

ITEM 13- Information

January 21, 2015

Review of Outline and Preliminary Budget for the
FY 2016 Unified Planning Work Program (UPWP)

Staff

Recommendation: Receive briefing on the enclosed outline and preliminary budget for the Unified Planning Work Program (UPWP) for FY 2016 (July 1, 2015 through June 30, 2016).

Issues: None

Background: A complete draft of the FY 2016 UPWP will be presented to the Board for review at its February 18 meeting, and the final version will be presented for the Board's approval at its March 18 meeting. The TPB Technical Committee reviewed the outline and budget at its January 9, 2015 meeting.



NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

January 15, 2015

MEMORANDUM

TO: Transportation Planning Board

FROM: Kanathur Srikanth
Director, Department of Transportation Planning

SUBJECT: Preliminary Budget and Outline for FY 2016 Unified Planning Work Program (UPWP)

A preliminary FY 2016 budget estimate for the UPWP, the work activity funding changes compared to FY 2015 levels, and an outline of the proposed work activities for FY 2016 are attached.

Estimated Total Budget Unchanged

The budget for the FY 2016 UPWP work program is based upon MPO planning funding allocations provided by the three DOTs of FTA Section 5303 and FHWA Section 112 PL funding that is determined by the FY 2015 USDOT budget. Due to the uncertainty regarding the final FY 2015 USDOT authorization and budget levels, we assume that the FY 2016 funding allocations to be provided by the DOTs will be at the current FY 2015 levels. The estimated funding is shown on the next page. In addition, the budget estimate assumes the level of unobligated funds from FY 2014 will be \$1,411,894, which is the same as from FY 2013. The preliminary estimated **total budget excluding carryover funds is \$12,881,585, which is the same as the current total FY 2015 budget** as amended December 17, 2014.

Core Program Budget Increased

In light of new performance-based planning requirements and in anticipation of the major funding needed for a large-sample regional household travel survey to be conducted in 2016-17, the three DOT and WMATA have agreed to reduce their budget levels for their technical assistance programs in order to provide additional funding for core program work activities.

The **technical assistance program budget is \$1,317,807**, which is a **decrease of \$458,385** from the current FY 2015 budget level. Technical

assistance program budgets are based upon agreed percentages of the estimated FY 2016 funding allocations. This year, the agreed percentage of the total new FTA and FHWA planning funding passed through each state is reduced from 13.5 percent to 10 percent. The funding level for WMATA technical assistance is reduced from 8 percent to 6 percent of the new FTA funding.

The **core program budget is \$11,563,778** without carryover funds, which is an **increase of \$458,385** more than the corresponding current FY 2015 budget level.

ESTIMATED PRELIMINARY FUNDING FOR FY 2016 UPWP

	FTA	FHWA	New FY 2016	Current FY 2015
DDOT				
New 2016	\$ 532,855	\$ 2,150,307	\$ 2,683,162	2,672,010
Unob.2014	23,993	107,656	131,649	131,649
MDOT				
New 2016	1,277,256	3,610,288	\$ 4,887,544	\$ 4,887,544
Unob.2014	249,550	550,550	800,100	800,100
VDOT & VDRPT				
New 2016	1,037,185	2,861,800	\$ 3,898,985	\$ 3,898,985
Unob.2014	72,000	408,145	480,145	480,145
TOTAL New 2015	\$ 2,847,296	\$ 8,622,395	\$ 11,469,691	\$ 11,469,691
TOTAL Unob.2014	\$ 345,543	\$ 1,066,351	\$ 1,411,894	1,411,894
Grand Total			\$ 12,881,585	12,881,585

Technical Assistance

10 % of new allocation

DDOT	268,316
MDOT	488,754
VDOT	389,899
	<u>\$ 1,146,969</u>

6% of total new FTA funding

WMATA	170,838
-------	---------

New Technical Assistance Total

Total	\$ 1,317,807
-------	---------------------

or 11.5 % of total new funding of \$11,469,869

**TPB FY 2016 WORK PROGRAM FUNDING CHANGES FROM FY 2015
NO CARRYOVER FUNDS**

Work Activity	FY 2016	FY 2015	FY16-FY15	% Change
1. PLAN SUPPORT				
A. Unified Planning Work Program (UPWP)	73,550	73,550	0	0
B. Transp Improvement Program (TIP)	225,300	250,300	-25,000	-11
C. Constrained Long-Range Plan	625,885	642,500	-16,615	-3
D. Financial Plan	65,550	65,550	0	0
E. Public Participation	466,060	466,060	0	0
F. Private Enterprise Participation	0	19,000	-19,000	-100
F. Performance-Based Planning for CLRP/TIP	100,000	0	100,000	
G. Annual Report	83,350	83,350	0	0
H. Transportation/Land Use Connection Progr	434,900	434,900	0	0
I. DTP Management	488,333	488,333	0	0
Subtotal	2,562,928	2,523,543	39,385	2
2. COORDINATION and PROGRAMS				
A. Congestion Management Process (CMP)	213,150	213,150	0	0
B. Management, Operations, and ITS Planning	354,050	354,050	0	0
C. Emergency Preparedness Planning	78,400	78,400	0	0
D. Transportation Safety Planning	130,100	130,100	0	0
E. Bicycle and Pedestrian Planning	126,250	126,250	0	0
F. Public Transportation Planning	180,600	161,600	19,000	11
G. Human Service Transportation Coordination	142,700	142,700	0	0
H. Freight Planning	156,050	156,050	0	0
I. MATOC Program Planning & Support	124,850	124,850	0	0
Subtotal	1,506,150	1,487,150	19,000	1
3. FORECASTING APPLICATIONS				
A. Air Quality Conformity	590,500	590,500	0	0
B. Mobile Emissions Analysis	714,500	714,500	0	0
C. Regional Studies	587,200	587,200	0	0
D. Coord Coop Forecasting & Transp Planning	839,400	839,400	0	0
Subtotal	2,731,600	2,731,600	0	0
4. DEVELOPMENT OF NETWORKS/MODELS				
A. Network Development	800,800	800,800	0	0
B. GIS Technical Support	571,000	571,000	0	0
C. Models Development	1,214,500	1,114,500	100,000	8
D. Software Support	186,200	186,200	0	0
Subtotal	2,772,500	2,672,500	100,000	4
5. TRAVEL MONITORING				
A. Cordon Counts	261,000	261,000	0	0
B. Congestion Monitoring and Analysis	364,100	364,100	0	0
C. Travel Surveys and Analysis				
Household Travel Survey	1,034,800	734,800	300,000	29
D. Regional Trans Data Clearinghouse	330,700	330,700	0	0
Subtotal	1,990,600	1,690,600	300,000	15
Core Program Total (I to V)	11,563,778	11,105,393	458,385	4
6. TECHNICAL ASSISTANCE				
A. District of Columbia	268,316	362,227	-93,911	-26
B. Maryland	488,754	659,819	-171,064	-26
C. Virginia	389,899	526,363	-136,465	-26
D. WMATA	170,838	227,783	-56,946	-25
Subtotal	1,317,807	1,776,192	-458,385	-26
Total Program	12,881,585	12,881,585	0	0
GRAND TOTAL	12,881,585	12,881,585	0	0

PROPOSED WORK ACTIVITIES FOR FY 2016

(July 1, 2015 to June 30, 2016)

1. PLAN SUPPORT

A. UNIFIED PLANNING WORK PROGRAM (\$73,500)

- UPWP will be developed to comply with the anticipated metropolitan planning requirements in the Moving Ahead for Progress in the 21st Century (MAP-21) Act.
- UPWP will describe work elements and integration of program activities and responsibilities for all aspects of the work program.
- UPWP will discuss planning priorities and describe the transportation planning and related air quality planning activities over next 1-2 years.

Oversight: TPB Technical Committee

Products: UPWP for FY 2017, amendments to FY 2016 UPWP, monthly progress reports and state invoice information, federal grant materials

Schedule: Draft: January 2016 Final: March 2016

B. TRANSPORTATION IMPROVEMENT PROGRAM (TIP) (\$225,300)

Ongoing Activities and Schedule

- The TIP will be updated every two years and amended each year. The FY 2015-2020 TIP was approved in October 2014. Amendments to the FY 2015-2020 TIP are anticipated to be approved along with the 2015 in October 2015.
- Drafts of the 2015 CLRP and FY 2015-2020 TIP amendments will be prepared and reviewed between January and September 2015.
- Documentation of the current TIP will be enhanced with additional analysis as a part of the CLRP/TIP brochure and the CLRP web site.
- Public access to TIP project data has been improved with an online searchable database, which will continue to be updated with the last information.
- The geographic information system linked database of TIP and CLRP project data and air quality conformity information will be improved to facilitate updating and reporting.
- Annual certification of compliance with regulations on providing transit services to persons with disabilities will be prepared.

