



# NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

## MEETING NOTICE

Date: February 18, 2015  
Time: 12 noon  
Place: COG Board Room

## AGENDA (BEGINS PROMPTLY AT NOON)

- 12 noon 1. **Public Comment on TPB Procedures and Activities**  
..... Chairman Mendelson
- Interested members of the public will be given the opportunity to make brief comments on transportation issues under consideration by the TPB. Each speaker will be allowed up to three minutes to present his or her views. Board members will have an opportunity to ask questions of the speakers, and to engage in limited discussion. Speakers are asked to bring written copies of their remarks (65 copies) for distribution at the meeting.
- 12:20 pm 2. **Approval of Minutes of January 21 meeting**  
..... Chairman Mendelson
- 12:25 pm 3. **Report of Technical Committee**  
..... Mr. Rawlings  
Chair, Technical Committee
- 12:30 pm 4. **Report of the Citizens Advisory Committee**  
..... Mr. Summersgill  
Chair, Citizens Advisory Committee
- 12:40 pm 5. **Report of Steering Committee**  
..... Mr. Srikanth  
Director, Department of  
Transportation Planning (DTP)
- 12:50 pm 6. **Chair's Remarks**  
..... Chairman Mendelson

**ACTION ITEMS**

- 12:55 pm 7. **Review of Comments Received and Approval of Project Submissions for the Air Quality Conformity Assessment for the 2015 Financially Constrained Long Range Transportation Plan (CLRP) and the FY 2015-2020 Transportation Improvement Program (TIP)**

..... Mr. Srikanth

At the January 21 meeting, the Board was briefed on the major project changes submitted for inclusion in the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP which were released for a 30-day public comment period that ended February 14. The Board will be briefed on the comments received and recommended responses, and asked to approve the project submissions for inclusion in the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP.

**Action:** Adopt Resolution R14-2015 to approve the project submissions for inclusion in the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP.

- 1:15 pm 8. **Approval of Scope of Work for the Air Quality Conformity Assessment for the 2015 CLRP and the FY 2015-2020 TIP**

..... Ms. Posey, DTP

At the January 21 meeting, the Board was briefed on the draft scope of work for the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP which was released for a 30-day public comment period that ended February 14. The Board will be briefed on the comments received and recommended responses, and asked to approve the scope of work for the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP.

**Action:** Approve the enclosed scope of work for the air quality conformity assessment for the 2015 CLRP and FY 2015-2020.

**INFORMATION ITEMS**

- 1:20 pm 9. **Briefing on the COG Cooperative Forecasting Process**

.....Mr. DesJardin

Director, COG Department of  
Community Planning and Services (DCPS)

At its February 11 meeting the COG Board approved the Draft Round 8.4 Cooperative Forecasts for use by the TPB in the Air Quality Conformity Analysis of the 2015 Financially Constrained Long-Range Plan and FY 2015 to 2020 Transportation Improvement Program. The Board will be briefed on the COG Cooperative Forecasting Process and the Round 8.4 Forecasts of future population, household and employment growth in the region.

- 1:30 pm 10. **Review of Draft FY 2016 Unified Planning Work Program (UPWP)**

..... Mr. Srikanth

The Board will be briefed on the enclosed draft Unified Planning Work Program (UPWP) for FY 2016 (July 1, 2015 through June 30, 2016). The Board will be asked to approve the FY2016 UPWP at its March 18 meeting.

- 1:40 pm 11. **Briefing on the Draft FY 2016 Commuter Connections Work Program (CCWP)**  
..... Mr. Ramfos, DTP

The Board will be briefed on the draft Commuter Connections Work Program (CCWP) for FY 2016 (July 1, 2015 through June 30, 2016). The Board will be asked to approve the FY 2016 CCWP at its March 18 meeting.

- 1:45 pm 12. **Briefing on the Implementation of the TPB Regional Priority Bus Project under the Transportation Investments Generating Economic Recovery (TIGER) Program**  
..... Mr. Randall, DTP

The Board will be briefed on the current status of the TPB Regional Priority Bus Project, which includes 16 project components being implemented by five project owners under a \$58 million TIGER grant administered by FTA.

**NOTICE ITEM**

- 1:55 pm 13. **Notice of Proposed Amendment to Update Projects and Funding in the District of Columbia Section of the FY 2015-2020 TIP**  
..... Mr. Zimbabwe

Notice is provided that the District Department of Transportation (DDOT) has requested an amendment to update projects and funding in the District section of the FY 2015-2020 TIP. The Board will be asked to approve this amendment at the March 18 meeting.

- 1:58 pm 14. **Other Business**

- 2:00 pm 15. **Adjourn**

Lunch will be available for Board members and alternates at 11:30 am

*Alternative formats of this agenda and all other meeting materials are available upon request. Email: [accommodations@mwcoq.org](mailto:accommodations@mwcoq.org). Phone: 202-962-3300 or 202-962-3213 (TDD). Please allow seven working days for preparation of the material. Electronic versions are available at [www.mwcoq.org](http://www.mwcoq.org).*

**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD**

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Washington, D.C. 20002-4226  
(202) 962-3200

**MINUTES OF THE  
TRANSPORTATION PLANNING BOARD  
January 21, 2015**

Members and Alternates Present

Marcel Acosta, NCPC  
Charles Allen, DC Council  
Ron Burns, Frederick County  
Rick Canizales, Prince William County  
Helen Cuervo, VDOT  
James Davenport, Prince William County  
Marc Elrich, Montgomery County  
Dan Emerine, DC Office of Planning  
Dennis Enslinger, City of Gaithersburg  
Gary Erenrich, Montgomery County/DOT  
Lyn Erickson, MDOT  
Jay Fisette, Arlington County  
Danielle Glaros, Prince George's County  
Jason Groth, Charles County  
Rene'e Hamilton, VDOT  
Neil Harris, Gaithersburg City Council  
Cathy Hudgins, Fairfax County  
Sandra Jackson, FHWA  
John Jenkins, Prince William County  
Shyam Kannan, WMATA  
Tim Lovain, City of Alexandria  
Phil Mendelson, DC Council  
Mark Rawlings, DC DOT  
Rodney Roberts, City of Greenbelt  
Elissa Silverman, DC Council  
Linda Smyth, Fairfax County  
David Snyder, City of Falls Church  
Tammy Stidham, National Park Service  
Jonathan Way, City of Manassas

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Victor Weissberg, Prince George's County/DPW&T  
Patrick Wojahn, City of College Park  
Sam Zimbabwe, DDOT

MWCOG Staff and Others Present

Robert Griffiths  
Gerald Miller  
John Swanson  
Andrew Meese  
Mark Moran  
Michael Farrell  
Dusan Vuksan  
Andrew Austin  
Erin Morrow  
Daivamani Sivasailam  
Jane Posey  
Wendy Klancher  
Wenjing Pu  
Dan Sonenklar  
Ben Hampton  
Bryan Hayes  
Sergio Ritacco  
Lamont Cobb  
Debbie Leigh  
Deborah Etheridge  
Bill Orleans                      Resident  
Stuart Freudberg                COG/EO  
Paul DesJardin                  COG/DCPS  
Steve Kania                        COG/OPA  
Stewart Schwartz                CSG  
Jameshia Peterson                DDOT  
Gregory Matlesky                Chairman Mendelson  
Pierre Holloman                 City of Alexandria  
Steve Still                         CAC  
Bob Summersgill                CAC  
Patrick Durany                    Prince William County  
Mike Lake                         Fairfax County/DOT  
Anne Phelps                        DC Council, Councilmember C. Allen  
Sam Rosen-Amy                  DC Council, Councilmember Silverman  
Tina Slater                        Action Committee for Transit  
Nancy Abeles                      Citizen (CLI alumni)  
Mike Harris                        Kimley Horn

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Tim Rosenbaum	VDRPT
Dingyuan Xu	University of Maryland
Todd Horsley	VDRPT
Tamara Vatnick	DC Office of Planning
Andrew Beacher	VDOT
Norman Whitaker	VDOT
Maria Sinner	VDOT
Susan Shaw	VDOT
Bill Sadler	Safe Routes to School National Partnership
Matt Golin	Safe Routes to School National Partnership

### **1. Public Comment on TPB Procedures and Activities**

Ms. Smith with the Northern Virginia Transportation Alliance noted that she was also presenting on behalf of the Northern Virginia Transportation Coalition. She expressed concern that the region lacks transportation priorities, and that the TPB's Regional Transportation Priorities Plan lists no projects. She highlighted that the Coalition identified nine projects of significance to Northern Virginia and the region, including a major upgrade of I-66 from the Roosevelt Bridge to US 15. Ms. Smith recommended capacity expansion for I-66 inside and outside the Beltway.

Ms. Bilek with ULI Washington announced the opening of the application period for the ULI's Technical Assistance Panel program. ULI-TAP, conducted with TPB staff, will provide assistances to three Regional Activity Centers in the coming year. Last year's TAP projects included four Activity Centers: the Glenmont Shopping Center, Rhode Island Avenue Metro, Prince George's Plaza Metro, and Falls Church. The application deadline is February 13, with a cost of \$7500 for the panel assistance and complementary yearlong membership to ULI.

Mr. Sadler with the Safe Routes to School National Partnership expressed SRTS's support of the update to the Bicycle and Pedestrian Plan. He encouraged the region's jurisdictions to pursue more funding to implement the plan. Mr. Sadler also acknowledged the reference to SRTS in Chapter One of the Plan.

Mr. Muchnick expressed support for VDOT's proposal to convert existing lanes along I-66 into HOT lanes during peak periods in both directions. He also thanked the TPB for encouraging VDOT to conduct the study leading to a long-term strategic plan for the I-66 multimodal corridor. He encouraged VDOT to continue their analysis, conduct public outreach, and develop a detailed implementation schedule for the suggested improvements. Mr. Muchnick noted that the proposed widening of I-66 would counteract the TPB's goals of reducing traffic congestion, carbon emissions, VMT, and increasing the use of public transit. He suggested that VDOT present two CLRP amendments regarding I-66 improvements inside the Beltway and consider alternatives to widening I-66, including improvements to Route 50.

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Mr. Schwartz encouraged VDOT to reconsider their decision to pursue the I-66 improvements as a Public/Private Partnership project. He said that neither transportation demand management nor transportation and land-use alternatives were a part of the Tier One phase of the project. He also said that expansion of existing rapid transit must be incorporated into the project and funded through dedicated portions of future toll revenues. Mr. Schwartz said the project review criteria suggested by the Northern Virginia Transportation Alliance represented an outdated approach.

## **2. Approval of Minutes of November 19 Meeting**

Mr. Emerine noted a correction to the minutes, and asked to be included as a Board member representing the District of Columbia and not College Park, MD. The correction was noted.

A motion was made to approve the minutes as corrected. The motion was seconded and was approved unanimously.

## **3. Report of the Technical Committee**

Mr. Rawlings reported the Technical Committee met on January 9. The committee reviewed five agenda items:

- An update on responses to comments received and revisions to the December version of the Draft 2014 Bicycle and Pedestrian Plan for the National Capital Region;
- A briefing on the 2014 Solicitation for the Section 5310 Enhanced Mobility Program for Seniors and People with Disabilities;
- A briefing on the major projects that were submitted for the 2014 CLRP by transportation agencies to date;
- A briefing from VDOT on the proposed improvements for I-66; and
- A briefing on the draft scope of work for the air quality conformity assessment of the 2015 CLRP and the 2015 to 2020 TIP

The committee also reviewed an outline and temporary budget for the FY 2016 Unified Planning Work Program.

Five items were included for information and discussion.

- Update on the COG multidisciplinary professional working group to develop a multi-sector action plan to reduce greenhouse gas emissions
- A briefing on the draft final report of a planning study to determine the best potential locations for on-street staging for commuter buses and off-street layover and parking of buses within the District of Columbia and Arlington County
- A briefing on changes in the regional travel and commuting patterns between 2010 and 2013
- A briefing on results of an analysis of decoded 2014 vehicle identification number registration data

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- An update on the latest developments regarding USDOT regulations on performance measures on the MAP-21.

#### **4. Report of the Citizen Advisory Committee**

Dr. Loh commented that this was her final report as chair and member of the Citizen's Advisory Committee. In the final report of the 2014, she highlighted the Regional Transportation Priorities Plan as both an accomplishment and a missed opportunity. She commended TPB staff on communicating the plan with local jurisdiction members, but noted the Board needs more outreach to raise awareness with TPB members. Dr. Loh noted the discussion around reauthorization of federal transportation funded as an accomplishment. She encouraged the Board to establish a working group in early 2015 and include a representative from the CAC in the group. She also cited the forthcoming development of a list of regional unfunded projects as a success of 2014. Dr. Loh stated the 2014 CAC would develop a list of topics of interests for the 2015 group, and acknowledged Mr. Summersgill as the incoming CAC chair.

Chair Mendelson thanked Dr. Loh for her work as 2014 CAC Chair and presented her with a certificate of recognition.

#### **5. Report of Steering Committee**

Mr. Srikanth reported that the Steering Committee met on January 9. The committee approved two resolutions.

- An amendment to the TPB's current fiscal year Unified Planning Work Program, under the technical assistance program, to add the District of Columbia's Loading Berth Survey Project worth \$70,000.
- An amendment to change the functional classification of 14 different streets in the District of Columbia, per an ongoing program of DDOT's highway performance monitoring program and review of the Federal Highway Divisional office.

Mr. Snyder asked if it would be appropriate for the Steering Committee to follow up on the developments since the Jan. 11, 2015 Metro rail accident near the L'Enfant Plaza station. He asked that the TPB be kept apprised of any developments. He also wondered whether there is a role for the TPB to play in the aftermath of the accident. He noted the TPB's support for WMATA. He also noted that the COG Board and the Emergency Preparedness Council are looking into it and that it would be appropriate for them to work with the TPB.

Chairman Mendelson agreed that it would be appropriate to have the Steering Committee to work on this matter. He also suggested that the steering committee look at this, but with an eye toward a presentation at an appropriate time, so that the TPB has a better sense of where there are issues and how WMATA is addressing them



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Ms. Hudgins supported the recommendation to have the Steering Committee to follow up noting that the information to inform this body as to how it can work in terms of the support and the engagement that TPB has had in supporting Metro. She also noted that the appropriate time for a presentation to the Board about the issues identified and how WMATA is addressing them would be when it has come through the review of the NTSB.

Mr. Lovain noted that as a member of the Steering Committee, he supports the idea of the committee working with COG and others including WMATA. He noted that the NTSB investigation may take 6–12 months, and that there are various different briefings and investigation activities currently taking place. He expressed his support for a briefing to the TPB on this matter at the appropriate time.

Mr. Srikanth noted the steering committee would add this to their agenda and staff would work to provide periodic reports to the TPB.

## **6. Chair's Remarks**

Chair Mendelson noted that Mr. Lovain would serve as first vice-chair of the TPB and Ms. Bridget Newton would serve as second vice-chair. He acknowledged two new members of the Board: Ms. Silverman, of the D.C. Council, and Ms. Glaros, of the Prince George's County Council. He also noted that this year, the TPB would be celebrating its 50<sup>th</sup> anniversary on June 30 and that staff would discuss with officers ways to commemorate the event.

## **ACTION ITEMS**

### **7. Approval of Funding and Transmittal Letter for TPB's 2015 Membership in the Association of Metropolitan Planning Organizations**

Mr. Srikanth said that TPB staff was seeking to renew the TPB's membership in the Association of Metropolitan Planning Organizations (AMPO). He said that the TPB is a founding member of AMPO, which serves MPOs across the country by facilitating conversations with Congress, and providing technical forums to share best practices. He said membership is \$25,000 per year and this funding was included in the annual budget approved by the Board in the previous year.

A motion was made to approve transmittal of the membership renewal letter to AMPO. The motion was seconded and was approved.

### **8. Approval of Appointments to the TPB Citizens Advisory Committee (CAC) for the Year 2015**

Chair Mendelson referred to a memorandum that provides the names of nominees to serve as members and alternates on the 2015 Citizens Advisory Committee. A motion was made to approve the appointments. The motion was seconded and was unanimously approved.

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Chairman Mendelson then said that as per the Board Bylaws he was required to appoint one of the members as the Chairman and that he was appointing Bob Summersgill from the District of Columbia to serve as chair of the CAC in 2015.

### **9. Approval of the Update of the Bicycle and Pedestrian Plan for the National Capital Region**

Referring to his presentation and to the mailout material, Mr. Farrell said that comments were received on the draft Bicycle and Pedestrian Plan for the National Capital Region from a variety of stakeholders, including the Citizens Advisory Committee, the TPB Technical Committee, WMATA, the Safe Routes to School National Partnership, and other jurisdiction partners. He said that corrections and updates were made in response to the comments. He said that the Plan comes with an online component that is both visual and interactive. He said that this online tool includes census data, information from bike share stations, and a map of bicycle and pedestrian projects planned for 2040. He said that the formal project database will be updated every two years and that the next full plan update will be in four years. He added that in 2015 the Bicycle and Pedestrian Subcommittee would continue work on a bicycle beltway and working closely with the National Park Service to update the 1990 Regional Trails Plan.

Mr. Fisette asked if the bicycle beltway activity was included in the plan update.

Mr. Farrell said it was listed as an action for the TPB's Bicycle and Pedestrians Subcommittee.

Mr. Fisette said that the discussion on a regional bicycle beltway would be consistent with the Region Forward compact, even though a beltway was not explicitly mentioned in that document. He asked if the bicycle beltway could be listed as a goal in the plan.

Mr. Srikanth said that the beltway could be added as an additional goal under chapter five of the report that talks about goals and objectives.

Mr. Fisette moved that the plan be approved with the change of incorporating as a target identifying a circumferential bicycle route or routes around the Washington region. The motion was seconded and was approved.

Mr. Erenrich asked if there was a region wide program to county bicycle facilities. He noted that we do not have any real data of usage that is consistent and collected consistently within the region. And it would be helpful to have a database like we have for highways and transit that would also incorporate that as part of our database.

Mr. Srikanth said that suggestion would be taken back to the subcommittee.

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## INFORMATION ITEMS

### **10. Approval of the CY 2014 Projects for Funding Under the Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities Program and an Amendment of the FY 2015-2020 Transportation Improvement Program (TIP) to Include the Projects**

Referring to the mailout material, Mr. Lovain said he chaired the selection committee to recommend projects for this round of the new Section 5310 Enhanced Mobility Program. He provided some background on the program and on the selection committee. He said that of the 11 applications received, eight were recommended for funding. The recommended projects would spend \$2.69 million in federal Enhanced Mobility funds, leaving \$2.38 million for the next solicitation, scheduled for August-October of this year.

Referring to the mailout material, Ms. Klancher provided background on each of the projects recommended for approval. She also described the solicitation process.

Vice Chairman Lovain moved approval of TPB Resolution R13-2015. The motion was seconded and was approved unanimously.

### **11. Briefing on Project Submissions for the 2015 CLRP**

Mr. Austin briefed the Board, referring to an on-screen presentation and a printed memorandum. He told Board members that the six major new projects and changes to existing projects proposed for inclusion in the 2015 CLRP update are currently available for comment through February 14. He explained that the Board would be asked at its meeting on February 18 to approve the projects for inclusion in the federally required air quality conformity analysis to be carried out this summer. Then, a second opportunity for public comment would be held this fall in advance of final TPB approval of the 2015 CLRP update.

In his presentation, Mr. Austin highlighted the six major new projects or changes to existing projects proposed for inclusion in this year's CLRP update. They include new-dedicated bike lanes in the District of Columbia, new express toll lanes on I-66 in Virginia both inside and outside the Capital Beltway, and the removal of three streetcar segments – one in the District and two in Virginia.

Chair Mendelson turned the floor over to Ms. Hamilton from the Virginia Department of Transportation (VDOT) to provide more detail about the express toll lane proposals for I-66 inside and outside the Beltway.

Ms. Hamilton began with a description of the portion of the project lying outside the Beltway. She said that VDOT is proposing to have two express toll lanes in either direction from the Beltway to Haymarket. She said one lane would be built new and the other would be converted from the existing high-occupancy vehicle (HOV) lane in either direction. She also explained that new transit options are a main component of the proposal, including both a commuter bus service and an all-

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day rapid bus service connecting activity centers in the corridor. She described the public involvement process for the project, including a series of public information meetings and one-on-one meetings with elected officials and stakeholders in the corridor, as well as a later phase that will include outreach to homeowners who may be impacted by the project. She said that construction on the project is expected to begin in 2017.

Ms. Hamilton then turned to a short description of the portion of the project lying inside the Beltway. She said that the proposal includes converting all existing lanes to express toll lanes during morning and afternoon peak periods. She said that the project, like the portion lying outside the Beltway, will also include increased transit service, as well as bicycle and pedestrian improvements on nearby roadways. She said that VDOT would be engaging stakeholders soon to refine the proposal. She said that the proposal also calls for widening a portion of I-66 inside the Beltway, but that specifics have yet to be identified.

Chair Mendelson seeking to clarify whether the current comment period and the upcoming TPB vote in February was the only opportunity to take a project out of this year's CLRP update, asked about the timeline and process for approving the proposed additions and changes to the CLRP.

Mr. Srikanth said that with the Board approving the proposed changes to the CLRP being reviewed now during its meeting next month staff would begin a five-month long technical process of air quality analysis. The results of this analysis would be released for a 30-day public comment period in September and the Board would take final action of approving the analysis and adopting the updated CLRP in October.

Mr. Mendelson asked if somebody is concerned about a project, if that project remains for the conformity analysis, is it then too late to take it out in October?

Mr. Srikanth responded that it is within the Board's purview to make such a change in October the practical implication of it would be that the air quality conformity analysis would have to be redone, which would mean getting all of the other projects into the updated CLRP would be delayed another six months.

Ms. Smyth asked whether the proposals included bicycle and pedestrian improvements on bridges and overpasses in the corridor.

Ms. Hamilton said that the project will include improvements to bicycle and pedestrian facilities as part of the improvements to the bridges but the details are still being developed. As such, they are not included in at this time. Ms. Smyth also asked whether those improvements would be included in the air quality conformity analysis, pointing out that such improvements might have positive air quality impacts.

Mr. Srikanth explained that they would not be included as part of the air quality conformity analysis. He explained that the model only takes into account changes to the highway and transit

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network. He said that staff could include the bicycle and pedestrian improvements as an information item in the table of highway and transit projects to be included in the air quality conformity analysis.

Mr. Fisette asked why the proposed express toll lanes inside the Beltway were being presented jointly with a later planned widening of a portion of I-66 inside the Beltway as one project. He suggested that they should be considered as two separate projects, noting that the multimodal study for the corridor said that express toll lanes could work without additional widening.

Ms. Hamilton explained that the state is trying to look at the corridor holistically and that presenting the two phases together provides an opportunity to analyze the relative benefits of widening versus transit.

Mr. Fisette also asked for more details about the transit, bicycle, and pedestrian improvements included in the proposal.

Ms. Hamilton explained that the details that had been worked out so far were included in the appendix of the proposal, and that those that had not yet been worked out would be included as part of the proposal by September, when the TPB is scheduled to consider the final 2015 CLRP update for adoption.

Mr. Zimbabwe asked about a discrepancy between a recent analysis of vehicle-miles travelled (VMT) in the region, which shows declining VMT in recent years, and the results of the most recent CLRP performance analysis, which shows VMT continuing to grow in the region. He specifically wanted to know whether and how the findings of the analysis of recent trends might be reflected in the TPB's travel modeling process and forthcoming performance analysis of the 2015 CLRP update. He asked staff to provide a presentation on this topic at a future TPB meeting.

Mr. Roberts asked whether VDOT could focus first on extending Metro out on I 66, BRT services on I 66, you know, BRT, bicycle and pedestrian infrastructure in the I-66 corridor outside the Beltway, rather than widening the highway at this time to accommodate new express toll lanes.

Ms. Hamilton said that VDOT and the counties believe that the need to provide new options for travelers in the corridor was too urgent to wait for the planning and the land-use changes that would be required in order to build and support significantly expanded transit service in the corridor. She reiterated the fact that the proposal only calls for widening the highway by one lane in either direction, and that it includes a number of strategies to make the most of the limited roadway space by encouraging use of alternative modes.

Mr. Lovain asked when VDOT would make a decision about whether to reserve the median of I-66 for future transit service.

Ms. Hamilton explained that public hearings would be held in May and that the state would make a decision by September, when the TPB is scheduled to consider the final 2015 CLRP update for

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adoption. Mr. Srikanth added that two alternatives of the project, one reserving the median and the other not, would be included in the air quality conformity analysis, so that whichever alternative the state chose it would have undergone the required analysis.

Mr. Emerine asked how the lack of details about planned access points for the express toll lanes and the pricing on the lanes and any new transit services in the proposal would affect the outcome of the travel modeling that underlies the air quality conformity analysis and performance analysis to take place this summer.

Mr. Srikanth explained that TPB staff would use the assumptions that have been provided so far, for this round of CLRP update and air quality conformity analysis. As the details of the projects, components are finalized over the next year or so those new details that arise later will be included in future plan updates and analyses.

## **12. Briefing on Draft Scope of Work for the Air Quality Conformity Assessment for the 2015 CLRP and the FY 2015-2020 TIP**

Ms. Posey referred to the scope of work that was distributed in the mailout. She said that the scope lists the steps that TPB staff will take to conduct the Air Quality Conformity Analysis of the 2015 CLRP. She said the scope is essentially the same as in 2014, though she said that this year's analysis would include new inputs from vehicle registration data and updated cooperative land-use forecasts. She said that the scope of work would be included in the materials open for public comment.

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

Mr. Srikanth said that the draft FY 2016 Unified Planning Work Program (UPWP), which funds most TPB activities, assumes the same amount of money as in the current fiscal year. He noted that staff was making this assumption since 80 percent of the TPB's budget comes from federal appropriations and at this time, there is some uncertainty about the funding amounts for FY 2015. He also said that the DOTs reduced their technical assistance program funding in order to contribute about \$500,000 to the TPB's primary work activity. He said that a draft will be presented to the TPB in February, and the final work program is anticipated be up for approval in March.

## **14. Other Business**

Chair Mendelson asked TPB staff to present an update on the TIGER grant at the February TPB meeting.

## **15. Adjourn**

The meeting adjourned at 2:06 p.m.

**TPB Technical Committee Meeting Highlights**

**February 10, 2015**

The Technical Committee met on February 6 at the Ronald F. Kirby Training Center at COG. Six items were reviewed for inclusion on the TPB agenda for February 18.

- TPB agenda Item 7

The Committee was updated on the major projects submitted for the 2015 CLRP by transportation agencies. The project submissions were released for a 30-day public comment period that will end February 14. At the February 18 meeting, the Board is scheduled to approve the project submissions for the air quality conformity analysis of the 2015 CLRP and FY 2015-2020 TIP.

- TPB agenda Item 8

The Committee was updated on the draft scope of work for the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP. The draft scope of work was released for a 30-day public comment period that will end February 14. At the February 18 meeting, the Board is scheduled to approve the scope of work for the air quality conformity assessment.

- TPB agenda Item 9

The Committee was briefed on how the COG Cooperative Forecasting Process develops population, household and employment forecasts for use in the regional transportation planning process, including key features of the recently developed Round 8.4 forecasts.

- TPB agenda Item 10

Staff reviewed the first draft of the Unified Planning Work Program (UPWP) for FY 2016 (July 1, 2015 through June 30, 2016). The TPB will be asked to approve the FY 2016 UPWP at its March 18 meeting.

- TPB agenda Item 11

Staff reviewed the first draft of the Commuter Connections Work Program (CCWP) for FY 2016 (July 1, 2015 through June 30, 2016). The TPB will be asked to approve the FY 2016 UPWP at its March 18 meeting.

- TPB agenda Item 12

The Committee was briefed on the current status of the TPB Regional Priority Bus Project, which includes 16 project components being implemented by five project owners under a \$58 million TIGER grant administered by FTA.

Three items were presented for information and discussion:

- In December, the TPB committed to support a COG multi-disciplinary professional working group to develop a multi-sector action plan to reduce greenhouse gas emissions and criteria pollutants. The Committee was briefed on the first meeting of this working group which was held on January 30.
- The Committee was updated on the latest developments regarding US DOT regulations on performance measures under MAP-21.
- The Committee was briefed on a recent US Court of Appeals decision to change the region's ozone attainment date.



**TPB TECHNICAL COMMITTEE MEMBERS AND ALTERNATES  
ATTENDANCE – February 6, 2015**

DISTRICT OF COLUMBIA

DDOT	Mark Rawlings
	Jameshia Peterson
DCOP	Dan Emerine

MARYLAND

Charles County	-----
Frederick County	Ron Burns
City of Frederick	-----
Gaithersburg	-----
Montgomery County	Gary Erenrich
Prince George's County	Victor Weissberg
Rockville	-----
M-NCPPC	
Montgomery County	-----
Prince George's County	Famararz Mokhtari
MDOT	Matt Baker
	Samantha Biddle
	Mike Nixon
Takoma Park	-----

VIRGINIA

Alexandria	Pierre Holloman
Arlington County	Dan Malouff
City of Fairfax	-----
Fairfax County	Malcolm Watson
Falls Church	-----
Fauquier County	Marie Scheetz
Loudoun County	Robert Brown
Manassas	-----
NVTA	-----
NVTC	Claire Randall
	David Moch
Prince William County	James Davenport
PRTC	Betsy Massie
VRE	Christine Hoeffner
	Sonali Soneji
VDOT	Norman Whitaker
	Andrew Beacher
	Dan Painter
VDRPT	Tim Roseboom
NVPDC	-----
VDOA	-----

WMATA

Jonathan Parker

FEDERAL/REGIONAL

FHWA-DC	-----
FHWA-VA	-----
FTA	-----
NCPC	-----
NPS	-----
MWAQC	-----
MWAA	Michael Hewitt

COG STAFF

Kanti Srikanth, DTP  
Gerald Miller, DTP  
Robert Griffiths, DTP  
Ron Milone, DTP  
Andrew Meese, DTP  
Elena Constantine, DTP  
Andrew Austin, DTP  
Anant Choudhary, DTP  
Ben Hampton, DTP  
Charlene Howard, DTP  
Eulalie Lucas, DTP  
Nicole McCall, DTP  
Jessica Mirr, DTP  
Mark Moran, DTP  
Dzung Ngo, DTP  
Jinchul Park, DTP  
Jane Posey, DTP  
Wenjing Pu, DTP  
Eric Randall, DTP  
Clara Reschovsky, DTP  
Sergio Ritacco, DTP  
Rich Roisman, DTP  
Jon Schermann, DTP  
Daivamani Sivasailam, DTP  
Dusan Vuksan, DTP  
Fen Xie, DTP  
Jeff King, DEP  
Sunil Kumar, DEP  
Amanda Campbell, DEP  
Paul DesJardin, DCPS  
Sophie Mintier, DCPS

OTHER

Bill Orleans



NATIONAL CAPITAL REGION  

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TRANSPORTATION PLANNING BOARD

Item #5

**MEMORANDUM**

February 12, 2015

To: Transportation Planning Board

From: Kanathur Srikanth  
Director, Department of Transportation Planning

Re: Steering Committee Actions

At its meeting on February 6, 2015, the TPB Steering Committee approved the following resolutions:

- SR11-2015: Resolution on an amendment to the FY 2015-2020 Transportation Improvement Program (TIP) that is exempt from the air quality conformity requirement to include funding for two projects on I-70/US 40 in Frederick County and one project on MD 5 in Prince George's County, as requested by the Maryland Department of Transportation (MDOT)
- SR12-2015: Resolution on an amendment to the FY 2015-2020 TIP that is exempt from the air quality conformity requirement to include funding for two grouped projects and for the Rogues Road Reconstruction Project in Fauquier County, as requested by the Virginia Department of Transportation (VDOT)

The TPB Bylaws provide that the Steering Committee "shall have the full authority to approve non-regionally significant items, and in such cases it shall advise the TPB of its action."



**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD  
777 North Capitol Street, N.E.  
Washington, D.C. 20002**

**RESOLUTION ON AN AMENDMENT TO  
THE FY 2015-2020 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)  
THAT IS EXEMPT FROM THE AIR QUALITY CONFORMITY REQUIREMENT  
TO INCLUDE FUNDING FOR TWO PROJECTS ON I-70/US 40 IN FREDERICK  
COUNTY AND ONE PROJECT ON MD 5 IN PRINCE GEORGE'S COUNTY, AS  
REQUESTED BY THE MARYLAND DEPARTMENT OF TRANSPORTATION (MDOT)**

**WHEREAS**, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

**WHEREAS**, the TIP is required by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as a basis and condition for all federal funding assistance to state, local and regional agencies for transportation improvements within the Washington planning area; and

**WHEREAS**, on October 15, 2014 the TPB adopted the FY 2015-2020 TIP; and

**WHEREAS**, in the attached letter of January 28, 2015, MDOT has requested that the FY 2015-2020 TIP be amended to include \$23.6 million in local funding and \$5.9 million in private funding for the completion of an interchange on I-70/US 40 at MD 144FA, Meadow Road and Old National Pike; \$8.2 million in National Highway Performance Program (NHPP) funding and \$2.3 million in state funding for the resurfacing of I-70/US 40 between MD 144FA and MD 27; and \$41.3 million in NHPP funding, \$6.5 million in High Priority Project (HPP) funding, and \$10.3 million in state funding for the construction of a new interchange on MD 5 at MD 373 and Brandywine Road, as described in the attached materials; and

**WHEREAS**, these projects are included in the Air Quality Conformity Analysis of the 2014 CLRP and the FY 2015-2020 TIP, or are exempt from the air quality conformity requirement, as defined in Environmental Protection Agency (EPA) regulations "40 CFR Parts 51 and 93 Transportation Conformity Rule Amendments: Flexibility and Streamlining; Final Rule," issued in the May 6, 2005, *Federal Register*;

**NOW, THEREFORE, BE IT RESOLVED THAT** the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2015-2020 TIP to include \$23.6 million in local funding and \$5.9 million in private funding for the completion of an

interchange on I-70/US 40 at MD 144FA, Meadow Road and Old National Pike; \$8.2 million in NHPP funding and \$2.3 million in state funding for the resurfacing of I-70/US 40 between MD 144FA and MD 27; and \$41.3 million in NHPP funding, \$6.5 million in HPP funding, and \$10.3 million in state funding for the construction of a new interchange on MD 5 at MD 373 and Brandywine Road, as described in the attached materials.

**Adopted by the Transportation Planning Board Steering Committee at its regular meeting on February 6, 2015.**



**Maryland Department of Transportation**  
The Secretary's Office

**Lawrence J. Hogan, Jr.**  
Governor

**Boyd K. Rutherford**  
Lt. Governor

**Pete K. Rahn**  
Acting Secretary

January 28, 2015

The Honorable Phil Mendelson, Chair  
National Capital Region Transportation Planning Board  
Metropolitan Washington Council of Governments  
777 North Capitol Street, N.E., Suite 300  
Washington DC 20002

Dear Chairman Mendelson:

The Maryland Department of Transportation (MDOT) requests three amendments to the State Highway Administration (SHA) portion of the FY 2015-2020 Transportation Improvement Program (TIP) as described in the attached memo. The additional funds for the projects have been made available due to an increase in federal-aid obligational authority. The amendment details are summarized below. The funding additions are for existing projects that are already included in the currently approved air quality conformity analysis, and for a project that does not impact air quality conformity (resurfacing).

TIP ID#	Project	Phase	Amount of New Funding	Comment
6411	I-70/US 40 Interchange Construction at MD 144FA (Old National Pike), Meadow Road, and Old National Pike, Spring Ridge/Linganore	PP PE RW CO	\$2,000,000 \$3,900,000 \$600,000 \$23,000,000	Adding \$29.5 million in local, state, and private funding.
4882	MD 5 (Branch Avenue) Interchange Construction at MD 373 (Accokeek Road) and Brandywine Road, Brandywine	CO	\$58,232,000	Adding \$58.2 million in state and federal funding.
6410	I-70 Resurfacing, MD 144FA (East Patrick Street) – MD 27 (Ridge Road), Frederick/Ballenger Creek/ Spring Ridge/Linganore/New Market/Mount Airy	PE CO	\$236,000 \$10,260,000	Adding \$10.5 million in state and federal funding to reflect a new regionally significant system preservation project.

MDOT requests that this amendment be approved by the Transportation Planning Board (TPB) Steering Committee at its February 6, 2015 meeting.

The revised funding status will not impact scheduling or funding availability for other projects in the current TIP, which continues to be fiscally constrained. The cost does not affect the portion of the federal funding which was programmed for transit, or any allocations of state aid in lieu of federal aid to local jurisdictions.

My telephone number is \_\_\_\_\_  
Toll Free Number 1-888-713-1414 TTY Users Call Via MD Relay  
7201 Corporate Center Drive, Hanover, Maryland 21076

The Honorable Phil Mendelson  
Page Two

We appreciate your cooperation in this matter. If you have any questions or comments, please do not hesitate to contact Ms. Lyn Erickson, at 410-865-1279, toll-free at 888-713-1414 or via email at [lerickson@mdot.state.md.us](mailto:lerickson@mdot.state.md.us). Of course, please feel free to contact me directly. Thank you.

Sincerely

A handwritten signature in blue ink that reads "Michael W. Nixon".

