP
Performed by: MPO staff and consultants
Forecast Start: Upon determination of scope detail
Product: Report on emergent transit project in the region

- Rail Passenger/Intercity Bus plan integration: Inter-regional connectivity will be examined per MTP 2050 and FAST Act requirements, documenting bus and rail usage and potential needs. Participation in NYS HSR initiative will also continue.

Objective: Assess intercity bus and rail connectivity per FAST Act requirements
Performed by: MPO Staff
Forecast Start: January 2019 - Forecast Complete: December 2019
Product: Document of findings

IV. SHORT RANGE TRANSPORTATION PLANNING PROJECT (44.24.00)

1. Mobility Coordination

This work element will combine several initiatives to provide a comprehensive approach to mobility improvements in the Buffalo-Niagara Region.

Objective: Support local government and regional initiatives to improve multimodal access
Performed by: MPO Staff
Forecast Start: as indicated in sub elements
Product: Documents with improvements recommendations and project development for input to funding plans

Sub elements include:

- Lockport B/P/Parking Recommendations: the City of Lockport has requested GBNRTC staff assistance in development of improved bicycle and pedestrian access facilities, as well as linkage to the regional trails system. Staff will participate in the initiative and prepare specific recommendations for improvements and implementation opportunities.

Forecast Start: April 2018 - Forecast Complete: November 2018
• Shoreline Trail Upgrades and Ontario linkage: the Shoreline Trail buildout will be supported through gap closing project initiation and planning for future upgrades of existing segments. As requested by Erie County, alternatives will be developed for trail locations south of the current project along Rt 5 in Lackawanna.

*Forecast Start: July 2018 - Forecast Complete: May 2019*

• Niagara Falls Bicycle Access and Planning: GBNRTC staff will continue to participate in the effort by the City of Niagara Falls to improve access in the City, both from neighborhoods to service areas and for tourists in the CBD and around the Falls.

*Forecast Start: August 2018 - Forecast Complete January 2019*

2. Freight & Logistics Project Development

• Updates to Regional Freight Study: the Regional Freight Study for the MPO area is now over ten years old, during the Statewide Freight Study process it was suggested that updates to the Plan, especially a review of proposed projects and scope, be performed. This will be accomplished with refined and new project identification to assist in coordinated planning and to provide more ready projects for available funding opportunities. This includes acquisition of newer freight data to refine the plan and support the emerging Trade Gateway project

  *Objective: Update Regional Freight Plan consistent with NYSDOT Statewide Plan and refine previously identified freight projects*  
  *Performed by: MPO staff and consultants*  
  *Forecast Start: April 2018 - Forecast Complete: May 2020*  
  *Product: Updated Freight Plan text and project definition*

• Trade Gateway development: GBNRTC staff will continue to participate in the Trade Gateway organization to develop, fund and implement the concept in the region. This includes continued participation in the International Trade Gateway Organization (ITGO) which stemmed from the GBNRTC Freight Plan and provision of assistance in freight project development, such as the recent INFRA grant application for trade gateway development through ITGO. Link to the organization is: [http://www.itgobuffaloniagara.com/](http://www.itgobuffaloniagara.com/)

  *Objective: Support trade and freight movements in the region*  
  *Performed by: MPO staff*  
  *Forecast Start: Ongoing Activity*  
  *Product: Operational ITGO organization and INFRA grant projects development*
3. Corridor Improvements/Project Support

Objective: Support project development in the region with MPO technical capabilities
Performed by: MPO staff with consultant assistance
Forecast Start: as indicated in sub elements
Product: Completed analyses of traffic and recommended improvements

Sub elements include:

- Bailey Avenue-Street and Transit: City of Buffalo and NFTA are examining deployment of enhanced transit and street corridor upgrades on Bailey Avenue. GBNRTC staff will participate in modeling of integrated traffic and transit on Bailey using simulation techniques.

  Forecast Start: June 2018 - Forecast Complete: February 2019

- Next Generation Signals and Technology: based on emerging technology and autonomous vehicle introduction, staff will perform a review of possible next generation signalization and applicability to the metro region. Development of a potential grant application for an early demonstration is also included.