- An annual listing of projects for which federal funds have been obligated in the preceding year will be prepared.
- Amendments and administrative modifications to the FY 2015-2020 TIP will be processed.
- In November 2015, the TPB will issue a call for projects document requesting project submissions for the 2016 CLRP. The FY 2017-2022 TIP that will accompany updates to the 2016 CLRP will be prepared for review by the TPB Technical Committee, the TPB, and the public between January and June 2016.

Performance Management and the TIP

MAP-21 calls for MPOs, states, and public transportation providers to establish and use a performance-based approach to transportation decision making. The USDOT will establish performance measures and subsequently states and public transportation providers will establish performance targets in support of those measures. The MPO subsequently has 180 days to establish performance targets coordinated with those of the states and public transportation providers. After these targets are set, the CLRP and TIP are required to include a description of the performance measures and targets used in assessing the performance of the transportation system.

- A system performance report evaluating the condition and performance of the transportation system with respect to the established targets and the anticipated effect of the TIP toward achieving the performance targets will be developed.
- The system performance report will also include other performance measures used in assessing the performance of the transportation system.
- Section 1.F of the UPWP – Performance Based Planning for the CLRP and TIP – will include the preliminary development of performance measures, targets, and a system performance plan for the metropolitan planning area as this MAP-21 requirement is implemented.

Oversight: TPB Technical Committee

Products: Amendments to the FY 2015-2020 TIP
Updated guide to the TIP

Schedule: October 2015

C. CONSTRAINED LONG-RANGE TRANSPORTATION PLAN (CLRP) (\$625,885)

Ongoing Activities and Schedule

Document the CLRP via the website and written materials, including:

- Document project submissions for 2015.
- An overview of the relationship between the transportation strategies and improvements and the development framework shown in the regional activity centers map.
- Evaluate the plan for disproportionately high and adverse effects on low-income and minority population groups.
- The 2015 CLRP and amendments to the FY 2015-2020 TIP will be prepared and reviewed between January and September 2015 with approval scheduled for October 2015.
- Continue to improve public materials about the plan during plan development and after plan approval so that the materials are more useful to a variety of audiences, less technical and easier for the public to understand.
- Continue to make plan information more visual, and utilize effective visualization technologies. Improve public access to the plan with informative maps and graphics for web and print media, and an online, searchable database.
- In November 2015, the TPB will issue its “Call for Projects” document for the 2016 CLRP. The “Call for Projects” document will request new projects programs and strategies, and updated information to be included in the 2016 CLRP. The 2016 CLRP will be prepared and reviewed between January and June 2016.

Performance Management and the CLRP

MAP-21 calls for MPOs, states, and public transportation providers to establish and use a performance-based approach to transportation decision making. The USDOT will establish performance measures and subsequently states and public transportation providers will establish performance targets in support of those measures. The MPO subsequently has 180 days to establish performance targets coordinated with those of the states and public transportation providers. After these targets are set, the CLRP and TIP are required to include a description of the performance measures and targets used in assessing the performance of the transportation system.

- A system performance report evaluating the condition and performance of the transportation system with respect to the established targets will be developed. Once the targets are developed in coordination with the State DOTs and public transportation providers, the CLRP will include the system performance report.

- The system performance report will also include other performance measures used in assessing the performance of the transportation system.
- Section 1.F of the UPWP – Performance Based Planning for the CLRP and TIP – will include the preliminary development of performance measures, targets, and a system performance plan for the metropolitan planning area as this MAP-21 requirement is implemented.

Annual Performance Analysis Report

- The TPB carries out the CLRP Performance Analysis each year in conjunction with the annual CLRP update to provide decision-makers and the public with information about how well the transportation investments that are currently planned and funded will meet the region's future transportation needs. The Performance Analysis uses forecasts of future population and job growth patterns along with the system of roadways and transit planned in the CLRP to predict future changes in travel patterns and travel conditions.
- Regional Transportation Priorities Plan (RTPP) and CLRP Comparative Assessment – TPB staff will conduct a qualitative assessment of how well the three overarching priorities identified in the RTPP are being met by the transportation system laid out in the 2015 CLRP.
- An analysis of the 2015 CLRP will detail how well the future transportation system laid out in the plan is expected to meet the needs of area travelers in 2040. In addition to changes in daily travel patterns, the 2015 CLRP Performance Analysis will also examine changes in congestion on area roadways and on the Metro system, as well as changes in the job accessibility by highway and transit.
- The analysis will also include the findings of the Air Quality Conformity Analysis of the 2015 CLRP and a forecast of future greenhouse gas emissions under the plan.

Environmental Consultation

- Continue to consult with the federal, state and local agencies responsible for natural resources, wildlife, land management environmental protection, conservation and historic preservation as necessary in the District of Columbia, Maryland and Virginia on the discussion of potential environmental mitigation activities.
- To compare the CLRP to natural and historic resources, maps of transportation and historic resources will be updated with the latest available GIS data from the District and the States and forwarded to federal, state and local agencies for comments.

Resiliency

- Continue to monitor local, state and national practices in transportation system resiliency, including climate change adaption, for potential applicability to the region.

Oversight: TPB Technical Committee

Products: 2015 CLRP and documentation, including the RTPP/CLRP Comparative Assessment and System Performance Report

Schedule: October 2015

D. FINANCIAL PLAN (\$65,550)

The financial analysis for the 2014 CLRP which was produced in consultation with the state and local DOTs and public transportation operators was included in the major update of the CLRP that was approved by the TPB in October 2014.

In FY 2016, the following activities are proposed:

- Review and update the financial analysis for the 2015 CLRP.
- Update financial plan for FY 2015-2020 TIP.

Oversight: Technical Committee

Products: Update of financial analysis for the 2016 CLRP and FY 2015-2020 TIP

Schedule: June 2016

E. PUBLIC PARTICIPATION (\$466,060)

The Update of the Participation Plan which was approved by the TPB in September 2014 will guide all public involvement activities to support the development of the TIP, the CLRP, the Regional Transportation Priorities Plan, and all other TPB planning activities.

Work activities include:

- Support implementation of the TPB Participation Plan.
- Provide public outreach support for the Regional Transportation Priorities Plan. Through a variety of public outreach activities, citizens will discuss the benefits, desirability and feasibility of potential projects and plan components.

- Develop and conduct workshops or events, as needed, to engage the public and community leaders on key regional transportation issues, including challenges reflected in the CLRP and TIP.
- Ensure that the TPB's website, publications and official documents are timely, thorough and user-friendly.
- Develop new written materials, tools and visualization techniques to better explain to the public how the planning process works at the local, regional and state levels.
- Conduct at least one session of the Community Leadership Institute, a two-day workshop designed to help community activists learn how to get more actively involved in transportation decision making in the Washington region.
- Effectively use technology, including social media and other web-based tools, to spread information about regional transportation planning and engage the public in planning discussions and activities.
- Provide staff support for the TPB Citizens Advisory Committee (CAC), including organizing monthly meetings and outreach sessions, and drafting written materials for the committee.
- Provide staff support for the TPB Access for All Advisory (AFA) Committee that includes leaders of low-income, minority and disabled community groups.
- Prepare AFA Committee memo to the TPB with comments on the CLRP related to projects, programs, services and issues that are important to community groups, such as providing better transit information for limited English speaking populations, improved transit services for people with disabilities, pedestrian and bike access and safety, and potential impacts of transit-oriented development and gentrification.
- Conduct regular public involvement procedures, including public comment sessions at the beginning of each TPB meeting and official public comment periods prior to the adoption of key TPB documents.
- Complete an evaluation of the public involvement process which began in FY 2015 as recommended during the October 2014 Federal planning certification review. It is anticipated that a consultant will be utilized.

Oversight: Transportation Planning Board

Products: TPB Participation Plan with a proactive public involvement process; CAC and AFA Committee Reports. Report on an evaluation of the TPB public

involvement process.

Schedule: Ongoing, with forums and meetings linked to preparation of the TIP and CLRP.
Evaluation report: March 2016

F. PERFORMANCE BASED PLANNING FOR THE CLRP AND TIP (\$100,000)

MAP-21 requires “a transition to performance-driven, outcome-based approaches” for the federal highway and transit programs. Metropolitan planning organizations, states, and public transportation providers will establish and use a performance-based approach to transportation decision making in planning and programming.