Michael W. Nixon, Manager  
Office of Planning and Capital Programming

Attachment

cc: Ms. Mary Deitz, Chief, Regional and Intermodal Planning Division, SHA  
Ms. Lyn Erickson, Manager, Office of Planning and Capital Programming,  
Maryland Department of Transportation  
Ms. Heather Murphy, Deputy Director, Office of Planning and Capital Programming  
Maryland Department of Transportation

Lawrence J. Hogan, Jr., *Governor*  
Boyd K. Rutherford, *Lt. Governor*




Pete K. Rahn, *Acting Secretary*  
Melinda B. Peters, *Administrator*

**MEMORANDUM**

**TO:** Mr. Don Halligan  
Director  
Office of Planning and Capital Programming  
Maryland Department of Transportation

**ATTN:** Ms. Lyn Erickson  
Mr. Mike Nixon

**FROM:** Mary Deitz, Chief   
Regional and Intermodal Planning Division  
State Highway Administration

**DATE:** January 26, 2015

**SUBJECT:** Request to Amend the Fiscal Year 2015 National Capital Region Transportation Improvement Program

The State Highway Administration (SHA) hereby requests amendment of the FY 2015 National Capital Region Transportation Improvement Program (TIP). SHA is programming additional funding for three projects in the National Capital Region as summarized below and detailed in the attached TIP sheets. The amendment is needed for:

- 1) The addition of \$29.5 million in planning, design, right-of-way, and construction funding for a new project, I-70/US 40 Interchange Construction at MD 144FA (Old National Pike), Meadow Road, and Old National Pike (TIP 6411).
- 2) The addition of \$58.2 million in construction funding for MD 5 (Branch Avenue) interchange at MD 373 (Accokeek Road) and Brandywine Road (TIP 4882).
- 3) The addition of \$10.5 million in design and construction funding for a new project, I-70 resurfacing between MD 144FA (East Patrick Street) and MD 27 (Ridge Road) (TIP 6410).

The additional funds for this project are available due to an increase in federal-aid obligational authority.

My telephone number/toll-free number is 410-545-5675

Maryland Relay Service for Impaired Hearing or Speech 1.800.735.2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410.545.0300 • [www.roads.maryland.gov](http://www.roads.maryland.gov)



TIP	Project	Phase	New Funding	Comments
6411	I-70/US 40 Interchange Construction at MD 144FA (Old National Pike), Meadow Road, and Old National Pike, Spring Ridge/Linganore	PP PE RW CO	\$2,000,000 \$3,900,000 \$600,000 \$23,000,000	Adding planning funding to reflect new regionally significant capital project including \$252,000 (State) to previous funding, \$1.5 million (Private) to FY 2015, and \$500,000 (Private) to FY 2016. Adding design funding to reflect new regionally significant capital project including \$1.0 million (Private) to FY 2015, \$2.0 million (Private) to FY 2016, and \$900,000 (Private) to FY 2017. Adding right-of-way funding to reflect new regionally significant capital project including \$300,000 (Local) to FY 2017 and \$300,000 (Local) to FY 2018. Adding construction funding to reflect new regionally significant capital project including \$6.5 million (Local) to FY 2018, \$8.3 million (Local) to FY 2019, and \$8.3 million (Local) to FY 2020.
4882	MD 5 (Branch Avenue) Interchange Construction at MD 373 (Accokeek Road) and Brandywine Road, Brandywine	CO	\$58,232,000	Adding construction funding to reflect FY 2015-2020 CTP including: adding \$37,000 (State), \$6.5 million (HPP), and \$148,000 (NHPP) to FY 2016; adding \$4.3 million (State) and \$17.0 million (NHPP) to FY 2017; adding \$5.3 million (State) and \$21.4 million (NHPP) to FY 2018; and adding \$711,000 (State) and \$2.8 million (NHPP) to FY 2019
6410	I-70 Resurfacing, MD 144FA (East Patrick Street) – MD 27 (Ridge Road), Frederick/Ballenger Creek/Spring Ridge/Linganore/New Market/Mount Airy	PE CO	\$236,000 \$10,260,000	Adding design funding to reflect new regionally significant system preservation project including \$236,000 (State) to FY 2015. Adding construction funding to reflect new regionally significant system preservation project including \$8.2 million (NHPP) and \$2.1 million (State) to FY 2016.

The proposed action will not impact scheduling or funding availability for other projects in the current TIP, which continues to be fiscally constrained. The cost does not affect the portion of the federal funding, which was programmed for transit or any allocations of state aid in lieu of federal aid to local jurisdictions.

After your review, please forward this request to the National Capital Region Transportation Planning Board. Upon approval of the requested TIP amendment, please amend the FY 2014 Statewide TIP (STIP) using the funding information provided in the attachment. If you have any questions, please do not hesitate to contact SHA Assistant Regional Planner, Matt Baker, at 410-545-5668 or via email at mbaker4@sha.state.md.us.

Mr. Don Halligan  
Page Three

**Attachment**

cc: Ms. Felicia Alexander, Deputy Director, Office of Planning and Preliminary Engineering,  
SHA  
Mr. Matt Baker, Assistant Regional Planner, SHA  
Mr. Eric Beckett, Assistant Chief, Regional and Intermodal Planning Division, SHA  
Ms. Samantha Biddle, Regional Planner, SHA  
Mr. Mark Crampton, District Engineer, SHA  
Mr. David Rodgers, Assistant Regional Planner, SHA  
Mr. Brian Young, District Engineer, SHA

**SUBURBAN MARYLAND  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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**MDOT/State Highway Administration**

**Interstate**

**I-70/US 40 at MD 144FA, Meadow Road, and Old National Pike Interchange**

TIP ID: 6411    Agency ID: FR 5801    Title: I-70/US 40 at MD 144FA, Meadow Road, and Old National Pike Interchange Construction    Complete: 2022

Facility: I 70	Local	0/0/100			300 b	300 b	8,250 c	8,250 c	23,600
From: MD 144FA						6,500 c			
To:	PRIV	0/0/0	1,500 a	1,500 a	2,000 a	900 a			5,900
	State	0/100/0	525 a						

**Total Funds: 29,500**

Description: Construction of two missing I-70/US 40 ramp movements at MD 144FA, Meadow Road, and Old National Pike, including entry ramp to westbound I-70/US 40 and exit ramp from eastbound I-70/US 40.

**Amendment: Additional Planning, Design, Right-of-Way, and Construction Funding** **Approved on: 2/6/2015**

Adding planning funding to reflect new regionally significant capital project including \$1.5 million (Private) to FY 2015 and \$500,000 (Private) to FY 2016. Adding design funding to reflect new regionally significant capital project including \$1.0 million (Private) to FY 2015, \$2.0 million (Private) to FY 2016, and \$900,000 (Private) to FY 2017. Adding right-of-way funding to reflect new regionally significant capital project including \$300,000 (Local) to FY 2017 and \$300,000 (Local) to FY 2018. Adding construction funding to reflect new regionally significant capital project including \$6.5 million (Local) to FY 2018, \$8.3 million (Local) to FY 2019, and \$8.3 million (Local) to FY 2020.

**SUBURBAN MARYLAND  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Primary</b>										
<b>MD 5 Corridor</b>										
TIP ID: 4882    Agency ID: PG1751		Title: MD 5 at MD 373 and Brandywine Road Interchange Construction						Complete: 2017		
Facility: MD 5 at MD 373 and Brandywine Road	HPP	100/0/0	3,140 a	468 a	490 a	1,443 a			17,272	
From:			17 b	2,236 b	3,120 b	3,031 b				
To:					6,484 c					
	NHPP	100/0/0			148 c	17,033 c	21,373 c	2,845 c	41,399	
	State	0/100/0	1,059 a	132 a	138 a	407 a	5,343 c	711 c	16,354	
			227 b	2,609 b	880 b	1,839 b				
					37 c	4,258 c				
	STP	100/0/0	405 a							
	TCSP	100/0/0	517 b	733 b					733	
<b>Total Funds:</b>									<b>75,758</b>	

Description: Construction of a new MD 5 interchange at MD 373 and Brandywine Road. This project also includes construction of a park-and-ride lot.

**Amendment: Additional Construction Funding** **Approved on: 2/6/2015**  
 Amending construction funding to reflect FY 2015-2020 CTP including: adding \$37,000 (State), \$6.5 million (HPP), and \$148,000 (NHPP) to FY 2016; adding \$4.3 million (State) and \$17.0 million (NHPP) to FY 2017; adding \$5.3 million (State) and \$21.4 million (NHPP) to FY 2018; and adding \$711,000 (State) and \$2.8 million (NHPP) to FY 2019.

<b>Other</b>										
<b>System Preservation Projects</b>										
TIP ID: 6410    Agency ID: FR		Title: I-70/US 40 Resurfacing						Complete: 2017		
Facility: I 70	NHPP	100/0/0				8,208 c			8,208	
From: MD										
To: MD 27	State	0/100/0		236 a	2,052 c				2,288	
<b>Total Funds:</b>									<b>10,496</b>	

Description: Resurfacing of I-70/US 40 between MD 144FA and MD 27.

**Amendment: Additional Design and Construction Funding** **Approved on: 2/6/2015**  
 Adding design funding to reflect new regionally significant system preservation project including \$236,000 (State) to FY 2015. Adding construction funding to reflect new regionally significant system preservation project including \$8.2 million (NHPP) and \$2.1 million (State) to FY 2016.

**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD  
777 North Capitol Street, N.E.  
Washington, D.C. 20002**

**RESOLUTION ON AN AMENDMENT TO  
THE FY 2015-2020 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)  
THAT IS EXEMPT FROM THE AIR QUALITY CONFORMITY REQUIREMENT  
TO INCLUDE FUNDING FOR TWO GROUPED PROJECTS AND FOR THE ROGUES  
ROAD RECONSTRUCTION PROJECT IN FAUQUIER COUNTY, AS REQUESTED  
BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)**

**WHEREAS**, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

**WHEREAS**, the TIP is required by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as a basis and condition for all federal funding assistance to state, local and regional agencies for transportation improvements within the Washington planning area; and

**WHEREAS**, on October 15, 2014 the TPB adopted the FY 2015-2020 TIP; and

**WHEREAS**, in the attached letter of January 30, 2015, VDOT has requested that the FY 2015-2020 TIP be amended to include funding for Fauquier County projects into the "Construction: Transportation Enhancement/Byway/Non-Traditional" and "Construction: Safety/ITS/Operational Improvements" grouped projects, and to include \$2.17 million in Surface Transportation Program (STP) and state matching funds for the Rogues Road Reconstruction project in Fauquier County, as described in the attached materials; and

**WHEREAS**, these projects are exempt from the air quality conformity requirement, as defined in Environmental Protection Agency (EPA) regulations "40 CFR Parts 51 and 93 Transportation Conformity Rule Amendments: Flexibility and Streamlining; Final Rule," issued in the May 6, 2005, *Federal Register*;

**NOW, THEREFORE, BE IT RESOLVED THAT** the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2015-2020 TIP to include funding for Fauquier County projects into the "Construction: Transportation Enhancement/Byway/Non-Traditional" and "Construction: Safety/ITS/Operational Improvements" grouped projects, and to include \$2.17 million in STP and state matching funds for the Rogues Road Reconstruction project in Fauquier County, as described in the attached materials.

**Adopted by the Transportation Planning Board Steering Committee at its regular meeting on February 6, 2015.**



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive  
Fairfax, VA 22030

CHARLES A. KILPATRICK, P.E.  
COMMISSIONER

January 30, 2015

The Honorable Phil Mendelson, Chairman  
National Capital Region Transportation Planning Board  
Metropolitan Washington Council of Governments  
777 North Capitol Street, N.E., Suite 300  
Washington, DC 20002-4201

RE: National Capital Region FY 2015-2020 Transportation Improvement Program Amendments for Fauquier County Projects Pursuant to MPO Boundary Expansion

Dear Chairman Mendelson:

The Virginia Department of Transportation (VDOT) requests amendments to the FY 2015-2020 Transportation Improvement Program (TIP) to add funding for improvements in the portion of Fauquier County recently added to the MWCOG-TPB Metropolitan Planning Organization (MPO) planning area. These amendments are also needed to reflect VDOT's latest planned funding obligations for two TIP Project Groupings district-wide.

We request the following amendments to the TIP:

1. Add UPC# 104300, Rogues Road Reconstruction, to the 2015-2020 TPB TIP. This project consists of reconstruction of a 3.24 mile segment of Rogues Road in Fauquier County from the Prince William County line to Route 605, without adding traffic capacity. The estimated total project cost is \$9.3 million. The amendment adds \$2.17 million in STP/F funding and State matching to the TIP.
2. Adjust the funding of the Northern Virginia Project Grouping titled "Construction: Transportation Enhancement/Byway/Non-Traditional" to move funding for Fauquier County projects from the STIP category of "Non-MPO" to "MPO". This amendment also updates the current funding levels and sources for this project grouping district-wide.
3. Adjust the funding of the Northern Virginia Project Grouping titled "Construction: Safety/ITS/Operational Improvements" to move funding for Fauquier County projects from the STIP category of "Non-MPO" to "MPO". This amendment also updates the current funding levels and sources for this project grouping district-wide.

Mr. Phil Mendelson  
January 30, 2015  
Page 2

These projects and funds are currently included in the 2015-2018 Virginia State Transportation Improvement Program (STIP). The amendments will have no impact on the financial constraint determination in the 2014 CLRP. Funding for the Fauquier County projects is being moved into the TIP along with the projects. Funding for grouped projects in the VDOT Northern Virginia District is already reflected in the approved 2014 CLRP Financial Plan. This amendment will not impact the regional air quality conformity analysis because the projects are not significant for air quality conformity purposes.

Tables summarizing the amendments are attached. VDOT requests that this TIP Amendment be approved by the Transportation Planning Board's Steering Committee at its meeting on February 6, 2015. VDOT's representative will attend the meeting and be available to answer any questions about the amendments.

If you have any questions, please contact Norman Whitaker, our Transportation Planning Manager, at 703-259-2799.

Thank you for your consideration of this request.

Sincerely,



Helen L. Cuervo, P.E.  
District Administrator  
Northern Virginia District

Attachment

cc: Ms. Dianne Mitchell, VDOT  
Ms. Maria Sinner, P.E., VDOT-NOVA  
Ms. Jan Vaughn, VDOT  
Mr. Dan Painter, VDOT, Culpepper District  
Mr. Norman Whitaker, AICP, VDOT-NOVA

### Northern Virginia MPO

#### Secondary Projects

UPC NO	104300	SCOPE	Reconstruction w/o Added Capacity			
SYSTEM	Secondary	JURISDICTION	Fauquier County	OVERSIGHT		
PROJECT	ROGUES ROAD - RECONSTRUCTION OF ROAD			ADMIN BY	VDOT	
DESCRIPTION	FROM: FAUQUIER/PRINCE WILLIAM C.L. TO: ROUTE 605 (3.2400 MI)					
PROGRAM NOTE	TIP Amd to change from NonMPO to MPO and add \$1 (STP/F) FFY18 RW phase.					
ROUTE/STREET	ROGUES ROAD (0602)			TOTAL COST	\$9,390,616	
	FUND SOURCE	MATCH	FY15	FY16	FY17	FY18
PE	Federal - STP/F	\$153,400	\$0	\$613,601	\$0	\$0
RW	Federal - STP/F	\$250,000	\$0	\$0	\$0	\$1,000,000



# Northern Virginia MPO

## Project Groupings

GROUPING		Construction : Transportation Enhancement/Byway/Non-Traditional					TOTAL COST		\$112,320,823
ROUTE/STREET									
	FUND SOURCE	MATCH	FY15	FY16	FY17	FY18			
PE	Federal - AC CONVERSION	\$386,972	\$1,252,381	\$295,505	\$0	\$0		\$0	
	Federal - ARRA	\$0	(\$118,360)	\$0	\$0	\$0		\$0	
	Federal - CM	\$189,277	\$757,108	\$0	\$0	\$0		\$0	
	Federal - DEMO	(\$147,509)	(\$713,834)	\$0	\$0	\$0		\$0	
	Federal - HPD	(\$42,069)	(\$168,275)	\$0	\$0	\$0		\$0	
	Federal - HSIP	(\$4,762)	(\$42,859)	\$0	\$0	\$0		\$0	
	Federal - NH	(\$38,486)	(\$153,942)	\$0	\$0	\$0		\$0	
	Federal - RSTP	\$381,068	\$374,673	\$81,600	\$800,000	\$268,000		\$0	
	Federal - SAFETEA-LU	\$134,569	\$538,276	\$0	\$0	\$0		\$0	
	Federal - STP/EN	(\$8,462,490)	(\$33,561,947)	\$0	\$0	\$0		\$0	
	Federal - STP/F	(\$931,167)	(\$3,724,668)	\$0	\$0	\$0		\$0	
	Federal - TAP/F	\$86,605	\$346,420	\$0	\$0	\$0		\$0	
	Other	\$0	\$383,810	\$0	\$100,000	\$0		\$0	
<b>PE TOTAL</b>		<b>(\$8,447,992)</b>	<b>(\$34,831,217)</b>	<b>\$377,105</b>	<b>\$900,000</b>	<b>\$268,000</b>			
PE AC	Federal - AC	(\$3,605,452)	(\$13,970,633)	\$0	\$0	\$0		\$0	
RW	Federal - CM	\$262,000	\$1,048,000	\$0	\$0	\$0		\$0	
	Federal - DEMO	\$55,596	\$222,384	\$0	\$0	\$0		\$0	
	Federal - HSIP	(\$33,413)	(\$300,714)	\$0	\$0	\$0		\$0	
	Federal - RSTP	\$233,224	\$812,894	\$0	\$120,000	\$0		\$0	
	Federal - SAFETEA-LU	\$92,990	\$371,960	\$0	\$0	\$0		\$0	
	Federal - STP/EN	\$1,401,827	\$5,607,308	\$0	\$0	\$0		\$0	
	Federal - STP/F	\$190,458	\$761,830	\$0	\$0	\$0		\$0	
	Federal - TAP/F	\$249,005	\$996,021	\$0	\$0	\$0		\$0	
	Other	\$0	(\$1,328,026)	\$0	\$0	\$50,000		\$0	
<b>RW TOTAL</b>		<b>\$2,451,687</b>	<b>\$8,191,657</b>	<b>\$0</b>	<b>\$120,000</b>	<b>\$50,000</b>			
RW AC	Federal - AC	\$304,389	\$1,217,556	\$0	\$0	\$0		\$0	
CN	Federal - AC CONVERSION	\$725,536	\$1,973,006	\$865,943	\$63,196	\$0		\$0	
	Federal - ARRA	\$0	(\$895,632)	\$0	\$0	\$0		\$0	
	Federal - BR	\$76,000	\$0	\$0	\$304,000	\$0		\$0	
	Federal - CM	\$1,699,528	\$6,351,243	\$0	\$446,870	\$0		\$0	
	Federal - DEMO	\$230,134	\$1,810,955	\$0	\$0	\$0		\$0	
	Federal - HSIP	\$13,808	\$124,271	\$0	\$0	\$0		\$0	
	Federal - NH	(\$296,740)	(\$575,779)	\$0	\$0	\$0		\$0	
	Federal - RSTP	\$3,349,946	\$3,861,108	\$5,887,635	\$3,651,040	\$0		\$0	
	Federal - SAFETEA-LU	\$1,363,298	\$3,544,519	\$1,908,672	\$0	\$0		\$0	
	Federal - STP/EN	\$10,087,188	\$39,824,309	\$524,442	\$0	\$0		\$0	
	Federal - STP/F	\$1,136,827	\$4,617,657	\$0	\$0	\$0		\$0	
	Federal - TAP/F	\$2,351,234	\$7,888,231	\$1,516,705	\$0	\$0		\$0	
	Federal - TAP/R	\$182,716	\$730,863	\$0	\$0	\$0		\$0	
	Federal - TAP/SU	\$35,000	\$140,000	\$0	\$0	\$0		\$0	
	Other	\$0	(\$33,703)	\$0	\$0	\$0		\$0	
<b>CN TOTAL</b>		<b>\$20,954,475</b>	<b>\$69,361,048</b>	<b>\$10,703,397</b>	<b>\$4,465,106</b>	<b>\$0</b>			
CN AC	Federal - AC	\$9,020,131	\$55,786,012	\$7,126,841	\$3,867,730	\$0		\$0	
MPO Note		TIP Amd to change from NonMPO to MPO and release \$106,633 (STP/EN) & remove \$106,633 (AC-Other) FFY15 PE phase; move \$103,317 (STP/EN) to (TAP/F) FFY15 CN phase.							

# Northern Virginia MPO

## Project Groupings

GROUPING		Construction : Safety/ITS/Operational Improvements					TOTAL COST		\$832,120,382
ROUTE/STREET									
	FUND SOURCE	MATCH	FY15	FY16	FY17	FY18			
PE	Federal - AC CONVERSION	\$615,526	\$1,040,000	\$1,529,763	\$560,000	\$772,101			
	Federal - BR	\$248,795	\$995,181	\$0	\$0	\$0			
	Federal - CM	\$608,345	\$1,571,693	\$80,000	\$80,000	\$80,000			
	Federal - DEMO	\$376,301	\$1,808,309	\$0	\$0	\$0			
	Federal - EB	\$183,450	\$733,798	\$0	\$0	\$0			
	Federal - FLH	\$0	\$496,000	\$0	\$0	\$0			
	Federal - HSIP	(\$160,022)	(\$558,209)	\$333,000	\$50,000	\$0			
	Federal - IM	(\$455,754)	(\$4,628,782)	\$0	\$0	\$0			
	Federal - MG	\$31,112	\$124,446	\$0	\$0	\$0			
	Federal - MISC	(\$13,675)	(\$54,700)	\$0	\$0	\$0			
	Federal - NH	(\$268,600)	(\$6,662,883)	\$0	\$0	\$0			
	Federal - NHPP	\$71,524	\$1,839,081	\$0	\$0	\$0			
	Federal - RSTP	\$1,330,981	\$2,924,506	\$0	\$1,550,446	\$602,031			
	Federal - SAFETEA-LU	(\$38,254)	(\$153,015)	\$0	\$0	\$0			
	Federal - STP/F	\$1,390,436	\$6,243,240	\$95,693	\$25,000	\$449,780			
	Federal - STP/HES	(\$51,803)	(\$339,669)	\$0	\$0	\$0			
	Federal - STP/R	(\$26,531)	(\$256,124)	\$0	\$0	\$0			
	Federal - STP/SRS	\$0	(\$7,554,961)	\$0	\$0	\$0			
	Federal - STP/SU	(\$267,981)	(\$1,077,334)	\$0	\$0	\$0			
	Other	\$0	\$1,487,433	\$817,000	\$0	\$300,000			
<b>PE TOTAL</b>		<b>\$3,573,849</b>	<b>(\$2,021,990)</b>	<b>\$2,855,456</b>	<b>\$2,265,446</b>	<b>\$2,203,912</b>			
PE AC	Federal - AC	\$1,349,872	\$24,390,681	(\$417,856)	\$480,699	\$849,249			
RW	Federal - AC CONVERSION	\$145,420	\$2,170,000	\$154,710	\$193,244	\$233,726			
	Federal - BR	\$215,787	(\$1,023)	\$249,304	\$614,866	\$0			
	Federal - CM	\$1,438,281	\$5,753,124	\$0	\$0	\$0			
	Federal - DEMO	\$204,881	\$4,168,231	\$0	\$0	\$0			
	Federal - EB	\$619,923	\$1,729,475	\$589,553	\$160,665	\$0			
	Federal - HSIP	(\$9,932)	\$4,281,952	\$1,395,000	\$1,000,000	\$0			
	Federal - IM	(\$2,433)	(\$21,893)	\$0	\$0	\$0			
	Federal - MG	\$402,910	\$1,463,258	\$0	\$148,382	\$0			
	Federal - NHPP	\$0	\$4,020,471	\$0	\$0	\$0			
	Federal - RSTP	\$2,385,322	\$2,729,864	\$4,730,722	\$2,080,701	\$0			
	Federal - SAFETEA-LU	\$897,994	\$3,591,975	\$0	\$0	\$0			
	Federal - STP/F	\$3,572,603	\$11,578,232	\$4,643,402	\$815,885	\$2,278,106			
	Federal - STP/HES	\$87,410	\$674,192	\$0	\$0	\$0			
	Federal - STP/R	(\$43,973)	(\$175,891)	\$0	\$0	\$0			
	Federal - STP/RAIL	\$12,000	\$108,000	\$0	\$0	\$0			
	Federal - STP/SRS	\$0	\$163,599	\$30,000	\$40,000	\$0			
	Federal - STP/SU	(\$373,443)	(\$1,493,770)	\$0	\$0	\$0			
	Other	\$0	\$193,583	\$6,000,000	\$0	\$1,250,000			
<b>RW TOTAL</b>		<b>\$9,552,750</b>	<b>\$40,933,379</b>	<b>\$17,374,835</b>	<b>\$5,053,743</b>	<b>\$3,761,832</b>			
RW AC	Federal - AC	\$3,427,171	\$30,913,149	\$5,270,320	\$4,747,157	\$455,000			
CN	Federal - AC CONVERSION	\$2,080,097	\$7,003,789	\$10,049,989	\$14,352,380	\$10,198,856			
	Federal - ARRA	\$0	(\$3,522,007)	\$0	\$0	\$0			
	Federal - BR	\$259,177	\$0	\$1,036,709	\$0	\$0			
	Federal - CM	\$6,441,095	\$20,393,073	\$2,941,124	\$4,577,103	\$0			
	Federal - DEMO	\$0	\$134,981	\$0	\$0	\$0			
	Federal - EB	\$1,448,078	\$4,237,698	\$542,576	\$676,229	\$546,853			
	Federal - FLH	\$0	\$1,918,707	\$0	\$0	\$0			

## Northern Virginia MPO

### Project Groupings

	Federal - HPD	\$383,230	\$1,532,918	\$0	\$0	\$0
	Federal - HSIP	\$1,942,483	\$72,542,793	\$6,281,707	\$9,180,801	\$2,000,000
	Federal - IM	\$919,693	\$8,277,241	\$1,759,627	\$3,350,463	\$0
	Federal - MG	\$1,948,426	\$9,878,855	\$192,418	\$91,464	\$0
	Federal - NH	\$182,928	\$1,222,023	\$5,360	\$0	\$0
	Federal - NHPP	(\$16,141)	\$8,362,674	\$538,697	\$46,526	\$0
	Federal - RSTP	\$4,060,047	\$8,278,945	\$640,000	\$1,717,936	\$5,603,305
	Federal - SAFETEA-LU	\$1,349,578	\$5,051,673	\$346,640	\$0	\$0
	Federal - STP/F	\$5,610,881	\$34,755,880	\$5,046,546	\$20,789,911	\$14,979,609
	Federal - STP/HES	\$83,454	\$4,398,254	\$0	\$821,250	\$0
	Federal - STP/R	(\$100,686)	(\$402,742)	\$0	\$0	\$0
	Federal - STP/RAIL	\$851,479	\$7,663,309	\$0	\$0	\$0
	Federal - STP/SRS	\$0	\$5,002,324	\$0	\$2,626,630	\$0
	Federal - STP/SU	(\$37,995)	(\$151,980)	\$0	\$0	\$0
	Other	\$3,322,747	\$21,297,005	\$1,262,126	\$0	\$0
	<b>CN TOTAL</b>	<b>\$30,728,573</b>	<b>\$217,875,413</b>	<b>\$30,643,519</b>	<b>\$58,230,693</b>	<b>\$33,328,623</b>
	<b>CN AC Federal - AC</b>	<b>\$38,678,381</b>	<b>\$205,795,659</b>	<b>\$67,892,805</b>	<b>\$27,923,649</b>	<b>\$63,072,055</b>
	<b>MPO Note</b>	TIP Amd to change from NonMPO to MPO and release \$101,250 (STP/HES) FFY15 PE phase; add \$90,000 (STP/HES) FFY15, move \$110,165 (STP/F) FFY17 to (EB) RW phase; release \$821,250 (STP/HES) FFY15, add \$88,132 (STP/F) & \$27,153,893 (AC-Other) FFY18 CN phase.				



NATIONAL CAPITAL REGION  
TRANSPORTATION PLANNING BOARD

Item #5

MEMORANDUM

February 12, 2015

**TO:** Transportation Planning Board

**FROM:** Kanti Srikanth *Kanti*  
Director, Department of Transportation Planning

**RE:** Letters Sent/Received Since the January 21<sup>st</sup> TPB Meeting

The attached letters were sent/received since the January 21<sup>st</sup> TPB meeting. The letters will be reviewed under Agenda #5 of the February 18<sup>th</sup> TPB agenda.

Attachments





# THE PRINCE GEORGE'S COUNTY GOVERNMENT

February 3, 2015

Hon. Lawrence J. Hogan, Jr.  
Governor  
100 State Circle  
Annapolis, Maryland 21401

Hon. Thomas V. Mike Miller, Jr.  
Senate President  
State House, H-107  
100 State Circle  
Annapolis, Maryland 21401

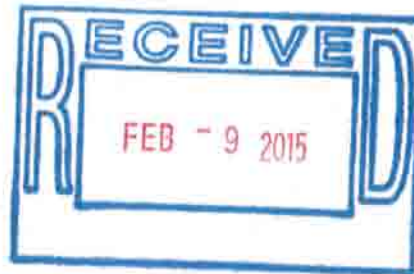
Hon. Michael E. Busch  
Speaker of the House  
State House, H-101  
100 State Circle  
Annapolis, Maryland 21401

Re: Transportation Planning Board Letter – Purple Line Project

Dear Governor Hogan, President Miller, and Speaker Busch:

It is my pleasure to write to bring to your attention additional information about the Purple Line project impacts on the regional transportation system. We are appreciative that the Fiscal Year 2016 State Budget as proposed includes funding for the potential continuation of the Purple Line project and look forward to its positive review by the Administration and General Assembly.

As you are aware, the Prince George's County Executive and County Council, recently sent a joint letter on the County's 2015 Legislative Agenda focuses primarily on safeguarding the County's budget priorities including protecting transportation projects like the Purple Line that help provide the infrastructure investments that we need to spur economic development and expand our commercial tax base.



**TODD M. TURNER**  
Council Member  
4<sup>th</sup> District

**Transportation Planning Board Letter – Purple Line Project**  
**February 3, 2015**  
**Page 2**

As a member representing the Prince George's County Council and former Chairman of the National Capital Region's Transportation Planning Board (TPB), and in response to the recent discussion on the future of the Purple Line project, I requested an analysis of the history and potential impacts of the project on the federally approved Constrained Long Range Plan (CLRP) and within the regional transportation funding system.

Please find enclosed for your information a copy of the January 21, 2015 letter from Mr. Kanathur N. Srikanth, Director of the Department of Transportation Planning for the TPB, highlighting how the Purple Line project conforms with the regionally approved CLRP and policy framework plans. As indicated, any changes or revisions to the scope, timing and funding of the project would have to be submitted to the TPB for approval pursuant to Federal law.

I thank you for your attention to this information and look forward to the discussion on the future of this important transportation project to the State of Maryland.

Respectfully,



Hon. Todd M. Turner  
County Council Member – 4<sup>th</sup> District  
TPB Member

Enclosure

cc: Honorable Douglas J.J. Peters, Senator, District 23  
Honorable Jay Walker, Delegate, District 26  
Honorable Rushern L. Baker, Prince George's County Executive  
Honorable Isiah Leggett, Montgomery County Executive  
Prince George's & Montgomery County Council Members  
Federal Senate & House Delegation Members  
Pete Rahn, Acting Secretary, Maryland Department of Transportation  
Kanathur N. Srikanth, National Capital Region Transportation Planning Board

*"Service. Community. Progress."*



## NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

January 21, 2015

The Honorable Todd Turner  
Council Member  
Prince George's County – District 4  
14741 Governor Oden Bowie Drive  
County Council, 2nd Floor  
Upper Marlboro, MD 20772

Subject: Status and relation of the Purple Line Transit with the TPB's CLRP.

Dear Mr. Turner:

At the Transportation Planning Board's December 17, 2014 meeting you inquired about the status and relation of the Purple Line Transit project in Maryland with the TPB's federally approved Constrained Long Range Plan (CLRP). Upon staff's response, the Board advised staff to provide the information in writing to the Board and for interested audiences beyond. As advised the subject information is as follows.

The National Capital Region Transportation Planning Board (TPB) is the metropolitan planning organization for the Washington region and has the responsibility under the provisions of Moving Ahead for Progress in the 21st Century (MAP-21) for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area. One of the federally mandated activities of the TPB is the development of a regional financially constrained plan to fund and implement transportation improvement projects over the next twenty plus years.

The current federally approved 2014 CLRP for the metropolitan Washington area includes the proposed construction of the Purple Line transit project between Bethesda and New Carrollton by 2020. The financial plan of the CLRP, just recently updated per federal requirement, indicates that the funding for the construction, operations and maintenance of the project is reasonably expected to be available. Finally the regional air quality conformity analyses for the 2014 CLRP, approved by the FHWA and FTA, assumes the Purple Line Transit project will be completed by 2020 and results in certain changes in the regional travel patterns and emissions of criteria pollutants.

The Purple Line Transit project was first added to the region's CLRP in 1994 and showed the construction of the facility between Bethesda and Silver Spring by 2015. An extension, between Silver Spring and New Carrollton, was added as a study in the 2003 CLRP, and then included for construction for the first time in 2009. In 2009 the facility's estimated completion date was 2018.

The proposed Purple Line is a 16-mile route with 21 stations, which would increase accessibility across Montgomery and Prince George's Counties. Travelling through five regional activity





## NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

centers (Bethesda, Silver Spring, Langley Park, College Park, and New Carrollton), it would directly connect riders to Metrorail (Red, Green, and Orange lines), MARC, Amtrak, and regional and local bus services. The project cost in the current CLRP is \$2.37 billion, with funding anticipated from federal, state, and local sources. This extensive connectivity, especially between multiple regional activity centers, addresses the basic principles of the TPB Vision and the Regional Transportation Priorities Plan.

The TPB Vision Plan and the Regional Transportation Priorities Plan make up the regional policy framework designed to help guide transportation planning and decision-making in the Washington Region. The Vision, adopted in 1998, incorporates eight planning factors, specified in current federal regulations, to consider during the development of transportation plans and programs. The Regional Transportation Priorities Plan, adopted in 2014, focuses attention on a limited number of specific strategies with the greatest potential to advance regional goals rooted in the TPB Vision. Both plans prioritize the health and connectivity of the regional activity centers. The Purple Line Transit project is consistent with these priorities.

Should any of the above assumptions materially change, such as the scope, timing and funding, the change would have to be officially submitted to the TPB for its review and approval to revise the regional CLRP and the regional air quality conformity analyses.

I trust the above presents a succinct summary of the status and relation of the Purple Line Transit project in Maryland to the region's long range transportation plan. As always if I or my colleagues as staff to the TPB can answer any questions or provide additional information, feel free to contact me at 202-962-3257 or at [KSrikanth@mwkog.org](mailto:KSrikanth@mwkog.org).

Sincerely,

Kanathur N. Srikanth  
Director Department of Transportation Planning

cc: Members of the National Capital Region Transportation Planning Board



# National Capital Region

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## Transportation Planning Board

**Item # 5**

### **MEMORANDUM**

**DATE:** February 18, 2015

**TO:** Transportation Planning Board

**FROM:** Kanti Srikanth,  
Director, Department of Transportation Planning

**RE:** Steering Committee Report on developments since the Jan. 12, 2015 Metrorail smoke incident near the L'Enfant Plaza train station

#### SUMMARY:

COG and a number of its public safety committees are active in response to the January 12, 2015 Metrorail L'Enfant Plaza smoke incident. The TPB Steering Committee will work with the COG staff coordinating the follow up activities as related to and in response to the incident; COG staff will keep the Steering Committee informed of the developments and will be available to brief the TPB, at an appropriate time in the future when more information is available, on the outcomes from the various activities currently underway. As events progress the Steering Committee will brief the TPB on any actions that may be warranted.

#### REPORT:

During its 1/21/2015 meeting the Board engaged in a brief discussion of the fatal incident on the Yellow line of the Metro rail at the L'Enfant Plaza station on Jan. 12, 2015. As an outcome of the discussion it was decided that given the Board's association with regional Transit projects in general and its interest in and long standing support for the Metro rail system the TPB's Steering Committee would stay engaged in monitoring the developments related to this incident. The Steering Committee was charged with keeping the Board apprised of: (1) the developments related to the Jan. 12, 2015 event (2) any recommendations for actions that the Transportation Planning Board (TPB) would have to take and (3) any information needed to inform the TPB as to how it can remain engaged with or offer support for the Metro rail system.

The Steering Committee discussed the matter during its Feb. 6, 2015 meeting and has agreed to stay engaged on this matter. The Metropolitan Washington Council of Government (COG) is currently engaged in a number of follow up activities related to the Jan. 12 Metrorail incident. COG's activities are

focused on the emergency preparedness and emergency incident management process and procedures. As a result, the Steering Committee believes that it would be best to have the TPB staff work closely with COG staff to monitor the developments, keep the TPB apprised of developments and particularly any opportunities for the TPB to take action. The Steering Committee was joined by COG's Deputy Executive Director, Mr. Stuart Freudberg, who is currently engaged in convening and coordinating follow up activities to the Jan. 12, 2015 Metro rail incident.

Mr. Freudberg briefed the Committee on various activities underway and planned that COG is coordinating. He noted that all of the people that need to be engaged in follow up activities are engaged. He also outlined the various Policy and Technical Committees under COG that are engaged in the follow up activities. A brief description of these Committees and their work areas is attached.

In conclusion the Steering Committee will continue to work with the COG staff on coordinating the follow up activities as related to and in response to the Jan. 12, 2015 Metro rail incident near L'Enfant Plaza station; COG staff will keep the Steering Committee informed of the developments and, when more information is available, will be available to brief the TPB.

Listed below is a timeline of selected events related to the Jan. 12, 2015 Metrorail incident including the first set of activities within the COG coordination activities.