  Forecast Start: April 2019 - Forecast Complete: March 2020

- Neighborhood Traffic Calming Program: the City of Buffalo is considering a quick response traffic calming program in City neighborhoods. GBNRTC staff will assist through preparation of some basic applications for consideration and possible testing of implications.

  Forecast Start: October 2018 - Forecast Complete: July 2019

- Site Traffic Analyses: staff time is also reserved in this work element for traffic analysis on request by member agencies. This effort is more intersection and signalization focused on a smaller scale below threshold for advanced simulation. Member requests will also be reviewed by PCC for approval prior to staff proceeding.

  Forecast Start: Upon determination of scope detail

- Orchard Park Town Traffic Analysis: at request of Town, collect data, assist in analysis of existing traffic patterns and discuss land use decision process and traffic management activities.

  Forecast Start: May 2018 - Forecast Complete: February 2019
4. Management and Operations Integration

- **ATDMTC/ Smart cities – Dynamic Routing**: Staff will provide model support for projects coming out of the ATDMTC grant program, especially initial assessment of dynamic routing capabilities.
  
  **Objective**: Support project development emanating from the NITTEC ATDMTC program  
  **Performed by**: MPO staff with consultant assistance  
  **Forecast Start**: June 2018 - Forecast Complete: March 2020  
  **Product**: Project quantifications for use in deployment

- **MaaS Deployment model**: MTP 2050 indicated transit future will include brokerage of service through a Mobility as a Service approach. An initial MPO area model will be assembled for early deployment. This initiative includes assessment of available transportation providers, coordination of service areas, development of a proposed operating agreement and determination of technologies to effectively broker and activate services.
  
  **Objective**: Develop a Maas demonstration in the region  
  **Performed by**: MPO staff  
  **Forecast Start**: October 2016 - Forecast Complete: May 2018  
  **Product**: Ready to implement proposal for a MaaS startup demo

- **TMA Support**: The Transportation Management Association (TMA) project supported as a demo by NYSERDA is complete. The initiative will continue through implementation in conjunction with NYSDOT 511 program and NYSDOT TMA support program.
  
  **Objective**: Support NY511 with TMA  
  **Performed by**: Consultant to NYSDOT supported by MPO  
  **Forecast Start**: April 2018 - Forecast Complete: March 2020  
  **Product**: Regional TMA buildout in support of NY511

- **Update current Congestion Management Plan in conjunction with MTP 2050 development**. Implementation of the CMP in collaboration with NYSDOT and NITTEC including continued data collection and integration.
  
  **Objective**: Maintenance of CMP process  
  **Performed by**: MPO staff  
  **Forecast Start**: June 2018 - Forecast Complete: May 2019  
  **Product**: CMP Updates
V. TRANSPORTATION IMPROVEMENT PROGRAM (44.25.00)

1. TIP Development
   - Complete development and approval of the new GBNRTC TIP through FY2024 including project intake, financial analysis/fiscal constraint, public review and Policy approval. Enter all project data in EStip for development of the new STIP. Based on NYSDOT guidance and funding targets, existing TIP projects will be statused and new projects selected to build the new TIP.

   **Objective:** Develop and approve a new Transportation Improvement Program (TIP)
   **Performed by:** MPO staff
   **Forecast Start:** April 2019 - **Forecast Complete:** March 2020
   **Product:** Approved new TIP

2. TIP Project Monitoring, Funding and Finance
   - TIP Projects Delivery Review: the region has experienced significant success in local federal aid project delivery through a well-developed and systematic approach to status meetings, information sharing and change control. The process will be reviewed for possible next generation solutions to continuously improve the process and further accelerate project delivery improvements. Results will be summarized and documentation revised or developed to formalize the changes.

   **Objective:** Manage TIP projects in the region for delivery success
   **Performed by:** MPO staff
   **Forecast Start:** December 2018 - **Forecast Complete:** June 2019
   **Product:** Review of current delivery process managed by the MPO and development of next generation approaches to continuously improve delivery rates

   - Finance Opportunities: Alternate finance positions identified in MTP 2050 will be categorized for applicability to TIP projects and an initial utilization organized for application.