MAP-21 Performance Management

- To implement this mandate, rulemakings on performance provisions are being issued by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). The proposed Statewide and Metropolitan Planning Rule provides for the implementation of performance management within the planning process. The basic framework of the planning process is largely untouched from previous federal surface transportation reauthorization acts. However, MAP-21 proposes to change the planning process by requiring States, MPOs, and providers of public transportation to select performance targets and link investment priorities in the TIP and CLRP to the achievement of performance targets.
- The proposed performance management framework created by MAP-21 requires coordination between States, MPOs, and public transportation providers. Integration of elements of other performance-based plans into the metropolitan planning process will also be required, including the:
 - Congestion Mitigation and Air Quality Improvement (CMAQ) Program Performance Plan,
 - Strategic Highway Safety Plan,
 - Public Transportation Agency Safety Plan,
 - Highway and Transit Asset Management Plans, and
 - State Freight Plan.
- Once the performance management rulemaking is finalized by USDOT, the states will have a year (anticipated for September 2016) to establish performance targets in support of those measures; and the MPO subsequently has 180 days (anticipated for March 2017) to establish performance targets coordinated with those of the states and public transportation providers. After these targets are set, the CLRP and TIP are required to include a description of the performance measures and targets used in assessing the performance of the transportation system. The CLRP will also include a system performance report evaluating the condition and performance of the transportation system with respect to the established targets. The TIP will also include a description of the anticipated effect of the TIP toward achieving the performance targets set in the CLRP.

Development and Coordination of Performance Management

- Once the USDOT has established performance measures for the rulemaking areas, a working group will be established to coordinate the development of regional performance measures and targets for the metropolitan planning area. TPB staff will coordinate with the local DOTs and public transportation providers to evaluate the requirements for data collection, analysis, and reporting. Both the collection of current data and the forecasting of future performance will be evaluated. Following USDOT final rulemaking, the working group will make necessary revisions to the data process used to establish measured performance.
- TPB staff will coordinate with DDOT, MDOT and VDOT staff on their setting of the state performance targets in support of measures. States may set different targets for urbanized and rural areas. TPB staff will coordinate with the DOT efforts to ensure consistent state measures that are relevant for the TPB planning area. TPB staff will also coordinate with the DOT staffs to develop the specific performance targets in relation to the applicable performance measures for the TPB planning area. Similarly, TPB staff will coordinate with WMATA, VDRPT, and other public transportation agencies on their setting of performance targets for USDOT established performance measures in transit state of good repair and safety.
- TPB staff will coordinate the preparation of a system performance report evaluating the condition and performance of the transportation system with respect to the established targets. The report will include a description of the performance measures and targets used in assessing the performance of the transportation system. Once the targets are developed in coordination with the State DOTs and public transportation providers, the CLRP will include the system performance report and the TIP will include a description of the anticipated effect of the TIP toward achieving the performance targets set in the CLRP.

Oversight: Transportation Planning Board

Products: Performance Analysis Report of the CLRP and TIP

Schedule: Performance Report of the 2015 CLRP: October 2015
MAP-21 Measures: June 2016

G. ANNUAL REPORT (\$83,350)

- This issue will describe the main activities completed in 2015.
- Produce the monthly newsletter *TPB News*.
- Write and distribute the *TPB Weekly Report*, a web-based newsletter featuring

a short article every week on a single topic of interest in regional transportation.

Oversight: Transportation Planning Board

Product: *Region* magazine, TPB News and TPB Weekly Report

Schedule: June 2016

H. TRANSPORTATION/LAND USE CONNECTION (TLC) PROGRAM (\$434,900)

This work activity strengthens the coordination between land use and transportation planning. Begun as a pilot in November 2006, the program established a clearinghouse to document national best practices as well as local and state experiences with land use and transportation coordination, and offers short-term technical assistance through consultant teams to local jurisdictions to advance their coordination activities.

The following activities are proposed for FY 2016:

- Fund at least six technical assistance planning projects at a level between \$20,000 and \$60,000 each. Fund at least one project for between \$80,000 and \$100,000 to perform project design to achieve 30% completion.
- Fund at least one technical assistance project at up to \$80,000 to complete preliminary engineering and conceptual design work, enabling one previous TLC technical assistance planning project or other member jurisdiction planning project to move towards construction-readiness.
- Conduct the selection process for small capital improvement projects using funding sub-allocated to the Washington metropolitan region through the state DOTs from the new MAP-21 Transportation Alternatives Program (TAP). Coordinate program implementation with the state DOTs.
- Maintain and update the TLC Regional Clearinghouse and website
- Develop tools and activities to facilitate regional learning about TLC issues among TPB member jurisdictions through the Regional Peer Exchange Network. Organize at least one regional meeting to facilitate an exchange of information about lessons learned from past TLC projects.
- Identify recommended implementation action steps in each planning project report, such as further study needs, more stakeholder collaboration, suggested land use or local policy changes, and transportation investment opportunities and priorities.
- Provide staff support for TLC Technical Assistance Projects to be conducted

as part of the MDOT Technical Assistance Program and for other projects where additional funding is provided by state or local agencies.

Oversight: TPB Technical Committee

Products: Updated web-based clearinghouse, technical assistance provided by consultant teams to six localities, and implementation toolkit.

Schedule: Technical assistance: September 2015-June 2016

I. DTP MANAGEMENT (\$488,333)

This activity includes all department-wide management activities not attributable to specific project tasks in the work program.

Oversight: Transportation Planning Board

Products: Materials for the meetings of the TPB, the Steering Committee, the Technical Committee, and the State Technical Working Group; responses to information requests from elected officials, federal agencies and media; and participation in external meetings related to TPB work program

Schedule: Ongoing throughout the year

2. COORDINATION and PROGRAMS

A. CONGESTION MANAGEMENT PROCESS (CMP) (\$213,150)

- Undertake activities to address the federal requirement for a regional Congestion Management Process component of the metropolitan transportation planning process. Include information from regional Travel Monitoring programs (see Section 5 of the UPWP) addressing congestion and reliability, as well as information on non-recurring congestion as examined in the Management, Operations, and Intelligent Transportation Systems (MOITS) program (see also Task 2.B.).
- Identify and document strategies that address congestion, in coordination with MOITS (see also Task 2.B), the Metropolitan Area Transportation Operations Coordination Program (see also Task 2.I), the Air Quality Conformity program (see also Task 3.A.), the Greenhouse Gas Multi-Sector Working Group (MSWG) (see also Task 3.C.), and the regional Commuter Connections Program (see www.commuterconnections.org).
- Analyze transportation systems condition data archives from private sector sources, especially the speed data archive from the I-95 Corridor Coalition Vehicle Probe Project, and the FHWA's National Performance Management Research Data Set (NPMRDS), as compiled in the Congestion Monitoring and Analysis Task (see also Task 5.B.).
- Support the Vehicle Probe Data Users Group in its role to foster technical and methodological coordination in the application of vehicle probe data by member agencies and jurisdictions, including conducting quarterly Users Group meetings and maintaining support materials on the TPB website.
- Conduct congestion impact data analyses on an as-needed basis, such as for noteworthy incidents, weather, or other events that cause major impacts to the congestion and reliability levels of the region's roadway system.
- Address MAP-21 requirements related to the CMP, including:
 - Analyze data from the above sources to support the “congestion reduction”, “System Reliability” and other relevant National Goals for Performance Management.
 - Report regional congestion performance measures based on the available data, especially for congestion reduction and system reliability.
 - Provide congestion-related information (both recurring congestion and non-recurring congestion/reliability information) and support for Performance-Based Planning for the CLRP/TIP (see also Task 1.F.).
- Compile information and undertake analysis for development on four major aspects of the regional CMP:
 - CMP Components of the Constrained Long-Range Plan (CLRP), portions of the CLRP that specifically address CMP and its subtopics, in the form of interlinked web pages of the on-line CLRP, to be updated in conjunction

- with major updates of the CLRP;
- CMP Documentation Form Information addresses federally-required CMP considerations associated with individual major projects, to be included with overall project information submitted by implementing agencies to the annual Call for Projects for the CLRP and Transportation Improvement Program (TIP) (see also Task 1.C), and incorporated into the regional CMP; and
- A CMP Technical Report, published on an as-needed basis, compiling and summarizing the results of monitoring and technical analysis undertaken in support of the regional CMP. A major update of the CMP Technical Report will be produced in FY2016 (last published in 2014).
- National Capital Region Congestion Report, released quarterly on the TPB website, reviewing recent information on congestion and reliability on the region's transportation system and featured CMP strategies, with a "dashboard" of key performance indicators.