#### **Timeline of selected events**

- |            |  |
|------------|--|
| January 12 | On January 12, 2015, about 3:15 p.m. Eastern Standard Time , Washington Metropolitan Area Transit Authority (WMATA) Metrorail train 302 stopped after encountering an accumulation of heavy smoke while traveling southbound in a tunnel between the L'Enfant Plaza Station and the Potomac River Bridge. As a result of the smoke, 86 passengers were transported to local medical facilities for treatment. There was one passenger fatality and two passengers were hospitalized in critical condition. (Source: NTSB, Preliminary Report Railroad DCA15 FR004) |
| January 16 | The National Transportation Safety Board (NTSB) releases Preliminary Report Railroad DCA15 FR004 on the 1/12/20-15 WMATA Metrorail Incident.<br><a href="http://www.nts.gov/investigations/AccidentReports/Pages/DCA15FR004_preliminary.aspx">http://www.nts.gov/investigations/AccidentReports/Pages/DCA15FR004_preliminary.aspx</a>  |
| January 17 | <i>DC Fire and Emergency Medical Services Department</i> issues Initial Report by the Fire and Emergency Medical Services Department on the L'Enfant Plaza Metro Station Incident of January 12, 2015.<br><a href="http://mayor.dc.gov/sites/default/files/dc/sites/mayormb/release_content/attachments/Initial_Report_on_the_LEnfant_Plaza_Metro_Incident_January-12-2015.pdf">http://mayor.dc.gov/sites/default/files/dc/sites/mayormb/release_content/attachments/Initial_Report_on_the_LEnfant_Plaza_Metro_Incident_January-12-2015.pdf</a>                    |
| January 20 | D.C. Council receives a briefing from WMATA Board Chair Tom Downs on the Jan. 12, 2015 incident.   |
| January 21 | Members of the region's Congressional Delegation are briefed on the Jan. 12, 2015 incident by WMATA and NTSB staffs.   |

**Timeline of selected events (Continued)**

January 21 The NTSB holds a media briefing to provide an update on its investigation into the January 12, 2015 Metro rail incident near the L'Enfant Plaza Metro Station in Washington, D.C.

January 22 NTSB briefing to WMATA Board's Safety and Security Meeting.

WMATA announces a range of early-action safety items identified in collaboration with the NTSB investigation team but not related any formal recommendations from the NTSB's investigation that is still ongoing. Completion dates for these actions range from Jan. 22, 2015 through March 31, 2015.

(Copy of WMATA's announcement attached)

Senator Warner writes to the Chairmen of MWCOG and WMATA suggesting that COG and WMATA further partner to design and implement a project to ensure emergency response interoperability and communications infrastructure across the entire system, and ensure that it is and asked for credible work plan, no later than Jan. 30<sup>th</sup>.

(Copy of the Senator's letter is attached.)

January 30 WMATA Board Chair Mortimer Downey and COG Board Chair Bill Euille jointly respond to Senator Warner's letter.

(Copy of the joint COG and WMATA response is attached)

February 9 Senator Mikulski writes to the Chairman of MWCOG requesting that MWCOG complete a regional work plan for training firefighters on emergency evacuation protocols in the Washington Metropolitan Area Transit Authority (Metro) system. . This request for a work plan has been referred to the Fire Chiefs Committee and CAOs for consideration and development.

(Copy of the Senator's letter is attached.)

February 11 NTSB makes three specific urgent safety recommendations and urges the WMATA to take action on these. These recommendations address the WMATA emergency response to smoke in subway tunnels. The NTSB notes that the recommendations are related to the safety issue the NTSB has identified involving the absence of a written procedure that addresses ventilation procedures during smoke and fire events in tunnels. The NTSB recommends that this vulnerability needs to be immediately addressed by WMATA and the rail transit industry.

(Copy of the NTSB letter attached)

February 13 US Congress, House Oversight Committee Hearing: D.C. Metro, Is There a Safety Gap? Rep. Mica and Rep. Meadows Co-Presiding. Committee members present: Rep. Beyer (VA), Rep. Connolly (VA), Rep. DeSaulnier (CA), Rep. Grothman (WI), Rep. Holmes-Norton (DC) Rep. Maloney (NY)

Panel of witnesses included: Mr. Johnathan Rogers, Metro train passenger, Mr.

Christopher Hart, Acting Chairman, NTSB, Mr. Mortimer Downey, Chairman, Board of Directors, WMATA, Mr. Ed Mills, Acting Assistant Fire and Emergency Medical Services Chief-Operations, Jackie Jeter, President and Business Agent, ATU Local 689.

Committee co-chairs, Mr. Mica and Mr. Meadows, opened with statements focused on the importance of Metro to the region and the Federal Government, the paramount need for passenger safety, and the expenditure of federal funds for first responder training, emergency response communication hardware, as well as Metro/WMATA system operations. Hearing testimony began with a personal narrative of the incident by Mr. Jonathan Rogers, a January 12<sup>th</sup> Metro passenger. During his testimony, Mr. Downey announced WMATA is initiating an independent review of the operations center. In statements and questions, the majority of committee members consistently noted interoperability and above- and below-ground communications as a concern. Metro staff and first responder training, with attention to D.C. FEMS, was another significant theme. Several members requested that WMATA address safety culture, from the Board to the employees. In addition, committee members raised the issue of protocols for passenger triage, care, transport and post-evacuation long-term health effects. The Fire Chiefs Committee/MWCOG regional training and three-year plan were referenced at several points throughout the hearing.

#### **COG Coordinated Activities:**

The COG Board and a number of its Policy and Technical Committees are currently working with WMATA and other agencies of the various jurisdictions and the States to convene forums to facilitate a broader review and discussion on overall emergency preparedness and regional coordination in emergency situations. The Committees assisting the COG Board in this broader effort are the: (1) Emergency Preparedness Council (EPC), (2) Passenger Rail Safety Subcommittee, Public Safety Communications Subcommittee and Senior Operations Chiefs Subcommittee under the auspices of the Fire Chiefs Committee and (3) 9-1-1 Committee. A brief description of these Committees and their work areas is attached. On February 11, 2015 the COG Board of Directors and the Emergency Preparedness Council (policy advisory body to the COG Board) held meetings where NTSB, WMATA, and the COG Fire Chiefs made presentations. These are summarized below.

#### **February 11 COG Board Meeting**

The Board held detailed discussions and received presentations from the NTSB, WMATA and the Chairman of its Fire Chief's Committee. The Board indicated it will expect future periodic updates from NTSB and WMATA and the Fire Chiefs on progress in addressing the January 12th incident, development of new protocols for communication and training/exercises.

- NTSB Acting Chairman Hart briefed the Board about NTSB, its role and responsibilities as well as the structure and policies used during the investigative process. He noted that the NTSB's role is to determine cause of any accident for the sake of prevention, not to assess blame or liability. He did note that the NTSB would release recommendations for any actions that it believes should be taken

immediately based on the investigation and findings completed to date. Mr. Hart noted that the NTSB had just issued such an urgent safety recommendations earlier that day. He also informed the Board that an NTSB public hearing is planned for June 23-24 and that information will be available on their website [www.nts.gov](http://www.nts.gov).

- WMATA Chairman Mort Downey and Acting General Manager Jack Requa briefed the Board on current emergency protocols in place for the Metrorail system. As part of their briefing they noted a number of safety improvements underway including: staffing additions, training opportunities, and system upgrades. Metro's training program for first responder personnel at the Landover training facility, including a full-scale two-car train in a tunnel, was described noting that training exercises and drills involving over 50 agencies have been held and that approximately 5,400 personnel were trained last year. The briefing also noted current or upcoming actions from WMATA including enhanced drills over the next 3 years; new operator protocols; new signage on the exteriors of rail cars that will aid first responders; a revised and more formalized program of radio testing; revisiting the maintenance schedule for ventilation fans, revising safety information within cars to include multi-lingual signs; and bringing up to modern standards the aging equipment such as electrical connectors as they are being replaced.
- Marc S. Bashoor, Fire Chief, Prince George's County Fire/EMS Chairman and currently the Chairman of COG's Fire Chiefs Committee briefed the Board and issued a statement on Behalf of COG Fire Chiefs Committee. He noted that the COG Fire Chiefs have directed the COG Senior Operations Chiefs along with the Passenger Rail Safety and Public Safety Communications Subcommittees to evaluate all operational procedures over the next 30 days and that they will report back to the COG aboard in April to identify opportunities for standardizing regional protocols and response improvements while also identifying safety and training protocol enhancements. The statement also lists the eight steps taken by the six COG Fire Chiefs, working with COG staff, the WMATA Police Chief, the Public Safety Communications and Passenger Rail Safety Subcommittees, and fire department station personnel in the past 10 days. Also included is a list of four commitments made by WMATA to the COG Fire Chiefs.

(Copy of the Fire Chief's Statement is attached)

February 11      Emergency Preparedness Council Meeting

- Panel Discussion on Emergency Response Protocols And Plans For Incidents In The Metrorail System. The panel comprised of Ron Bodmer, WMATA Director of its Office of Emergency Management; Marc Bashoor, Fire Chief of Prince George's County and Chair of the COG Fire Chiefs Committee; and Stuart Freudberg, Deputy Executive Director of COG coordinating COG's activities following the Jan. 12, 2015 Metro rail incident.
- Mr. Bodmer discussed WMATA's Standard Operations Procedure (SOP), SOP pertaining to Command, Control and Coordination of Emergencies on the Rail

System, Metrorail Train Evacuation Procedures, Emergency Management Training and Exercises and planned activities on these items.

- Mr. Freudberg summarized COG's coordination activities to date including the response letter to Senator Warner, expected response letter to Senator Mikulski, and then provided an overview of the National Capital Region Emergency Preparedness Council the organization structure, its various initiatives and priorities for 2015 and an update of the activities in Emergency Program Management Office. He also informed the Council that COG has engaged former U.S. Capitol Police Chief Terry Gainer as a special assistant to help the region implement some of the planned work activities coming out of the Jan. 12, 2015 Metrorail Train incident.

**Memo to: TPB**  
**Developments Related to 1/12/15 Metrorail**  
**Incident**

**Feb. 18, 2015**

**Attachments**

1. NTSB Preliminary Report, Jan 16, 2015
2. WMATA's 10 early-action safety items.
3. Senator Mark Warner's letter to COG and WMATA Chairmen
4. Joint COG and WMATA Response to Sen. Warner
5. Brief description of selected COG Committees and Subcommittees
6. Senator Mikulski's letter to COG
7. NTSB's Urgent Safety Recommendations, Feb. 11, 2015
8. Statement on Behalf of COG Fire Chiefs Committee to COG Board of Directors - Marc S. Bashoor, Fire Chief, Prince George's County Fire/EMS Chairman, COG Fire Chiefs Committee February 11, 2015





# **Preliminary Report Railroad DCA15FR004**

*The information in this report is preliminary and will be supplemented or corrected during the course of the investigation.*

On January 12, 2015, about 3:15 p.m. eastern standard time, Washington Metropolitan Area Transit Authority (WMATA) Metrorail train 302 stopped after encountering an accumulation of heavy smoke while traveling southbound in a tunnel between the L'Enfant Plaza Station and the Potomac River Bridge. After stopping, the rear car of the train was about 386 feet from the south end of the L'Enfant Plaza Station platform.

A following train, stopped at the L'Enfant Plaza Station at about 3:25 p.m., and was also affected by the heavy smoke. This train stopped about 100 feet short of the south end of the platform. Passengers of both trains, as well as passengers on the station platforms, were exposed to the heavy smoke.

Both Metrorail trains involved in this incident consisted of six passenger cars and were about 450 feet in length. As a result of the smoke, 86 passengers were transported to local medical facilities for treatment. There was one passenger fatality and two passengers were hospitalized in critical condition.



**Figure 1.** Damage from the arcing incident in the tunnel near L'Enfant Plaza Station.

NTSB investigators have inspected the area of the incident, where they observed severe electrical arcing damage to the third rail and electrical cables about 1,100 feet ahead of train 302. Recorded data shows that at about 3:06 p.m., an electrical breaker at one end of a section of third rail tripped (opened). At about 3:16 p.m. the WMATA Operations Control Center (OCC) began activating ventilation fans in an effort to exhaust smoke from the area. The electrical breaker at the other end of the third rail section remained closed; supplying power until the WMATA OCC remotely sent a command to open the breaker at about 3:50 p.m.



**Figure 2.** Damage from the arcing incident in the tunnel near L'Enfant Plaza Station.

NTSB investigators are reviewing maintenance records of track, signal and power inspections, and railcar vehicles; documentation on previous events with smoke generation; maintenance and repair records of the tunnel exhaust fan/ventilation operations; WMATA emergency response and evacuation plans; and employee training records. Investigators have also collected material samples from the incident site and are examining the samples at the NTSB Materials Lab. In addition, NTSB investigators are currently conducting interviews with personnel involved, and have begun the collection and review of all available surveillance video.

The NTSB has formed the following technical investigative working groups:

- Operations
- Survival Factors
- Fire Science
- Signal and Power
- Track
- Civil Engineering/Infrastructure
- Mechanical/Equipment
- Recorders

The NTSB Transportation Disaster Assistance Division is providing support to the WMATA victim assistance team.

Parties to the investigation include: the Federal Transit Administration, Tri-State Oversight Committee, Washington Metropolitan Area Transit Authority, Amalgamated Transit Union Local 689, and the Bureau of Alcohol, Tobacco, Firearms and Explosives.

## Metro News Release

For immediate release: January 22, 2015

### Metro Deputy General Manager orders safety actions during investigation

Metro Deputy General Manager Rob Troup today ordered a range of early-action safety items. The steps were identified in collaboration with the NTSB investigation team and are not to be misconstrued as formal recommendations from the NTSB. The NTSB investigation remains ongoing and has not yet determined the cause or identified findings.

“Metro and NTSB have been reviewing standard procedures and looking for opportunities to further enhance the safety of this system,” Troup said. “The ten items that we have identified so far are actions Metro is taking now based on our collaborative review with NTSB.”

“I must emphasize that these steps should not be interpreted as being related to the cause of the L'Enfant incident,” Troup said.

The ten items ordered by Troup are:

1. Write SOP for train operator to cut EV Immediately upon stopping for smoke Incident (RTRA, Completion -1/22/2015)

*Note: The minute a train stops for a smoke incident, the train operator will turn off air intake systems. Under the fanner SOP, the instruction for turning off air intake comes from the Rail Operations Control Center. This is not related to tunnel fans.*

2. Write SOP for Incident management In ROCC to provide specifics for site discipline In the ROCC to avoid cross-talk and unnecessary Interactions. (RTRA, Completion -1/26/2015)

*Note: To ensure that key personnel who are responsible for managing an incident are not distracted, this SOP will ensure that ROCC employees stay at their own desks and not engage those managing the incident.*

3. Set schedule for next three years for emergency quarterly drills to be conducted wayside. Sequence station, than a tunnel section, than an elevated section (note tunnel and elevated sections shall be between stations). Please sequence each quarter in a separate Jurisdiction. Coordinate type of drill and logistics with MTPD. (RTRA, Completion -1/26/2015)

4. Design and Implement exterior signage for exterior doors to clearly delineate access In event of emergency. (TIES, Completion -2/13/2015)

*Note: Metro has an extensive training program for emergency responders. However, in the event that one of the trained responders is not first on scene, there will be new signage on the outside of the train to identify emergency doors and access points.*

5. Provide engineering and operations report on all third rail jumper cables in tunnel sections for condition and Installation. (TIES, Completion -2/27/2015)

*Note: Metro personnel will conduct inspections looking for wear and tear on cables and assess the condition of cable installations.*

For immediate release: January 22, 2015

6. Recommendation on installation of low smoke/low halogen on high voltage third rail jumper cables. (TIES, Completion -2/13/2015)

*Note: Already an ongoing effort under its rebuilding program, Metro is installing low-smoke cables.*

7. Install mechanical protection on third rail jumper cables that may be exposed to wear from vibration against other materials. (TIES -Begin work immediately)

*Note: Note: If a cable that has begun to lean over the years (as a result of vibration), protection to prevent the cable from corning in contact with other materials.*

8. Review of ground fault detectors on third-rail circuit breakers. (TIES, Completion· 2/27/2015)

9. Operational analysis of running trains at 45 MPH in the core with limited acceleration. (TIES and RTRA - 3/31/2015)

*Note: This will be an operational analysis to see if Metro can limit current flowing through electrical infrastructure.*

10. Provide report on installing zoned smoke detectors using ETS boxes for location and transmitting of information, also investigate use of wireless smoke detectors. (TIES, Completion -2/27/2015)

*Note: The report will determine feasibility.*

News release issued at 9:54 am, January 22,2015.

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# United States Senate

WASHINGTON, DC 20510-4606

January 22, 2015

Mort Downey  
Board of Directors, Chairman  
WMATA  
600 5<sup>th</sup> St. NW  
Washington, D.C. 20001

William Euille  
Board of Directors, Chairman  
Washington Council of Governments  
777 North Capitol St. NE, Suite 300  
Washington, D.C. 20002

Dear Mr. Downey and Mayor Euille,

Leaders of the Washington Metropolitan Area Transit Authority (WMATA) and the National Transportation Safety Board (NTSB) briefed members of the Virginia, Maryland and District of Columbia congressional delegations on Wednesday to provide preliminary information on the fatal Jan. 12, 2015 smoke incident at Metro's L'Enfant Plaza station. We discussed the current status of the NTSB's investigation into the incident, as well as broader current efforts to make safety improvements to the Metro system serving hundreds of thousands of daily commuters and visitors to the national capital region. Although we received answers to some of our questions, many other questions have been left unanswered.

One area of particular concern to me was the breakdown in radio communications among first responders as they attempted to reach the stationary train car to rescue stranded passengers. It is apparent that the process WMATA and its partners currently employs to address communication problems needs greater oversight and urgency. According to officials participating in Wednesday's briefing, WMATA was alerted to problems with radio communications at L'Enfant Plaza by D.C. Fire and Emergency Medical Services on January 8th. Although there are reports which suggest Metro employees began looking into the problems over the weekend of Jan. 11-12, WMATA apparently did not schedule a time to collaboratively address the issue with D.C. fire officials until January 14 -- nearly one week later. Tragically, as we all know, the fatal accident occurred in this intervening period.

Radio communication for first responders in any emergency is of vital importance. I strongly urge WMATA to work more closely with its local partners, and in a more transparent and robust way, to correct specific interoperability issues in a much more timely and responsible way. Metro's riders deserve better than to rely on a transit system in which emergency communications equipment is known to be inadequate or ineffective, yet no sense of urgency is demonstrated to fix the problems.

I know that local public safety networks and radio systems operate independently. I would strongly suggest that WMATA, in conjunction with COG, develop a process in which each jurisdiction notifies its partners and tests equipment whenever updates or other significant changes are made. Because WMATA owns and maintains much of the infrastructure through which those systems operate during emergency events, it is imperative that WMATA proactively

engage its local emergency response partners on a regular and sustained basis to ensure that all of its communications infrastructure and equipment is properly up-to-date and functioning appropriately. Passenger safety on the nation's second largest transit system requires no less.

Yesterday, we were assured that WMATA has corrected the specific communication problem that existed at L'Enfant Plaza on Jan. 12. However, I would request some assurances that WMATA has proactively tested the entire system – in close coordination with local first response agencies – to ensure the interoperability and integrity of the entire network over the entire Metro system. I further understand that COG already is actively engaged in assessing the effectiveness of cellular telephone capacity across the Metro system. I would suggest that COG and WMATA further partner to design and implement this project to ensure emergency response interoperability and communications infrastructure across the entire system, and ensure that it is maintained going forward. I would appreciate a status update, or at least a credible work plan, no later than Jan. 30<sup>th</sup>.

Since the 9/11 attacks more than thirteen years ago, our nation has invested hundreds of millions of dollars to improve emergency communications and provide reliable and secure interoperable public safety networks. Progress should not be undone, and more lives should not be put at risk, because we have failed to maintain and update our emergency communication infrastructure.

Sincerely,



MARK R. WARNER  
United States Senator





January 30, 2015

The Honorable Mark R. Warner  
United States Senate  
475 Russell Senate Building  
Washington, DC 20510

Dear Senator Warner:

We write to jointly respond to your letter of January 22, 2015, asking for a work plan to enhance effective emergency communications across the Metro system. We share your resolve that the Metro transit experience be as safe as possible, and want to assure you that we are working together to establish formal protocols and procedures for radio testing that will be incorporated into an agreement between the regional emergency responders and WMATA. In addition to the testing that already takes place, following the incident at L'Enfant Plaza on January 12<sup>th</sup>, WMATA and jurisdictions with Metrorail stations report that they have tested the radio communications. We are working systemically to address any issues that were found during the testing in order to assure that radio communication within the Metrorail system is in good working order. In addition, we are working together to identify any other areas where improvements can be made in emergency communications and incorporate them into the agreement. Our goal is to proactively build upon the work done to date.

#### Background on Current Metro Transit – Fire/Rescue Emergency Procedures Policy Agreement

Before explaining the particulars of our work plan, we want to provide background on the existing agreement between WMATA and the regional emergency responders. Protocols for emergency response in the Metro system are formalized in an agreement, coordinated through the Metropolitan Washington Council of Governments (COG), which is signed by WMATA and every fire chief in the region: the “Metro Rail Transit - Fire/Rescue Emergency Procedures Policy Agreement 2011.” (“Policy Procedures Agreement”)

The Procedures Policy Agreement details roles and responsibilities around incident command, with the National Incident Management System (NIMS) serving as the foundation of that agreement. Under NIMS, during an emergency when the Fire Department is called in, the Fire Department assumes full control of the emergency upon arrival on the scene and is responsible for coordinating all activities at the scene, including all actions taken by Metro. Specifically, the battalion chief or other senior fire official is designated as the Incident Commander. This unified command structure is used to coordinate and control activities at the scene. The Incident Commander establishes a command post where face-to-face coordination takes place, and then messages are sent out to the respective teams.

Radio communication takes place through two separate radio systems operating in the Metrorail system – the radio system that Metro uses and the radio system that the local jurisdictions use. Metro is responsible for assuring that it maintains a robust and redundant capability to link with its regional radio partners.

With nearly 5,000 Metro employees using radios – including train operators, station managers and Metro Transit Police Department officers – Metro is responsible for constantly troubleshooting and testing the system. Whenever an issue is detected, a work order is placed through Metro’s Maintenance Operations Center and the radio connection is restored quickly.

The jurisdictions are responsible for and regularly conduct their own testing which includes the radio connections through Metro’s bi-directional amplifier. WMATA and COG are committed to creating a regionally coordinated schedule for testing, reporting and resolving issues that are identified. This is one of the key issues that we expect that the revised Policy Procedures Agreement will address.

To build upon these protocols, COG will serve as a forum and a convener to address issues affecting the National Capital Region jurisdictions, and help foster cooperation and coordination between WMATA and the region’s emergency first responders. COG will convene the appropriate committees, and assist in facilitating needed outcomes.

#### Proposed Work Plan

Attached is the work plan which we will use as a focus of our joint efforts. The policy and procedures of the work plan will be developed by the region’s emergency first responders with the assistance of appropriate subject matter experts. The COG Fire Chiefs Committee will oversee and facilitate the work plan. The current effort of updating the “Metro Rail Transit – Fire/Rescue Emergency Procedures Policy Agreement 2011” will be expanded to address collaborative testing of radio communications by WMATA and emergency responders, assessing the effectiveness of cell phone communication across the Metro system, and ongoing protocols for emergency communications. A third party or other means of certification will be identified for the assurance part of this work plan.

Because of the broad implications of transit communications, COG’s Fire/Rescue Passenger Rail Subcommittee of the Fire Chiefs Committee will solicit input from representatives from other disciplines or refer specific issues to other relevant COG Committees, such as the COG 9-1-1 Committee and the COG Public Safety Communications Subcommittee. Funding implications will be considered. The work plan contains immediate and long term phases.

We are prepared to develop an amendment to the existing Procedures Policy Agreement between WMATA and the regional emergency first responders. The revised Agreement will formalize commitments to ongoing protocols and a long term operational plan for insuring radio communication and related issues.

Senator Mark Warner

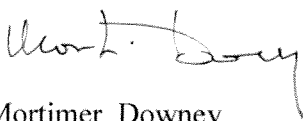
Page 3

We will begin this work with the next monthly meeting in February of the COG Fire Chiefs Committee. Work plan activities will be meshed with the various other ongoing actions that relate to WMATA and emergency response.

In addition, the COG Board of Directors will meet on February 11<sup>th</sup> at which time WMATA will provide a briefing on Emergency Response protocols, including radio communications. WMATA and COG both recognize the critically important role effective emergency communications play in the safety of Metrorail riders.

We appreciate your concern for the region and assistance on transit matters.

Sincerely,



Mortimer Downey  
Chairman, Board of Directors  
Washington Metropolitan Area Transit  
Authority



William Euille  
Chairman, Board of Directors  
Metropolitan Washington Council of  
Governments

Attachment: Work Plan

cc: NCR Congressional Delegation  
WMATA Board of Directors  
WMATA Interim General Manager  
COG Board of Directors  
COG Executive Director  
COG Chief Administrative Officers Committee  
Chair, COG Fire Chiefs Committee

**REGIONAL WORK PLAN  
FOR ENHANCING FIRST RESPONDER COMMUNICATIONS SYSTEMS IN THE  
METRO SYSTEM**

**Purpose:** The purpose of this Regional Work Plan is to establish a system to ensure that WMATA and first emergency responders test communications systems at each Metro stations and all rail tunnels to make certain that the communications systems are continuously operational. The work plan contains immediate and long term phases.

**Process:** The COG Fire Chiefs Committee will oversee and facilitate the work plan. The details of the work plan will be provided by the region's emergency first responders with the assistance of appropriate subject matter experts. Because of the broad implications of transit communications, the COG Fire/Rescue Passenger Rail Subcommittee of the Fire Chiefs Committee will solicit input from representatives from other disciplines, such as the COG 9-1-1 Committee and the COG Public Safety Communications Subcommittee.

**Short Term Actions:** Testing of all Metro stations and tunnels and agreement by WMATA and the region's Fire/Rescue Chiefs for ongoing testing.

*Deliverables:*

- 1) Documentation of test results of Metro stations and all rail tunnels – WMATA and jurisdiction testing.
- 2) Agreement by WMATA and Fire/Rescue Chiefs to protocols for ongoing testing, reporting and correction of deficiencies, to include timing and frequency.

*Deadline:*

- 1) Documentation report on testing: 30 days to WMATA General Manager and COG Executive Director.
- 2) Initial agreement on testing protocols between WMATA and jurisdictions: 60 days

**Phase Two Actions:**

- 1) Development of an amendment to the "Metro Rail Transit – Fire/Rescue Emergency Procedures Policy Agreement 2011" ("Procedures Policy Agreement") to formalize commitments to ongoing protocols and a long term operational plan for insuring radio communication and related issues. A third party or other means of certification will be identified for the "assurance" part of this work plan.
- 2) Funding implications will be considered.

*Deliverables:*

- 1) Agreement by WMATA and Fire Rescue/Chiefs to revision to Policy Procedures Agreement.
- 2) Funding recommendations.

*Deadline:* Proposed agreement within 120 days to the WMATA and COG Boards of Directors.

## ANNOTATED LISTING OF SELECT METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS COUNCILS, COMMITTEES AND SUB-COMMITTEES

### 1. National Capital Region Emergency Preparedness Council

- a. **Reports to** the COG Board of Directors on matters directly related to homeland security to include the NCR Homeland Security Strategic Plan and the Regional Emergency Coordination Plan (RECP) to include the Regional Emergency Support Functions (RESFs) and Regional Programmatic Working Groups (RPWGs) and leads inquiries into incidents that occur in the region as requested by the COG Board.
- b. **Membership** is broader than of any organization at COG it includes 9 elected officials from Maryland, the Commonwealth of Virginia, and the District of Columbia and multiple other local, state, federal, private, and non-profit organizations as specified in the By-Laws.
- c. The National Capital Region Emergency Preparedness Council (EPC) is an advisory body established by the Metropolitan Washington Council of Governments (COG) Board of Directors. The EPC provides a forum for local, state and federal governmental official collaboration with business, education and community stakeholders on regional emergency planning, coordination and response. The EPC works in conjunction with the Senior Policy Group, the Chief Administrative Officers, the new Project Management Office (PMO), the U.S. Department of Homeland Security's Office of National Capital Region Coordination (ONCRC), and others in the enhancement of regional preparedness activities and acquisitions. It serves as the custodian of the National Capital Region Homeland Security Strategic Plan, oversees the Regional Emergency Coordination Plan (RECP), and helps to coordinate activities of various support function working groups, and assists in the development and conduct of preparedness training and exercises

### 2. Emergency Managers Committee

- a. **Reports to** Emergency Preparedness Council on matters directly pertinent to homeland security or the UASI grant; reports to the Human Services & Public Safety Policy Committee on matters not directly pertinent to homeland security or the UASI grant
- b. **Membership** consists of any COG member jurisdiction that has an Emergency Management Director or Coordinator (no more than one per jurisdiction), the Emergency Management Coordinators of Maryland and Virginia, the Director of FEMA's Office of National Capital Region Coordination.
- c. The committee's primary purpose is to advise the Public Safety Policy Committee, Emergency Preparedness Committee, Chief Administrative Officer's Committee, various regional emergency support committees and the COG Board of Directors on matters pertaining to emergency management issues. A secondary purpose is for representatives of the various emergency management agencies, within the Washington metropolitan area, to meet and exchange information and ideas concerning the delivery of emergency management services and such other matters of mutual concern.

**ANNOTATED LISTING OF SELECT METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS  
COUNCILS, COMMITTEES AND SUB-COMMITTEES**

**3. COG Fire Chiefs Committee**

- a. **Reports to** Emergency Preparedness Council on matters directly pertinent to homeland security or the UASI grant; reports to the Human Services & Public Safety Policy Committee on matters not directly pertinent to homeland security or the UASI grant
- b. **Membership** consists of the principal Fire Chiefs of any COG member jurisdiction that has a career Fire/Rescue/EMS Service, including the Metropolitan Washington Airports Authority.
- c. The committee's primary purpose is to advise the Public Safety Policy Committee, Emergency Preparedness Committee, Chief Administrative Officer's Committee, various regional emergency support committees and the COG Board of Directors on matters pertaining to fire and rescue service issues. A secondary purpose is for representatives of the various fire and rescue service agencies, within the Washington metropolitan area, to meet and exchange information and ideas concerning the delivery of emergency management services and such other matters of mutual concern.

**4. COG Passenger Rail Safety Subcommittee**

- a. **Reports to** the COG Senior Operations Chiefs Committee
- b. **Membership** consists of at least one designated representative from each COG Fire Chiefs Committee member agency as well some other entities with interest to rail safety such as WMATA, Amtrak, MTA, VRE, NTSB, TSA and other
- c. The subcommittee's purpose is to convene regional rail safety experts to address passenger safety issues as it pertains to both light and heavy passenger rail transit throughout the NCR.

**5. Public Safety Communications Subcommittee**

- a. **Reports to** both the COG Fire Chiefs Committee and the COG Police Chiefs Committee
- b. **Membership** consists of at least one designated representative from each COG Fire Chiefs and Police Chiefs Committee member agencies. Included in this membership are some radio managers of regional jurisdictions and other communications experts from each of the COG jurisdictions.
- c. Provide a forum for collaboration on regional communications systems. The subcommittee will utilize a strategic approach to maintain and enhance systems that provide interoperability in voice, video, data and PSCC operations within the NCR while providing subject matter expertise to the Police and Fire Chiefs in support of their needs.

**6. Senior Operations Chiefs Committee**

- a. **Reports to** the COG Fire Chiefs Committee
- b. **Membership** consists of at least one designated representative from each COG Fire Chiefs Committee member agency, oftentimes the senior most Chief beneath the principal Fire Chief of an agency.
- c. Provide for operational guidance and support to the following technical subcommittees of the Fire Chiefs Committee: Hazmat Subcommittee, Technical Rescue Subcommittee, EMS Subcommittee, Metrotech, Passenger Rail Safety Subcommittee

**ANNOTATED LISTING OF SELECT METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS  
COUNCILS, COMMITTEES AND SUB-COMMITTEES**

**7. 9-1-1 Directors Committee**

- a. **Reports to** Emergency Preparedness Council on matters directly pertinent to homeland security or the UASI grant; reports to the Human Services & Public Safety Policy Committee on matters not directly pertinent to homeland security or the UASI grant
- b. **Membership** consists of primary and associate committee members. *Primary member.* The term “primary member” refers to the Director of 9-1-1 Emergency Communications Services for a local government member of COG. Each primary member shall have the right to vote on any issue brought before the committee. When these by-laws refer to a vote of the committee, such reference refers to the primary (voting) members of the committee. *Associate member.* The term “associate member” refers to representatives of federal, state, local or other 9-1-1 emergency communications agencies within the Washington Metropolitan Statistical Area, but who are not components of a local government jurisdiction that is a member of COG. Associate members may include (but are not limited to) representatives from emergency communications officials from federal and state agencies, the military, the private sector, volunteer organizations, homeland security organizations, and others. Associate members shall be non-voting committee members.
- c. The committee's primary purpose is to advise the COG Board of Directors, the Human Services and Public Safety Policy Committee, the NCR Emergency Preparedness Council, the Chief Administrative Officers Committee, and various regional emergency support committees, on matters relating to 9-1-1 emergency communications. A secondary purpose is to provide a forum in which representatives of the various 9-1-1 communications agencies serving the Washington metropolitan area can meet and exchange information and ideas concerning the delivery of 9-1-1 emergency communications services.

United States Senate  
WASHINGTON, DC 20510-2003

February 9, 2015

Mr. William Euille  
Chairman  
Board of Directors  
Metropolitan Washington Council of Governments  
777 North Capitol Street NE  
Washington, DC 20002

Dear Chairman Euille:

I request that the Metropolitan Washington Council of Governments (COG) complete a regional work plan for training firefighters on emergency evacuation protocols in the Washington Metropolitan Area Transit Authority (Metro) system. I also request that this pressing issue be added to the agenda of COG's Board of Directors meeting on Wednesday.

I was shocked to learn that the training of firefighters is not mandatory. There are only voluntary emergency practice drills between Metro and the region's fire departments. In addition, we have recently learned that the training practices of the region's fire departments are uneven and fall below what should be required to keep riders safe in some jurisdictions.

As COG begins its regional work plan for improving interoperability throughout the Metro system, I request that a similar plan be developed establishing mandatory training requirements for emergency evacuations. Once the work plan is completed, I request the existing Procedures Policy Agreement between the Metro and emergency first responders be amended with the new training requirements.

Every firefighter should be required to attend training at Metro's Rail Operations Control Center and Emergency Management Facility. This should be a requirement during their initial training and then re-certification should be required.

Thank you for your prompt attention to my requests.

Sincerely,



Barbara A. Mikulski  
United States Senator





# National Transportation Safety Board

Washington, DC 20594

## Safety Recommendation

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**Date:** February 11, 2015

**In reply refer to:** R-15-8 through -10 (Urgent)

Mr. Jack Requa  
Interim General Manager and Chief  
Executive Officer  
Washington Metropolitan Area Transit  
Authority  
600 5th St. NW  
Washington, DC 20001

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The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to provide assistance to victims and their family members affected by major transportation disasters.

We urge the Washington Metropolitan Area Transit Authority (WMATA) to take action on the urgent safety recommendations issued in this letter. These recommendations address the WMATA emergency response to smoke in subway tunnels and are derived from our ongoing investigation of the electrical arcing and smoke accident near the WMATA L'Enfant Plaza station in Washington, D.C., on January 12, 2015. Facts supporting these recommendations are discussed below.

### Background

On January 12, 2015, at 3:15 p.m., eastern standard time, southbound WMATA Metrorail train 302 stopped after encountering heavy smoke in a subway tunnel between the L'Enfant Plaza station and the Potomac River bridge. After stopping, the rear car of the train was about 386 feet from the south end of the L'Enfant Plaza station platform. The train operator contacted the WMATA Operation Control Center (OCC) to announce that the train was stopped due to heavy smoke.

A following train (train 510), which was stopped at the L'Enfant Plaza station at 3:25 p.m., also was affected by the heavy smoke. This train stopped about 100 feet short of the south end of the platform, but its cars were entirely within the station. Train 510 was evacuated while it was stopped at the station platform.

Police officers provided assistance in guiding passengers from the underground platform to the surface. Some of the passengers aboard train 302 self-evacuated. Emergency responders were dispatched to the scene and assisted evacuating passengers from both trains, as well as the station.

Both Metrorail trains had six passenger cars. The length of each train was about 450 feet. As a result of the smoke, 86 passengers were transported to local medical facilities for treatment. One passenger fatality occurred. Initial damages were estimated by WMATA to be \$120,000.

The parties to the investigation include the Washington Metropolitan Transit Authority; the Federal Transit Administration; the Tri-State Oversight Committee; the Bureau of Alcohol, Tobacco, Firearms and Explosives; the Amalgamated Transit Union, Local 689; the International Association of Fire Fighters, Local 36; the District of Columbia Fire and Emergency Medical Services Department; and the District of Columbia Metropolitan Police Department.

Although the NTSB investigation is still in the early stages, we have identified safety issues that require immediate attention and are making one urgent safety recommendation to the Federal Transit Administration, three urgent safety recommendations to WMATA, and two urgent safety recommendations to the American Public Transportation Association.

## **Discussion**

The WMATA subway system has ventilation fans at strategic locations to remove smoke and heat from the tunnels. These fans can be operated in either a supply mode that pulls fresh air into the tunnels and stations or an exhaust mode that pulls air from the tunnels and stations to the outside. The fans can be operated either remotely from the WMATA OCC or locally from control panels near the fans.

Smoke was not present as train 302 departed the L'Enfant Plaza station. After encountering heavy smoke, the train operator stopped the train with the lead car about 836 feet beyond the south end of the station. At 3:16 p.m., the WMATA OCC activated the under-platform fans in the exhaust mode at the L'Enfant Plaza Green and Yellow Line platforms. The location of these under platform fans was behind the stopped train 302. This action pulled smoke toward trains 302 and 510 from the electrical arcing event that caused the smoke. The source of the smoke was later determined to be about 1,100 feet ahead (south) of train 302.

A vent shaft with additional ventilation fans was about 24 feet ahead (south) of the source of the smoke. At 3:24 p.m., these ventilation fans, which are about 1/3 mile south of L'Enfant Plaza station, were activated in exhaust mode. At this point train 302 was already blanketed with smoke. Also, the train ventilation system that draws air from the outside into the cars was not shut off by the train operator. Existing WMATA procedures required the train operator to receive permission from the OCC to shut off the train ventilation system. Because both the station and vent shaft fans were all activated in exhaust mode, there was not a supply of fresh air to aid in moving the smoke through the tunnel to the exhaust.

A smoke detector located at the bottom of the vent shaft near the location of the heavy smoke activated at 3:04 p.m. Smoke detectors in the service rooms located southwest of the L'Enfant Plaza station platform activated at 3:19 p.m. and 3:20 p.m.