   **Objective:** Develop an alternate financing approach and demonstration
   **Performed by:** MPO staff
   **Forecast Start:** October 2018 - **Forecast Complete:** May 2019
   **Product:** Documentation of finance strategies and organization of one demonstration
- Innovative Materials Demo: some cost savings may be achievable through use of innovative materials and practices for capital projects. One potential project will be identified, an alternate treatment selected and a demonstration organized to deploy and test the solution. Results will be documented for future utilization.

  **Objective:** Develop an innovative materials demonstration  
  **Performed by:** MPO staff  
  **Forecast Start:** April 2019 - **Forecast Complete:** January 2020  
  **Product:** Documentation of an innovative materials demonstration project

### VI. PLANNING EMPHASIS AREAS PROJECT (44.26.00)

#### 1. Coordination of Non-Emergency Human Services Transportation

- Human Services Transportation Plan Update: as required, the HSTP will be updated in this time period to reflect definition of service needs, providers and gaps. This will provide valuable documentation and assure project eligibility for mobility projects in the 5310 program.

  **Objective:** Develop HSTP updates reflecting current conditions  
  **Performed by:** MPO staff  
  **Forecast Start:** Upon determination of scope detail and Guidance  
  **Product:** Approved HSTP Update

- 5310 Projects Administration: in support of NYSDOT 5310 program, GBNRTC will continue to provide support through project solicitation, assembly of a rating committee, project review and ratings supplied to NYSDOT MO for project selection

  **Objective:** Provide potential 5310 projects into the funding and delivery process  
  **Performed by:** MPO staff  
  **Forecast Start:** Upon determination of scope detail and Guidance  
  **Product:** Approved 5310 projects in TIP and ready for delivery
Transit Focused PEAs

PEAs 2-4 provide ongoing support for transit operator participation in the MPO process

2. Participation of Transit Operators in Metropolitan and Statewide Planning
   • Involve regional transit members and personnel in the ongoing MPO transit coordination activities, including statewide working groups and NYSDOT sponsored outreach.

     Forecast Start: Ongoing activity

3. Planning for Transit Systems Management/Operations to Increase Ridership
   • Using the evaluations and products developed in the regional studies, assist implementation of key initiatives to improve the overall effectiveness of public transportation in the region. Provide regional travel model simulations of potential systems management options to gauge ridership and travel impacts.

     Forecast Start: Ongoing activity in support of transit providers

4. Support Transit Capital Investment Decisions through Effective Systems Planning
   • Using financial projections, ridership forecasts, system conditions, and MPO planning documents, continue to develop a framework of capital investment needs to assist TIP project development and capital budget requests for public transportation projects in the region.

     Forecast Start: Ongoing activity

5. Incorporate Safety and Security in Transportation Planning
   • Fully Operationalize System Analyses: the GBNRTC Safety program has advanced through acquisition of MS2 software and safety data acquisition and loading. In this work program period the system will be fully operationalized to analyze the data and assist project development for safety projects funding.

     Objective: Operationalize data aggregation and analysis in new software
     Performed by: MPO staff
     Forecast Start: January 2018 - Forecast Complete: December 2018
     Product: Fully operational safety data analytical tool and supportive analyses
6. Other Areas

**Objective:** Support for national objectives identified in MAP-21
- **Performed by:** MPO staff
- **Forecast Start:** Ongoing activities
- **Product:** Performance management support and cooperation among MPOs

**MAP-21 Implementation: Transition to Performance Based Planning and Programming**

- Development and implementation of a performance management approach to transportation planning and programming that supports the achievement of transportation system performance outcomes. The approach was used in MTP 2050 development and will be furthered through the performance monitoring aspects of the program as indicated.

*Forecast Start: Ongoing activity*

**Models of Regional Planning Cooperation**

- This is intended to promote cooperation and coordination across MPO boundaries and across State boundaries where appropriate to ensure a regional approach to transportation planning. Activities include cooperation in New York State between MPOs and NYSDOT through the AMPO organization and also in the BiNational cooperative efforts in this work program.