Oversight: Management, Operations, and Intelligent Transportation Systems (MOITS) Technical Subcommittee

Products: Updated CMP portions of the CLRP; CMP Documentation Form; National Capital Region Congestion Report; 2016 CMP Technical Report; documentation as necessary supporting MAP-21 requirements of the CMP; Vehicle Probe Data Users Group support materials and website; as-needed congestion studies following major regional events; summaries, outreach materials, and white paper(s) on technical issues as needed

Schedule: Monthly

B. MANAGEMENT, OPERATIONS, AND INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PLANNING (\$354,050)

- Regional transportation systems management and operations are vital considerations for metropolitan transportation planning, and have been emphasized in MAP-21. Under this work task, TPB will address these as well as coordination and collaborative enhancement of transportation technology and operations in the region, with a key focus on non-recurring congestion due to incidents or other day-to-day factors. The MOITS program includes planning activities to support the following major topics:
 - MAP-21: Address MAP-21 requirements related to MOITS, including:
 - Compile and analyze data to support the “system reliability” National Goal for Performance Management

- Coordinate with member states on system reliability targets
- ITS Data: The collection/compilation, processing, warehousing, and sharing of transportation systems usage and condition data from Intelligent Transportation Systems (ITS) sources
- Regional Transportation Management: Particularly in conjunction with the Metropolitan Area Transportation Operations Coordination (MATOC) Program (see also Task 2.I.); support the MOITS Technical Subcommittee in its long-range planning advisory role for the MATOC Program
- Multi-modal Coordination: Examination of traffic and transit management interactions in daily operations
- Coordination of day-to-day transportation operations planning with emergency preparedness in conjunction with the COG Regional Emergency Support Function 1 – Emergency Transportation Committee (see also Task 2.C.)
- Traveler Information: Real-time traveler information made available to the public, including addressing federal Section 1201 requirements on making real-time incident data available
- Congestion Management Process: Technology and operations strategies to address non-recurring congestion aspects of the regional Congestion Management Process (see also Task 2.A.)
- Maintenance and Construction Coordination: Regional sharing of available maintenance and construction information for coordination purposes, in conjunction with MATOC's regional construction coordination system
- Intelligent Transportation Systems (ITS) Architecture: Maintain the regional ITS architecture in accordance with federal law and regulations
- Traffic Signals: Assist member agencies in the exchange and coordination of interjurisdictional traffic signal operations information and activities; examine traffic signal systems and operations from the regional perspective, including in conjunction with emergency planning needs
- Climate Change Adaptation: Monitor local and national practices regarding transportation operational procedures to adapt to climate change effects. Coordinate with COG Regional Climate Adaption Plan activities to identify transportation operations-related climate change adaptation activities for the region's transportation agencies to consider
- MOITS Strategies: Analysis and assessment of strategies designed to reduce congestion or emissions (both criteria pollutants and greenhouse gas emissions); inform the Greenhouse Gas Multi-Sector Working Group (MSWG) on these strategies (see also Task 3.C.)
- Member Agency Activities: Work as needed with the MOITS activities of the state and D.C. departments of transportation, the Washington Metropolitan Area Transit Authority, and other member agencies

- Coordinate with supra-regional management and operations activities of the Federal Highway Administration, the I-95 Corridor Coalition, and other relevant stakeholders
- Provide staff support to the MOITS Policy Task Force, MOITS Technical Subcommittee, MOITS Regional ITS Architecture Subcommittee, and MOITS Traffic Signals Subcommittee.

Oversight: Management, Operations, and Intelligent Transportation Systems (MOITS) Technical Subcommittee

Products: Agendas, minutes, summaries, outreach materials as needed; white paper(s) on technical issues as needed; revised regional ITS architecture; MOITS input to the CLRP as necessary; review and advice to MOITS planning activities around the region; documentation as necessary supporting MAP-21 requirements of MOITS planning

Schedule: Monthly

C. TRANSPORTATION EMERGENCY PREPAREDNESS PLANNING (\$78,400)

Under this work task, TPB will provide support and coordination for the transportation sector's role in overall regional emergency preparedness planning, in conjunction with the Metropolitan Washington Council of Governments (COG) Board of Directors, the National Capital Region Emergency Preparedness Council, and other COG public safety committees and efforts. This task is the transportation planning component of a much larger regional emergency preparedness planning program primarily funded outside the UPWP by U.S. Department of Homeland Security and COG local funding. Here specialized needs for transportation sector involvement in Homeland Security-directed preparedness activities will be addressed. Efforts are advised by a Regional Emergency Support Function #1 - Transportation Committee in the COG public safety committee structure, with additional liaison and coordination with the TPB's Management, Operations, and Intelligent Transportation Systems (MOITS) Policy Task Force and MOITS Technical Subcommittee.

MAP-21 requires the metropolitan planning to address the security of the transportation system for motorized and nonmotorized users.

Major topics to be addressed under this task include the following:

- Liaison and coordination between emergency management and TPB, MOITS, and other transportation planning and operations activities.
- Planning for the role of transportation as a support agency to emergency management in catastrophic or declared emergencies, including:

- Emergency coordination and response planning through the emergency management and Homeland Security Urban Area Security Initiative (UASI) processes
- Emergency communications, technical interoperability, and capabilities
- Public outreach for emergency preparedness
- Coordination with regional critical infrastructure protection and related security planning
- Emergency preparedness training and exercises
- Conformance with U.S. Department of Homeland Security (DHS) directives and requirements
- Applications for and management of UASI and other federal Homeland Security funding.

Oversight: Management, Operations, and Intelligent Transportation Systems (MOITS) Technical Subcommittee

Products: Agendas, minutes, summaries, outreach materials as needed; white paper(s) on technical issues as needed; regular briefings and reports to TPB and MOITS as necessary; materials responding to DHS and UASI requirements; documentation as necessary supporting MAP-21 requirements of transportation emergency preparedness planning

Schedule: Monthly

D. TRANSPORTATION SAFETY PLANNING (\$130,100)

The Washington metropolitan area is a diverse and rapidly growing region, a major tourist destination, and a gateway for immigrants from all over the world. Growth has meant more people driving more miles and more people walking, especially in inner suburban areas where pedestrians were not common in years past. MAP-21 requires metropolitan planning to increase the safety of the transportation system for motorized and nonmotorized users. These and other factors, along with heightened awareness of the safety problem, have demonstrated the need for the regional transportation safety planning program.

- Under this work task, TPB will provide opportunities for consideration, coordination, and collaboration planning for safety aspects of the region's transportation systems. Safety planning will be in coordination with the State Strategic Highway Safety Plan efforts of the District of Columbia, Maryland, and Virginia, as well as other state, regional, and local efforts. Coordination will be maintained with the regional Street Smart pedestrian and bicycle safety outreach

campaign. Major topics to be addressed in the Transportation Safety Planning task include the following:

- Support of the Transportation Safety Subcommittee
- Safety data compilation and analysis
- Address MAP-21 requirements related to the CMP, including:
 - Compile fatality and injury data to support the “safety” National Goal for Performance Management.
 - Provide information on performance measures for safety.
 - Coordinate with member states on addressing safety targets.
 - Provide safety-related information and support for Performance-Based Planning for the CLRP/TIP (see also Task 1.F.).
- Coordination on metropolitan transportation planning aspects of state, regional, and local safety efforts, and with transportation safety stakeholders
- Coordination with other TPB committees on the integration of safety considerations
- Maintenance of the safety element of region's long-range transportation plan.

Oversight: Transportation Safety Subcommittee

Products: Safety element of the CLRP; summaries, outreach materials, and white paper(s) on technical issues as needed; documentation as necessary supporting MAP-21 requirements of transportation safety planning

Schedule: Quarterly

E. BICYCLE AND PEDESTRIAN PLANNING (\$126,250)

Under this work task, TPB will provide opportunities for consideration, coordination, and collaborative enhancement of planning for pedestrian and bicycle safety, facilities, and activities in the region, advised by its Bicycle and Pedestrian Subcommittee. An updated Regional Bicycle and Pedestrian Plan were completed in FY2015, and provide guidance for continued regional planning activities. Major topics to be addressed include the following:

- Advise the TPB, TPB Technical Committee, and other TPB committees on bicycle and pedestrian considerations in overall regional transportation planning.