The vent shaft near the source of the smoke contained four fans. Each fan had a rated capacity of 50,000 cubic feet per minute (air flow). NTSB investigators found during post-accident inspection that two of the four fans had tripped an overload circuit breaker and were non-operational. This means that either (1) only two of the four fans were operational during the accident or (2) two of the fans became non-operational sometime during the accident.

Currently, WMATA does not have the means to determine the exact location of a source of smoke in their tunnel network. However, the initial reports from the train operator suggested that the smoke was ahead of train 302, since the train had travelled from a smoke-free environment into a smoke-filled environment.

The OCC rail controllers are guided by various emergency Standard Operating Procedures (SOPs). WMATA SOP No. 6, *Smoke and Fire on The Roadway*, contains a number of key actions that must be taken when a train encounters smoke in a tunnel. This SOP does not address tunnel ventilation strategies. Other transit agencies (such as the San Francisco Bay Area Transit District) have developed detailed ventilation procedures for addressing train fires and smoke events in tunnels. A common approach in these tunnel ventilation procedures is (1) to identify the most likely location of the smoke or fire, (2) to start the ventilation fans on one side of the smoke or fire in supply mode, and (3) to start the ventilation fans on the other side in exhaust mode. This strategy is designed to move smoke away from the passengers and the evacuation route. Once implemented, the controllers are to check with personnel at the site to verify the ventilation fans are properly working and to make any necessary adjustments.

WMATA told the NTSB investigators that the OCC controllers are trained on ventilation procedures and on the strategy of using ventilation fans in supply and exhaust modes to provide air to passengers. WMATA told the NTSB investigators that since this accident it has re-trained its controllers on the proper operation of tunnel ventilation fans. However, during the investigation, the NTSB investigators determined (1) WMATA does not have a written ventilation procedure for smoke and fire events in a tunnel, and (2) the ventilation strategy implemented during this accident was not consistent with best practices. This issue is critical because SOPs, which are readily available to the controllers, can serve as a checklist during an emergency.

The safety issue the NTSB has identified involve the absence of a written procedure that addresses ventilation procedures during smoke and fire events in tunnels. This vulnerability needs to be immediately addressed by WMATA and the rail transit industry. Therefore, the NTSB makes the following urgent safety recommendations to the WMATA:

R-15-8

Assess your subway tunnel ventilation system to verify the state of good repair and compliance with industry best practices and standards, such as those outlined in the National Fire Protection Association's NFPA 130,<sup>®</sup> *Standard for Fixed Guideway Transit and Passenger Rail Systems*.<sup>®</sup> (Urgent)

R-15-9

Develop and implement detailed written tunnel ventilation procedures for operations control center staff that take into account the probable source location of smoke and fire, the location of the train, the best evacuation route, and unique infrastructure features; these procedures should be based on the most effective strategy for fan direction and activation to limit passengers' exposure to smoke. (Urgent)

R-15-10

As part of the implementation of the procedures developed in response to Safety Recommendation R-15-009, incorporate the use of the procedures into your ongoing training and exercise programs and ensure that operations control center staff and emergency responders have ample opportunities to learn and practice activating ventilation fans. (Urgent)

We also issued one urgent safety recommendation to the Federal Transit Administration and two urgent safety recommendations to the American Public Transportation Association.

Acting Chairman HART and Members SUMWALT and WEENER concurred in these recommendations.

We are vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate receiving a response from you within 30 days detailing the actions you have taken or intend to take to implement them. When replying, please refer to the safety recommendations by number. We encourage you to submit your response electronically to [correspondence@ntsb.gov](mailto:correspondence@ntsb.gov).

[Original Signed]

By: Christopher A. Hart,  
Acting Chairman

*District of Columbia  
Bladensburg\*  
Bowie  
Charles County  
College Park  
Frederick  
Frederick County  
Gaithersburg  
Greenbelt  
Montgomery County  
Prince George's  
County  
Rockville  
Takoma Park  
Alexandria  
Arlington County  
Fairfax  
Fairfax County  
Falls Church  
Loudoun County  
Manassas  
Manassas Park  
Prince William County*

*Adjunct Member*

**Statement on Behalf of COG Fire Chiefs Committee to COG Board of Directors**  
**Marc S. Bashoor, Fire Chief, Prince George's County Fire/EMS**  
**Chairman, COG Fire Chiefs Committee**

**February 11, 2015**

The National Capital Region COG Fire Chiefs are committed to ensuring the safety of the public, our responders and the WMATA employees within the METRO system at all times. It is imperative that each of us work together to build and maintain a system of operations and response that instills confidence and constantly improves the culture of safety in our response systems.

The area Fire and EMS Departments have been a part of the planning, training and operational response within the WMATA system, since its inception. The six Fire Chiefs whose jurisdictions are directly impacted by the Metrorail system have been intimately involved in the discussions related to the recent incidents surrounding the WMATA Metrorail system.

These six COG Fire Chiefs, working with COG staff, the WMATA Police Chief, the Public Safety Communications and Passenger Rail Safety Subcommittees, and fire department station personnel have taken the following steps in the past 10 days:

1. Tested all underground radio systems
2. Reported all system gaps to WMATA
3. Identified gaps in the radio system testing processes
4. Agreed to weekly testing in the District and bi-weekly testing outside the District
5. Approved a common web-based recordation methodology for radio system quality testing and reporting (draft developed by WMATA)
6. Agreed to a common above ground Incident Command Post methodology
7. Requested additional on-site and web-based training opportunities from WMATA, including 24/7 access to the Landover training facility
8. Offered Fire Department personnel to assist as train-the-trainers where possible

In addition, WMATA has made the following commitments to the COG Fire Chiefs:

1. Agreed to have "boots on the ground" to investigate system deficiencies within 24 hours
2. Conceptually agreed to radio system repairs within one to two days
3. Agreed to host the web-based reporting system, with protocols which will email-notify responsible parties within each jurisdiction when deficiencies are noted and updates or repairs to the deficiencies are made
4. Agreed to the concept of additional training (no specifics at this time)

Identifying solutions to the process for testing and reporting deficiencies in the radio testing, along with the protocols to repair and make notification of repairs is a critical step ensuring the underground portions of the system are safer for everyone. Similarly, agreements to collaborate on testing, reporting and repair is a critical step in the public safety continuum.

It is certainly true that the radio system is aging with the rest of the infrastructure. Through the Council of Governments, discussions continue to identify funding for a system-wide radio system evaluation, which will ensure all previously unidentified gaps and improvement solutions are identified swiftly.

The COG Fire Chiefs have directed the COG Senior Operations Chiefs along with the Passenger Rail Safety and Public Safety Communications Subcommittees to evaluate all operational procedures over the next 30 days. They will report back in April to identify opportunities for standardizing regional protocols and response improvements while also identifying safety and training protocol enhancements.

Training for first responders is a critical component to ensuring safety for everyone in the WMATA system. Many personnel have been afforded the opportunity to train at the current WMATA training facility on Pennsy Drive in Prince George's County. There has been an active and ongoing training and exercise program between WMATA and the area Fire Departments, to include tabletop, functional, and full-scale exercises remote of the Pennsy Drive training facility. As stated above, the COG Fire Chiefs are requesting additional training opportunities at the WMATA facility, including 24/7 availability. However, training at the Landover facility alone is not a practical solution to the training needs. A combination of Landover-based and computer or simulator-based opportunities along with system-wide opportunities for access to underground spaces during off-hours will ensure maximum exposure for the thousands of firefighters located across the National Capital Region. This will become increasingly important as the system expands into a seventh jurisdiction with the expansion to Dulles Airport impacting Loudoun County.

The safety of WMATA patrons and employees as well as our First Response personnel is of paramount concern. There must be a transparent culture of safety that ensures early 9-1-1 notification and swift standardized dispatch protocols combined with expertly trained employees and responders. All aspects of the emergency response system will be under operational review, including 3<sup>rd</sup> rail power protocols, exhaust systems, emergency evacuation procedures, and door operations to mention a few. Safety will be enhanced with continued collaboration and focus on systemic improvements for the long term.

The COG Fire Chiefs appreciate the opportunity to work together with WMATA to have a quality-improvement process for safety, response and training in the METRO system.

**ITEM 7 - Action**  
February 18, 2015

Review of Comments Received and Approval of Project Submissions for the Air Quality Conformity Assessment for the 2015 Financially Constrained Long Range Transportation Plan (CLRP) and the FY 2015-2020 Transportation Improvement Program (TIP)

**Staff**

**Recommendation:** Receive briefing on the comments received and recommended responses, and adopt Resolution R14-2015 to approve project submissions for inclusion in the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP.

**Issues:** None

**Background:** At the January 21 meeting, the Board was briefed on the major project changes submitted for inclusion in the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP which were released for a 30-day public comment period that ended February 14. The projects were reviewed by the Technical Committee on February 6.





**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD**  
777 North Capitol Street, N.E.  
Washington, D.C. 20002

**RESOLUTION ON INCLUSION IN AIR QUALITY CONFORMITY ANALYSIS OF  
SUBMISSIONS FOR THE 2015 FINANCIALLY CONSTRAINED LONG RANGE PLAN  
(CLRP) AND THE FY 2015-2020 TRANSPORTATION IMPROVEMENT PROGRAM  
(TIP)**

**WHEREAS**, the National Capital Region Transportation Planning Board (TPB), as the metropolitan planning organization for the Washington metropolitan area, has the responsibility under the provisions of Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the metropolitan area; and

**WHEREAS**, the Joint Planning Regulations issued February 14, 2007 by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) require that the long range transportation plan be reviewed and updated at least every four years; and

**WHEREAS**, the transportation plan, program and projects must be assessed for air quality conformity as required by the conformity regulations originally published by the Environmental Protection Agency in the November 24, 1993 Federal Register and with latest amendments published in the Federal Register on July 1, 2004; and

**WHEREAS**, on October 15, 2014 the TPB adopted resolution R5-2015 determining that the 2014 CLRP and the FY 2015-2020 TIP conform with the requirements of the Clean Air Act Amendments of 1990 and resolution R6-2015 approving the 2014 CLRP; and

**WHEREAS**, the transportation implementing agencies in the region have provided submissions for the 2015 CLRP and the FY 2015-2020 TIP, which are in response to the November 2014 Call for Projects document issued by the TPB, and the Technical Committee has reviewed these submissions at its meetings on January 9 and February 6, 2015; and

**WHEREAS**, at the TPB Citizens Advisory Committee meeting on January 15, the submissions for the 2015 CLRP were released for a 30-day public comment and interagency consultation period which ended February 14; and

**WHEREAS**, at the February 18, 2015 meeting, the TPB was briefed on the project submissions for the 2015 CLRP, the public comments received on the submissions, and the recommended responses to the public comments; and

**WHEREAS**, the 2015 CLRP is scheduled to be released for public comment on September 10, 2015 and approved by the TPB at its October 21, 2015 meeting; and

**WHEREAS**, the submissions have been developed to meet the financial plan requirements in the Metropolitan Planning Rules and show the consistency of the proposed projects with already available and projected sources of transportation revenues; and

**NOW, THEREFORE, BE IT RESOLVED THAT** the National Capital Region Transportation Planning Board approves for inclusion in the air quality conformity analysis of the 2015 CLRP and the FY 2015-2020 TIP, the project submissions as described in the attached memorandum.



# NATIONAL CAPITAL REGION

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## TRANSPORTATION PLANNING BOARD

### MEMORANDUM

February 12, 2015

To: Transportation Planning Board

From: Kanti Srikanth  
Director, Department of Transportation Planning

Re: Additions and Changes to Projects Proposed for Inclusion in the  
2015 Financially Constrained Long-Range Transportation Plan (CLRP)

The project submissions for inclusion in the Air Quality Conformity Analysis of the 2015 Update to the CLRP were released for on January 15 for a 30 day public comment period. A summary of the major new projects or changes to existing major projects included in the project submissions was presented to the Board at its January 21, 2015 meeting. Members of the Board asked for details, clarifications and some changes to the some of the project documentation during the meeting. Additionally public comments were also received seeking clarifications and details on some of the project submissions. Based on questions and comments received during the public comment and interagency consultation period, TPB staff has worked with the implementing agencies to provide some additional or updated project information.

The public comment period ends on February 14, 2015. The TPB will be asked to approve the project submissions at the February 18<sup>th</sup> meeting.

Changes made to and additional details provided for some of the projects, since the start of the public comment period, used as inputs to the regional air quality conformity analysis are summarized in Table 1. All changes and/or additional details provided for these projects are reflected in the updated CLRP project description forms under attachment A. The summary of major additions and changes for the 2015 CLRP presented to the Board in January has been updated to reflect the changes and additions made and shown as Exhibit 1.

The following highlights the changes in the project summaries of Exhibit 1 and the project description forms in attachment A.

In **Virginia**, for the I-66 Multimodal Improvements inside the Beltway project, the cost for this project has been updated since the beginning of the public comment period from between \$75 and \$100 million to \$350 million. The project description has also been revised to provide

more information on multi-modal aspects of the project, including bicycle and pedestrian components and transit service enhancements.

For the I-66 outside the Beltway project the description form has been revised to include a table and schematics of transit service assumptions, and transit and transportation demand management definitions for the project.

The letter from VDOT accompanying the I-66 projects has also been included with the original executive summary attachments.

# TABLE 1

## CHANGES SINCE THE BEGINNING OF THE PUBLIC COMMENT PERIOD

### 2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS

<b>HIGHWAY PROJECTS:</b>											
Conl D	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
789			Construct/Widen	I 66 Eastbound	Washington Blvd. Off-Ramp	<i>North</i> Fairfax Drive	1	1	2	3	2040
759		Alt A	Revise Operations	I-66 Express Lanes Interchange Ramps	EB off-ramp, WB on-ramp to/from I-66 Express lanes <b>BUS /HOV-3/HOT ONLY</b>	@ Vaden Drive / Vienna Metro Station	1	1	Bus Only Operations <i>from existing HOV Lanes</i>	<b>Bus / HOV-3 / HOT from proposed Express Lanes</b>	2022
760		Alt B	Revise Operations	I-66 Express Lanes Interchange Ramps	EB off-ramp, WB on-ramp to/from I-66 Express lanes <b>BUS ONLY</b>	@ Vaden Drive / Vienna Metro Station	1	1	Bus Only Operations <i>from existing HOV Lanes</i>	<b>Bus HOV-3/HOT Only Operations from proposed Express Lanes</b>	2022
310	VP6EAA		Widen/Upgrade	VA 28 PPTA Phase II	I 66	US 50	<del>5</del>	<del>5</del>	6	8	2025
310	VP6EBB		Widen/Upgrade	VA 28 PPTA Phase II	US 50	Sterling Blvd.	<del>5</del>	<del>5</del>	6	8	<b>2016</b> <del>2025</del>
310	VP6ECC		Widen/Upgrade	VA 28 PPTA Phase II	Sterling Blvd.	VA 7	<del>5</del>	<del>5</del>	6	8	2025

**NOTE: Shaded cells show changes since the beginning of the public comment period.**

# TABLE 1

## CHANGES SINCE THE BEGINNING OF THE PUBLIC COMMENT PERIOD

### 2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS

**TRANSIT PROJECTS:**

Improvement	Facility	From	To		Complete
Construct	Benning Road Streetcar	Oklahoma Avenue NE	45th Street/Benning Road Metro		<b>2020</b> <b>2016</b>
Construct	Anacostia Streetcar Extension	Howard Road Firth Sterling	Good Hope Road SE		<b>2017</b> <b>2016</b>
Construct	DC Streetcar - Anacostia Initial Line (AIL)	Defense Blvd. and S. Capitol St. SE	Howard Rd. and Firth Sterling		<b>2017</b> <b>2015</b>
Implement <i>Study</i>	DC Circulator Expansion	<i>Union Station to Georgetown Route</i> <i>Phase I TDP Routes—</i> <i>Wisconsin/Woodley</i>	<i>Extension to</i> National Cathedral		2017 Not Coded
Implement <i>Study</i>	DC Circulator Expansion	<i>Union Station to Navy Yard Route</i> <i>Phase I TDP Routes</i> <i>Navy Yard/ M-Street SE</i>	<i>Extension to</i> Waterfront / Maine-Ave. SW		2017 Not Coded
<b>Implement</b>	<b>DC Circulator Expansion</b>	<b>Rosslyn to Dupont Circle Route</b>	<b>Extension to U St./ Howard University</b>		<b>2017</b>
Implement	I-66 Corridor Enhanced Bus Service <i>(details shown with project description sheet)</i>	Inside the beltway			<b>2025</b> <b>2017</b>
<b>Implement</b>	<b>I-66 Corridor Enhanced Bus Service</b> <b><i>(details shown with project description sheet)</i></b>	<b>Inside the beltway</b>			<b>2040</b>
Implement	I-66 Corridor Enhanced Bus Service <i>(details shown with project description sheet)</i>	Outside the beltway			2022
<b>Implement</b>	<b>I-66 Corridor Enhanced Bus Service</b>	<b>Outside the beltway</b>			<b>2040</b>
<b>Construct</b>	<b>I-66 Corridor Park and Ride lot</b>	<b>US 15 in Haymarket</b>			<b>2022</b>
<b>Construct</b>	<b>I-66 Corridor Park and Ride lot</b>	<b>University Blvd. in Gainesville</b>			<b>2022</b>
<b>Construct</b>	<b>I-66 Corridor Park and Ride lot</b>	<b>Balls Ford Road in Manassas</b>			<b>2022</b>
<b>Expand</b>	<b>I-66 Corridor Park and Ride lot</b>	<b>Prince William Parkway</b>			<b>2022</b>
<b>Expand</b>	<b>I-66 Corridor Park and Ride lot</b>	<b>Stringfellow Road</b>			<b>2022</b>
<b>Expand</b>	<b>I-66 Corridor Park and Ride lot</b>	<b>Monument Drive</b>			<b>2022</b>

**NOTE: Shaded cells show changes since the beginning of the public comment period.**

# Exhibit 1: Summary of Major Additions and Changes for the 2015 Financially Constrained Long-Range Transportation Plan



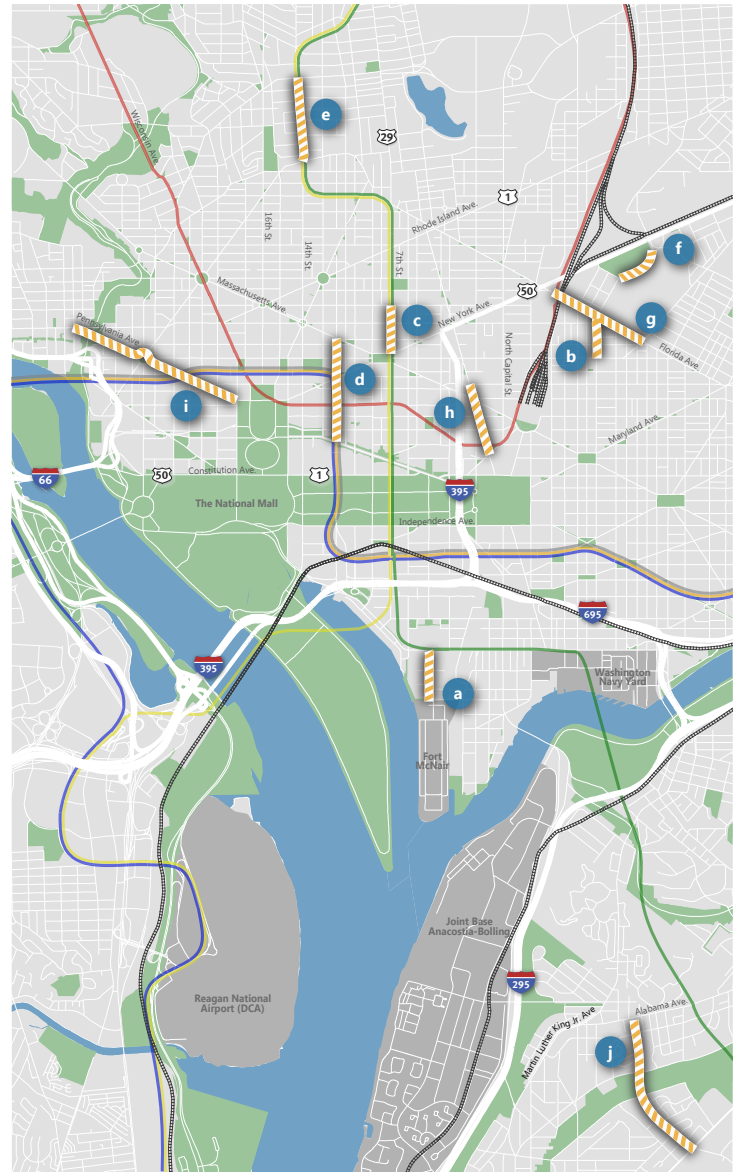
## DISTRICT OF COLUMBIA

### Dedicated Bike Lanes, Citywide

Length: 9 miles  
Complete: 2015  
Cost: \$470,000

The District Department of Transportation (DDOT) proposes to add a series of dedicated bike lane projects that will remove one or more lanes for vehicular traffic on 10 different roadways by reducing lanes as follows:

- 4th St. SW, M St. to P St.  
4 to 2 lanes
- 6th St. NE, Florida Ave. to K St.  
2 to 1 lane
- 7th St. NW, New York Ave. to N St.  
4 to 2 lanes
- 12th St. NW, Pennsylvania Ave. to Massachusetts Ave.  
4 to 3 lanes
- 14th St. NW, Florida Ave. to Columbia Rd.  
4 to 2 lanes
- Brentwood Pkwy. NE, 6th St./Penn St. to 9th St.  
4 to 2 lanes
- Florida Ave. NE, 2nd St. to West Virginia Ave.  
6 to 4 or 5 lanes
- New Jersey Ave. NW, H St. to Louisiana Ave.  
4 to 2 lanes
- Pennsylvania Ave. NW, 17th St. to 29th St.  
4/6 to 2 or 4 lanes
- Wheeler Rd. SE, Alabama Ave. to Southern Ave.  
4 to 2 lanes



### Remove: Benning Road Streetcar Spur

The 2014 Update to the CLRP included the addition of a streetcar spur line running from Benning Rd. along Minnesota Ave. to the Minnesota Ave. Metro Station. This project is being withdrawn from the CLRP.

# Summary of Major Additions and Changes for the 2015 CLRP



## VIRGINIA

### I-66 Multimodal Improvement Project, Inside the Beltway US Route 29 in Rosslyn to I-495

Length: 10 miles  
Complete: 2017, 2040  
Cost: \$350 million



The Virginia Department of Transportation (VDOT) proposes to convert I-66 inside the Capital Beltway into a managed express lanes facility with dynamic, congestion-based tolling for all vehicles with less than three occupants, in both directions during the morning and evening peak periods. VDOT plans to implement this conversion by 2017. VDOT also proposes widening I-66 to 3 lanes in both directions between Fairfax Dr. and I-495 (and from 3 to 4 lanes on eastbound I-66 from the Dulles Toll Road to Washington Blvd.) The widening is projected to be complete by 2040.

VDOT proposes to implement a number of multimodal improvements with this project, including enhanced bus service and completion of elements of the bicycle and pedestrian network around the corridor. Tolls from the managed express lanes will be used to fund further transit enhancements.

The currently approved CLRP includes an assumption that the existing HOV requirement on I-66 inside the Beltway would increase from 2 to 3 occupants in 2020. This proposed project would advance that requirement to 2017 inside the Beltway. The CLRP also currently includes two spot improvement projects that provide additional lanes on westbound I-66 between Westmoreland Dr./Washington Blvd. and Haycock Rd./Dulles Access Highway (complete in 2015), and between Lee Highway/Spout Run and Glebe Rd. (complete in 2020).

See the CLRP Project Description Form and supplemental materials provided by VDOT in Attachment A for more information.

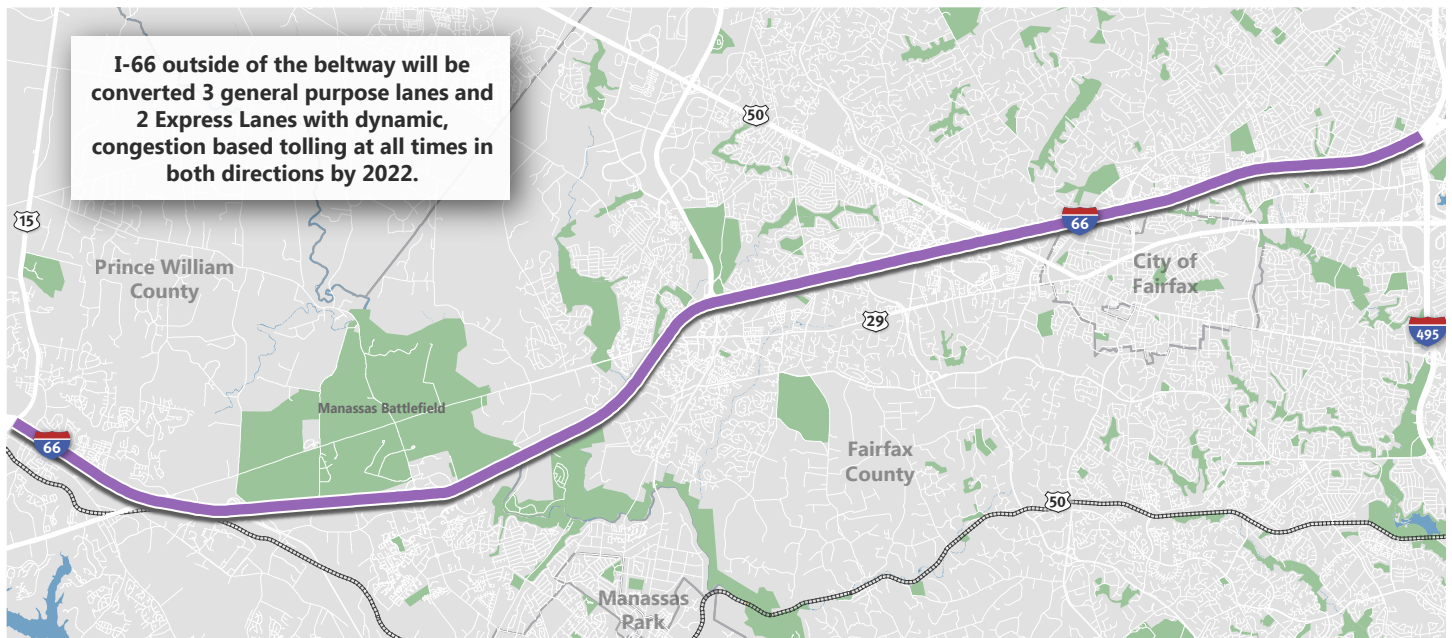


# Summary of Major Additions and Changes for the 2015 CLRP



## I-66 Corridor Improvements outside the Capital Beltway I-495 to US Route 15 in Prince William County

Length: 25 miles  
Complete: 2022  
Cost: \$2-3 billion



VDOT proposes to reconfigure I-66 outside the Capital Beltway to have two managed express lanes and three general purpose lanes in each direction. Please see the 2015 CLRP Air Quality Conformity Inputs table for further details on lane configurations. The managed express lanes would use dynamic, congestion-based tolling for vehicles with less than 3 occupants at all times to maintain free-flow conditions.

VDOT has proposed two alternative sets of access and egress points between the express lanes and the general purpose lanes. Both alternatives (A and B) are detailed in the Air Quality Conformity Inputs table and will be analyzed separately.

Multimodal aspects of the proposed project include implementation of a new high-frequency bus service and the construction of new, and expansion of existing commuter park-and-ride lots.

See the CLRP Project Description Form and supplemental materials provided by VDOT in Attachment A for more information.

## Remove: Columbia Pike Streetcar and Crystal City Streetcar Projects

The Columbia Pike Streetcar project between Skyline Center and Pentagon City was added to the CLRP in 2008 and was scheduled to be complete in 2017. The Crystal City Streetcar from the Pentagon City Metro Station to Four Mile Run at the Alexandria city line was added in 2011 and was projected to be complete by 2019. Due to recent policy and funding changes in Arlington County, both projects are proposed for removal.



# **Attachment A**

## **Project Description Forms and Supplemental Materials**



**BASIC PROJECT INFORMATION**

1. Submitting Agency: DDOT
2. Secondary Agency:
3. Agency Project ID:
4. Project Type:  Interstate  Primary  Secondary  Urban  Bridge  Bike/Ped  Transit  CMAQ  
 ITS  Enhancement  Other  Federal Lands Highways Program  
 Human Service Transportation Coordination  TERMS
5. Category:  System Expansion;  System Maintenance;  Operational Program;  Study;  Other
6. Project Name: **Dedicated Bike Lanes, Citywide**

	Prefix	Route	Name	Modifier
7. Facility:			See facilities and limits in description below	
8. From:				
9. To:				

10. Description:

**4<sup>th</sup> Street SW from M Street to P Street**

This project will reduce roadway capacity through converting the existing roadway configuration from four general purpose travel lanes to two lanes with a center turn lane and bicycle lanes.

Length: 0.3 mile  
 Cost \$10,000

**6<sup>th</sup> Street NE from Florida Avenue to K Street**

This project will implement recommendations from the recent Florida Ave study. It will reduce roadway capacity through the conversion of the existing roadway from two-way to one-way operation with one general purpose travel lane and two-way protected bicycle lanes on the east side of the road.

Length: 0.26 mile  
 Cost: \$30,000

**7<sup>th</sup> Street NW from New York Avenue to N Street**

This project will reduce roadway capacity through converting the existing roadway configuration from four general purpose travel lanes to two lanes with a center turn lane and bicycle lanes.

Length: 0.3 mile  
 Cost: \$20,000

**12<sup>th</sup> Street NW from Pennsylvania Avenue to Massachusetts Avenue**

12<sup>th</sup> St is a four lane, one-way northbound road with two rush-hour restricted parking lanes. This project will reduce rush-hour roadway capacity by one lane by changing the east side rush-hour restricted parking lane to full-time parking and adding a bicycle lane.

Length: 0.64 mile  
 Cost \$20,000

**14<sup>th</sup> Street NW from Florida Avenue to Columbia Road**

This project will reduce roadway capacity through converting the existing roadway configuration from four general purpose travel lanes to two lanes with a center turn lane and bicycle lanes. It will connect existing bike lanes, making it the longest continuous bike lane corridor in the city.

Length: 0.52 mile  
 Cost: \$20,000

**Adams Mill Road NW from Kenyon Street to Klinge Road**

Adams Mill Road has two southbound lanes and one northbound lane. This project will reduce roadway capacity through the elimination of one of the southbound lanes to provide room for the addition of 5' bicycle lanes on either side of the roadway. It will provide a bicycle connection between the National Zoo and Mount Pleasant to Klinge Road/Porter Street and neighborhoods to the west of Rock Creek Park.

Length: 0.24 mile

Cost: \$10,000

**Brentwood Parkway NE from 6<sup>th</sup> Street/Penn Street to 9<sup>th</sup> Street**

This project will reduce roadway capacity through converting the existing roadway configuration from four general purpose travel lanes to three lanes. Traffic analysis is still required to determine which lane would be eliminated. The extra space will be used for bicycle lanes on either side of the road, or a two-way protected bicycle lane on one side of the street. This will connect the 6<sup>th</sup> St NE bike lanes to the 9<sup>th</sup> St Bridge.

Length: 0.22

Cost: \$10,000

**New Jersey Avenue NW from H Street to Louisiana Avenue**

This project will reduce roadway capacity through converting the existing roadway configuration from four general purpose travel lanes to two lanes with a center turn lane and bicycle lanes.

Length: 0.45 mile

Cost: \$25,000

**Wheeler Road SE from Alabama Avenue to Southern Avenue**

This project will reduce roadway capacity through converting the existing roadway configuration from four general purpose travel lanes to two lanes with a center turn lane and bicycle lanes.

Length: 0.94 mile

Cost: \$35,000

- 11. Projected Completion Year: 2015
- 12. Project Manager: Mike Goodno
- 13. Project Manager E-Mail: mike.goodno@dc.gov
- 14. Project Information URL:
- 15. Total Miles: 3.9
- 16. Schematic:
- 17. Documentation:
- 18. Jurisdictions: Washington, DC
- 19. Baseline Cost (in Thousands): \$180 cost estimate as of 12/05/14
- 20. Amended Cost (in Thousands): cost estimate as of MM/DD/YYYY
- 21. Funding Sources:  Federal;  State;  Local;  Private;  Bonds;  Other

**Regional Policy Framework**

**22. Provide a Comprehensive Range of Transportation Options**

Please identify all travel mode options that this project provides, enhances, supports, or promotes.

- |   |   |   |                                    |
|---|---|---|------------------------------------|
| <input type="checkbox"/> Single Driver        | <input type="checkbox"/> Carpool/HOV          |   |                                    |
| <input type="checkbox"/> Metrorail            | <input type="checkbox"/> Commuter Rail        | <input type="checkbox"/> Streetcar/Light Rail |                                    |
| <input type="checkbox"/> BRT                  | <input type="checkbox"/> Express/Commuter bus | <input type="checkbox"/> Metrobus             | <input type="checkbox"/> Local Bus |
| <input checked="" type="checkbox"/> Bicycling | <input type="checkbox"/> Walking              | <input type="checkbox"/> Other                |                                    |

Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low-incomes, and/or limited English proficiency?)  Yes  No

23. **Promote Regional Activity Centers**

Does this project begin or end in an Activity Center?  Yes  No

Does this project connect two or more Activity Centers?  Yes  No

Does this project promote non-auto travel within one or more Activity Centers?  Yes  No

24. **Ensure System Maintenance, Preservation, and Safety**

Does this project contribute to enhanced system maintenance, preservation, or safety?  Yes  No

25. **Maximize Operational Effectiveness and Safety**

Does this project reduce travel time on highways and/or transit without building new capacity (e.g., ITS, bus priority treatments, etc.)?  Yes  No

Does this project enhance safety for motorists, transit users, pedestrians, and/or bicyclists?  Yes  No

26. **Protect and Enhance the Natural Environment**

Is this project expected to contribute to reductions in emissions of criteria pollutants?  Yes  No

Is this project expected to contribute to reductions in emissions of greenhouse gases?  Yes  No

27. **Support Interregional and International Travel and Commerce**

Please identify all freight carrier modes that this project enhances, supports, or promotes.

Long-Haul Truck  Local Delivery  Rail  Air

Please identify all passenger carrier modes that this project enhances, supports, or promotes.

Air  Amtrak intercity passenger rail  Intercity bus

28. **Additional Policy Framework**

In the box below, please provide any additional information that describes how this project further supports or advances these and other regional goals.

**MAP-21 PLANNING FACTORS**

29. Please identify any and all planning factors that are addressed by this project:

a.  Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

b.  Increase the **safety** of the transportation system for all motorized and non-motorized users.

i. Is this project being proposed specifically to address a safety issue?  Yes;  No

ii. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:

c.  Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.

d.  Increase **accessibility and mobility** of people.

e.  Increase accessibility and mobility of **freight**.

f.  Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

g.  Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.

h.  Promote efficient system **management and operation**.

i.  Emphasize the **preservation** of the existing transportation system.

## **ENVIRONMENTAL MITIGATION**

30. Have any potential mitigation activities been identified for this project?  Yes;  No
- a. If yes, what types of mitigation activities have been identified?
- Air Quality;  Floodplains;  Socioeconomics;  Geology, Soils and Groundwater;  Vibrations;
  - Energy;  Noise;  Surface Water;  Hazardous and Contaminated Materials;  Wetlands

## **CONGESTION MANAGEMENT INFORMATION**

31. Congested Conditions
- a. Do traffic congestion conditions necessitate the proposed project or program?  Yes;  No
- b. If so, is the congestion recurring or non-recurring?  Recurring;  Non-recurring
- c. If the congestion is on another facility, please identify it:
32. Capacity
- a. Is this a capacity-increasing project on a limited access highway or other principal arterial?  Yes;  No
- b. If the answer to Question 26.a was "yes", are any of the following exemption criteria true about the project? (Choose one, or indicate that none of the exemption criteria apply):
- None of the exemption criteria apply to this project – a Congestion Management Documentation Form is required
  - The project will not use federal funds in any phase of development or construction (100% state, local, and/or private funding)
  - The number of lane-miles added to the highway system by the project totals less than one lane-mile
  - The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange
  - The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles
  - The project consists of preliminary studies or engineering only, and is not funded for construction
  - The construction costs for the project are less than \$10 million.
- c. If the project is not exempt and requires a Congestion Management Documentation Form, click here to open a blank Congestion Management Documentation Form.

## **RECORD MANAGEMENT**

33. Completed Year:
34.  Project is being withdrawn from the CLRP.
35. Withdrawn Date: MM/DD/YYYY
36. Record Creator:
37. Created On:
38. Last Updated by:
39. Last Updated On:
40. Comments:



**BASIC PROJECT INFORMATION**

1. Submitting Agency: District Department of Transportation
2. Secondary Agency: Policy, Planning and Sustainability Administration (PPSA)
3. Agency Project ID: ZU202A
4. Project Type:  Interstate  Primary  Secondary  Urban  Bridge  Bike/Ped  Transit  CMAQ  
 ITS  Enhancement  Other  Federal Lands Highways Program  
 Human Service Transportation Coordination  TERMS
5. Category:  System Expansion;  System Maintenance;  Operational Program; Study;  Other
6. Project Name: *Florida Avenue NE, Multimodal Transportation Study*

	Prefix	Route	Name	Modifier
7. Facility:			Florida Avenue NE	
8. From ( <input type="checkbox"/> at):			2 <sup>nd</sup> Street, NE	
9. To:			West Virginia Avenue	

10. Description: This project is the implementation of the recommended alternative from the *Florida Avenue Multimodal Corridor Study*. *The corridor will be reconstructed as shown in the recommended Alternative (attached). **The reconstruction will reduce the number of lanes from six lanes to four lanes in order to improve safety for all users through dedicated left-turn lanes, bicycle facilities, wider sidewalks and shorter crossing distances, decreased curb-to-curb street width and on-street parking to promote slower auto speeds, and pedestrian-scale lighting; increases the tree canopy and green infrastructure along the corridor; and significantly improves non-auto conditions for users, particularly the large deaf community in the area.***

11. Projected Completion Year: 2022
12. Project Manager: Gabe Onyeador
13. Project Manager E-Mail: [gabe.onyeador@dc.gov](mailto:gabe.onyeador@dc.gov)
14. Project Information URL: [www.floridaavesafety.org](http://www.floridaavesafety.org)
15. Total Miles: *1.25 miles*
16. Schematic: *see attached*
17. Documentation: *Final report for corridor planning study*
18. Jurisdictions: *District of Columbia ANCs 5C, 5D, 5E, 6A, 6C*
19. Baseline Cost (in Thousands): \$12,000 cost estimate as of 10/20/2014
20. Amended Cost (in Thousands): cost estimate as of MM/DD/YYYY
21. Funding Sources:  Federal;  State;  Local;  Private;  Bonds;  Other

**Regional Policy Framework**

**22. Provide a Comprehensive Range of Transportation Options**

Please identify all travel mode options that this project provides, enhances, supports, or promotes.