*Forecast Start: Ongoing activity*

**Ladders of Opportunity**

- Recognizing importance of access to essential services, as part of the transportation planning process, this will help identify transportation connectivity gaps in access to essential services, including housing, employment, health care, schools/education, and recreation. Effort here is focused in MTP delivery and mobility coordination.

*Forecast Start: Ongoing activity*
### Total Cost Summary Table by UPWP Work Element in Dollars

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### COMBINED FHWA-PL & FTA MPP BUDGETS

**GBNRTC 2018 - 2020 UNIFIED WORK PROGRAM**

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<td>$1,047,607.00</td>
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### APPROVED TASK BUDGET

| I. 44.21.00 PRG. SUPPORT & ADMIN | $1,760,624.00 | $1,299,200.00 | $447,762.00 | $13,662.00 |
| II. 44.22.00 GEN. DEV & COMP PLNG | $157,817.00 | $149,592.00 | $6,169.00 | $2,056.00 |
| III. 44.23.01 LONG RANGE PLNG - SYS | $2,157,982.00 | $2,010,474.00 | $138,759.00 | $8,749.00 |
| III. 44.23.02 LONG RANGE PLNG - PROJ. | $2,157,982.00 | $2,010,474.00 | $138,759.00 | $8,749.00 |
| IV. 44.24.00 SHORT RANGE TRANS PLNG | $889,175.00 | $857,686.00 | $23,617.00 | $7,872.00 |
| V. 44.25.00 TRANS IMPROV. PROGRAM | $953,916.00 | $301,335.00 | $359,614.00 | $292,967.00 |
| VI 44.26.00 PLANNING EMPHASIS |       |       |       |     |
| 44.26.12 COORD OF HUMAN SVCS TRANS | $146,788.00 | $128,231.00 | $13,918.00 | $4,639.00 |
| 44.26.13 TRANSIT OPER - MET ST PLNG | $14,039.00 | $11,231.00 | $2,160.00 | $702.00 |
| 44.26.14 TRANS SYS MMGT/OPS INC Riders | $21,635.00 | $17,308.00 | $3,245.00 | $1,082.00 |
| 44.26.15 SUPP TRANS CAP INV DECISIONS | $189,426.00 | $189,810.00 | $6,462.00 | $2,154.00 |
| 44.26.16 INCORPORATE SAFETY & SECURITY | $34,906.00 | $27,924.00 | $5,236.00 | $1,746.00 |
| VII. 44.27.00 OTHER ACTIVITIES | $0.00 |       |       |     |
| **TOTAL** | $7,700,046.00 | $6,103,238.00 | $1,047,607.00 | $349,201.00 | $200,000.00 |

(1) Includes Federal FTA Planning Funds from appendix 3A Grants NY80-0023, 0024, 0025, 0026 and 0027

(2) The NYSDOT non-federal share is provided via Toll Credits for FHWA-PL costs and as an In-Kind Service for FTA MPP costs

(3) Tasks funded with other Federal/State/Local Funding included for informational purposes only

(4) Local non-federal share is provided via In-Kind Service
### 2018-19 FHWA-PL Budget

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* NYSDOT provides its share of the match via toll credits

### 2019-20 FHWA-PL Budget

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* NYSDOT provides its share of the match via toll credits
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<td>91,063</td>
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* NYSDOT provides its share of the non-federal match via In-Kind Service

** Local nonfederal share is provided via In-Kind Service

APPENDIX 2B.2

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<td>485,670</td>
<td>91,063</td>
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* NYSDOT provides its share of the non-federal match via In-Kind Service

** Local nonfederal share is provided via In-Kind Service
### APPENDIX 3A

**GBNRTC 2018 - 2020 UNIFIED WORK PROGRAM**

#### CARRYOVER FTA PLANNING FUND RESOURCES (1)

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(1) Federal funds estimated available

### APPENDIX 3B

**Description of Other Federal/State Funds Included in Programs**

#### UPWP TASK

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$200,000.00