- Maintain the Regional Bicycle and Pedestrian Plan and supporting Bicycle and Pedestrian Plan database on the TPB Web site for member agency and public access, including the following:
 - Maintain the improved system developed in FY2015 of on-line mapping and visualization of projects identified in the plan.
 - Compile information toward a biennial report to be delivered in FY2017 on progress on implementing projects from the Regional Bicycle and Pedestrian Plan.
 - Provide the public with information on the status of bicycle and pedestrian facilities planning and construction in the Washington region.
- Monitor regional Complete Streets and Green Streets activities.
- Compile bicycle and pedestrian project recommendations for the Transportation Improvement Program (TIP).
- Work with the Bicycle and Pedestrian Subcommittee to identify regional or long-distance bicycle routes/project needs, including a potential circumferential "bicycle beltway" route or routes.
- Coordinate with the annual "Street Smart" regional pedestrian and bicycle safety public outreach campaign (Street Smart is supported by funding outside the UPWP).
- Advise on the implementation and potential expansion of the regional bikesharing system and associated marketing materials.
- Examine regional bicycle and pedestrian safety issues, their relationship with overall transportation safety, and ensure their consideration in the overall metropolitan transportation planning process, in coordination with task 2.D above.
- Examine bicycle and pedestrian systems usage data needs for bicycle and pedestrian planning, and ensure their consideration in the overall metropolitan transportation planning process.
- Coordinate and host two or more regional bicycle and pedestrian planning or design training, outreach, or professional development opportunities for member agency staffs or other stakeholders, at least one of which will have a primary focus on pedestrian planning.
- Provide staff support to the Bicycle and Pedestrian Subcommittee, supporting the regional forum for coordination and information exchange among member agency bicycle and pedestrian planning staffs and other stakeholders.

Oversight: Regional Bicycle and Pedestrian Subcommittee

Products: Compilation of bicycle and pedestrian facilities for the TIP; maintenance of the regional bicycle and pedestrian plan on the TPB Web Site; two or more regional outreach workshops; Subcommittee minutes,

agendas, and supporting materials; white papers or other research and advisory materials as necessary

Schedule: Bimonthly

F. PUBLIC TRANSPORTATION PLANNING (\$180,600)

This work activity will provide support to the Regional Public Transportation Subcommittee for the coordination of public transportation planning throughout the Washington region, and for incorporating regional public transportation plans into the CLRP and TIP. The Regional Public Transportation Subcommittee is a forum for local and commuter bus, rail transit, and commuter rail operators and other agencies involved in public transportation planning and operation. The Subcommittee focuses on bus planning as well as regional transit issues, such as data sharing and technical projects. The work activity will also support the Private Providers Task Force, and private provider of public transportation involvement will be documented in the TIP. Quarterly meetings of the TPB Regional Taxicab Regulators Task Force will also be supported.

The major topics to be addressed in FY 2016 include the following:

- Evaluate federal rulemaking for the performance provisions of MAP-21, specifically transit safety and transit state of good repair, including changes in the metropolitan planning process in regard to performance-based project programming and planning.
- Provide a forum for discussion of the development of the performance measures and selection of performance targets required under MAP-21, in order to coordinate with relevant providers of public transportation to ensure consistency to the maximum extent practicable.
- Development and publication of an annual report “State of Public Transportation” that will provide useful operations, customer, and financial data on regional public transportation services for TPB and public utilization, including recent accomplishments and upcoming activities in public transportation across the region and a summary of the Subcommittee’s discussions and any recommendations for consideration by the TPB.
- Coordination and evaluation of CLRP and TIP proposals and amendments with regard to public transportation service plan implementation and capital projects for public transportation facilities and runningway improvements.
- Provide technical advice and input regarding regional transportation and land use coordination, including the development of transit assumptions for TPB planning studies.
- Facilitation of technology transfer and information sharing as it relates to regional, state and local public transportation services, including for Bus Rapid Transit (BRT) and other projects, customer information, and other common issues.
- Coordination with other regional committees regarding public transportation participation in planning and training activities, including but not limited to the Regional Emergency Support Function (RESF) #1 at COG and the MATOC Transit Task Force.

- Coordination with the TPB Management, Operations, and Intelligent Transportation Systems (MOITS) Policy Task Force and MOITS Technical Subcommittee regarding integrated planning for public transportation services and street operations.
- Coordination with the TPB Access for All (AFA) Committee and the Human Services Transportation Coordination Task Force to enhance regional mobility for all populations.

Oversight:	Regional Pubic Transportation Subcommittee
Products:	Annual report, data compilation, reports on technical issues, and outreach materials Private Provider involvement documentation
Schedule:	Monthly Annual Transit Forum – May

G. HUMAN SERVICE TRANSPORTATION COORDINATION (\$142,700)

Under Federal regulations, a Coordinated Human Service Transportation Plan is required to guide funding decisions for the Federal Transit Administration (FTA) “Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities” program.

MAP-21 eliminated the Job Access and Reverse Commute (JARC) program and consolidated the New Freedom and the Section 5310 Elderly and Individuals with Disabilities Program into a new program “Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities”. COG was the designated recipient for JARC and New Freedom for the Washington DC-VA-MD Urbanized Area and became the designated recipient of MAP-21’s Enhanced Mobility program in 2013.

In 2014, the TPB approved an update to the Coordinated Plan to respond to the requirements of the Enhanced Mobility program. The previous Coordinated Plan guided funding decision for three FTA programs; two of which COG served as the designated recipient for: the Job Access and Reverse Commute for Low Income Individuals (JARC) and New Freedom Program for Persons with Disabilities.

The TPB established the Human Service Transportation Coordination Task Force (“Task Force”) to develop and help implement the Coordinated Plan which guided for the new Section 5310 Enhanced Mobility program. The Task Force is comprised of human service and transportation agency representatives from each TPB jurisdiction as well as consumers and private providers. The Task Force establishes priorities for the solicitation of grant applications and assists with outreach.

Proposed work activities include:

- Support the activities of the TPB Human Service Transportation Coordination Task Force which include:
 - Identify priority projects for Enhanced Mobility Funding;
 - Review the Coordinated Plan for any revisions or updates to capture unmet transportation needs for people with disabilities and older adults; and
 - Further the goals in the Coordinated Plan for local and regional mobility management efforts to provide an array of transportation services and options to older adults and people with disabilities;
- Support the solicitation and selection of projects for Section 5310 Enhanced Mobility funding; and
- Coordinate the activities of the Task Force with the TPB Access for All Advisory Committee, the Regional Public Transportation Committee and the Private Providers Task Force.

Oversight: Transportation Planning Board

Products: Project Priorities and Recommendations for Enhanced Mobility Funding

Schedule: June 2016

H. FREIGHT PLANNING (\$156,050)

Under this work task, TPB will provide opportunities for consideration, coordination, and collaborative enhancement of planning for freight movement, safety, facilities, and activities in the region. An updated Regional Freight Plan was completed in FY2010, and provides guidance for continued regional planning activities. Major topics to be addressed include the following:

- Support the Regional Freight Subcommittee.
- Complete a new Regional Freight Plan.
- Maintain the Regional Freight Plan and supporting information on the TPB Web site for member agency and public access.
- Ensure consideration of freight planning issues in overall metropolitan transportation planning, including:
 - Work proactively with the private sector for consideration of private sector freight issues. Identify topics of interest to private sector, often competing trucking and freight stakeholders.
 - Continue following up on recommendations from the Regional Freight Forum held in FY2011.
 - Advise the TPB and other committees in general on regional freight planning considerations for overall metropolitan transportation planning.

- Coordinate with federal, state, and local freight planning activities.
- Address MAP-21 requirements related to freight planning, including:
 - Analyze available freight movement data for the region including FHWA Freight Analysis Framework total tonnage and total value data for truck, rail, air cargo, and maritime movements in our region; this data may inform freight performance measures.
 - Monitor federal rulemaking on freight performance measures.
 - Coordinate with member states on the establishment of freight targets.
- Complete a set of "Freight Around the Region" outreach materials focusing on individual jurisdictions' freight activities and their links to regional activities.
- Coordinate with TPB travel monitoring and forecasting activities on freight considerations.
- Examine truck safety issues.
- Develop ongoing freight component input to the Constrained Long Range Plan (CLRP).
- Keep abreast of regional, state, and national freight planning issues.
- Undertake data compilation and analysis on freight movement and freight facilities in the region.
- Undertake freight stakeholder outreach with representatives of the freight community, including carriers, shippers, and other stakeholders, to gain their input on regional freight movement, safety and other issues and to gauge their interest in state and MPO planning and programming processes.