- Single Driver       Carpool/HOV  
 Metrorail       Commuter Rail       Streetcar/Light Rail  
 BRT       Express/Commuter bus       Metrobus       Local Bus  
 Bicycling       Walking       Other

Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low-incomes, and/or limited English proficiency?)  Yes  No

**23. Promote Regional Activity Centers**

- Does this project begin or end in an Activity Center?  Yes  No  
 Does this project connect two or more Activity Centers?  Yes  No  
 Does this project promote non-auto travel within one or more Activity Centers?  Yes  No

**24. Ensure System Maintenance, Preservation, and Safety**

Does this project contribute to enhanced system maintenance, preservation, or safety?  Yes  No

**25. Maximize Operational Effectiveness and Safety**

- Does this project reduce travel time on highways and/or transit without building new capacity (e.g., ITS, bus priority treatments, etc.)?  Yes  No  
 Does this project enhance safety for motorists, transit users, pedestrians, and/or bicyclists?  Yes  No

**26. Protect and Enhance the Natural Environment**

- Is this project expected to contribute to reductions in emissions of criteria pollutants?  Yes  No  
 Is this project expected to contribute to reductions in emissions of greenhouse gases?  Yes  No

**27. Support Interregional and International Travel and Commerce**

Please identify all freight carrier modes that this project enhances, supports, or promotes.

- Long-Haul Truck     Local Delivery     Rail     Air

Please identify all passenger carrier modes that this project enhances, supports, or promotes.

- Air       Amtrak intercity passenger rail     Intercity bus

**28. Additional Policy Framework**

In the box below, please provide any additional information that describes how this project further supports or advances these and other regional goals.

*The Recommended Alternative for Florida Avenue NE was developed through careful consideration of community priorities, the overall function of the roadway, and physical constraints along the corridor. The Alternative ensures adequate auto mobility on the corridor is maintained; improves safety for all users through dedicated left-turn lanes, bicycle facilities, wider sidewalks and shorter crossing distances, decreased curb-to-curb street width and on-street parking to promote slower auto speeds, and pedestrian-scale lighting; increases the tree canopy and green infrastructure along the corridor; and significantly improves non-auto conditions for users, particularly the large deaf community in the area.*

**MAP-21 PLANNING FACTORS**

29. Please identify any and all planning factors that are addressed by this project:

- a.  Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- b.  Increase the **safety** of the transportation system for all motorized and non-motorized users.
  - i. Is this project being proposed specifically to address a safety issue?  Yes;  No
  - ii. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:

*A number of issues affect corridor safety, particularly for the non-auto community. These include high auto speeds (85<sup>th</sup> %-ile speeds approximately 10 mph higher than speed limit), long and poor crossing facilities (six-lane cross section with several uncontrolled crossing locations), inadequate sidewalk infrastructure (sidewalk on south side of corridor is approximately 4 feet wide with numerous instances with less than 2 feet of clearance), and no pedestrian-scale lighting (corridor includes high number of pedestrians walking between NoMa Metro station and Gallaudet University, particularly deaf users that must rely on amenities such as lighting to navigate street safely), and a lack of bicycle facilities on a heavy bike corridor. Intersections with high left-turning volumes experienced a high number of crashes in the 3-year data collection span, including 46 total crashes at 4<sup>th</sup> Street, 24 at 6<sup>th</sup> Street, and 24 at West Virginia Avenue. There were 15 pedestrian-related crashes (one being a fatality at 11<sup>th</sup> Street) and 13 bike-related crashes along the study corridor during the same data collection period.*

- c.  Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.
- d.  Increase **accessibility and mobility** of people.
- e.  Increase accessibility and mobility of **freight**.
- f.  Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- g.  Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.
- h.  Promote efficient system **management and operation**.
- i.  Emphasize the **preservation** of the existing transportation system.

#### **ENVIRONMENTAL MITIGATION**

30. Have any potential mitigation activities been identified for this project?  Yes;  No
- a. If yes, what types of mitigation activities have been identified?
    - Air Quality;  Floodplains;  Socioeconomics;  Geology, Soils and Groundwater;  Vibrations;
    - Energy;  Noise;  Surface Water;  Hazardous and Contaminated Materials;  Wetlands

#### **CONGESTION MANAGEMENT INFORMATION**

31. Congested Conditions
- a. Do traffic congestion conditions necessitate the proposed project or program?  Yes;  No
  - b. If so, is the congestion recurring or non-recurring?  Recurring;  Non-recurring
  - c. If the congestion is on another facility, please identify it:
32. Capacity
- a. Is this a capacity-increasing project on a limited access highway or other principal arterial?  Yes;  No
  - b. If the answer to Question 26.a was "yes", are any of the following exemption criteria true about the project? (Choose one, or indicate that none of the exemption criteria apply):
    - None of the exemption criteria apply to this project – a Congestion Management Documentation Form is required
    - The project will not use federal funds in any phase of development or construction (100% state, local, and/or private funding)
    - The number of lane-miles added to the highway system by the project totals less than one lane-mile
    - The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange
    - The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles
    - The project consists of preliminary studies or engineering only, and is not funded for construction

- The construction costs for the project are less than \$10 million.
- c. If the project is not exempt and requires a Congestion Management Documentation Form, [click here](#) to open a blank Congestion Management Documentation Form.

**RECORD MANAGEMENT**

- 33. Completed Year:
- 34.  Project is being withdrawn from the CLRP.
- 35. Withdrawn Date: MM/DD/YYYY
- 36. Record Creator:
- 37. Created On:
- 38. Last Updated by:
- 39. Last Updated On:
- 40. Comments:

**BASIC PROJECT INFORMATION**

1. Submitting Agency: DDOT
2. Secondary Agency:
3. Agency Project ID:
4. Project Type:  Interstate  Primary  Secondary  Urban  Bridge  Bike/Ped  Transit  CMAQ  
 ITS  Enhancement  Other  Federal Lands Highways Program  
 Human Service Transportation Coordination  TERMS
5. Category:  System Expansion;  System Maintenance;  Operational Program;  Study;  Other
6. Project Name: Pennsylvania Avenue NW Protected Bicycle Lanes

	Prefix	Route	Name	Modifier
7. Facility:			Pennsylvania Avenue NW	
8. From ( <input type="checkbox"/> at):			17 <sup>th</sup> Street	
9. To:			29 <sup>th</sup> Street	

10. Description: Pennsylvania Avenue is a four to six lane corridor with two additional parking lanes. This project will reduce roadway capacity by reducing the existing travel lanes by one to two lanes and installing protected bicycle lanes.
  - o 17<sup>th</sup> to 18<sup>th</sup> Streets will be reduced from 6 to 4 lanes
  - o 18<sup>th</sup> to 20<sup>th</sup> Street will be reduced from 5 to 4 lanes
  - o 20<sup>th</sup> to 26<sup>th</sup> Streets will be reduced from 6 to 4 lanes
  - o 26<sup>th</sup> to 28<sup>th</sup> Streets will be reduced from 5 to 4 lanes
  - o 28<sup>th</sup> to 29<sup>th</sup> Streets will be reduced from 4 to 2 lanes
11. Projected Completion Year: 2015
12. Project Manager: Mike Goodno
13. Project Manager E-Mail: mike.goodno@dc.gov
14. Project Information URL:
15. Total Miles: 1.03
16. Schematic:
17. Documentation:
18. Jurisdictions: Washington, DC
19. Baseline Cost (in Thousands): 250,000 cost estimate as of 12/05/14
20. Amended Cost (in Thousands): cost estimate as of MM/DD/YYYY
21. Funding Sources:  Federal;  State;  Local;  Private;  Bonds;  Other

**Regional Policy Framework**

**22. Provide a Comprehensive Range of Transportation Options**

Please identify all travel mode options that this project provides, enhances, supports, or promotes.

- |   |   |   |                                    |
|---|---|---|------------------------------------|
| <input type="checkbox"/> Single Driver        | <input type="checkbox"/> Carpool/HOV          |   |                                    |
| <input type="checkbox"/> Metrorail            | <input type="checkbox"/> Commuter Rail        | <input type="checkbox"/> Streetcar/Light Rail |                                    |
| <input type="checkbox"/> BRT                  | <input type="checkbox"/> Express/Commuter bus | <input type="checkbox"/> Metrobus             | <input type="checkbox"/> Local Bus |
| <input checked="" type="checkbox"/> Bicycling | <input type="checkbox"/> Walking              | <input type="checkbox"/> Other                |                                    |

Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low-incomes, and/or limited English proficiency?)  Yes  No

23. **Promote Regional Activity Centers**

Does this project begin or end in an Activity Center?  Yes  No

Does this project connect two or more Activity Centers?  Yes  No

Does this project promote non-auto travel within one or more Activity Centers?  Yes  No

24. **Ensure System Maintenance, Preservation, and Safety**

Does this project contribute to enhanced system maintenance, preservation, or safety?  Yes  No

25. **Maximize Operational Effectiveness and Safety**

Does this project reduce travel time on highways and/or transit without building new capacity (e.g., ITS, bus priority treatments, etc.)?  Yes  No

Does this project enhance safety for motorists, transit users, pedestrians, and/or bicyclists?  Yes  No

26. **Protect and Enhance the Natural Environment**

Is this project expected to contribute to reductions in emissions of criteria pollutants?  Yes  No

Is this project expected to contribute to reductions in emissions of greenhouse gases?  Yes  No

27. **Support Interregional and International Travel and Commerce**

Please identify all freight carrier modes that this project enhances, supports, or promotes.

Long-Haul Truck  Local Delivery  Rail  Air

Please identify all passenger carrier modes that this project enhances, supports, or promotes.

Air  Amtrak intercity passenger rail  Intercity bus

28. **Additional Policy Framework**

In the box below, please provide any additional information that describes how this project further supports or advances these and other regional goals.

**MAP-21 PLANNING FACTORS**

29. Please identify any and all planning factors that are addressed by this project:

a.  Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

b.  Increase the **safety** of the transportation system for all motorized and non-motorized users.

i. Is this project being proposed specifically to address a safety issue?  Yes;  No

ii. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:

c.  Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.

d.  Increase **accessibility and mobility** of people.

e.  Increase accessibility and mobility of **freight**.

f.  Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

g.  Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.

h.  Promote efficient system **management and operation**.

i.  Emphasize the **preservation** of the existing transportation system.

### **ENVIRONMENTAL MITIGATION**

30. Have any potential mitigation activities been identified for this project?  Yes;  No
- a. If yes, what types of mitigation activities have been identified?
- Air Quality;  Floodplains;  Socioeconomics;  Geology, Soils and Groundwater;  Vibrations;
  - Energy;  Noise;  Surface Water;  Hazardous and Contaminated Materials;  Wetlands

### **CONGESTION MANAGEMENT INFORMATION**

31. Congested Conditions
- a. Do traffic congestion conditions necessitate the proposed project or program?  Yes;  No
- b. If so, is the congestion recurring or non-recurring?  Recurring;  Non-recurring
- c. If the congestion is on another facility, please identify it:
32. Capacity
- a. Is this a capacity-increasing project on a limited access highway or other principal arterial?  Yes;  No
- b. If the answer to Question 26.a was "yes", are any of the following exemption criteria true about the project? (Choose one, or indicate that none of the exemption criteria apply):
- None of the exemption criteria apply to this project – a Congestion Management Documentation Form is required
  - The project will not use federal funds in any phase of development or construction (100% state, local, and/or private funding)
  - The number of lane-miles added to the highway system by the project totals less than one lane-mile
  - The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange
  - The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles
  - The project consists of preliminary studies or engineering only, and is not funded for construction
  - The construction costs for the project are less than \$10 million.
- c. If the project is not exempt and requires a Congestion Management Documentation Form, click here to open a blank Congestion Management Documentation Form.

### **RECORD MANAGEMENT**

33. Completed Year:
34.  Project is being withdrawn from the CLRP.
35. Withdrawn Date: MM/DD/YYYY
36. Record Creator:
37. Created On:
38. Last Updated by:
39. Last Updated On:
40. Comments:





**FINANCIALLY CONSTRAINED LONG-RANGE  
TRANSPORTATION PLAN FOR 2040  
PROJECT DESCRIPTION FORM  
BASIC PROJECT INFORMATION**

1. Submitting Agency: **Virginia Department of Transportation**
2. Secondary Agency: **Virginia Department of Rail and Public Transportation**
3. Agency Project ID: **UPC 97586**
4. Project Type:  
 Interstate    Primary    Secondary    Urban    Bridge    Bike/Ped  
 Transit    CMAQ    ITS    Enhancement    Other  
 Federal Lands Highways Program    Human Service Transportation Coordination  
 TERMS
5. Category:  
 System Expansion;    System Maintenance;    Operational Program;  
 Study;    Other
6. Project Name: **I-66 Multimodal Improvement Project, inside the Beltway**  
Prefix Route Name Modifier
7. Facility: **I-66**
8. From: **I-495, Fairfax County**
9. To: **Route 29 near Rosslyn, Arlington County**
10. Description:

The I-66 Multimodal Improvement Project (the "Project") is based on the recommendations from the June 2012 Final Report of the I-66 Multimodal Study inside the Beltway. The study team for the Multimodal Study included local, state, regional and federal stakeholders who participated in an interactive process which resulted in endorsements from these partners. The study, which built upon the 2009 Department of Rail and Public Transportation (DRPT) I-66 Transit/Transportation Demand Management (TDM) study, evaluated and recommended various multimodal improvements in the corridor that were further refined in the August 2013 Supplemental Report. The recommended improvements from the study included transit, bike/ped, TDM, integrated corridor management (ICM), tolling, and widening components, making this a truly multimodal solution for the corridor.

VDOT/DRPT is initiating an environmental assessment (NEPA) process to advance the multimodal improvements identified in the I-66 Multimodal Study. This process will assess the Project's impacts on social, cultural, economic and natural resources (such as air, noise, and water quality). The environmental process will provide opportunities for the public and stakeholders to provide comments and feedback throughout the study. In February of 2015 VDOT is beginning a comprehensive toll and revenue study to determine the expected

project revenue by year. Also during this time, VDOT will be working with corridor stakeholders, including local jurisdictional partners, to review the results of the revenue study and prioritize the list of multimodal and operational improvements. The multimodal improvements will be grouped into three categories: for Group 1, the stakeholder team will identify and evaluate **low cost** quickly implementable corridor improvements **to** be done **in conjunction with the tolling component**.

. Group 2 projects are expected by 2025. Group 3 multimodal projects are expected by 2040. In addition, a Stakeholder Technical Advisory Group is being established with local, state, regional and federal partners. The Project may be updated in future CLRPs in response to the environmental process, public outreach, and stakeholder input.

**The tolling component of the Project will be implemented first, concurrent with the selected Group I Multi-modal improvements**, and the tolls will be used to help fund the multimodal improvements in the corridor inside the Beltway. The tolling includes conversion of the existing I-66 facility inside the Capital Beltway to an Express Lanes facility with the following characteristics:

- Dynamic tolling in both directions during the peak periods only;
- HOV-3+ vehicles ride free at all times;
- Facility free to all traffic during off-peak periods;
- Consistent with current policy, heavy trucks will be prohibited.

The **transit** components include all the current improvements in the CLRP plus new priority bus routes on I-66, Route 29, and Route 50; Metrorail station improvements at Ballston and East Falls Church, and service enhancements for numerous routes in the study area inside the Beltway. Consideration will also be given to Metrorail core capacity improvements (8-car trains) that will address capacity concerns in the I-66 corridor.

For the **bicycle/pedestrian** components, the Multimodal Study identified approximately 60 capital and operating projects inside the Beltway. The Supplemental Report examined projects deemed to be the most regionally significant of the 60, based on (1) projects that can impact bicycling and walking for relatively large numbers of people and (2) projects that enhance the connectivity and functionality of the regional network. Sample projects include:

- Custis trail/W&OD trail improvements
- Fairfax Drive connector
- Arlington Boulevard trail- Glebe Rd. to City of Fairfax
- West Falls Church connector trail
- VA 7 – Tysons to Falls Church

The **TDM** elements of the Project were built on those recommended in the DRPT Transit and TDM Study of 2009, and in the 2012 Multimodal Study were grouped into high, medium and low impact, based on the ability of each measure to impact travel demand. High impact strategies included rideshare program operational support, enhanced telework, van priority access, direct transit subsidies, and enhanced employer outreach. Medium impact

strategies included vanpool driver incentives, I-66 corridor carpool startup incentives, and regionwide financial incentives. Lower impact strategies included enhanced corridor marketing, enhanced vanpool insurance pool, capital assistance for vanpools, and flexible vanpool network strategies.

The Project **ICM** recommendation also includes the addition of dynamic merge/junction control, speed harmonization, advanced parking management systems for park-and-ride lots, multimodal traveler information including travel time information by mode, and implementing signal priority for transit vehicles in the corridor.

Lastly, the environmental study will also include consideration of a later phase to **widen** I-66 from I-495 to Fairfax Drive near Ballston, as identified in the I-66 Multimodal Study. Eastbound widening includes the addition of a third through lane between I-495 and Fairfax Drive near Ballston; westbound widening includes adding a lane between the Sycamore Street off-ramp west to the Washington Blvd. on-ramp and from the Dulles Connector to I-495. The environmental study will consider this widening with a horizon year of 2040, and will also test an interim year of 2025 for this improvement.

### **Tolling Policy**

As on the other Express Lane facilities in the region, tolls would be congestion-based. To use this section of I-66 inside the Beltway during the peak periods in either direction, motorists would have the choice of forming a 3+ carpool, taking transit, or paying a toll. Carpools of three or more persons, buses, motorcycles, and emergency response vehicles will ride free. Other vehicles not meeting the occupancy requirement will be required to pay a toll, using electronic toll collection equipment, at a rate that will vary based on the level of congestion, to ensure free-flow conditions as specified by Federal and State regulations.

The region's current Constrained Long Range Plan calls for all HOV lanes in Northern Virginia to be HOV-3+ by 2020. Allowing HOV-3 vehicles to ride free is consistent with this policy change, and will also match the occupancy requirement on I-495 and the I-95 Express Lanes. The Project provides a seamless network of Express lanes by connecting to adjacent Express facilities.

It is envisioned that VDOT will operate and maintain the facility. Toll revenues will be used to offset design, construction, operating and maintenance costs of the project. Project revenues will also provide a funding source for multimodal improvements identified in the Description section of this project.

MAP-21 mandates strict performance standards which are intended to ensure free-flowing conditions on the Express lanes. The proposed Express lanes project will include performance monitoring as an integral part of the project and ensure that the MAP-21 mandated performance standards are complied with as a minimum. More specifically, the project will meet all applicable requirements of MAP-21 regarding "HOV Facility Management, Operation, Monitoring, and Enforcement" as described in Section 166 of Title 23 U.S.C., inclusive of the amendments (deletions, insertions and additions) prescribed by MAP-21 Section 1514 "HOV FACILITIES". This includes a minimum average operating speed of 45 mph for 90% of the time over a specific period of time during the peak period.

## Schedule

Project development and procurement will take place in 2015, followed by construction starting in 2016. Tolling is expected to enter operations in 2017, along with the first (Group 1) multimodal improvements. The Group 2 multimodal improvements are expected by 2025. Group 3 multimodal improvements and widening are expected by 2040.

## Federal Environmental Review (“NEPA”) Process

Project scoping is currently underway and will result in the appropriate level of NEPA documentation in coordination with FHWA and FTA as appropriate.

## Coordination with Other Projects

The Project will be coordinated closely with other initiatives such as the Active Traffic Management (ATM) project and the potential I-66 Express Lanes project outside the Beltway. The Project will also be coordinated with future improvements that may be underway in the corridor.

## Financial Plan

The total baseline cost for the Project is estimated to be approximately \$350M (in year of expenditure dollars). This estimate includes the cost of tolling, multimodal improvements, and roadway widening.

## Stakeholder Outreach

VDOT and DRPT will work closely with Arlington County, Fairfax County, the City of Falls Church, transit providers, and other stakeholders to implement a comprehensive outreach program. The outreach program will provide the opportunity for direct engagement with various groups along the corridor, including the local political leadership, transit service providers, various other interest groups, and business and community leaders. There will also be opportunities for the public to learn more about the Project, as well as provide comments, both through the CLRP process and the NEPA process.

11. Projected Completion Year: **2017 (tolling, Group 1 multimodal),  
2025 (Group 2 multimodal),  
2040 (Group 3 multimodal, widening)**
12. Project Manager: **Ms Susan Shaw, P.E.**
13. Project Manager E-Mail: **[susan.shaw@VDOT.Virginia.gov](mailto:susan.shaw@VDOT.Virginia.gov)**
14. Project Information URL: **<to be determined>**
15. Total Miles: **10 miles (approximate)**

16. Schematic:



17. Documentation: **<to be determined>**

18. Jurisdictions: **Fairfax County, Arlington County**

19. Baseline Cost (in Thousands): **\$350,000**

20. Amended Cost (in Thousands): cost estimate as of MM/DD/YYYY

21. Funding Sources:  Federal;  State;  Local;  Private;  Bonds;  Other

### Regional Policy Framework

#### 22. Provide a Comprehensive Range of Transportation Options

Please identify all travel mode options that this project provides, enhances, supports, or promotes.

Single Driver  Carpool/HOV  Metrorail  Commuter Rail  Streetcar/Light Rail  
 BRT  Express/Commuter bus  Metrobus  Local Bus  Bicycling  Walking  Other

Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low-incomes, and/or limited English proficiency?)  Yes  No

#### 23. Promote Dynamic Activity Centers

Does this project begin or end in an Activity Center?  Yes  No  
Does this project connect two or more Activity Centers?  Yes  No  
Does this project promote non-auto travel within one or more Activity Centers?  Yes  No

**24. Ensure System Maintenance, Preservation, and Safety**

Does this project contribute to enhanced system maintenance, preservation, or safety?  
 Yes  No

**25. Maximize Operational Effectiveness and Safety**

Does this project reduce travel time on highways and/or transit without building new capacity (e.g., ITS, bus priority treatments, etc.)?  Yes  No

Does this project enhance safety for motorists, transit users, pedestrians, and/or bicyclists?  
 Yes  No

**26. Protect and Enhance the Natural Environment**

Is this project expected to contribute to reductions in emissions of criteria pollutants and/or greenhouse gases?  Yes  No

**27. Support Interregional and International Travel and Commerce**

Please identify all freight carrier modes that this project enhances, supports, or promotes.  
 Long-Haul Truck  Local Delivery  Rail  Air

Please identify all passenger carrier modes that this project enhances, supports, or promotes.

Air  Amtrak intercity passenger rail  Intercity bus

**28. Additional Policy Framework**

In the box below, please provide any additional information that describes how this project further supports or advances these and other regional goals.

**MAP-21 PLANNING FACTORS**

29. Please identify any and all planning factors that are addressed by this project:

a.  Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

b.  Increase the **safety** of the transportation system for all motorized and non-motorized users.

- i. Is this project being proposed specifically to address a safety issue?  Yes;  No
- ii. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:

c.  Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.

d.  Increase **accessibility and mobility** of people.

e.  Increase accessibility and mobility of **freight**.

f.  Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

g.  Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.

h.  Promote efficient system **management and operation**.

i.  Emphasize the **preservation** of the existing transportation system.

## ENVIRONMENTAL MITIGATION

30. Have any potential mitigation activities been identified for this project?  Yes;  No

a. If yes, what types of mitigation activities have been identified?

Air Quality;  Floodplains;  Socioeconomics;  Geology, Soils and Groundwater;

Vibrations;

Energy;  Noise;  Surface Water;  Hazardous and Contaminated Materials;  Wetlands

The Environmental Process has not started yet. VDOT will assess the environmental impacts of the project as required by State and Federal law.

## CONGESTION MANAGEMENT INFORMATION

31. Congested Conditions

a. Do traffic congestion conditions necessitate the proposed project or program?

Yes;  No

b. If so, is the congestion recurring or non-recurring?  Recurring;  Non-recurring

c. If the congestion is on another facility, please identify it:

32. Capacity

a. Is this a capacity-increasing project on a limited access highway or other principal arterial?  Yes;  No

b. If the answer to Question 32.a was "yes", are any of the following exemption criteria true about the project? (Choose one, or indicate that none of the exemption criteria apply):

None of the exemption criteria apply to this project – a Congestion Management Documentation Form is required

The project will not use federal funds in any phase of development or construction (100% state, local, and/or private funding)

The number of lane-miles added to the highway system by the project totals less than one lane-mile

- The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange
- The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles
- The project consists of preliminary studies or engineering only, and is not funded for construction
- The construction costs for the project are less than \$10 million.

c. If the project is not exempt and requires a Congestion Management Documentation Form, [click here](#) to open a blank Congestion Management Documentation Form.

### **RECORD MANAGEMENT**

33. Completed Year:

34.  Project is being withdrawn from the CLRP.

35. Withdrawn Date: MM/DD/YYYY

36. Record Creator:

37. Created On:

38. Last Updated by:

39. Last Updated On:

40. Comments:



# Exhibit 1

## Transit Service Enhancements for I-66 Inside the Beltway 2015 CLRP Submission (placeholder subject to change\*\*)

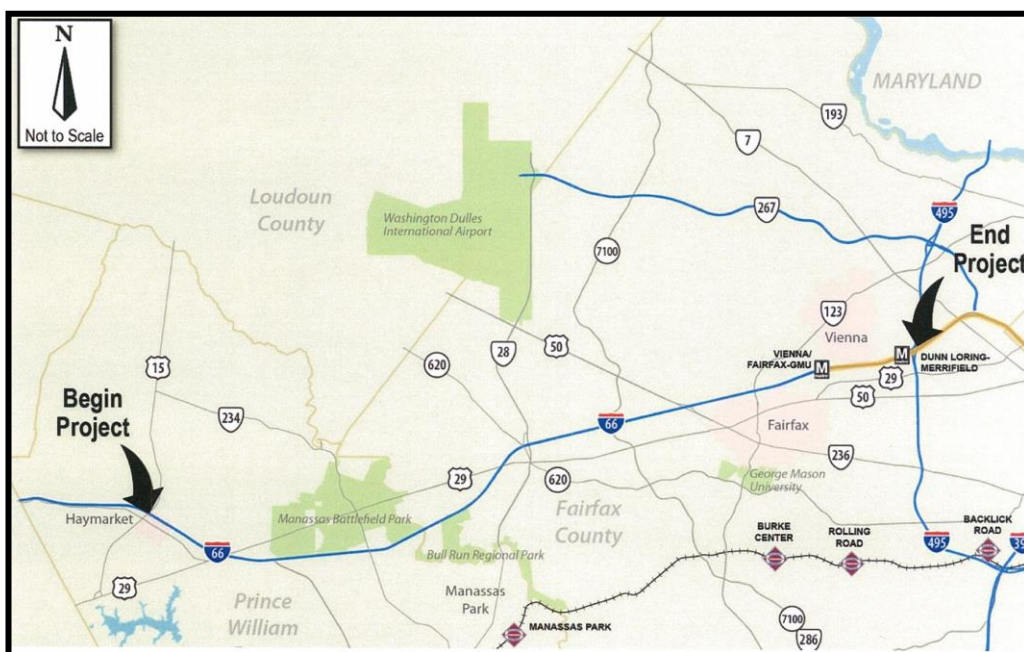
Route	Change
<b>New Outside the Beltway Services</b>	
Rapid Bus Service from outside the Beltway:	Bi-directional, all day + weekend
Haymarket to Arlington/DC	
Gainesville to Arlington/DC	
Manassas to Arlington/DC	
<b>New Priority Bus Services</b>	
U.S. 29 Priority Bus	Bi-directional, all day service
U.S. 50 Priority Bus - via Ballston	Bi-directional, all day service
U.S. 50 Priority Bus - via U.S. 50	Add route from Fair Lakes to D.C. core along U.S. 50
U.S. 50 Priority Bus - Tysons	Add route from Tysons Corner along U.S. 50 and Wilson Boulevard
<b>Local Routes in Study Area:</b>	
Metrobus 1B	Increase peak-period frequency; improve inbound runtime
Metrobus 1C	Increase peak and off-peak frequencies
Metrobus 1E	Improve runtime
Metrobus 2C	Increase peak and off-peak frequencies
Metrobus 3A	Extend routing to NVCC and East Falls Church and increase frequency
Metrobus 3E	Add reverse-peak direction service and increase peak-direction service frequency; add off-peak service
Metrobus 3T	Increase off-peak-period frequency
Metrobus 4A	Reroute to end at Seven Corners; increase frequency
Metrobus 4E	Increase peak-period frequency, improve runtime
Metrobus 4H	Improve runtime
Metrobus 10B	Increase peak-period frequency
Metrobus 15L	Increase peak-period frequency
Metrobus 22A	Increase peak-period frequency
Metrobus 23A	Increase peak-period frequency
Metrobus 23C	Increase peak-period frequency
Metrobus 25A	Increase peak and off-peak frequencies
Metrobus 25B	Increase northbound off-peak frequency and peak frequencies in both directions
Metrobus 28A	Increase peak-period frequency, improve runtime
Metrobus 28E	New route between Skyline Plaza and East Falls Church
Metrobus 38B	Increase frequency
<b>ART</b>	
ART 42	Increase the reverse-peak direction, peak-period frequency
ART 45	Increase peak-period frequency, improve run time
ART 52	Increase peak and off-peak frequencies
ART #75	Extend routing to Shirlington and Virginia Square; add off-peak service
ART #77	Extend to Rosslyn and increase frequency
New ART1	Add route between Arlington Hall and Crystal City
New ART2	Add route between Court House and Pentagon City

\*\*Services subject to change based on environmental study, public outreach, and stakeholder working group inputs.



# FINANCIALLY CONSTRAINED LONG-RANGE TRANSPORTATION PLAN FOR 2040 PROJECT DESCRIPTION FORM BASIC PROJECT INFORMATION

1. Submitting Agency: **Virginia Department of Transportation**
2. Secondary Agency: **Virginia Department of Rail & Public Transportation**
3. Agency Project ID: **0066-96A-297, P101    UPC#105500**
4. Project Type:
  - Interstate     Primary     Secondary     Urban     Bridge     Bike/Ped
  - Transit     CMAQ     ITS     Enhancement     Other
  - Federal Lands Highways Program     Human Service Transportation Coordination
  - TERMS
5. Category:
  - System Expansion;     System Maintenance;     Operational Program;
  - Study;     Other
6. Project Name: **I-66 Corridor Improvements Project Outside the Beltway**  
Prefix Route Name Modifier
7. Facility: **I-66**
8. From: **US 15, Prince William County**
9. To: **I-495, Fairfax County**



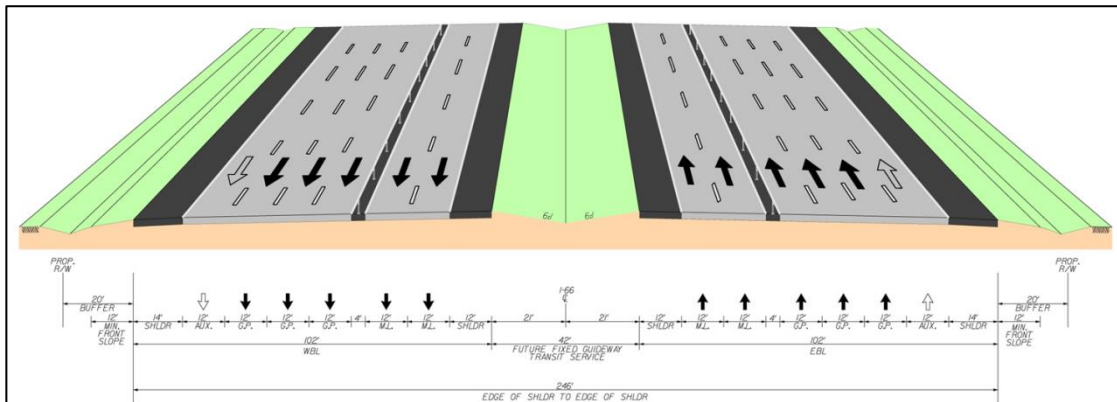
10. Description:

The Commonwealth's I-66 Corridor Improvements Project ("Project") outside the Beltway includes:

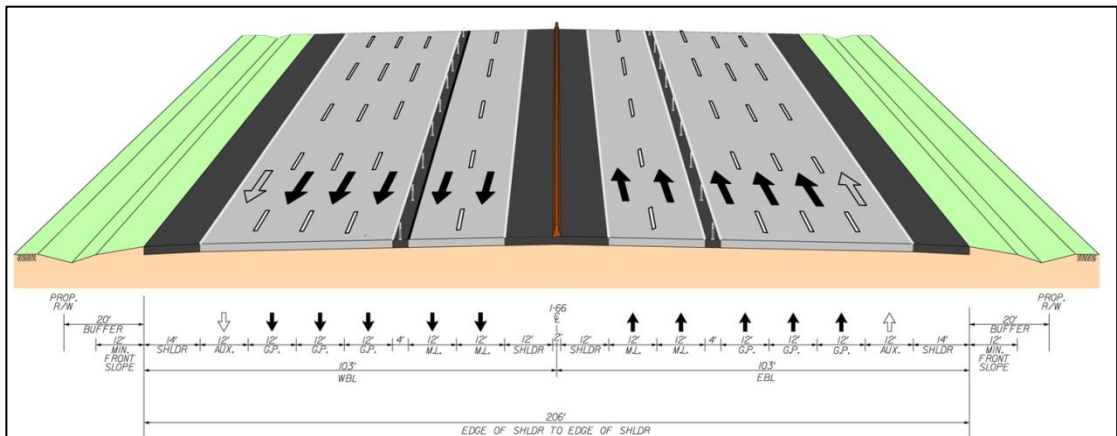
- Three general purpose lanes in each direction (with auxiliary lanes where needed);
- Two barrier-separated managed express lanes in each direction (the existing high-occupancy vehicle (HOV) lane will be converted to an express lane and one new express lane will be added);
- New high-frequency bus service with more predictable travel times;
- Direct access ramps to and from the managed lanes;
- New or expanded commuter park and ride lots in the corridor.

Below are two alternative typical sections being considered, depending on anticipated transit needs and impacts along the corridor.

*Alternative 2A – Flexible Barrier with Buffer & Median reserved for Future Center Transit*



*Alternative 2B – Flexible Barrier with Buffer and No Median*



As on the I-495 and I-95 Express Lanes, access to the I-66 Express Lanes will

be available to automobiles, motorcycles, light-trucks, emergency vehicles, buses and transit vehicles only. Vehicles with three or more occupants and motorcycles would travel on the Express Lanes for free, as per the code of the Commonwealth of Virginia and Federal law. The facility will be operated and HOV occupancy and toll payment enforced in a manner that complies with the statutory requirements of the Commonwealth. Other vehicles not meeting the occupancy requirement of 3+ will pay a toll, using electronic toll collection equipment, at a rate that will vary based on congestion, to ensure free-flow conditions as specified by Federal regulations.

The region's current Constrained Long Range Plan calls for all HOV lanes in Northern Virginia to be HOV-3+ by 2020. Allowing HOV-3's to ride free is consistent with this policy change, and will also match the High Occupancy Toll lane occupancy requirement on 495 and 95. The Project expands the NoVA network of Express lanes by connecting to the I-495 Express Lanes Project, which also connects to the newly constructed I-95 Express Lanes.

The project includes a robust transit component, consisting of new and modified commuter bus services providing one-seat rides between park and ride lots and major regional destinations, and new frequent all-day Rapid Bus service on I-66 to complement Metrorail in the corridor. New and expanded park and ride lots are included throughout the corridor, with easy or direct access to the managed lanes. Finally, to promote and incentivize alternative modes in the corridor, new and enhanced corridor transportation demand management strategies will be included as part of the project (see attachments).

Bicycle and Pedestrian accommodations in the corridor are currently being developed in cooperation with the localities, and will be consistent with VDOT's Policy for Integrating Bicycle and Pedestrian Accommodations ([www.virginiadot.org/bikepedpolicy/](http://www.virginiadot.org/bikepedpolicy/)).

Project construction, operations and maintenance will be procured using Virginia's Public-Private Transportation Act (PPTA) legislation leading to the selection of a private consortium ("Concessionaire"). A comprehensive agreement will ultimately outline all of the terms and conditions of the Public-Private Partnership.

### **Tolling Policy**

Express lanes use dynamic pricing to maintain free-flowing conditions for all users, even during rush hour. The toll rates will vary throughout the day corresponding to demand and congestion levels. Toll prices will be adjusted in response to the level of traffic to ensure free flowing operations.

Dynamic message signs will provide drivers with current toll rates so they can choose whether or not to use the lanes. Toll collection on the Express Lanes

will be totally electronic. There will be no toll booths. The dynamic message signs will be supplemented by other notification/communications methods to ensure all users, including transit operators, have as much advance notice of traffic conditions as is possible.

MAP-21 mandates strict performance standards which are intended to ensure free-flowing conditions on the Express lanes. The proposed Express lanes project will include performance monitoring as an integral part of the project and ensure that the MAP-21 mandated performance standards are complied with as a minimum. More specifically, the project will meet all applicable requirements of MAP-21 regarding "HOV Facility Management, Operation, Monitoring, and Enforcement" as described in Section 166 of Title 23 U.S.C., inclusive of the amendments (deletions, insertions and additions) prescribed by MAP-21 Section 1514 "HOV FACILITIES". This includes a minimum average operating speed of 45 mph for 90% of the time over a specific period of time during the peak period.

### **Schedule**

Construction for the Project is projected to begin in 2017, with an estimated construction completion time of 4-5 years. The facility is expected to enter operations in early 2021-2022. The current schedule calls for environmental review in compliance with Federal (NEPA) and state regulations. FHWA has further conditioned environmental approval to the Project being included in a conforming Transportation Improvement Program ("TIP") and Constrained Long Range Plan ("CLRP") for construction.

### **Federal Environmental Review ("NEPA") Process**

The Tier 2 Environmental Assessment scope builds upon and includes a combination of concepts identified in the Tier 1 Environmental Impact Statement. It will evaluate site-specific conditions and potential effects the proposed improvements would have on air quality, noise, neighborhoods, parks, recreation areas, historic properties, wetlands and streams. The environmental review is currently being conducted in full accordance and compliance with Federal and state law. FHWA is the 'Lead Agency' for the NEPA document and will provide document review / approval and issuance of FONSI at the conclusion of the process.

### **Transportation Management Plan**

As a matter of policy, practice and a reflection the agency's commitment to safety, VDOT adopts Transportation Management Plans for its construction projects. Such Plans are also required by FHWA for large projects such as this initiative. The congestion mitigation plans used for projects such as the Springfield Interchange, the I-495 Express Lanes, and the I-95 Express Lanes

have been very successful in managing traffic during construction. VDOT and the Concessionaire will similarly implement a robust Transportation Management Plan for this Project.

### **Coordination with Other Projects in the Corridor**

This project is being coordinated with other active projects in the corridor such as:

- Vaden Drive ramp improvements
- Active Traffic Management (ATM) project
- Route 28 / I-66 interchange improvements
- US 15 / I-66 interchange improvements
- HOV lane project from Gainesville to US 15

### **Financial Plan**

The total cost for the proposed Project is estimated to be approximately \$2 – 3 billion in year of expenditure dollars. Funding sources for the Project will include a combination of private and public equity and third party debt, including private bank loans and/or Private Activity Bonds, with the potential for TIFIA funding as a form of subordinated debt. As the Project progresses, VDOT will explore all avenues of funding to ensure the lowest cost of capital for the Project.

The Concessionaire will be fully authorized to toll the facility, which will serve to pay debt service, operating and maintenance costs and return on equity. Toll revenue will be the main source of revenue. The Commonwealth will enter into a Comprehensive Agreement with the selected Concessionaire, which will authorize the Concessionaire to raise the necessary funds to construct the Project.

### **Stakeholder Outreach**

A Stakeholder Technical Advisory Group (STAG) has been established and meets regularly. The STAG provides the opportunity for direct engagement with various groups along the corridor, including local jurisdictions, environmental resource agencies, transit service providers, and various other agencies. Stakeholder and public outreach is a high priority for the I-66 project team. A Transit/TDM Technical Advisory Group (TTAG) is also actively engaged in project development. There are opportunities for the public to learn more about the Project, as well as provide comments, through public meetings, the project website, and community dialogs in addition to other items. The Project may be updated in future CLRPs in response to the environmental process, public outreach, and stakeholder input.

11. Projected Completion Year: **2022**
12. Project Manager: **Ms Susan Shaw, P.E.**
13. Project Manager E-Mail: **susan.shaw@VDOT.Virginia.gov**
14. Project Information URL: **http://www.transform66.org**
15. Total Miles: **25 miles**
16. Schematic: **See figures in items 9 and 10 above.**
17. Documentation: **The graphics included in the response to items 9 and 10 above will be uploaded to allow a more readable version.**
18. Jurisdictions: **Fairfax County, Prince William County**
19. Baseline Cost (in Thousands): **\$2,000,000 - \$3,000,000 (approximately 2 to 3 \$billion) combined public & private cost estimate as of 11/10/2014**
20. Amended Cost (in Thousands): cost estimate as of MM/DD/YYYY
21. Funding Sources:  Federal;  State;  Local;  Private;  Bonds;  Other

### **Regional Policy Framework**

#### **22. Provide a Comprehensive Range of Transportation Options**

Please identify all travel mode options that this project provides, enhances, supports, or promotes.

Single Driver  Carpool/HOV  Metrorail  Commuter Rail  Streetcar/Light Rail  
 BRT  Express/Commuter bus  Metrobus  Local Bus  Bicycling  Walking  Other

Does this project improve accessibility for historically transportation-disadvantaged individuals (i.e., persons with disabilities, low-incomes, and/or limited English proficiency?)  Yes  No

#### **23. Promote Dynamic Activity Centers**

Does this project begin or end in an Activity Center?  Yes  No

Does this project connect two or more Activity Centers?  Yes  No

Does this project promote non-auto travel within one or more Activity Centers?  Yes  No

#### **24. Ensure System Maintenance, Preservation, and Safety**

Does this project contribute to enhanced system maintenance, preservation, or safety?

Yes  No

#### **25. Maximize Operational Effectiveness and Safety**

Does this project reduce travel time on highways and/or transit without building new capacity (e.g., ITS, bus priority treatments, etc.)?  Yes  No

Does this project enhance safety for motorists, transit users, pedestrians, and/or bicyclists?

Yes  No



## 26. Protect and Enhance the Natural Environment

Is this project expected to contribute to reductions in emissions of criteria pollutants and/or greenhouse gases?  Yes  No

## 27. Support Interregional and International Travel and Commerce

Please identify all freight carrier modes that this project enhances, supports, or promotes.

Long-Haul Truck  Local Delivery  Rail  Air

Please identify all passenger carrier modes that this project enhances, supports, or promotes.

Air  Amtrak intercity passenger rail  Intercity bus

## 28. Additional Policy Framework

In the box below, please provide any additional information that describes how this project further supports or advances these and other regional goals.

### MAP-21 PLANNING FACTORS

29. Please identify any and all planning factors that are addressed by this project:

a.  Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

b.  Increase the **safety** of the transportation system for all motorized and non-motorized users.

i. Is this project being proposed specifically to address a safety issue?  Yes;  No

ii. If yes, briefly describe (in quantifiable terms, where possible) the nature of the safety problem:

c.  Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.

d.  Increase **accessibility and mobility** of people.

e.  Increase accessibility and mobility of **freight**.

f.  Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

g.  Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.

h.  Promote efficient system **management and operation**.

i.  Emphasize the **preservation** of the existing transportation system.

### ENVIRONMENTAL MITIGATION

30. Have any potential mitigation activities been identified for this project?  Yes;  No

a. If yes, what types of mitigation activities have been identified?

Air Quality;  Floodplains;  Socioeconomics;  Geology, Soils and Groundwater;

Vibrations;

Energy;  Noise;  Surface Water;  Hazardous and Contaminated Materials;

Wetlands

## **CONGESTION MANAGEMENT INFORMATION**

### 31. Congested Conditions

a. Do traffic congestion conditions necessitate the proposed project or program?

Yes;  No

b. If so, is the congestion recurring or non-recurring?  Recurring;  Non-recurring

c. If the congestion is on another facility, please identify it:

### 32. Capacity

a. Is this a capacity-increasing project on a limited access highway or other principal arterial?  Yes;  No

b. If the answer to Question 32.a was "yes", are any of the following exemption criteria true about the project? (Choose one, or indicate that none of the exemption criteria apply):

None of the exemption criteria apply to this project – a Congestion Management Documentation Form is required

The project will not use federal funds in any phase of development or construction (100% state, local, and/or private funding)

The number of lane-miles added to the highway system by the project totals less than one lane-mile

The project is an intersection reconstruction or other traffic engineering improvement, including replacement of an at-grade intersection with an interchange

The project, such as a transit, bicycle or pedestrian facility, will not allow private single-occupant motor vehicles

The project consists of preliminary studies or engineering only, and is not funded for construction

The construction costs for the project are less than \$10 million.

c. If the project is not exempt and requires a Congestion Management Documentation Form, [click here to open a blank Congestion Management Documentation Form.](#)

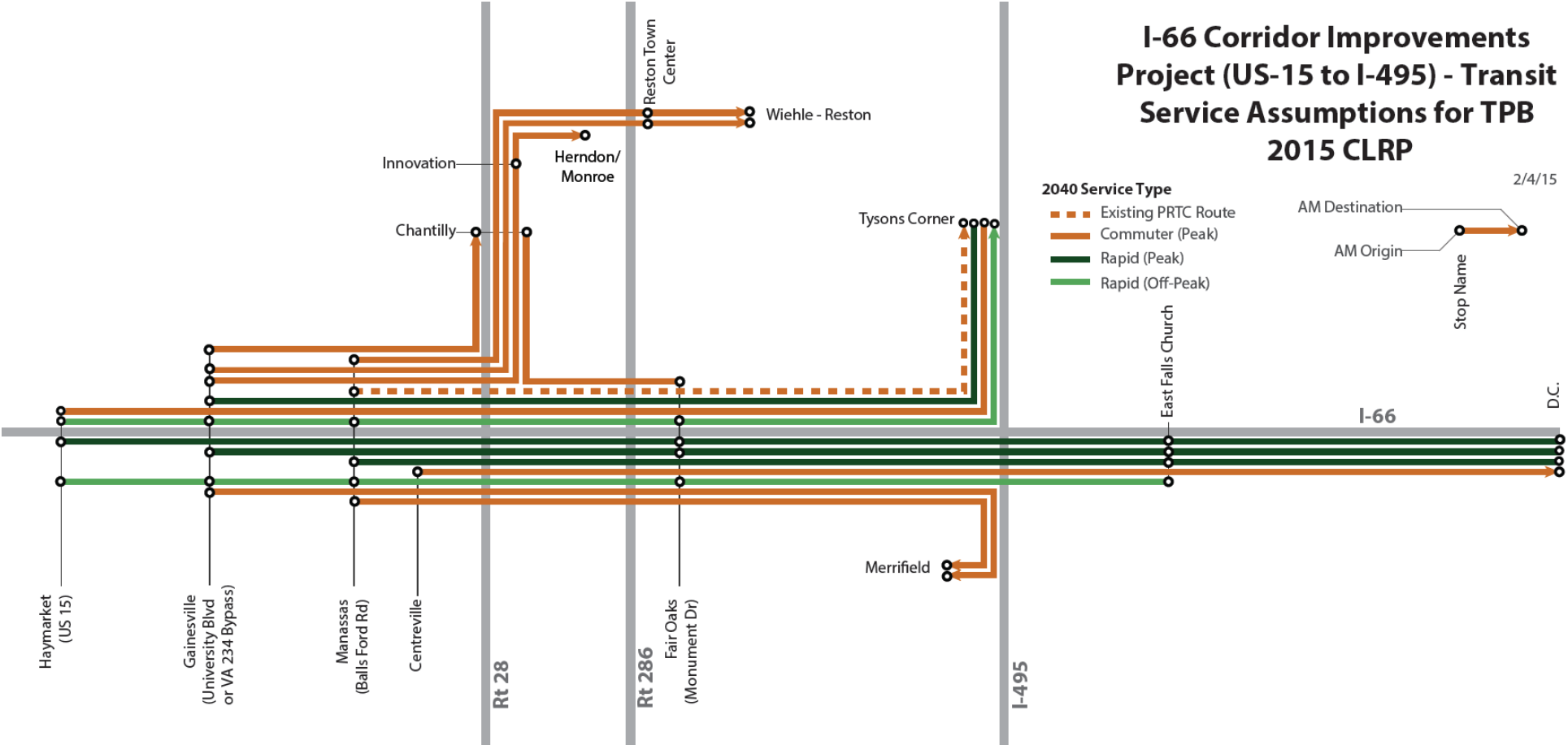
## **RECORD MANAGEMENT**

33. Completed Year:

I-66 Corridor Improvements Project (US 15 to I-495) - Transit Service Assumptions for TPB 2015 CLRP									
Route	New/ Existing	Year	Notes	Direction	Times	2022 Average Peak Frequency (minutes)	2022 Average Off-Peak Frequency (minutes)	2040 Average Peak Frequency (minutes)	2040 Average Off-Peak Frequency (minutes)
Haymarket to Arlington/Downtown DC Commuter Bus	New	2022		Peak Only	Peak Only	60	-	Replaced by Rapid Bus Service	
Haymarket to Arlington/Downtown Rapid Bus	New	2040	Stop at Monument; One off-peak route serves Haymarket, Gainesville & Manassas and terminates at E. Falls Church.	Bi-directional	All-day + Weekend	-	-	30	30
Haymarket to Tysons Corner Commuter Bus	New	2040		Peak Only	Peak Only	-	-	45	-
Gainesville to East Falls Church/ Downtown DC Rapid Bus		2022	Stop at Monument; One off-peak route serves Haymarket, Gainesville & Manassas and terminates at E. Falls Church.	Bi-directional	All-day + Weekend	25	60	10	30
Gainesville to Tysons Corner Commuter Bus	Existing		PRTC's Linton Hall Metro Direct	Peak Only	Peak Only	30	-	Continued operation of existing service at the discretion of PRTC with Rapid Bus in place.	
Gainesville to Tysons Corner Rapid Bus		2040	One off-peak route serves Haymarket, Gainesville & Manassas.	Bi-directional	All-day + Weekend	-	-	25	60
Gainesville to Merrifield Commuter Bus		2040		Peak Only	Peak Only	-	-	35	-
Gainesville to Reston Commuter Bus		2022		Peak Only	Peak Only	45	-	25	-
Gainesville to Innovation/Herndon Commuter Bus		2022		Peak Only	Peak Only	60	-	30	-
Gainesville to Chantilly Commuter Bus		2022		Peak Only	Peak Only	60	-	25	-
Manassas to East Falls Church/Downtown DC Rapid Bus		2022	One off-peak route serves Haymarket, Gainesville & Manassas and terminates at E. Falls Church.	Bi-directional	All-day + Weekend	45	60	25	30
Manassas to Tysons Corner Commuter Bus	Existing		PRTC's Manassas Metro Direct	Peak Only	Limited mid-day	30	60	30	60
Manassas to Merrifield Commuter Bus		2040		Peak Only	Peak Only	-	-	45	-
Manassas to Reston Commuter Bus		2040		Peak Only	Peak Only	-	-	60	-
Centerville to Downtown DC Commuter Bus		2040		Peak Only	Peak Only	-	-	25	-
Fair Oaks to Chantilly Commuter Bus		2040		Bi-directional	Peak Only	-	-	60	-

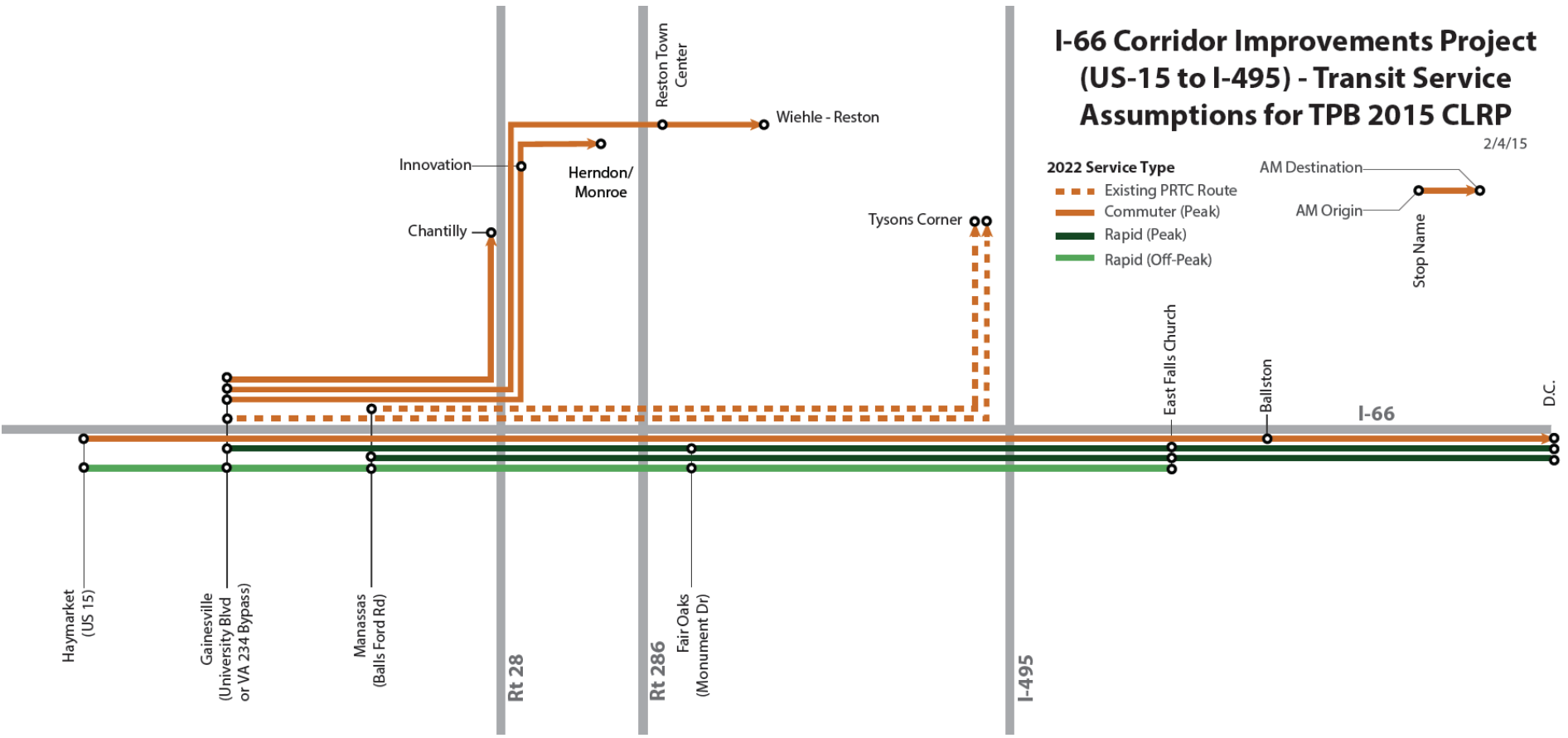
\*Existing PRTC Metro Direct services shown for informational purposes only

# I-66 Corridor Improvements Project (US-15 to I-495) - Transit Service Assumptions for TPB 2015 CLRP



# I-66 Corridor Improvements Project (US-15 to I-495) - Transit Service Assumptions for TPB 2015 CLR

2/4/15



## Transit and Transportation Demand Management (TDM) Definition for I-66 Corridor Improvements Project

### Introduction

A transit and transportation demand management (TDM) planning process is underway by VDOT and DRPT in coordination with the development of the I-66 Corridor Improvements Project (Project). It is anticipated that the planning will result in an I-66 Transit and TDM Implementation Plan with recommendations that will be integrated with the proposed elements of the I-66 Project. The transit/TDM recommendations will support the overall purpose and need of the Project, seeking to achieve the following objectives:

- Efficient use of public transportation infrastructure and services
- Reduction in congestion
- Increase in the availability and reliability of travel choices
- Improvement in the attractiveness, reliability, and quality of transit
- Increase in park-and-ride space supply, convenience, and availability
- Effective use of the region's developed and emerging managed lanes network including I-66, I-495, I-395, and I-95 through Integrated Corridor Management (ICM)

The following sections briefly define the primary elements of the transit and TDM Implementation Plan, which include:

- Park-and-ride facilities
- Transit services
- TDM programs

### Park-and-Ride Facilities

Park-and-ride facilities are an essential part of the transit, TDM, and ICM support infrastructure in the I-66 corridor. These facilities will offer people direct access to transit services, perform a role in people's transition from one mode to another, and support carpooling, vanpooling and casual carpooling/slugging. The nature of existing and future development along the I-66 corridor is such that much of the transit demand in the corridor will be generated by park-and-ride activity and through coordinated local transit and corridor rapid bus services.

Given the role of park-and-ride facilities in the corridor, it is anticipated that the Transit and TDM Implementation Plan will recommend an increase in the number of these facilities and in the supply of parking in the corridor. The plan will also likely recommend improved amenities at park-and-ride facilities, as well as more direct access between the facilities and I-66. The following locations are currently being recommended for proposed park-and-ride lots as part of the I-66 Project:

- Haymarket, west of the I-66/Route 15 interchange (new facility)
- Gainesville, off of University Boulevard (new facility)
- Route 234 Bypass (Cushing Road), east of the I-66 interchange (expansion of existing facility)
- Balls Ford Road, west of Route 234 Business (new facility)
- Stringfellow Road (expansion of existing facility, currently underway by Fairfax County)
- Monument Drive/Fairfax Corner (new facility, likely structured parking)
- Vienna Metrorail Station (possible improvements of access to existing facility)

It is anticipated that the I-66 Transit/TDM Implementation Plan will recommend the following services and amenities at the existing proposed park-and-ride facilities:

- Park-and-ride parking for privately-owned vehicles
- Real-time parking availability information
- Kiss-and-ride accommodation
- Dedicated space for transit operations (bus bays and station/stop facilities)
- Waiting area for buses (shelters, sidewalk, plaza area, etc.)
- Waiting/queuing area for casual carpooling/slugging (depending on anticipated demand)
- Pick-up space for vehicles picking up/dropping off casual carpoolers/sluggers
- Lighting (at bus stations and in lots)
- Static and real-time transit service information
- Landscaping
- Pedestrian walkways
- Bicycle racks, lockers, and/or shelters
- Interconnecting transit service (e.g., local feeder services and rapid bus service on I-66)
- Direct or nearly direct access to/from I-66 managed lanes via new ramps
- Multimodal access from arterial street network (including pedestrian and bicycle access)

Working in coordination with VDOT operations of the corridor, including intelligent transportation system (ITS) elements of the I-66 Corridor Improvements Project, transit and TDM recommendations for park-and-ride facilities will also likely include the development of infrastructure to support the provision of real-time information about park-and-ride facility utilization and transit service information and vanpool and carpool matching to travelers utilizing ICM applications (possibly a mixture of publically-provided information and private applications).

## Transit Services

It is anticipated that a combination of existing local and new or expanded corridor-focused transit services will serve weekday and weekend peak and off-peak hour demand intersecting with and along the I-66 corridor. The I-66 Transit/TDM Implementation Plan will likely introduce a new I-66 rapid bus service that will increase service efficiency and effectiveness, while increasing its convenience and utility for many trip purposes and travel periods. The Implementation Plan will also consider increased commuter bus service that will offer peak period service. The transit and TDM plan recommends a mixture of the following transit services:

- **Commuter Bus Services:** Services focused on one-seat rides. The Transit and TDM Implementation Plan will likely recommend strategic routes and other commuter service in the corridor to enhance connectivity to major destinations in DC, Arlington, Vienna, Merrifield, Tysons, Fair Lakes, Reston, Herndon, Centreville, and Manassas. The plan will likely encourage service and facility coordination with these services to enable operators to take advantage of new park-and-ride facilities and their improved access to the corridor.
- **I-66 Rapid Bus Service (RBS):** Service specifically for the I-66 corridor operating as a bus extension/compliment of the Metrorail Orange Line. It is anticipated that the I-66 RBS will operate on several route patterns to offer frequent headways and all-day service to and from key park-and-ride lots (with direct ramp access to/from managed lanes). RBS will operate in the managed lanes with the intention of providing users more daily, reliable rides to and from their destinations.

## TDM Programs

TDM programs at several levels of investment and market penetration will likely be recommended as a part of the pending I-66 Transit and TDM Implementation Plan. TDM programs will be designed to complement and support transit facility, infrastructure, and service recommendations. TDM recommendations will be focused on increasing the number, convenience, and effectiveness of travel choices in the I-66 corridor, as well as on managing travel demand during construction and post construction. TDM recommendations will include the following strategies:

- Carpool formation assistance and incentives
- Vanpool formation assistance and incentives
- Employer and destination outreach, services and information
- Home-based outreach
- Promotion of transit, vanpooling and carpooling
- Enhancement of web-based and mobile app ridematching service
- Support for casual carpooling (slugging)

## Summary

The current I-66 Transit and TDM planning by VDOT and DRPT will complement the development of the I-66 Corridor Improvements Project. It is anticipated that the planning will be completed in mid-2015 with the primary outcome being an I-66 Transit and TDM Implementation Plan. The plan will include recommendations to be integrated with the proposed I-66 Project, such as park-and-ride lot locations and sizes, enhancement and expansion of transit services, and implementation of TDM programs.





# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF TRANSPORTATION

4975 Alliance Drive  
Fairfax, VA 22030

**CHARLES A. KILPATRICK, P.E.**  
COMMISSIONER

January 15, 2015

The Honorable Phil Mendelson, Chairman  
National Capital Region Transportation Planning Board  
Metropolitan Washington Council of Governments  
777 North Capitol Street, N.E., Suite 300  
Washington, DC 20002-4201

RE: I-66 Corridor Improvements Project (Outside the Beltway) and I-66 Multimodal Improvement Project (Inside the Beltway)

Dear Chairman Mendelson:

As part of the Virginia Department of Transportation's (VDOT) submission of projects for the National Capital Region Transportation Planning Board's 2015 Constrained Long Range Plan (CLRP) and the 2015 CLRP Air Quality Conformity Assessment, we would like to provide additional information to the TPB on two key projects: the I-66 Corridor Improvements Project (Outside the Beltway) and the I-66 Multimodal Improvement Project (inside the Beltway).

The I-66 Corridor Improvement Project (Outside the Beltway) extends from U.S. Route 15 in Prince William County to I-495 in Fairfax County. In addition to roadway widening and multimodal elements, VDOT has submitted two alternative versions of the access points to be included in the TPB's analysis. The completion date for the Outside the Beltway project is 2022.

The I-66 Multimodal Improvement Project (Inside the Beltway) extends from I-495 in Fairfax County to U.S. Route 29 in Arlington County. There are two major components to the Inside the Beltway project. The first component involves multimodal improvements, with the peak-period tolling component starting in 2017. The second component involves widening of some sections of the corridor to provide three lanes in each direction, to be completed after 2025.

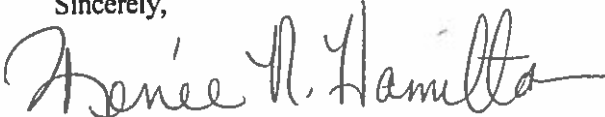
In order to provide background information on the two multimodal projects in advance of the Board meeting, the attached documents provide an overview of the project development for the I-66 multimodal corridor:

- Executive Summary of the I-66 Transit/TDM Study Final Report, December 31, 2009
- Executive Summary of the I-66 (Outside the Beltway) Tier I Environmental Study
- Executive Summary of the I-66 (Inside the Beltway) Multimodal Study Final Report, June 2012
- Executive Summary of the I-66 (Inside the Beltway) Multimodal Study Supplemental Report, August 2013

Mr. Phil Mendelson  
January 15, 2015  
Page 2

VDOT will make presentations on both projects at the January 21, 2015 Board meeting. Thank you for your consideration of these two very important projects.

Sincerely,

*for*   
Helen L. Cuervo, P.E.  
District Administrator  
Northern Virginia District

cc: Ms. Renée Hamilton, VDOT-NoVA  
Ms. Jennifer Mitchell, VDRPT  
Ms. Susan Shaw, VDOT-NoVA  
Mr. Norman Whitaker, VDOT-NoVA

# **I-66 Transit/TDM Study Final Report**

**December 31, 2009**

**Developed by  
I-66 Transit/TDM Technical Advisory Committee**

**Project Lead  
Virginia Department of Rail and Public Transportation  
600 East Main Street, Suite 2102  
Richmond, VA 23219  
[www.drpt.virginia.gov](http://www.drpt.virginia.gov)**

## ES.0 Executive Summary

The purpose of the I-66 Transit/Transportation Demand Management<sup>1</sup> (TDM) Study was to identify more transportation choices through transit service and TDM program enhancements to increase mobility in the corridor. The study set out to develop a recommended plan for short- and medium-term transit and TDM service improvements in the I-66 corridor between Haymarket and Washington, D.C. and to be positioned to provide input into the restart of the Virginia Department of Transportation (VDOT) I-66 Multimodal Transportation Environmental Study. The study was mindful to offer approaches that could lay the groundwork for rail extension in the long term.

The study was conducted by the I-66 Transit/TDM Technical Advisory Committee (TAC) consisting of members from state, regional, and local jurisdictions, transit agencies, and transportation demand management providers in cooperation with the Virginia Department of Rail and Public Transportation (DRPT). This multimodal transportation planning effort utilized the results of a market research survey, travel demand forecasting, and park-and-ride demand forecasting, as well as the expertise of the TAC to develop and consider alternative recommendations.

This Executive Summary provides a summary of the key messages emerging from the TAC's work as well as an overview of the study, including the major activities, findings, and recommendations. More detailed information is available on all of the topic areas within the body of the report.

### ES.1 Key Messages

Key messages from the I-66 Transit/TDM Study include:

- Today there is robust transit service in the I-66 corridor, including many local and express bus routes with good service frequencies, in addition to trains traveling downtown every six minutes during the peak period on the Metrorail Orange Line. Additionally, complementary transit services operate nearby on U.S. 29, U.S. 50, and on the VRE Manassas Line. However, high quality service is limited during off-peak periods and in the reverse peak direction.
- The projections for the location of households and employment in 2030 for the I-66 corridor indicate that some future land uses in the corridor will be less conducive to being served by transit. Unless corridor-wide transit-oriented development strategies are implemented, sprawl and congestion will continue to grow with an expected 22 percent increase in commuter trips originating in locations within the corridor and an expected 40 percent increase in commuter trips destined to the corridor (due to employment growth exceeding residential growth). There would still be a large market for transit services and potentially some new markets; however, expected growth areas not easily served by transit should be reviewed for impacts on the transportation system.
- The recommended Priority Bus<sup>2</sup> transit improvements will greatly increase service frequency to important destinations from within the corridor by 2030 and, thus, attract more people to

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<sup>1</sup>Transportation Demand Management is the application of strategies and programs to change travel behavior in order to reduce the demand on highways and to improve the performance of the transportation system (e.g., carpooling, vanpooling, park-and-ride facilities, guaranteed ride home programs, and shared-ride benefits and support programs).

<sup>2</sup>Priority Bus service includes BRT or elements of BRT that improve the quality and dependability of transit service, including frequent service, substantial stations, improved reliability, advanced technology and information systems, direct access to stations, modern vehicles, and distinct branding

live in the activity centers and ride transit, potentially reducing sprawl. For example, in Haymarket, interlined service frequency to major work destinations will increase from once every 60 minutes to once every 10 minutes (with new destinations served). At Centreville, interlined service frequency will increase from about one bus every six minutes to one bus every two minutes.

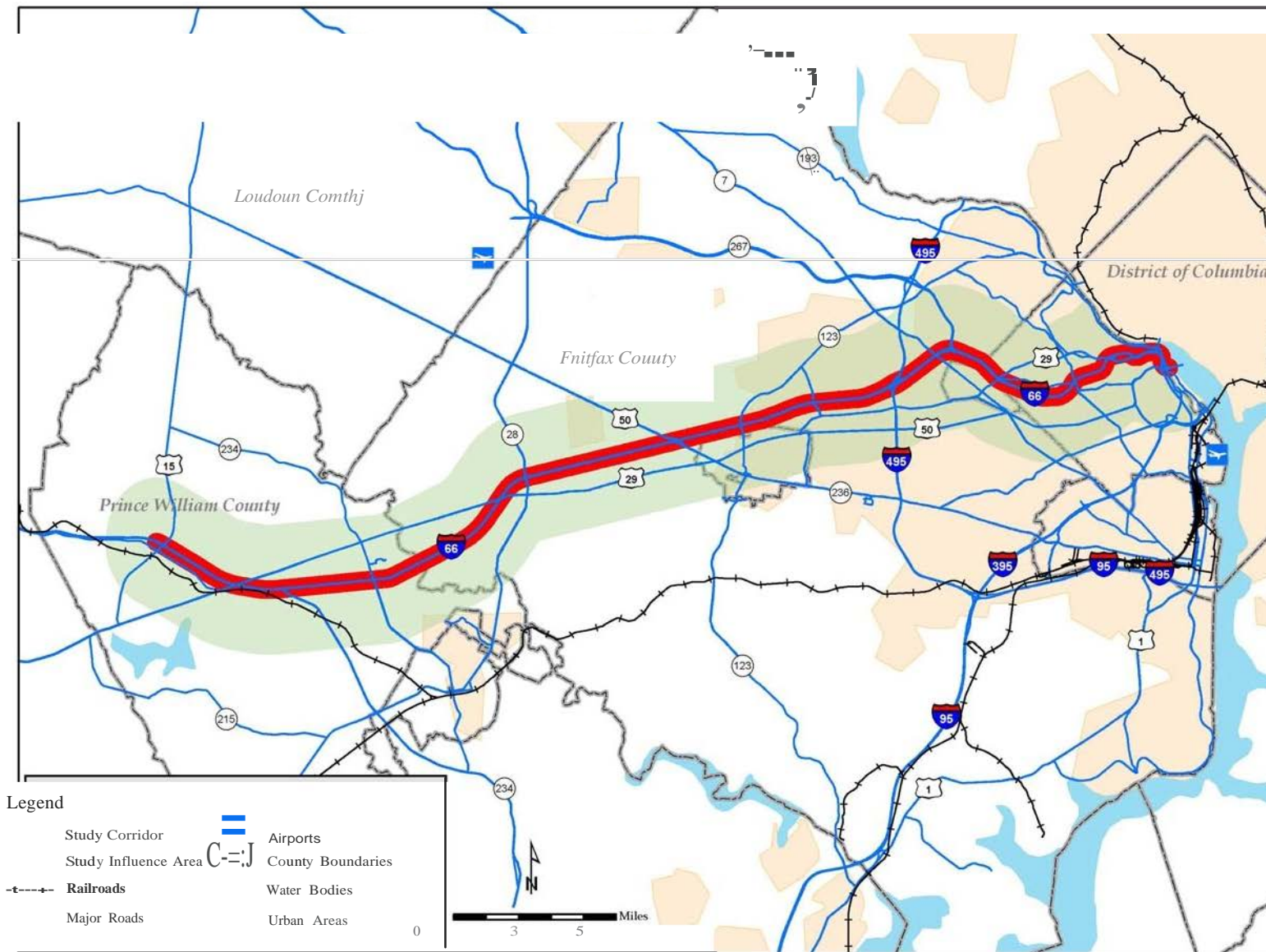
- The recommended Priority Bus transit improvements will also reduce the number of transfers required and create travel time savings to major markets in the I-66 corridor versus existing transit service, attracting more people to transit. For example, a 20 percent time savings is forecast for transit trips via services on U.S. 50 or U.S. 29. A 25 percent time savings is forecast from Haymarket to D.C. and a 10 percent time savings is forecast from Centreville to D.C.
- The full set of recommendations improves transit reliability and attractiveness, resulting in more people moving in the corridor by transit. Similar to the Dulles Corridor, Priority Bus improvements and facilities can be implemented in the short term and lay the groundwork for an extension of rail in the corridor in the long term. The limits of the short-term recommendations confirm that the long-term strategy for the corridor must continue to advance in order to provide the capacity required to meet forecasted demand.
- The recommended TDM programs provide benefits to all travelers in the corridor by reducing vehicle trips, providing a range of travel options, and raising awareness of transit services in the corridor; the corridor and its options are able to meet the needs of more people. As an added benefit, TDM programs have a generally lower cost than infrastructure improvements and can be implemented in the corridor quickly.
- The short-term recommendations require capital investment of \$126.8 million and an annual operating cost of \$11.8 million above the cost of existing service. The medium-term recommendations require additional investment beyond the short-term recommendations, including \$163.7 million in additional capital investment (including replacement vehicles for improvements implemented in the short term). The annual operating cost for the medium-term recommendations is \$14.7 million; \$2.9 million more than the short-term recommendations. All of these figures are expressed in constant 2010 dollars and are net of projected farebox revenues.
- The study was conducted using the latest regionally adopted analysis tools and associated assumptions. These do not yet officially reflect significant ongoing activities, such as potential changes in land use for Tysons Corner and changes to HOV operations that could further increase the benefits of the strategies recommended in this study.

## ***ES.2 Study Overview***

The I-66 Transit/TDM Study represents a part of efforts by the Commonwealth of Virginia to review various multimodal solutions to manage existing congestion and expected growth in the I-66 corridor. This study is focused on identifying short- and medium-term transit and TDM improvements (infrastructure, services, and programs) for the corridor.

The study area comprises an area of approximately two miles on either side of the corridor defined by I-66 from U.S. 15 in Haymarket, Virginia, east to the District of Columbia. The study area included consideration of U.S. 29 and U.S. 50. Figure ES-1 shows the boundaries of the study area. Major destinations in the study area include the Washington D.C. core, Pentagon area, Rosslyn-Ballston corridor, Tysons Corner, Fair Lakes, Centreville, Gainesville, and Haymarket.

Figure ES-1.1-66 Transit/TOM Study Area



The project was executed as a series of closely associated tasks covering a spectrum of activities from data collection through analysis to development of recommendations. A public information program was an important activity throughout the project. The TAC, made up of agency and operator stakeholders, carefully guided the work. Ultimately, a set of multimodal recommendations were developed that encompassed transit service, transit stations, pedestrian and bicycle facilities, TDM strategies, and park-and-ride lots. Cost and revenue projections for these recommended elements were developed in the final stage of the study.

### ***ES.3 Existing Conditions***

The I-66 corridor features a wide range of transit services, including commuter rail operated by VRE, Metrorail service operated by WMATA, and various bus services, including express buses, operated by multiple agencies. Thousands of commuters use transit daily in the corridor. A variety of TDM programs and services also operate in and around the study corridor and support ridesharing and transit use as well as reduce overall travel demand. Park-and-ride lots in the corridor are generally heavily used, especially those associated with rail service.

The existing I-66 HOV lane is a critical element in the success of the existing transit services, providing the incentive of travel time savings to transit riders and carpoolers as compared to if the lane did not exist. However, pressure has been developing that is affecting the performance of the lane, and this has been exacerbated by recent construction work related to the Beltway HOT facility construction. Friction from the adjacent general purpose lane, in part due to a lack of physical separation, leads to degradation of the travel time savings available in the HOV lane and threatens the attractiveness of carpooling and transit in the corridor.