Oversight: TPB Freight Subcommittee

Products: New Regional Freight Plan; data compilation and outreach materials as needed; white paper(s) on technical issues as needed; structured interviews and summarized results; documentation as necessary supporting MAP-21 requirements of freight planning

Schedule: Bimonthly

I. METROPOLITAN AREA TRANSPORTATION OPERATIONS COORDINATION PROGRAM PLANNING (\$124,850)

Under this work task, TPB will provide planning support for the Metropolitan Area Transportation Operations Coordination (MATOC) Program, in conjunction with the MATOC Steering Committee, subcommittees, and partner agencies. This task is the metropolitan transportation planning component of a larger set of MATOC Program activities, including operational and implementation activities, funded outside the

UPWP. The Metropolitan Area Transportation Operations Coordination (MATOC) Program's mission is to provide situational awareness of transportation operations in the National Capital Region (NCR) through the communication of consistent and reliable information, especially during incidents. MATOC's information sharing is undertaken in large part through the Regional Integrated Transportation Information System (RITIS). RITIS is an automated system that compiles formats, and shares real-time traffic and transit data among the region's transportation agencies. RITIS was developed on behalf of the region by the Center for Advanced Transportation Technology Laboratory at the University of Maryland. Data provided through RITIS is in daily use by the region's major transportation operations centers.

As a complement to the externally-funded operations activities of MATOC, this UPWP task is to provide ongoing TPB staff planning assistance to the MATOC Program, as a part of the TPB's metropolitan transportation planning activities. Planning activities under this task include:

- Committee Support: Provide administrative support of MATOC Steering Committee and subcommittee meetings, including preparation of agendas and summaries and tracking of action items.
- TPB Reports: Provide regular briefings to the TPB on MATOC Program progress.
- TPB Staff Participation: Provide input and advice to the MATOC Information Systems Subcommittee and Operations Subcommittee.
- Coordinate as necessary with the Management, Operations, and Intelligent Transportation Systems (MOITS) Technical Subcommittee
- Outreach: Coordinate the work of MATOC with other organizations, for example, with public safety or emergency management groups and media representatives; prepare articles, presentations and brochures to convey MATOC concepts, plans, and accomplishments. Also coordinate with the COG Regional Emergency Support Function # 1 - Emergency Transportation Committee.
- Implementation Planning: Prepare implementation plans describing the work required to reach defined stages of MATOC operating capability, including expert input from MATOC subcommittees.
- Financial and Legal Analysis: Support discussion of the identification of funding sources, estimation of funding needs, as well as preparation of legal agreement materials that provide for the long term sustainability of MATOC.
- Performance Measurement: Support MATOC committee discussions of assessing progress against MATOC's defined goals and objectives.
- Risk Management: Identify and monitor major risks to progress and identify actions to be taken in order to avoid incurring risks or mitigating their consequences.
- Supporting Materials: Develop supporting or informational materials for the above activities as necessary.

Oversight: MATOC Steering Committee; MOITS Technical Subcommittee

Products: Agendas, minutes, summaries, and outreach materials as needed; white paper(s) on technical issues as needed; regular briefings and reports to the TPB, MATOC committees, and the MOITS Policy Task Force and Technical Subcommittee.

Schedule: Monthly

Blank

3. FORECASTING APPLICATIONS

A. AIR QUALITY CONFORMITY (\$590,500)

The FY2016 work program will include the following tasks:

- Completion of conformity analysis of the 2015 CLRP by preparing the final report, which documents procedures, results, and comments and testimony received; in addition, all data files for use in subsequent regional and corridor/subarea planning studies are organized and documented.
- Preparation and execution of a work program for analysis of the 2016 CLRP & FY2017-22 TIP using the most up-to-date project inputs, planning assumptions, travel demand model, software and emissions factor model (MOVES); preparation of a draft report on the conformity assessment.
- TPB interagency and public consultation procedures; this includes funding for review and coordination work on the part of COG/DEP staff to reflect involvement by the Metropolitan Washington Air Quality Committee (MWAQC) in the public and interagency consultation process.
- Coordination of project solicitation, documentation, and emissions reduction analysis associated with CMAQ projects. Perform incidental air quality conformity reviews (non-systems level), as required throughout the year.
- Keeping abreast of federal requirements – as they are updated throughout the year – on air quality conformity regulations and as guidance is issued; revision of work program elements as necessary.

Oversight: Technical Committee in consultation with MWAQC committee

Products: Final report on 2015 CLRP Air Quality Conformity Assessment; Work Program for 2015 CLRP & FY2015-20 TIP Conformity Assessment

Schedule: June 2016

B. MOBILE EMISSIONS ANALYSIS (\$714,500)

The FY2016 work program will include the following tasks:

- Development of input data for MOVES model runs for the 2015 CLRP & FY2015-20 TIP Air Quality Conformity Assessment, review and evaluation of MODEL outputs. Mobile emissions may also be developed for GHG pollutants using the MOVES model (as deemed necessary) in support of strategic planning scenarios as part of the TPB's Scenario Task Force activities and the COG Board's Climate, Energy, and Environment Policy Committee (CEEPC).
- Execution of sensitivity tests (as necessary) assessing the likely impacts of input data changes in MOVES model runs
- Measurement of the on road mobile emissions reductions attributable to current and future Transportation Emissions Reductions Measures (TERMs)
- Technical support to the Commuter Connections Program in support of developing implementation plans and evaluating current and future TERMS
- Development of on road mobile emissions inventories using MOVES2014 as the emissions estimating model and the 2014 VIN database in support of an update of a PM2.5 Maintenance Plan (tentative)
- Funding for the COG Department of Environmental Programs (DEP) in support of its contributions towards provision of data from the state air agencies, and updates on federally-mandated issues related to mobile emissions as part of the annual air quality conformity determinations
- Response to requests for technical assistance by governmental entities and/or their consultants working on technical analyses or municipal transportation planning.
- Development of presentation material, rendering technical support and attendance of MWAQC and CEEPC meetings, policy discussions and public hearings.
- Monitoring of performance measures development associated with Air Quality as mandated by MAP-21
- Monitoring of the development of the newest version of MOVES (MOVES2014) by keeping up-to-date on technical issues, release date, grace period, and technical support activities provided by EPA; staff training on MOVES2014 may also be necessary

Oversight: Technical Committee in coordination with MWAQC committees

Products: Reports on TERM evaluation and on greenhouse gas emissions reduction strategies; Updated mobile source emissions inventories / reports as required addressing

ozone and PM_{2.5} standards and climate change requirements

Schedule: June 2016

C. REGIONAL STUDIES (\$587,200)

Transportation Sector Support for the COG Multi-Sector Greenhouse Gas (GHG) Working Group (MSWG)

In January 2015, COG convened the MSWG of senior level professionals from local governments and state agencies representing the energy, environment, transportation and land use sectors. The Working Group is tasked to prepare a draft report, by September 2015, assessing “What We Can Do” in a cost-effective, viable manner to attain the region’s GHG reductions goals.

In spring 2015, the MSWG will identify a set of viable strategies that can be implemented at local, state, regional and national levels to reduce GHG emissions in the energy, environment, transportation and land use sectors. The Working Group with consultant support will

- address how these actions can achieve co-benefits such as reduced criteria pollutant emissions, reduced transportation congestion and increased energy efficiency;
- quantify the benefits, cost and implementation timeframe for these strategies;
- develop an action plan for the region; and
- explore specific GHG reduction goals, measures, and/or targets, in the four sectors.

In FY 2016, TPB staff will continue activities to support the MSWG and the preparation of the draft (September 2015) and final (January 2016) report on “What We Can Do” to attain the region’s GHG reduction goals.

Follow-on Activities for the Regional List of Unfunded Transportation Projects

In the second-half of FY 2015, TPB staff will develop of a list of transportation projects which could not be included in the CLRP because funding has not been identified. Each member jurisdiction and agency was asked to provide its list of recognized priority transportation projects with cost estimates for inclusion in a regional list. After this project list is described, mapped and summarized, it will be reviewed by the Technical Committee, the CAC and AFA committees, and TPB.

It is anticipated that these reviews will suggest follow-on activities in FY 2016 to examine the impacts and benefits of the unfunded projects to help identify which ones should be advanced for inclusion in future CLRPs.. One activity could be to develop a multi-modal set of projects for a regional scenario analysis. Another activity could be to focus on a small set with significant regional benefits and then to identify creative ways to fund them.

Regional Transportation Priorities Plan (RTPP) – Review

In light of the implementation of the MAP-21 performance-based planning requirements, the new assessment of transportation strategies to reduce GHG in the COG report, as well as the experience derived from examining a regional list of the unfunded projects for the CLRP, the RTPP will be reviewed to determine how it could be updated in 2017 to inform the 2018 CLRP, along with its quadrennial financial analysis and annual call for projects. Preparatory work for this review is anticipated to begin in the first half of 2016 (later half of FY 2016).

Scenario Analysis

Potential outcomes of the MSWG and of the Unfunded Projects List may include requests for regional scenario analysis. At the direction of the TPB, staff would coordinate the development and analysis of scenarios that could incorporate greenhouse gas emissions reduction strategies, currently unfunded projects, or other strategies, policies, and projects, to inform decision-makers and the public.

Other FY 2016 activities include:

- Provision of staff support involving transportation for COG's FY 2016 Region Forward and Economy Forward regional planning and development efforts.
- Preparing project grant applications for promising US DOT grant opportunities, as approved by the TPB.

Oversight: TPB

Products: Transportation Sector input for the COG "What We Can Do" to reduce GHG report. Draft- September 2015, Final- January 2016.

Follow-on Activities for the Regional List of Unfunded Transportation Projects

Project grant applications for USDOT grant funding programs as approved by TPB

D. COORDINATION OF COOPERATIVE FORECASTING AND TRANSPORTATION PLANNING PROCESSES (\$839,400)

- Support the Planning Directors Technical Advisory Committee (PDTAC) in the coordination of local, state and federal planning activities and the integration of land use and transportation planning in the region.

- Analyze changes in regional economic, demographic and housing trends drawing on the results from the Census American Communities Survey (ACS) and from other available federal, state, local data sources.
- Work with members of the Cooperative Forecasting Subcommittee to enhance and improve the quality of small area (TAZ-level) employment data. This effort will involve the tabulation and analysis of state ES-202 employment data files for DC, MD and VA and collaboration with the National Capital Planning Commission (NCPC) and the General Services Administration (GSA) to obtain site specific employment totals for federal employment sites in the region.
- Work with the Cooperative Forecasting Subcommittee and the region's Planning Directors to assess the effects of significant transportation system changes on the Cooperative Forecasting land activity forecasts. Document key land use and transportation assumptions used in making updates to the Cooperative Forecasting land activity forecasts
- Work with members of the Cooperative Forecasting Subcommittee to reconcile initial Round 9.0 Cooperative Forecasts submitted by local jurisdictions with the regional benchmark projections produced by the top-down Cooperative Forecasting regional econometric model that incorporates current national and regional economic growth assumptions by major industry groups.
- Work with the Cooperative Forecasting Subcommittee and the region's Planning Directors to develop Round 9.0 Transportation Analysis Zone (TAZ)-level forecasts once jurisdictional totals are reconciled with the regional econometric model benchmark projections.
- Work with the Cooperative Forecasting Subcommittee and the region's Planning Directors to obtain the COG Board's approval of the draft Round 9.0 Cooperative Forecasts for use in the FY 2016 Constrained Long Range Plan (CLRP) travel demand forecasts and air quality conformity analysis.
- Work with the members of the Cooperative Forecasting Subcommittee, the region's Planning Directors, the Baltimore Metropolitan Council, the Tri-County Council for Southern Maryland, the George Washington Regional Planning Commission and the Planning Directors of Fauquier County- VA, Clarke County-VA and Jefferson County-WV to develop Round 9.0 Cooperative Forecasts by jurisdiction and ensure that they are consistent with the reconciled Round 9.0 Cooperative forecasts developed by COG member jurisdictions.
- Update and maintain Cooperative Forecasting land activity databases that are used as input into TPB travel demand-forecasting model. Prepare Round 9.0 TAZ-level population, household, and employment forecasts for both COG member and non-member jurisdictions in the TPB Modeled Area.
- Analyze and map Round 9.0 growth forecasts for identified COG Activity Centers.

- Respond to public comments on the Round 9.0 forecasts and the Cooperative Forecasting process.
- Develop and publish useful economic, demographic and housing-related information products including the Regional Economic Monitoring Reports (REMS) reports, the annual "Commercial Development Indicators" and economic and demographic data tables to be included in the Region Forward work program.

Oversight: Technical Committee

Products: Coordination of Land Use and Transportation Planning in the Region, Reconciliation and Approval of Draft Round 9.0 Cooperative Forecasts, Update of Regional Planning Databases, Analysis of Activity Center Growth Forecasts, Development and Distribution of technical reports and information products.

Schedule: June 2016

4. DEVELOPMENT OF NETWORKS AND MODELS

A. NETWORK DEVELOPMENT (\$800,800)

This activity addresses the development of transportation network files which are primary inputs to the regional travel demand model. During FY 2016, TPB staff will continue to develop network files that are compliant with the currently adopted Version 2.3.57 travel demand model (or its successor) to support regional and project planning needs. Staff will continue to develop transportation networks for project planning studies, special scenario studies and long-term models development activities.

The following work activities are proposed:

- Update the TPB's base-year (2015) transit network to reflect the most current service in the Metropolitan Washington Region. Staff will utilize digital data that is available on the web and published schedules.
- Prepare base- and forecast-year highway and transit networks in accordance with the latest CLRP and TIP elements received from state and local agencies. The networks will be prepared in compliance with the Version 2.3.57 travel demand model requirements. Provide guidance in the development of network inputs to other technical staff members in the department.
- Support the development of networks for special regional planning studies (including studies initiated by the multi-sector working group established by MWCOG to identify and evaluate greenhouse gas reduction strategies) and for developmental work that might be required for ongoing Models Development work.
- Continue to support technical refinements in models development, including a multi-year migration in the transit network building software, from TRNBUILD to Public Transport (PT). As part of this work, staff may consider developing a more refined approach for forecasting bus speeds as a function of highway congestion.
- Respond to network-related technical data requests including transit line files, station files, and shape files associated with features of the regional highway or transit network.
- Maintain and refine the TPB's existing ArcGIS-based information system used to facilitate network coding and multi-year network file management.

Oversight:

Travel Forecasting Subcommittee

Products:

A series of highway and transit networks reflecting the latest TIP and Plan, and compliant with the Version 2.3 travel

model. Technical documentation will be furnished.

Schedule: June 2016

B. GIS TECHNICAL SUPPORT (\$571,000)

- Provide data and technical support to staff using the COG/TPB GIS for development and distribution of data and information developed by the TPB planning activities, including Regional Studies, the CLRP, the TIP, Congestion Monitoring and Analysis, Cooperative Forecasting, Regional Transportation Data Clearinghouse, Network and Models Development, and Bicycle Planning.
- Provide application support for the creation, design, and maintenance of COG/TPB online web maps, applications, and visualization tools including the CLRP Project Viewer and the Bicycle and Pedestrian Plan Map
- Integrate COG/TPB data products, including web maps, tabular data, and other spatial data with the COG website
- Provide support for GIS-based transportation network management.
- Enhance the COG/TPB GIS Spatial Data Library with updated transportation and non-transportation features as these data become available.
- Add additional transportation attribute data, land use features and imagery data to the COG/TPB GIS Spatial Data Library.
- Update GIS Spatial Data Library documentation, GIS User Guides and technical documentation of various GIS software applications as required.
- Continue to coordinate the regional GIS activities with state DOTs, WMATA, and the local governments through COG's GIS Committee and subcommittees.
- Maintain and update COG/TPB's GIS-related hardware and software.
- Respond to request for COG/TPB GIS metadata, databases, and applications.

Oversight: Technical Committee

Products: Updated GIS software, databases, On-line web map applications, User documentation, Support and coordination of COG/TPB GIS activities.

Schedule: June 2016

C. MODELS DEVELOPMENT (\$1,214,500)

The Models Development activity functions to maintain and advance the TPB's travel forecasting methods which support ongoing transportation planning work. Models development activities are formulated around the areas of data collection, short- and long-term models development, research, and maintenance. During FY 2016, staff will continue to support the application and refinement of the currently adopted Version 2.3.57 travel model. Staff will also maintain a consultant-assisted effort to evaluate existing forecasting practices and to provide advice on longer-term improvements. Travel modeling refinements will be drawn from a strategic models development plan that was formulated during FY 2015. All improvements to the regional travel model will be implemented in consultation with the TPB Travel Forecasting Subcommittee (TFS).