### ***ES.4 General Travel Forecasts***

Projected growth in population and employment in the corridor are expected to significantly increase in future years and additionally strain transit and highway capacity. This is particularly true in the I-66 corridor where growth and development is currently expected to occur. Areas forecast to experience the most substantial household growth include areas on the far western end of the corridor in Prince William County, west of the City of Fairfax and in Tysons Corner in Fairfax County, and in some parts of Arlington County. Several areas are forecast to experience major employment growth including the area near Dulles International Airport in both Loudoun and Fairfax Counties and the Tysons Corner area in Fairfax County.

In addition to existing traditional commuter patterns to the urban core, the marked increase in population, employment, and activity centers along the western half of the I-66 corridor suggests an increasing likelihood of a gain in prominence of reverse commuting patterns. However, this pattern of commuting is more challenging to serve with transit than are more traditional core commutes and thus the need to consider TDM programs, including ridesharing and telework, as part of the mix is clear. Of course, the form of the development in the corridor is a critical element to consider. Campus-type commercial developments and residential culs-de-sac are not transit friendly. To the extent that transit-oriented development (TOD) can be encouraged, then it may be possible to develop non-core-oriented transit services that are successful. Transit service works best for concentrated travel markets and requires supportive land use policies for optimum conditions.

The appeal of transit has grown in recent years and could signal a paradigm shift where commuters are more receptive to the idea of using transit. Coupled with enhancements in the quality and dependability of service, the potential for Priority Bus services to attract additional riders seems clear. As part of the I-66 Transit/TDM Study, exploration was made of the attractiveness of elements of improved transit service and a framework was developed for

potential expansion of implementation of Priority Bus infrastructure and services to the corridor. Implementation of Bus Rapid Transit or enhancement of the existing commuter bus and express bus services were among the alternatives considered as part of the study.

### ***ES.5 Market Research Findings***

As part of the outreach effort for this study, an extensive market research program was conducted. The market research was used to determine current travel patterns, attitudes, and preferences by mode in the study corridor and to explore expected changes in travel behavior as a result of introducing possible enhanced infrastructure, programs, and services. Postcard invitations were mailed to approximately 75,000 households, and direct e-mail lists with thousands of additional contacts were used to reach other potential participants. Nearly 3,000 completed interviews were obtained across the desired target segments to enable analysis with appropriate levels of statistical confidence.

The market research indicated:

- There is strong potential support in the corridor for new and/or improved transit services;
- Dependability is a critical attribute of successful bus services in the corridor;
- Time and cost are more important to commuters than whether the Priority Bus services offered are “BRT” or other forms of express bus;
- Employer and institutional TDM support is necessary to encourage use of modes other than single-occupant vehicles. For example, the availability of employer transit benefits and the presence of the guaranteed ride home program (GRH) are factors in mode choices being made in the corridor;
- Expanded telework programs could eliminate some commuter trips altogether; and
- There is a need for increased marketing of the availability of transit services and TDM programs to realize the full potential for ridership and usage.

The market research fed into the development of the analyzed alternatives, including the definition of potential Priority Bus services for the corridor. Ultimately, the formulation of the study recommendations was also informed by the market research.

### ***ES.6 Public Information Program Findings***

The information program for the study included extensive communication and outreach, including conducting stakeholder interviews and holding public meetings. For the stakeholder interview program, a selection of more than 40 stakeholders were interviewed, in consultation with the TAC, representing a broad and diverse cross-section of public interests including: elected and appointed officials; local transportation agency leaders; and representatives from home owners associations, civic associations, chambers of commerce, special interest groups for land use and alternative transportation modes, and industry associations. The interviews covered stakeholder knowledge of the study, preferences on mobility solutions in the corridor, and ideas on ways to communicate about the study. The interviews took the form of a dialog, guided by tailored interview protocols. The interviews provided valuable insights and guided the development of recommendations, including highlighting the criticality of the reliability of the I-66 HOV lane, the importance of providing fast and dependable transit service, and the wide support for transit and TDM improvements.



Six public information meetings were also performed as part of the public outreach program, in two rounds. Presentation boards, slides, handouts, and web site materials were developed for the purpose of informing interested citizens in the corridor about the study process and comment forms (paper and electronic) and question and answer sessions were used to solicit input for use in the study. The meetings were held in Arlington, Fairfax, and Prince William Counties and included both a formal presentation and an open house component. In addition, fact sheets were developed as the study progressed to share information about the progress of the study and its key findings. The input received from the public through this project confirmed the strong desire for transit service enhancements and improvement of the reliability of the underlying HOV lane and guided the development of recommendations.

## ***ES.7 Analysis Findings***

A set of three initial alternatives and a final refined alternative were among the improvement scenarios tested. In developing the alternatives, the focus was on short- and medium-term enhancements that could be made to transit infrastructure and services and TDM programs. The objectives that guided the definition and analysis of the transit alternatives and TDM strategies were as follows:

- Transit service improvements should be demand-driven and built from existing service levels to meet forecasts of increased transit demand in the planning horizon.
- Existing transit services already provide excellent coverage in areas with large numbers of transit trips and transit mode share in the corridor. Since it is anticipated that existing services will continue and that transit providers in the corridor have planned and approved service improvements, the alternatives were designed to enhance the coverage or the existing level of services and are defined by specific operator.
- Services should reflect that the basic market needs for transit in the corridor will still consist of long distance commuters whose trips end in downtown D.C., Tysons Corner and the Rosslyn-Ballston corridor in Arlington, though consideration should also be given to new markets.
- Transit service improvements would utilize existing HOV lanes as the travel lanes for any new transit service improvements in the corridor (i.e., no dedicated transit rights-of-way would be assumed) due to the objectives and time horizon of the study.
- Transit improvements would be designed so as to lay the groundwork for the extension of the Metrorail Orange Line.
- Any Priority Bus service framework proposed would be considered as part of an overall Northern Virginia Priority Bus system, including potential Priority Bus services along I-495 and I-95/I-395.
- Proposed Priority Bus services should interface effectively with the Metrorail system, particularly the new Silver Line to Loudoun County and Dulles International Airport.
- BRT would be among the Priority Bus implementation alternatives considered by the study for the I-66 corridor.

The process of developing the testing alternatives was iterative, with qualitative assessments performed with the help of TAC members. Travel forecasting was performed using the MWCOG/TPB regionally adopted model and a post-processor developed for WMATA for submode choice analysis to permit comparison among the testing alternatives. In addition, a number of sensitivity analyses and other checks were performed in reviewing and interpreting the forecasts and arriving at a refined alternative for further consideration.

The refined alternative was based on a broad set of inputs, not just the travel forecasting. The public, stakeholder, and TAC input; the market research; and information about current ridership patterns and recent growth were all important factors. The overall analysis showed that the significant existing transit service will continue to attract additional riders in the corridor over time. In addition, there are opportunities for introducing a Priority Bus framework to the corridor. This framework would include new or enhanced station and access infrastructure, new or expanded park-and-ride facilities, and new or enhanced bus services. In addition, supportive TDM programs were indicated to increase ridesharing, transit use, and telework in the corridor.

## **ES.8 Recommendations**

The analysis work led to a set of infrastructure, program, and service recommendations for transit and TDM in the corridor. The recommendations have been developed to improve conditions in the I-66 corridor for travelers using all modes. Taken together, the recommendations strive to provide congestion relief in the corridor, improve the operations of the existing HOV lane, increase the reliability and speed of transit service in the corridor, increase the amount of park-and-ride spaces available, and provide a range of transportation options for residents and employees in the corridor.

The core recommended infrastructure improvements include the development of eight Priority Bus stations, new direct access ramps at several locations, several new and expanded park-and-ride facilities, and adjustments to improve the reliability of the existing HOV lane. Several complementary transit service recommendations are also made. In addition, a comprehensive supporting TDM strategy is recommended.

### **ES.8.1 Priority Bus Stations and Ramps**

The eight Priority Bus stations recommended for the I-66 corridor include:

- Haymarket;
- VA 234 Bypass;
- Centreville;
- Stringfellow Road;
- Monument Drive/Fairfax Corner;
- East Falls Church;
- Ballston; and
- D.C. Core.

Each of these stations would be served by multiple transit routes, including new Priority Bus services in addition to feeder and realigned existing service. The study developed sketch plans for each of these stations, including desired direct or indirect ramp connections and potential parking facilities for 2015 and 2030 time horizons.

Among the proposed station infrastructure improvements, the study recommends development of a two-way direct access ramp from the eastbound I-66 HOV lane to the Vienna Metrorail station and vice versa. This ramp would make it faster for buses to access the station and provide an easy return in the opposite direction. Even this small amount of travel time savings could attract additional riders. In addition, by eliminating a weaving movement that would otherwise be necessary to access the station, the ramp would make an additional positive contribution to reducing congestion for general purpose traffic.

## **ES8.2 Runningway Improvements**

The existing I-66 HOV lane is a critical element in maintaining dependable, high-quality transit services in the corridor. The travel forecasting, market research, and public input underlined the importance of addressing the reliability of the lane in the short and medium term. Signing and marking improvements are recommended by this study for the congested portion of the lane, particularly between approximately U.S. 50 and the Beltway to create a better defined buffer of two-to-four feet in width with appropriate enforcement. These improvements would define specific entry and exit points from the lane, using double white lines to mark areas where entry or exit was prohibited. In the long term it may be necessary to consider adjusting the hours of operation, occupancy requirements, clean fuel vehicle exemptions, or enforcement protocols of the HOV lane to maintain its reliability. Physical barrier separation of the lane does not seem feasible in the short or medium term. Where HOV facilities are not available, such as on U.S. 29, U.S. 50, or in the off-peak direction on I-66, bus-on-shoulder or queue jump operations may be useful to consider in some locations in order to provide bus services with a reliable runningway.

## **ES.8.3 Recommended Transit Services**

A map depicting the recommended services, including Priority Bus services, is provided as Figure ES-2. The map also indicates the location of the recommended Priority Bus stations. The market focus for the recommended transit service is primarily traditional commute trips in the peak hours and peak directions, although some new reverse commute service is provided on the portion of I-66 east of VA 28. The Priority Bus routes provide service to the employment centers in Arlington by providing direct connections to Ballston. The connection at East Falls Church will also provide transfer opportunities to the Silver Line and the Tysons Corner area. Substantial feeder services are also recommended in addition to the Priority Bus services that provide connections to and from major destinations in the study area including Manassas, Fair Lakes, Centreville, Reston, and Herndon.

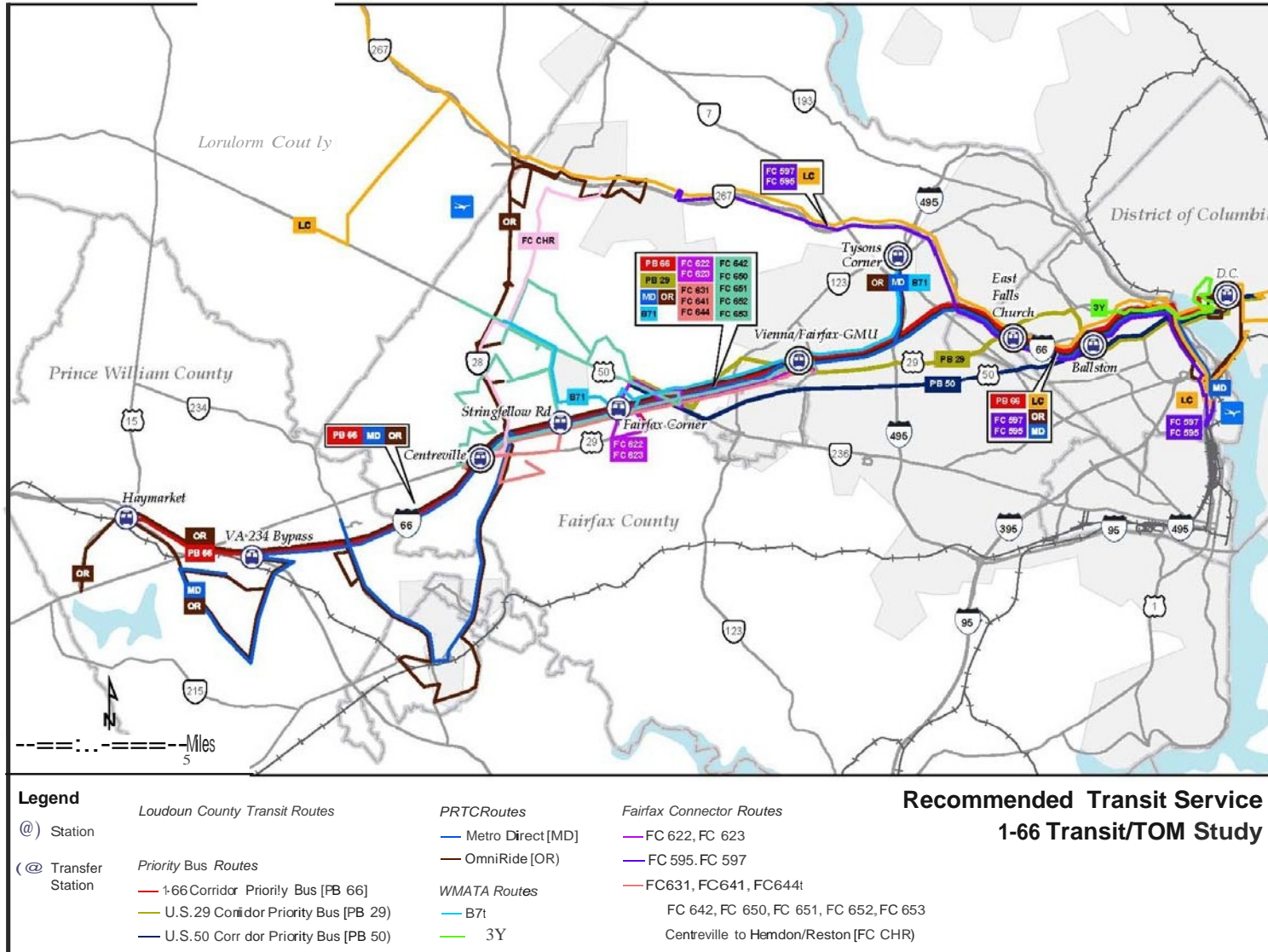
The recommended I-66 Priority Bus service includes many elements of BRT that will improve the quality and dependability of transit service provided in the corridor. Frequent service is supplemented by substantial stations, improved reliability, advanced technology and information systems, and direct access to selected stations. In addition, the market research indicated that the most compelling element of BRT was that it makes fewer stops than other transit alternatives. Each of the recommended new I-66 Priority Bus services has only five stops, providing a shorter a more direct trip to the major destinations in the corridor (e.g., the D.C. Core and the Rosslyn-Ballston corridor).

## **ES.8.4 Park-and-Ride Lots**

Recommendations for expanded parking capacity were developed, in part, based on travel forecasts for the corridor with the other recommended improvements in place. The first priority in allocation of spaces was to provide parking for the proposed new facilities near Haymarket and Centreville. The second priority was to address areas with the largest difference between the forecast demand and capacity.

Where new lots are recommended, transit service is also recommended so as to provide a backbone for supplemental ridesharing activities. However, higher priority was given to expanding existing parking facilities over constructing new ones because travel behavior research has shown that there is usually inertia associated with the ridesharing and transit activities that occur at existing facilities and because the environmental and engineering processes are generally faster with lot expansion as compared with constructing an all new facility.

Figure ES-2. Recommended Transit Service



The recommendations include the addition of 2,650 spaces by 2015 and an additional 350 spaces by 2030 through capacity expansions at three existing lots and the construction of four new lots in the western end of the corridor. This represents a more than 25 percent increase in park-and-ride capacity in the corridor. Of the four new lots, three will be served by the recommended I-66 Priority Bus service.

Work should proceed on developing a system to provide real-time information about park-and-ride facility utilization to corridor travelers along the lines of the recommendations of a June 2009 Feasibility Study conducted by WMATA. The outlined system could include information directing patrons to open spaces as well as indicating space availability to help commuters plan their trips and reduce parking circulation related congestion and the associated time. Implementation of a pilot real-time parking information system at West Falls Church is recommended in the short term as the first step in such a corridor-wide project.

### ES.8.5 TDM Strategies

Three tiers of TDM strategies representing varying levels of investment and market penetration were developed in the course of the study. TDM plays an important role in improving the quality of transportation in the I-66 corridor by providing a range of transportation options to residents and employees of the area. In addition, there are recommended TDM elements that focus on increasing awareness of transit services and providing programs that encourage transit use. Because of these potential benefits and the importance of high quality TDM programs illustrated by the market research survey, the highest tier of TDM services was recommended for the I-66 corridor.

TDM recommendations were developed for implementation by the horizon years of 2015 and 2030. Table ES-1 highlights all 15 program elements. Only elements "A" through "I" are indicated for implementation by horizon year 2015. By horizon year 2030, it is recommended that all 15 program elements be implemented. As envisioned, the TDM strategies would be implemented throughout the I-66 corridor study area, which would include areas adjacent to I-66 and residential areas that would be considered "feeders" to I-66 for commuting.

**Table ES-1. Recommended TDM Strategies**

ID	Program	Description
A	Enhanced Corridor Marketing	Adds targeted marketing (direct mail, newspaper advertisements) for TDM and transit along the corridor and in feeder markets
B	Vanpool Driver Incentive	Provides incentives to get new drivers and retain existing drivers for vanpools
C	Corridor-Specific Startup Carpool Incentives	Provides a three- to six-month startup carpool incentive for participating commuters in Northern Virginia
D	Rideshare Program Operational Support	Additional staff for commuter assistance programs in the corridor and feeder markets to promote TDM programs and transit and for additional employer outreach support
E	Carsharing at Priority Bus Activity Nodes	Expand the existing carshare program to include vehicles at Priority Bus activity nodes
F	Bike Hubs/Storage at Priority Bus Activity Nodes	Priority Bus nodes near employment or residential activity centers include "bike hubs" with bike maintenance, showers, personal lockers, and other services for bicyclists; additional lockers at other nodes

**Table ES-1. Recommended TDM Strategies (continued)**

ID	Program	Description
G	TDM Program Evaluation	Evaluation of travel and environmental impacts of TDM activities in Northern Virginia, with particular attention to impacts on I-66 corridor system operation
H	Enhanced Virginia Vanpool Insurance Pool	Provides affordable insurance coverage for vanpools
I	Enhanced Telework!VA	Adds new financial incentives for Virginia employers and/or extends the level of assistance available
J	Northern Virginia Ongoing Financial Incentive	Offers a small ongoing reward opportunity (e.g., prize drawings, etc.) to commuters traveling to or from Northern Virginia using a non-SOV mode
K	Van Priority Access	Allows vanpool vans to access bus-only infrastructure in the I-66 corridor
L	Capital Assistance for Vanpools	Provides financial assistance for purchase or lease of vanpool vans
M	Flexible Vanpool Network	Includes a network of overlapping vanpool routes which permits part-time ridership and flexibility for full-time riders to modify their vanpool schedule with a reservation
N	SmartBenefits Subsidy Public Share	Provides a public agency contribution to employer-provided SmartBenefit transit/vanpool subsidies and shares the cost of these subsidies with employers
O	Mobility Centers/Mobile Commuter Stores	Self-serve kiosks or staffed commuter stores at I-66 Priority Bus stations offering personalized trip advice, transit information, and fare media

**ES.8.6 Related Recommendations**

In addition to the core recommendations of the study, several related recommendations are also made to further the study objectives, including:

- Review of adequacy of pedestrian and bicycle facilities is recommended for existing transit hubs and stations and should be an essential planning element of new facility development.
- Transit-oriented development considerations are also recommended to be a part of new station planning as well as when considering redevelopment around existing transit hubs or activity centers in the corridor.
- As plans evolve for the proposed K Street Transitway, it is recommended that the needs of Priority Bus services traveling from outside D.C. be addressed in a manner that will maintain the attractiveness of these services. This includes exploration of bus priority lanes on facilities leading to and entering D.C., including the Roosevelt Bridge.
- The developments along the VA 28 corridor showed some promise as a potential transit market due to the large amount of employment growth anticipated. However, the land use form and scale and the types of roadway facilities involved indicated that a separate study should be conducted on how best transit ridership could be realized. Therefore, conducting such a study is among the related recommendations of this study. Indeed, a concept review of BRT lanes between U.S. 50 and the Dulles Toll Road is currently being considered as part of a study to develop 30 percent plans for widening VA 28.

- During the development of station sketch planning for the Haymarket area station it was realized that additional comprehensive multimodal planning in the area around and including the Town of Haymarket could be beneficial. Such a study would identify and select from among alternative locations the preferred location and form for a context-sensitive transportation hub and its associated parking facilities. Prince William County, the Town of Haymarket, the Potomac and Rappahannock Transportation Commission (PRTC), Virginia Railway Express, VDOT, and DRPT would be potential stakeholders in such a study.
- Planning for the longer-term extension of rail in the corridor should be progressed, including Metrorail Orange Line extension beyond Vienna and extension of the VRE Manassas Line. Station area plans for each proposed station should advance not only to inform rail planning but also to inform the synergistic development of appropriate Priority Bus infrastructure as a stepwise short- to medium-term improvement that lays the groundwork for rail (e.g., the site location and character of parking and station facilities).

### ES.8.7 Program Costs

Table ES-2 summarizes the total capital and operating costs for this study's recommendations in 2010 constant dollars. The medium-term plan element costs are additive to the short-term plan element costs to arrive at the net difference between the medium-term plan elements and existing conditions. The plan elements shown include all recommended transit services, Priority Bus stations, TDM programs, the I-66 HOV lane buffer, and all park-and-ride lot recommendations. The majority of the costs are capital costs associated with park-and-ride lot expansions, construction of Priority Bus stations, and the purchase of vehicles. The total capital cost of the recommendations is estimated as \$290.5 million. The annual operating cost for the full medium-term program, net of farebox revenue, is \$14.7 million; about \$2.9 million more per year than the short-term program.

**Table ES-2. Summary Cost Projections for Recommendations**

Plan Element	Annual Operating Cost <sup>2</sup>		Capital Cost		
	Short Term	Medium Term <sup>3</sup>	Short Term	Medium Term <sup>4</sup>	Total
Transit Services	\$10.1	\$11.1	\$35.7	\$47.5	\$83.2
Priority Bus Stations	-	-	\$57.3	\$112.2	\$169.5
Runningway Improvements	-	-	\$2.0	-	\$2.0
TDM Programs	\$1.5	\$3.6	\$5.3	\$0.5	\$5.8
Park and Ride	\$0.2	-	\$26.5	\$3.5	\$30.0
<b>Total</b>	<b>\$11.8</b>	<b>\$14.7</b>	<b>\$126.8</b>	<b>\$163.7</b>	<b>\$290.5</b>

Notes:

1. All costs are expressed in millions of 2010 constant dollars and represent costs beyond providing existing programs and services.
2. Annual operating costs are expressed net of farebox revenue.
3. Medium-term operating costs are inclusive of costs to operate plan elements included as short-term recommendations; they are not additive with the short-term operating costs.
4. Medium-term capital costs include new programs, services, and infrastructure beyond the short-term recommendations, plus cost for vehicle replacements for services initiated in the short term.

### ES.9 Next Steps

The recommendations of the I-66 Transit/TDM Study are intended to be implementable in the short- or medium-term time frame. Although the horizon years for the analysis and planning were 2015 and 2030, the actual year of implementation could be earlier. Several of the recommendations represent actions that could be moved forward in the immediate future. These

include moving forward with design of the recommended HOV lane improvements, the preliminary engineering of the direct access ramp for the Vienna Station, park-and-ride capacity expansion at existing locations, and enhancement of many of the TDM programs, including enhanced corridor marketing. Development of cross-operator implementation plans for the Priority Bus framework should also progress in the immediate future.

In the short term, further planning for the additional recommended park-and-ride locations and implementation of new and enhanced transit services would proceed. The recommended VA 28 corridor transit study and Haymarket area transit hub/park-and-ride study could be completed. Additional planning for longer-term rail extensions should also continue. Engineering for two additional direct access ramps, at Stringfellow Road and at Monument Drive/Fairfax Corner could also proceed.

Working towards some of the medium-term recommendations will require additional planning work, including designing bus priority treatments on local streets, engineering for additional direct access ramps, considering additional HOV runningway improvements, and implementing the full range of recommended transit services and TDM programs.

Funding for the transportation infrastructure and service improvements will remain a challenge in the near term. Although the study explored and identified general potential funding sources, it will still be up to planners and policy makers to program funds for the recommended improvements to permit full implementation to be realized.



NOVEMBER 2013

INTERSTATE

# TIER 1 FINAL ENVIRONMENTAL IMPACT STATEMENT AND TIER 1 RECORD OF DECISION

## INTERSTATE 66

From US Route 15 in Prince William County  
To Interstate 495 in Fairfax County



INTERSTATE 66 CORRIDOR- From U.S. Route 15 to Interstate 495 (Capital Beltway)  
Fairfax and Prince William Counties, Virginia

TIER 1 FINAL ENVIRONMENTAL IMPACT STATEMENT  
AND TIER 1 RECORD OF DECISION

Submitted Pursuant To:  
42 U.S.C. 4332(2)(c)

By:  
U.S. Department of Transportation, Federal Highway Administration  
and  
Virginia Department of Transportation  
Virginia Department of Rail and Public Transportation

Cooperating Agencies:  
Federal Transit Administration  
U.S. Army Corps of Engineers  
U.S. Environmental Protection Agency

11/20/13  
Date of Approval

Gregory A. Kelly  
Environmental Administrator  
Virginia Department of Transportation

11/20/13  
Date of Approval

Will S. Pottel  
Director FOR TD  
Virginia Department of Rail & Public Transportation

11/20/2013  
Date of Approval

Richard Wayne Tedora  
for Division Administrator  
Federal Highway Administration

This Tier 1 Final Environmental Impact Statement defines existing and future transportation conditions and needs within the 25-mile I-66 corridor from U.S. Route 15 to I-495 (Capital Beltway), identifies a range of conceptual-level improvements that would address those needs, and evaluates the potential effects of these concepts on the natural and human environments. The "Build" improvement concepts in this Tier 1 study are based on a systems level analysis that focuses on broad issues such as purpose and need, travel modes, technology choices, and general location of multi-modal improvements. The improvement concepts that have been retained in this Tier 1 Final Environmental Impact Statement are: general purpose lanes, managed lanes, Metrorail extension, light rail transit, bus rapid transit, VRE extension, improve spot locations/chokepoints, intermodal connectivity, safety improvements, and transportation communication and technology. In addition, the consideration of tolling as a funding source for improvements is proposed to be advanced to Tier 2. A Tier 1 Record of Decision is included as an appendix to the Tier 1 Final Environmental Impact Statement.

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A Federal agency may publish a notice in the Federal Register, pursuant to 23 U.S.C. §139(1), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 150 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.

# ES EXECUTIVE SUMMARY

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## ES.1 NEPA TIERING PROCESS

The Virginia Department of Transportation (VDOT) and the Virginia Department of Rail and Public Transportation (VDRPT), in cooperation with the Federal Highway Administration (FHWA), are studying the potential environmental impacts of transportation improvement concepts along Interstate 66 (I-66). As a Tier 1 document, this Final EIS represents the first step within a tiered approach to National Environmental Policy Act (NEPA) analyses as presented in the Council on Environmental Quality's (CEQ's) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR 1500 – 1508), and in FHWA's and FTA's *Environmental Impact and Related Procedures* (23 CFR 771) and *Linking the Transportation Planning and NEPA Processes* (Appendix A to 23 CFR 450; Question and Answer #9). Tiering involves the evaluation of broad level programs and issues in an initial (Tier 1) analysis followed by more detailed evaluation of specific improvements in subsequent (Tier 2) analyses.

This Tier 1 study was designed to aid in the development of a long-term vision for the I-66 corridor from US 15 to I-495 (Capital Beltway) that includes corridor-wide multimodal concepts and assists in making informed decisions about the best program of near-term and long-term transportation improvements.

This Tier 1 Final EIS defines existing and future transportation conditions and needs within the study corridor, identifies a range of transportation improvement concepts that would serve those needs, evaluates the potential effects of the concepts on the natural and human environment, and presents recommendations for improvement concepts to be advanced. The "Build" improvement concepts in this Tier 1 study are based on a systems-level analysis that focuses on broad issues such as purpose and need, travel modes, technology choices, and general location of improvements. This Tier 1 analysis examines potential impacts at a conceptual level while subsequent Tier 2 NEPA documents will include site-specific quantitative analyses of effects and provide avoidance, minimization, and mitigation measures.

## ES.2 STUDY AREA

I-66 is the main east-west interstate highway in Northern Virginia and serves the District of Columbia, Arlington County, Fairfax County, Loudoun County, Prince William County and points west, the cities of Fairfax, Falls Church, Manassas, and Manassas Park and the Towns of Vienna and Haymarket. The study corridor is a complex, comprehensive transportation facility that includes general-purpose and high-occupancy vehicle (HOV) highway facilities, heavy rail transit, local and regional bus service, and bicycle and pedestrian facilities.

The study corridor is comprised of the 25-mile section of the I-66 corridor that extends from US 15 in Prince William County east to I-495 (Capital Beltway) in Fairfax County, as shown in **Figure**

**ES-1.** From the Capital Beltway (I-495 to US 50), I-66 is six-lane facility. The inside lane (median side) is used as a concurrent HOV-2 (two occupants or more) lane in the peak travel direction between the hours of 5:30 to 9:30 AM and 3:00 to 7:00 PM on weekdays. From US 50 to US 29 (Gainesville), I-66 is an eight-lane facility. The inside lane (median side) is used as a concurrent HOV lane during the peak periods in the peak directions, with the same operating characteristics as the previous section. From US 29 Gainesville to US 15, I-66 is currently a four-lane facility and has no HOV lanes. A planned project by VDOT is slated to widen I-66 to eight lanes in this section, including concurrent HOV lanes. The widening is planned to be completed by 2015. Within the study corridor, I-66 includes eleven general-purpose traffic interchanges and two HOV-dedicated interchanges. The analysis area for this study extends beyond the study corridor and includes areas adjacent to the study corridor. The analysis area includes I-66, its parallel arterial routes US 50 and US 29, and several key routes serving north-south travel, including US 15, VA 234, VA 28, Fairfax County Parkway, VA 123, and I-495.

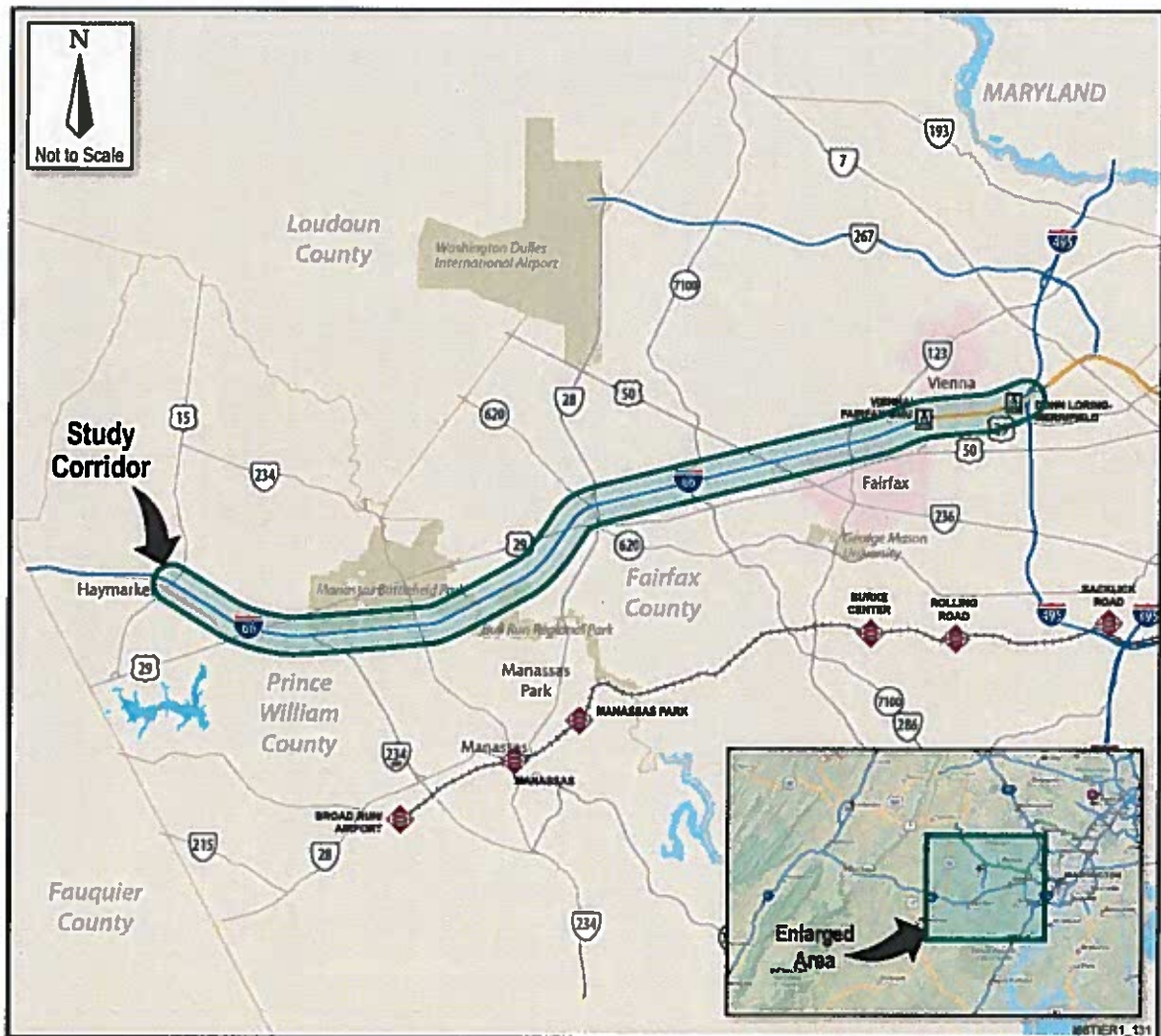


Figure ES-1. Study Corridor

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### **ES.3 PURPOSE AND NEED**

The purpose of this Tier 1 EIS is to address existing and future transportation problems on I-66. The study evaluates the effectiveness of both highway and transit improvements in meeting the identified needs. The identified needs to be addressed include: transportation capacity deficiencies, major points of congestion, limited travel mode choices, safety deficiencies, and lack of transportation predictability.

#### **TRANSPORTATION CAPACITY DEFICIENCIES**

Travel demands in the corridor, particularly during peak demand periods, exceed the carrying capacity of existing transportation facilities within the corridor. Growth in population and employment in the corridor is expected to further increase travel demand, resulting in a widening differential between demand and capacity.

#### **MAJOR POINTS OF CONGESTION**

In addition to the need for increased overall transportation capacity in the I-66 corridor, traffic operations are adversely affected by points of constraint based on either capacity or geometric issues. There are a number of localized constraints (chokepoints) where daily peak period congestion affects both car and bus transit operations.

#### **LIMITED TRAVEL MODE CHOICES**

Metrorail's Orange Line service in Virginia is primarily focused on serving commuter trips to and throughout the region's inner core (Arlington and the District of Columbia) employment areas. The peak travel of the Orange Line within the Study Corridor primarily serves home-to-work trips, eastward to the region's core in the morning and the reverse in the evening. Even with the corridor's current transit and commuter bus service, alternatives to single occupant vehicle travel are limited due to lack of connecting facilities/transfer points and largely lack of service and facilities. Transit services for the reverse of the peak direction, and during off-peak times, is much less robust. Existing bus routes in the study corridor are radial in nature and lack north/south routes. Travel choices for bicycling and walking, whether as the primary transportation mode for a trip or as a means to connect to other modes, are lacking within the corridor. Associated with the lack of modal choices are limitations with respect to coordination across the various travel models, limitations on traveler information across these modes, and the need to improve physical linkages between modes through the construction of park-and-ride facilities, intermodal transfer centers, and connections that are supportive of access to intermodal facilities by walking and bicycling.

#### **SAFETY DEFICIENCIES**

The I-66 study corridor in both directions has a lower crash rate, fatality rate, and injury rate than the overall statewide average for urban facilities; however, several key areas within the corridor have high crash rates compared to the I-66 corridor average. In both directions of I-66, the areas around the three eastern interchanges have crash rates of over 100 crashes per hundred million vehicle miles travelled (HMVMT). Also, westbound I-66 within the interchange areas at VA 28 and US 29 has a higher crash rate than the corridor; this is likely due to the high weaving volumes in the short segment between the two interchanges.

### **LACK OF TRANSPORTATION PREDICTABILITY**

While it is difficult to quantify, travelers experience highly unreliable travel times on I-66, particularly during peak periods. With volumes either at or over capacity, events such as a disabled vehicle in the travel lane or on the shoulder, adverse weather conditions and/or glare from sunrises or sunsets, can result in substantial variability in travel time. The lack of predictability for travel in the corridor adversely affects the quality of life for travelers in the corridor and also makes it difficult for travelers to make decisions about when to travel and which mode to take. In addition, it adversely affects both travel times and service predictability for the bus services that make use of the I-66 roadway.

### **EXISTING AND FUTURE CONDITIONS ALONG I-66**

The following existing (2011) conditions within the corridor illustrate the need for improvements:

- Over half of the corridor's peak direction roadway miles operate at a Level of Service (LOS) E or LOS F in the AM peak hour.
- Nearly two-thirds of the corridor's peak direction roadway miles operate at a LOS E or LOS F in the PM peak hour.
- Peak period congestion in the eastern portion of the corridor is 4-5 hours per day (in each direction).
- Seven of twenty (one-way) segments within the corridor experience crash rates above the statewide average for urban interstates.
- Nine specific areas of congestion exist along the corridor near interchanges where geometrics or capacity constraints cause peak period delay.
- There is a lack of traveler information along the corridor that can be used to identify alternate routes and modes.
- There is a need for improvements to Park-and-Ride lots within the study area as well as direct connections to the HOV lanes for priority buses.