The following work activities are proposed:

- Support the application of the Version 2.3.57 travel model for air quality planning work and other planning studies conducted by TPB staff. This will include the update of travel modeling inputs as necessary (external trips and other exogenous trip tables), investigating technical problems that might arise during the course of application, and documenting refinements to the model. Staff will also provide support for local project planning work, including MWCOG's multi-sector study to identify and evaluate greenhouse gas reduction strategies (initiated in FY 2015). Some of this support will be administered through the TPB's technical service accounts.
- Continue the consultant-assisted effort to improve the TPB travel model and to conduct focused research on selected technical aspects of travel modeling in order to keep abreast of best practices.
- Staff will work with local transportation agencies in formulating ways in which the regional travel model might be used to provide performance-based measures as per the new surface transportation authorization legislation (MAP-21).
- Continue the investigation of refinements to the Version 2.3.57 model, drawing from: 1) recommendations compiled from past consultant-generated reviews of the regional travel model and 2) the strategic models development plan that was formulated during FY 2015. These refinements may include activities that were initiated during FY 2014, including an enhanced traffic assignment process, an improved mode choice model application program, and the use of the Public Transport (PT) transit network program. Staff will also continue to leverage available technology to minimize model computation times as much as possible.
- Continue the effort to use cell probe-based origin-destination data (acquired in FY 2015) as a basis for forecasting non-resident travel.
- Continue the analysis of 2010 Census data and the COG geographically focused household travel survey data that TPB staff has collected during FY 2012, FY 2013 and FY 2014. This will include a comparison of surveyed data against

modeled data as a way of assessing model performance and reasonability.

- Keep abreast of new developments in travel demand forecasting, both short-term developments (such as for trip-based, four-step models) and long-term developments (such as ABMs and dynamic traffic assignment). TPB staff will also continue involvement with the Transportation Research Board (TRB), the Travel Modeling Improvement Program (TMIP) and Institute of Transportation Engineers (ITE).
- Staff will keep abreast of hardware and software needs and opportunities, including the potential use of “cloud computing” and the use of versioning software as an efficient way of tracking model code as it evolves with model refinements over time.
- Provide staff support for the TPB Travel Forecasting Subcommittee which is the forum charged with overseeing technical practices and improvements to the TPB travel forecasting process. This will include organizing meetings, preparing regular presentations, and coordinating with internal and external meeting participants on presentation items.
- Respond to model-related data requests from local partner agencies and their consultants.

Oversight:	Travel Forecasting Subcommittee
Products:	Updated travel models; documentation of models development activities; and recommendations for continued updating of the travel demand modeling process, where applicable.
Schedule:	June 2016

D. SOFTWARE SUPPORT (\$186,200)

The FY2016 work program will include the following tasks:

- Continued support on executing CUBE / TP+ runs and migration to CUBE / Voyager in running TPB travel demand forecasting applications.
- Continued support on MOVES emissions model runs and supporting software applications.
- Training of DTP staff in various applications of CUBE/ TP+, CUBE / Voyager, MOVES2014 and post-model applications such as integration with TRANSIM (as deemed necessary).
- Monitoring of the performance of DTP desktop and laptop microcomputer hardware

and software and make upgrades as appropriate.

- Coordination with the COG Office of Technology Programs and Services (OTPS) staff in this task and in applications under the Microsoft Windows operating system.
- Maintenance of the data storage systems for the back-up, archiving and retrieval of primary regional and project planning data files.
- Support development and execution of applications of micro simulation software as appropriate.

Oversight: Technical Committee.

Products: Operational travel demand forecasting process plus operational MOVES2014 Models; File transfer, storage and retrieval processes; DTP staff training in MOVES2014 systems; and Microcomputer hardware to support CUBE/ TP+, CUBE / Voyager, MOVES2014, and other operations.

Schedule: June 2016

5. TRAVEL MONITORING

A. TRAFFIC COUNTS (\$261,000)

- In fall of 2015 and spring of 2016 staff will conduct a sample of detailed truck counts to support TPB freight planning activities.
- Process and analyze the truck count data and prepare a technical report documenting the procedures and results of the truck data analysis
- Technical report will include information on truck volumes by time of day and vehicle classification.

Oversight: Freight Planning Subcommittee

Products: Truck Counts and Technical Report

Schedule: June 2016

B. CONGESTION MONITORING AND ANALYSIS (\$364,100)

Congestion Monitoring supplies data for the Congestion Management Process (CMP - Item 2.A.) and Models Development (Item 4.C.). The program monitors congestion on both the freeway and the arterial highway systems, to understand both recurring and non-recurring congestion. Data collection methods include a combination of aerial surveys, field data collection, and/or data procured from private sources. Examples of emerging technologies include probe-based data and Bluetooth-based data. Activities will include:

- Undertake analysis on regional roadway monitoring information as follow-up to the three-part report prepared in FY2015 (on the triennial survey of congestion on the region's freeway system, the FY2015 time-lapsed aerial photography pilot, and associated regional travel trends).
- Compile, review, and format transportation systems condition information from sources including:
 - The speed data archive from the I-95 Corridor Coalition/INRIX, Inc. Vehicle Probe Project (VPP) and associated VPP Suite developed by the University of Maryland Center for Advanced Transportation Technology;
 - The Regional Integrated Transportation Information System (RITIS) of the Metropolitan Area Transportation Operations Coordination (MATOC) Program;
 - The FHWA's National Performance Management Research Data Set (NPMRDS)
 - Private sector sources as available.
- Examine potential new sources of archived operations data.

- Provide data to the products of the Congestion Management Process (see also Task 2.A.)

Oversight: MOITS Technical Subcommittee

Products: Transportation systems monitoring data sets and analysis reports from archives, provided for the products of the Congestion Management Process (2.A.) and other regional transportation planning activities; research or white papers as needed; documentation as necessary supporting MAP-21 requirements of congestion monitoring and analysis

Schedule: June 2016

B. TRAVEL SURVEYS AND ANALYSIS

Household Travel Survey (\$1,034,800)

- Provide data, documentation, and technical support to users of 2007/2008 Regional Household Travel Survey and 2011-2015 Geographically-Focused Household Travel Surveys. Update user documentation as required.
- Complete the processing and analysis of data collected in the 2015 Geographically-Focused Household Travel Surveys to support analysis of regional growth and transportation issues of topical interest to the members of the TPB. Prepare information reports on various aspects of daily household and vehicle travel in the region.
- Begin planning and seek funding for a large sample methodologically enhanced activity-based region-wide household travel survey to begin in 2016. It is currently estimated that about \$3.0 million in funding will be needed to collect survey data from approximately 10,000-12,000 households in the TPB modeled area.

Oversight: Travel Forecasting Subcommittee

Product: Processing and Analysis of Household Travel Survey Analyses, Information Reports, Planning for Large Sample Region-wide Household Travel Survey.

Schedule: June 2016

D. REGIONAL TRANSPORTATION DATA CLEARINGHOUSE (\$330,700)

- Update Clearinghouse data files with FY14-15 highway and transit network data.
- Update Clearinghouse traffic volume data with AADT and AAWDT volume estimates, hourly directional traffic volume counts and vehicle classification counts received from state DOTs and participating local jurisdiction agencies.
- Update Clearinghouse transit ridership data with data received from WMATA, PRTC, VRE, MTA and local transit agencies including the Ride-On, The Bus, ART, DASH and the Fairfax Connector.
- Add newly collected and processed freeway and arterial road speed and level of service (LOS) data to the Regional Transportation Data Clearinghouse network.
- Add updated Cooperative Forecasting data to the Clearinghouse by TAZ.
- Update Regional Clearinghouse user manuals and documentation.
- Display Clearinghouse volume, speed and LOS data on a GIS web-based application that utilizes satellite/aerial photography imagery with zooming user interface.
- Distribute Regional Transportation Clearinghouse Data to TPB participating agencies via a GIS web-based application.

Oversight: Technical Committee

Product: Updated Clearinghouse Database and Documentation; Web Interface to Access Clearinghouse Data

Schedule: June 2016

6. TECHNICAL ASSISTANCE (\$1,317,800)

The funding level allocated to technical assistance is 11.5 percent of the total new FY 2016 funding in the basic work program. The funding level for each state is 10 percent of the total new FTA and FHWA MPO planning funding provided by each state. The funding level for WMATA is 6 percent of the total new FTA funding. The specific activities and levels of effort are developed through consultation between each state and WMATA representatives and DTP staff.