Future conditions will lead to further deteriorating traffic conditions by 2040 as follows:

- Traffic is expected to grow between 10-66% along the corridor, adversely affecting both vehicular and transit bus operations.
- Employment in the Gainesville-Haymarket area is expected to grow 141%.
- During the AM peak, all of the study corridor segments in the eastbound direction are expected to operate at LOS E or LOS F.
- During the PM peak, over 90% of the study corridor segments in the westbound direction are expected to operate at LOS E or LOS F.
- Peak period congestion in the eastern portion of the corridor is expected to increase to 8-10 hours per day (in each direction), affecting both vehicular operations as well as the reliability of bus transit services.
- Metro's Orange Line demand will exceed the capacity of 120 riders per car.

- Safety concerns are expected to increase as congestion increases and traffic volumes continue to grow, particularly in areas that currently have geometric deficiencies and high weaving volumes between interchanges.
- As volumes increase, the nine specific areas of congestion identified along the corridor near interchanges where geometrics or capacity constraints cause peak period delay will remain and likely worsen.

#### **ES.4 BUILD IMPROVEMENT CONCEPTS**

The Build Improvement Concepts include corridor-length options that are intended to increase capacity within the corridor, as well as options to increase travel mode choices, improve individual interchanges, address spot safety needs, and enhance travel efficiency. The concepts were developed with public and participating agency input.

##### **IMPROVEMENT CONCEPT DEVELOPMENT PROCESS**

The term *improvement concept* is used in this document rather than the traditional term *alternative* because the improvements developed for this Tier 1 study are conceptual. Ten Build Improvement Concepts that directly address the needs were identified and considered. These concepts, along with the No-Build, are:

1. **General Purpose Lanes:** Construction of additional highway lanes open to all traffic.
2. **Managed Lanes:** Conversion of the existing HOV lane into either a one- or two-lane (in each direction) facility that would operate as a high-occupancy toll facility where only high-occupant vehicles would be exempt from paying a toll.
3. **Metrorail Extension:** Metrorail service extending west from Vienna to either Centreville or Haymarket.
4. **Light Rail Transit:** Light rail service extending west from Vienna to either Centreville or Haymarket.
5. **Bus Rapid Transit:** Separate guideway bus rapid transit extending west from Vienna to Haymarket; service could extend east of Vienna.
6. **VRE Extension:** Extension of existing VRE service from Manassas to Haymarket.
7. **Improve Spot Locations/Chokepoints:** Improvements that address operational constraints at discrete locations (chokepoints) such as individual interchanges or specific junction points within the interchanges (i.e., merge, diverge, or weaving areas).
8. **Intermodal Connectivity:** Availability of a full range of travel modes within the corridor, as well as availability and functionality of connections between travel modes.
9. **Safety Improvements:** Safety improvements that address both location-specific and corridor-wide safety concerns.
10. **Transportation Communication and Technology:** Continued enhancements to Intelligent Transportation Systems (ITS) technology for all modes in the corridor, including traveler information, corridor and incident management, and transit technology.

11. **No-Build:** The No-Build is a stand-alone concept that serves as the baseline against which the Build Improvement Concepts are measured.

The concept development process for **General Purpose Lanes, Managed Lanes, Metrorail Extension, Light Rail Transit, Bus Rapid Transit, and VRE Extension** are described as capacity improvement concepts. The process of developing these capacity improvement concepts consisted of four steps:

1. Quantify total travel demand in person-trips for each segment of the corridor in the horizon year of 2040.
2. Identify the range of capacity improvement concepts for carrying person-trips in the corridor.
3. Quantify the generalized ability of each improvement concept to carry person-trips in the study corridor.
4. Identify the range of possible improvement concept combinations (i.e., the improvement concept scenarios).

After evaluation of the six capacity improvement concepts revealed that none could meet the needs of the corridor as stand-alone improvement concepts, they were combined into 47 improvement concept scenarios (ICS). The ICSs represent the logically consistent combinations of the capacity-related improvement concepts and were evaluated for their ability to meet the needs in the corridor. Although the Tier 1 decisions are intended to advance an improvement concept(s) and not an ICS, the ICSs aid decision-makers in understanding how the various improvement concepts can work together.

The process for the three other improvement concepts (i.e., the non-capacity improvement concepts noted as Concepts 7 through 10 above) followed a similar, but less detailed, process of developing and testing concepts to determine the extent of which they address identified needs. This is due to the fact that these concepts focus more on a single mode and/or involve less potential interactions between modes and concepts; additionally, these concepts are generally more geographically focused and/or would involve lesser levels of potential impacts. These concepts can complement the capacity improvement concepts or serve in isolation to address components of the project's purpose and need to varying degrees.

#### **OTHER IMPROVEMENT CONCEPTS ELIMINATED FROM DETAILED STUDY**

In addition to those improvement concepts carried forward for detailed evaluation, other transportation improvement concepts were considered but eliminated from further study. These included the improvement of parallel roadways and system-wide or out-of-corridor improvements to Metrorail (such as Metrorail core capacity improvements). While these concepts may be important to improving mobility across the region, they were not advanced as part of this study because it was determined that they would not directly address the needs within the study corridor across multiple measures, including those related to capacity deficiencies, major points of congestion, and travel time predictability.


























































In addition, Transportation Demand Management (TDM), which includes a wide range of strategies and policies that seek to reduce the demands on the transportation system by reducing travel by single-occupant vehicle (SOV); reducing peak period travel; promoting travel by transit, walking, or bicycling; and promoting more transportation-efficient land development patterns, has been eliminated as a stand-alone concept because of its inability to meet the purpose and need. TDM strategies were, however, incorporated into the improvement concepts that were carried forward.

**ANALYSIS OF BUILD IMPROVEMENT CONCEPTS**

The ten Build Improvement Concepts address the identified needs to varying degrees. Table ES-1 summarizes the ability of each improvement concept to meet the purpose and need.

**Table ES-1. Evaluation of Improvement Concepts Against Purpose and Need Elements**

IMPROVEMENT CONCEPT	EXISTING AND FUTURE CAPACITY DEFICIENCIES	IMPROVE SPOT LOCATIONS/ CHOKEPOINTS	LIMITED MODE CHOICES	SAFETY DEFICIENCIES	UNPREDICTABLE TRAVEL TIMES
General Purpose Lanes					
Managed Lanes					
Metrorail Extension					
Light Rail Transit					
Bus Rapid Transit					
VRE Extension					
Improve Spot Locations/Chokepoints					
Intermodal Connectivity					
Safety Improvements					
Communication and Technology					
No-Build					

Meets Purpose and Need?  = Yes  = Partially  = No

Notes:

<sup>1</sup>Fully meeting purpose and need would require a total of 18 lanes for higher volume portions of the I-66 study corridor. The "partial" rating shown here reflects the fact that such a roadway width is impractical and not reasonable.

Based on the improvement concept analysis it was determined that:

- None of the Build Improvement Concepts, as stand-alone concepts, fully satisfy the purpose and need.
- The project peak travel demands in the corridor highlight the need for a transportation solution that provides space efficiency – the ability to carry a large number of persons within limited spaces.
- Fully meeting demand with single-mode improvements is unlikely given the constraints within the corridor; multi-modal solutions would be more practicable in addressing transportation needs in the corridor.
- The non-capacity improvement concepts partially address the purpose and need and could advance independently of the capacity improvement concepts.
- The No-Build Concept does not satisfy the purpose and need.

All ten improvement concepts, as well as the No-Build, were evaluated in detail in the Tier 1 Draft EIS and are retained in this Tier 1 Final EIS.

## ES.5 ENVIRONMENTAL CONSEQUENCES

The potential impacts of the ten Build Improvement Concepts and the No-Build on the existing conditions and resources within the human and natural environments of the study area were analyzed at a level of detail appropriate for a Tier 1 EIS and the decisions to be made in Tier 1.

### APPROACH

The impact analysis:

- **Uses information at a level of detail available at this stage of the process:** The overall transportation improvement development process recognizes that details such as specific footprints and operational details would be developed as part of Tier 2.
- **Focuses on the individual improvement concepts rather than combinations of improvements:** Unless the No-Build is selected, a Tier 1 decision would advance one or more of the improvement concepts. If multiple improvement concepts are evaluated in detail in Tier 2, additional studies would be performed to address in detail the specific interfaces between the specific projects.
- **Supports Tier 1 decision-making by focusing on the comparative impacts of various multi-modal capacity, operational, and safety improvements:** The intent of the impact analysis is to provide decision-makers with information to assist in understanding the potential impacts of each individual improvement concept on the natural and built environment.

### PROCESS

For purposes of estimating potential impacts, the ten Build Improvement Concepts were grouped into four categories (referred to as “templates”) based on the space requirements for implementation. The description and generalized footprint width for each template are shown in the Table ES-2. The **Safety Improvements, Intermodal Connectivity, and Transportation Communication and Technology Improvement** concepts are anticipated to have limited need for additional rights-of-way and minimal environmental impacts.

## POTENTIAL IMPACTS

Based on the templates, the analysis of the potential impacts of the improvement concepts on the human and natural environments are summarized below. **Table ES-3** summarizes the potential quantitative impacts and **Table ES-4** summarizes the potential qualitative impacts. The No-Build would not require any additional right-of-way and would have no impact on the resources below with the exception of air quality and energy which would be affected by continued traffic congestion. The No-Build would not be consistent with local land use plans.

**Table ES-2. Improvement Concept Widths and Description**

TEMPLATE	FOOTPRINT WIDTH	DESCRIPTION
<b>Median</b>	235 feet	Space within the median would be used by <b>Metrorail Extension, Light Rail Transit, or Bus Rapid Transit.</b>
<b>Outside</b>		
Add one lane in each direction (either general purpose or managed lane) <sup>1</sup>	270 feet	Space to the outside of existing highway would be used for either <b>General Purpose Lanes</b> or <b>Managed Lanes</b> . Widths for three possibilities of Outside widening are considered as part of the impact analysis.
Add two lanes in each direction (either general purpose or managed lanes) <sup>2</sup>	295 feet	
Add 5 lanes in each direction (general purpose lanes) <sup>3,4</sup>	355 feet	
<b>Interchange</b>	Existing footprint expanded by 100 feet in all directions	<b>Improve Spot Locations/Chokepoints</b> would require space within or immediately adjacent to the existing interchange.
<b>VRE</b>	100 feet	Requirements for rights-of-way for the <b>VRE Extension</b> would be along the existing VRE alignment which is generally located approximately 5 miles from the I-66 corridor.

Notes: The estimated footprint widths shown are planning level and would be further refined during Tier 2 analyses. The Outside templates are indicated as: <sup>1</sup> *Outside Minimum*; <sup>2</sup> *Outside Medium*; <sup>3</sup> *Outside Maximum*. <sup>4</sup> Five lanes were chosen to represent a likely maximum upper limit. It was not intended to be a fixed number based on a desirable number of lanes.

**Table ES-3. Quantitative Summary of Potential Impacts from Build Improvement Concepts**

RESOURCE	SUMMARY OF POTENTIAL IMPACTS - QUANTITATIVE FOR BUILD IMPROVEMENT CONCEPTS (BASED ON TEMPLATES)					
	MEDIAN	OUTSIDE MINIMUM	OUTSIDE MEDIUM	OUTSIDE MAXIMUM	INTERCHANGE	VRE
Approximate template width:	235 feet	270 feet	295 feet	355 feet	Existing plus 100 feet	100 feet
<b>Social and Economic:</b>						
Residential Relocations <sup>1</sup>	0	1	4	36	14	1
Community Facility Impacts	2	10	10	10	2	4
Business Relocations	0	0	0	4	5	6
Relocations within Minority Census Tracts	0	0	1	14	5	0
Relocations within Low-Income Census Tracts	0	0	0	0	0	0
Relocations within Limited English Proficiency Census Tracts	0	0	1	8	4	0

RESOURCE	SUMMARY OF POTENTIAL IMPACTS - QUANTITATIVE FOR BUILD IMPROVEMENT CONCEPTS (BASED ON TEMPLATES)					
	MEDIAN	OUTSIDE MINIMUM	OUTSIDE MEDIUM	OUTSIDE MAXIMUM	INTERCHANGE	VRE
Farmlands (acres)	6.5	10.1	13.2	22.4	16.1	<0.1
Public Parks, Recreation Areas, and Open Space Easements <sup>2</sup> (acres)	0.9	6.6	12.2	21.3	1.8	0
Historic Properties <sup>3</sup> :	3	4	4	5	3	1
Architectural Sites	3	3	3	3	1	1
Archaeological Sites	0	1	1	2	2	0
Potential Impacts to Section 4(f) Properties (acres)	21.2	32.6	43.5	62.9	41.5	19.5
Hazardous Material Sites <sup>4</sup>	1	2	2	5	1	4
Wetlands <sup>5</sup> (acres)	3.6	6.8	9.6	17.4	9.4	7.2
Streams (linear feet)	5,172	6,354	7,636	9,703	5,634	1,048
Floodplains (100-yr floodplain, acres)	22.0	28.3	33.2	45.4	15.4	13.5
Natural Heritage Sites <sup>6</sup> (acres)	152.8	175.0	190.9	228.7	164.8	14.5

Notes:

- 1: Includes single family and multi-family structures.
- 2: There are no open space easements located within the study area. Acreage includes potential impacts to one federal park, one regional park, and six local public parks and recreation areas. However, given the nature of Manassas National Battlefield Park as a federally owned national park, it is very likely that direct impacts to the Park will be avoided.
- 3: Includes direct potential impacts to resources that are either listed, eligible, or potentially eligible for listing in the NRHP.
- 4: Includes CERCLIS Sites (none); VRP Sites (none); Unidentified HAZMAT Sites (none); and Solid Waste Facilities (1). All other identified sites are Petroleum Release Sites.
- 5: Includes wetland types: Palustrine Forested; Palustrine Scrub Shrub; and Palustrine Emergent.
- 6: Acreage includes potential impacts to five natural heritage locations within the study area.

Table ES-4. Qualitative Summary of Potential Impacts from Build Improvement Concepts

RESOURCE	SUMMARY OF POTENTIAL IMPACTS - QUALITATIVE FOR BUILD IMPROVEMENT CONCEPTS (BASED ON TEMPLATES)
Land Use	The Build Improvement Concepts are generally consistent with local comprehensive plan objectives which identify the need to improve transportation facilities along the I-66 corridor to reduce congestion and air pollution. The transit improvement concepts (i.e., <b>MetroRail Extension, Light Rail Transit, Bus Rapid Transit, and VRE Extension</b> ), and <b>Managed Lanes</b> improvement concepts within the I-66 corridor are compatible with transportation policies of local jurisdictions located along the corridor, because these policies cite the need to move large numbers of people within relatively confined spaces. The <b>VRE Extension</b> concept is consistent with the City of Manassas Comprehensive Plan, which seeks to expand the service and promote infill and transit-oriented development. The <b>Safety Improvements and Transportation Communication and Technology</b> improvement concepts would further contribute to local transportation objectives of reducing congestion by lowering crash rates and providing tools to inform drivers of traffic flow problems.

RESOURCE	SUMMARY OF POTENTIAL IMPACTS - QUALITATIVE FOR BUILD IMPROVEMENT CONCEPTS (BASED ON TEMPLATES)
Air Quality	The additional highway lanes associated with the <b>General Purpose Lanes</b> and <b>Managed Lanes</b> improvement concepts would improve traffic flow and increase vehicle speeds, thereby reducing vehicle idling and stop-and-start driving conditions that are associated with higher levels of air emissions. However, an increase in vehicles speeds may have different effects for different pollutants, depending on the rate of speed. The <b>Metrorail Extension</b> , <b>Light Rail Transit</b> , <b>Bus Rapid Transit</b> , and <b>VRE Extension</b> improvement concepts all would reduce the number of vehicles on the roadway resulting in lower air emissions. <b>Spot Locations/Chokepoints</b> improvements would allow traffic to flow more efficiently and generally result in lower air emissions compared to the existing conditions. Demonstration of conformity with the State Implementation Plan in accordance with the Clean Air Act will occur during Tier 2 when individual projects are analyzed.
Noise	An initial inventory of noise-sensitive and vibration-sensitive buildings and activity areas adjacent to the study areas was completed. Detailed noise modeling, quantification of potential impacts from individual projects, and identification of appropriate abatement measures will be conducted during Tier 2. The noise analyses for the I-66 corridor would be performed in accordance with FHWA 23 CFR 772 and VDOT noise policy. For the VRE Extension corridor, rail sources are the dominant component to the noise and vibration environment and therefore the noise and vibration analyses for the VRE corridor would be conducted according to FTA criteria.
Visual Quality	The transit improvement concepts (i.e., <b>Metrorail Extension</b> , <b>Light Rail Transit</b> , or <b>Bus Rapid Transit</b> ) would introduce a new visual element that suggests a more urban environment. Widening of the roadway as part of the capacity improvement concepts (i.e., <b>General Purpose Lanes</b> and <b>Managed Lanes</b> ) as well as the <b>Spot Locations/Chokepoints</b> improvement concept would potentially impact views of parkland and farmland through the conversion of open space to a more expansive transportation facility. The intensity of potential impacts would be greatest for the Outside Maximum template.
Water Quality	The I-66 corridor crosses four impaired water bodies as identified in the 303(d) VDEQ 2010 Water Quality Assessment. The Build Improvement Concepts have the potential to increase stormwater runoff velocities and roadway contaminants received by these impaired water bodies, and other water resources in the study area. To minimize these potential impacts, appropriate erosion and sediment control practices would be implemented for the individual Tier 2 projects, if a build improvement concept is advanced, in accordance with the Virginia Erosion and Sediment Control Regulations, the Virginia Stormwater Management Law and regulations, and VDOT's Road and Bridge Specifications. More detailed analyses of water quality impacts and necessary stormwater management controls would be conducted for the individual Tier 2 projects when additional design details would be available.
Coastal Zone Management Areas	The entire study area is located within the Coastal Zone. The Build Improvement Concepts would be constructed to be consistent with the established Virginia Coastal Zone Enforceable Policies; and with implementation of mitigation measures, the Build Improvement Concepts would not impair resources protected by the Virginia Coastal Zone Enforceable Policies, including wetlands, dunes, and aquatic animals.
Wild and Scenic Rivers	There are no designated Wild and Scenic Rivers located within the study area. One stream is listed in the National Rivers Inventory and as a potential component of the state Scenic River Inventory; however, as the proposed crossing of the river would be at the existing crossing location, the scenic nature of the river would not be substantially altered.
Wildlife Habitat	While there are some natural lands adjacent to I-66, the Build Improvement Concepts would only potentially affect small amounts of these natural habitats. No substantial fragmentation or disruption of large habitat areas or potential movement corridors would occur because potential impacts would take place along existing facilities. Therefore, the effects of the Build Improvement Concepts should not be substantial.
Threatened and Endangered Species	Based on the habitat model used in the USFWS Information Planning and Conservation (IPAC) online review, potential habitat may exist within the templates for two federally listed plants and one-federally listed mollusk. Correspondence with the VDGIF indicates suitable habitat may occur for two state-listed species. According to the VDGIF Species Observation Database (SppObs), no known occurrences of federal or state listed wildlife species would be impacted by any Build Improvement Concepts based on the templates.

RESOURCE	SUMMARY OF POTENTIAL IMPACTS - QUALITATIVE FOR BUILD IMPROVEMENT CONCEPTS (BASED ON TEMPLATES)
Invasive Species	While highway right-of-way is vulnerable to colonization by invasive plant species from adjacent properties, implementation of the provisions of VDOT's Road and Bridge Specifications would reduce the potential for the establishment and proliferation of invasive species within the study area.
Energy	The capacity improvement concepts range in their rate of energy consumption with average British Thermal Units (BTUs) per passenger mile ranging from 2520 to 4118 for the various modes. The rate of energy consumption for the <b>Spot Locations/Chokepoints, Safety Improvements, Intermodal Connectivity, and Transportation Communication and Technology</b> improvement concepts cannot be computed at the passenger mile level, however these concepts are likely to have minimal energy expenditures.

## ES.6 TIER 1 DECISIONS

A Memorandum of Agreement (MOA) established in June 2011 between VDOT, FHWA, DRPT, and FTA outlines the roles of each agency during the Tier 1 NEPA process and the decisions to be made following completion of the Tier 1 study (see Appendix A). Per the agreement, VDOT, VDRPT, and FHWA are joint Lead Agencies for the Tier 1 EIS pursuant to 23 USC 139(c); while FTA is a Cooperating Agency and may therefore adopt the Tier 1 EIS. Different Lead Agencies may be identified during subsequent Tier 2 NEPA studies.

Per the MOA, decisions on the following will be made upon completion of the Tier 1 study:

- The concepts to be advanced for the I-66 corridor, including transit improvements, transportation demand management strategies, and/or roadway improvements. Within these concepts, consideration will be given to managed lanes and tolling;
- The general location for studying future highway and transit improvements in Tier 2 NEPA document(s);
- Identification of projects with independent utility to be evaluated in Tier 2 NEPA document(s) and evaluated pursuant to other environmental laws; and
- Advancing tolling for subsequent study in Tier 2 NEPA document(s).

Per the MOA, the following decisions will not be made until after the completion of the Tier 2 NEPA document(s):

- Approval of final design;
- Authority to utilize federal funds to acquire right-of-way;
- Authority to utilize federal funds for construction;
- Approval to modify access to Interstate 66; and
- Approval for entry into the Project Development Phase under New Starts.

Proposed decisions based on the Tier 1 study are detailed as follows:

- The build improvement concepts to be advanced are: general purpose lanes, managed lanes, Metrorail extension, light rail transit, bus rapid transit, VRE extension, improvement spot locations/chokepoints, intermodal connectivity, safety

improvements, and transportation communication and technology. In resolutions dated May 15, 2013 and July 17, 2013, the Commonwealth Transportation Board (CTB) endorsed these improvement concepts as those to be advanced for further study.

- The general location for studying future highway and transit improvements in Tier 2 is within the existing I-66 corridor as defined in the Tier 1 Draft EIS, with the exception of VRE improvements for which the general location is the existing VRE alignment. Each of the improvement concepts is proposed to be located within the corridor in which it currently exists, rather than new location corridors.
- No individual projects have been identified at this time.
- Tolling is proposed to be advanced for subsequent study in Tier 2 NEPA document(s).

Information on the future decision-making process is included in Chapter 6.

## **ES.7 AGENCY COORDINATION AND PUBLIC PARTICIPATION PROCESS**

### **PUBLIC OUTREACH**

An extensive public involvement program was implemented to ensure that concerned citizens, interest groups, civic organizations, and businesses were provided adequate opportunities to express their views throughout the NEPA process for the Tier 1 EIS.

Various communication media, including newsletters, brochures, questionnaires, informational videos, a project website, and public meetings were used to provide information about the project and gather input from citizens and other interested parties. A mailing list of interested citizens and local, state, and federal agency representatives and elected officials was created at the beginning of the study; this was used to distribute periodic study updates, as well as announcements of upcoming public meetings and project newsletters.

Three project newsletters were prepared during the course of the Tier 1 Draft EIS study to keep interested parties informed about its status and progress. Information is available on the study website at [www.helpfix66.com](http://www.helpfix66.com). Efforts were made throughout the study to engage the media and local transportation stakeholders in helping to build awareness of the study with residents. Individual citizens contacting VDOT about the project were referred to the project website for further information and encouraged to subscribe to project updates as well as participate in public meetings.

### **SCOPING**

The study team has coordinated with local, state, and federal agencies on the I-66 Tier 1 EIS study in accordance with 40 CFR 1501.7. FHWA published a Notice of Intent in the Federal Register on April 18, 2011 to announce its intent to prepare this Tier 1 EIS.

Representatives from federal, state, regional, and local agencies were invited to participate in the scoping process through attendance at scoping meetings and/or by providing comments

and suggestions in writing to the study team. Fourteen agencies participated in the June 7, 2011 scoping meeting that was held at the VDOT Northern District Office in Fairfax.

A total of four public scoping/citizen information meetings were held in Fairfax and Prince William counties in June 2011 and January/February 2012. The purpose of the meetings was to obtain public input on the transportation problems and needs in the corridor, identify options to address those needs, and gain input on any key environmental considerations in the corridor.

The Tier 1 Draft EIS was approved on February 12, 2013 and a Notice of Availability for the document was published in the Federal Register on February 22, 2013. The Tier 1 Draft EIS was made available to the public for review and comment and distributed to agencies and stakeholders with jurisdiction, expertise, or interest in the issues involved in the study. Printed copies of this document were available for review at local libraries and government centers within the project corridor, VDOT's Northern Virginia District and Richmond offices and at the Public Hearings. Digital copies of the document were made available on the project website.

Public Hearings were conducted from 6 p.m. to 9 p.m. on Wednesday, March 13, 2013 in Manassas, Virginia and Thursday, March 14, 2013 in Falls Church, Virginia. The purpose of the hearings was to obtain public input on the Tier 1 Draft EIS and which of the 10 Build Improvement Concepts under consideration best meet corridor needs. The public hearings were carried out in accordance with the guidelines contained in VDOT's *Policy Manual for Public Participation in Transportation Projects*.

#### **AGENCY COORDINATION**

Coordination with various federal, state, and local agencies on the scope of this EIS began early and continued throughout the study. Three federal agencies are serving as Cooperating Agencies for this Tier 1 EIS study: Army Corps of Engineers, Environmental Protection Agency, and FTA.

Of the twenty-three federal, regional, state or local agencies that were invited to be Participating Agencies for this study, fourteen accepted the invitation. Meetings were held with the Cooperating and Participating Agencies on November 29, 2011; March 19, 2012; and May 31, 2012.

#### **ES.8 TIER 1 RECORD OF DECISION**

The Tier 1 Record of Decision is the official decision document that concludes the Tier 1 National Environmental Policy Act process. On July 6, 2012, the President signed into law the Moving Ahead for Progress in the 21st Century Act (MAP-21). Section 1319(b) of MAP-21 states, "To the maximum extent practicable, the lead agency shall expeditiously develop a single document that consists of a final environmental impact statement and a record of decision, unless (1) the final environmental impact statement makes substantial changes to the proposed action that are relevant to environmental or safety concerns; or (2) there are significant new circumstances or information relevant to environmental concerns and that bear on the proposed action or the impacts of the proposed action." The title page of the Tier 1 Draft EIS stated, "FHWA will issue a single Final Environmental Impact Statement and Record of Decision document pursuant to Public Law 112-141, 126 stat. 405, Section 1319(b) unless FHWA determines statutory criteria or practicability considerations preclude issuance of the combined document pursuant to Section



1319.” Since neither of the two statutory criteria is applicable to this Tier 1 study, a single Tier 1 Final Environmental Impact Statement and Tier 1 Record of Decision document has been issued. The Tier 1 Record of Decision is located in Appendix E.





# I-66 Multimodal Study

Inside the Beltway

## Final Report



prepared for

**Virginia Department of Transportation  
Virginia Department of Rail and Public Transportation**

prepared by

**Cambridge Systematics, Inc.**

with

**KFH Group, Inc.**

**MCV Associates, Inc.**

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**Southeastern Institute of Research, Inc.**

**Toole Design Group LLC**

June 8, 2012

**CAMBRIDGE  
SYSTEMATICS**

# Executive Summary

The Virginia Department of Transportation (VDOT) and the Department of Rail and Public Transportation (DRPT) commissioned the I-66 Multimodal Study to address long-term multimodal needs within the I-66 corridor inside the Beltway. This study builds on the recommendations of the 2005 Idea-66 Study and the 2009 I-66 Transit/TDM Study, and fulfills the commitment made to the National Capital Regional Transportation Planning Board (TPB) in TPB Resolution R12-2009.<sup>1</sup>

The goal of the I-66 Multimodal Study was to:

*Identify a range of current and visionary multimodal and corridor management solutions (operational, transit, bike, and pedestrian, in addition to highway improvements) that can be implemented to reduce highway and transit congestion and improve overall mobility within the corridor and along major arterial roadways and bus routes within the study area.*

Building on the region's 2011 Financially Constrained Long Range Plan (CLRP), the study considered a wide range of complementary and mutually supportive multimodal improvement options, balancing the needs and priorities of users and nearby residents. A multitude of options for improvement were considered, including expanded public transportation, additional highway lane capacity, transportation demand management (TDM), high-occupancy vehicle (HOV) policies, high-occupancy/toll (HOT) policies, congestion pricing, managed lanes, integrated corridor management (ICM), and bicycle and pedestrian corridor access.

This final report provides a summary of the year-long I-66 Multimodal Study and includes recommendations and actions that address the study goals. An interim report was published in December 2011 that documents the long-term issues and needs of the corridor, the market research key findings, and the development of an evaluation methodology to formulate and assess the mobility options and multimodal mobility option packages.

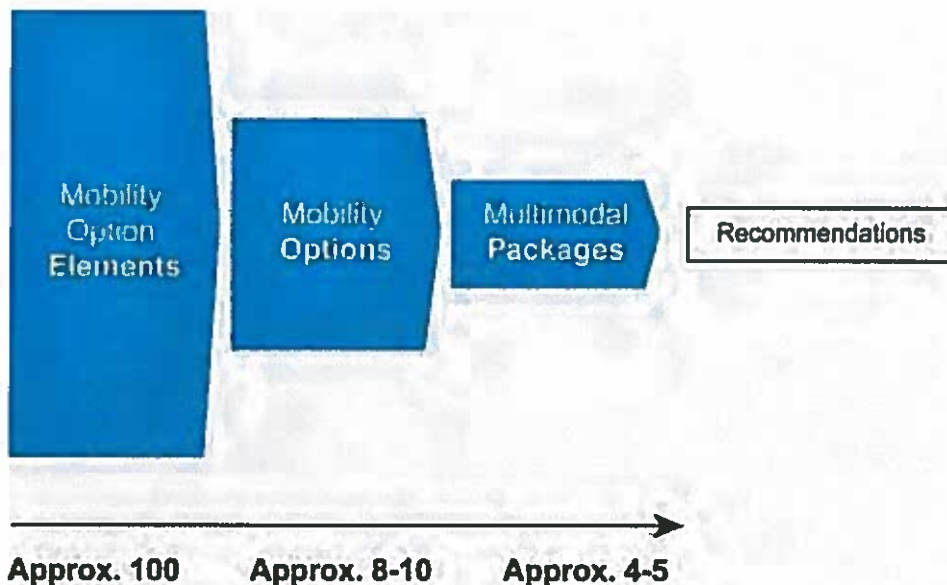
## Path to Study Recommendations

The path to developing a final set of recommendations was organized around a structured process for arriving at a set of multimodal solutions. Issues and needs germane to the study area were identified. Subsequently, an evaluation process, illustrated in Figure ES.1, provided a means to move from a starting point of numerous ideas – referred to as mobility option elements – down a path to recommendations, considering first a set of eight to ten discrete

<sup>1</sup> National Capital Region Transportation Planning Board, Resolution on Inclusion in Air Quality Conformity Analysis of Submissions for the 2009 Constrained Long Rang Plan (CLRP) and FY 2010-2015 Transportation Improvement program (TIP). TPB Resolution R12-2009, March 18, 2009.

mobility options and then narrowing to a set of four or five multimodal mobility option packages before developing recommendations.

**Figure ES.1 Path to Recommendations**



Feedback on key study topics was provided by members of a multi-jurisdictional Participating Agency Representative Committee (PARC) on a regular basis. In addition, public input was provided through market research conducted early in the evaluation process, as well as stakeholder interviews conducted throughout the project, and public meetings held at key milestones of the study.

Technical analysis, coupled with market research, stakeholder interviews, and jurisdictional input from the PARC meetings was used throughout the evaluation process – from identifying issues and needs to selecting a package of multimodal improvements for the long-term.

### **Mobility Option Elements**

Starting with a review of past plans and studies, and proceeding with input from the market research, members of the PARC and Lead Agencies on new strategies, a comprehensive list of mobility option elements was compiled. Section 5.0 of the Interim Report describes this process and lists the more than 100 mobility elements that were examined.

### **Issues and Needs**

A systematic process, as depicted in Figure ES.2, was undertaken to identify the issues and needs associated with the I-66 corridor inside the Beltway. Section 3.0 of the Interim Report

documents this process in greater detail. This comprehensive set of transportation issues and needs within the study addressed the following conditions:

1. Westbound roadway congestion;
2. Eastbound roadway congestion (including interchange capacity constraints at the Dulles Connector Road);
3. Capacity issues at I-66/arterial interchanges;
4. Non-HOV users during HOV operation hours;
5. Orange Line Metrorail congestion;
6. Adverse impact of roadway congestion on bus service;
7. Challenges to intermodal transfers (rail, bus, bicycle, car);
8. Bottlenecks on the Washington & Old Dominion (W&OD) and Custis Trails; and
9. Limitations/gaps in bicycle and pedestrian accessibility and connectivity.

**Figure ES.2 Process to Identify Issues and Needs**



## Mobility Options

The issues and needs were mapped against potential mobility solutions to screen over 100 mobility option elements down to 11 mobility options. These solutions – or mobility options – responded directly to the defined issues and needs in the corridor. The mobility options, organized by mode and submode, are listed in Table ES.1.

Table ES.1 Mobility Options

Name	Brief Description
Option A - HOV Restrictions	Designate I-66 lanes in both directions as Bus/HOV during peak periods
Option B1 - I-66 Bus/HOV/HOT Lane System Option 1	Convert I-66 into an electronically tolled Bus/HOV/high occupancy/toll (HOT) roadway
Option B2 - I-66 Bus/HOV/HOT Lane System Option 2	Convert I-66 into an electronically tolled Bus/HOV/HOT roadway and add a lane in each direction
Option C1 - I-66 Capacity Enhancement Option 1	Add lane designated HOV in both directions during peak periods
Option C2 - I-66 Capacity Enhancement Option 2	Add lane in both directions; designate HOV in peak period, peak direction only
Option D - Integrated Corridor Management	Deploy ICM strategies throughout the corridor
Option E - Arterial Capacity Enhancement	Enhance U.S. 50 through application of access management principles and implementation of a bus-on-shoulder lane
Option F - Metrorail Level of Service and Capacity	Provide an alternative connection between the I-66/Dulles Connector Road Corridors and South Arlington through an interline connection between the Orange Line and Blue Line
Option G - Bus Transit Level of Service and Capacity	Implement a range of enhancements to local, commuter, and regional bus services, including bus route changes and additions throughout the study area
Option H - Transportation Demand Management	Enhance TDM strategies drawn from the I-66 Transit/TDM Study
Option I - Bicycle/Pedestrian System Enhancements	Implement a range of bicycle and pedestrian improvements of varying scales

The effectiveness of the mobility options in addressing the issues and needs was assessed using various performance measures derived from an abbreviated application of the TPB travel demand forecasting model and other off-model analytical methods. Section 2.0 of this report presents the mobility option formulation and evaluation discussion.

## Multimodal Packages

Using the detailed assessment of the mobility options and input from the PARC, project stakeholders, and the public, the mobility options were combined into four multimodal packages. These four packages (outlined in Table ES.2) were comprised of elements of previously tested mobility options with some modifications and enhancements to better address the congestion and mobility goals of the corridor. All packages include a highway and transit component, ICM solutions, TDM programs, and bicycle and pedestrian improvements.

As documented in Section 3.0 of this report, all of the multimodal packages tested included transportation projects documented in the CLRP for 2040, along with the recommended bus services and TDM measures from the 2009 DRPT I-66 Transit/TDM Study. Metrorail core capacity improvements, including 100 percent eight-car trains on the Metrorail Orange and Silver Lines, were also included as part of the 2040 Baseline scenario for all the packages. Section 3.0 of this report describes the multimodal package assessment process and results.

**Table ES.2 Recommended Multimodal Packages**

Package	Multimodal Package Elements
#1	Option B1. I-66 Bus/HOV/HOT Lane System - Option 1 Option G. Bus Transit Level of Service and Capacity Option D. Integrated Corridor Management Option H. Transportation Demand Management Option I. Bicycle/Pedestrian System Enhancements
#2	Option B2. I-66 Bus/HOV/HOT Lane System - Option 2 Option G. Bus Transit Level of Service and Capacity Option D. Integrated Corridor Management Option H. Transportation Demand Management Option I. Bicycle/Pedestrian System Enhancements
#3	Option C1. I-66 Capacity Enhancement - Option 1 Option G. Bus Transit Level of Service and Capacity Modification: Additional buses serving Rosslyn and D.C. Core (i.e., K Street) destinations Option D. Integrated Corridor Management Option H. Transportation Demand Management Option I. Bicycle/Pedestrian System Enhancements
#4	Option G. Bus Transit Level of Service and Capacity Modification: Improve bus routing and LOS; improved headways further on Priority Bus Include U.S. 50 bus-on-shoulder operation Option D. Integrated Corridor Management Option H. Transportation Demand Management Option I. Bicycle/Pedestrian System Enhancements, including complementary bicycle facility along U.S. 50

### Sensitivity Tests

The evaluation of the four multimodal packages highlighted strengths and weaknesses in each package. This led to questions about how specific changes to a package might alter the results. To address these questions, two sensitivity analyses were conducted by modifying package features and performing a full run of the travel demand forecasting model. For the first sensitivity test, Package 1 was modified to test having the HOT operations only in effect during peak periods. The second sensitivity test modified Package 3 to have the new lane operate as a Bus/HOV/HOT lane 24/7 rather than as a Bus/HOV lane in the peak periods. Section 3.12 of this report discusses this analysis in more detail.



## Recommendations for Enhanced Mobility on I-66 Inside the Beltway

To formulate the final set of project recommendations, the study team considered the technical analysis, the market research, the stakeholder interviews, PARC input and public comments received at the public meetings and via webpage, email, and phone line. Recommendations were organized into two categories:

- Core Recommendations that are considered top priority; and
- Package Recommendations that are derived specifically from the multimodal packages evaluated in this study.

Section 3.0 of this report provides the detailed assessment of the multimodal packages. Section 4.0 provides a more robust discussion of overall study recommendations.

### Core Recommendations

The first tier of recommended improvements for the I-66 corridor inside the Beltway consists of the improvements in the corridor as included in the 2011 CLRP for 2040, including spot improvements along westbound I-66, increasing the HOV occupancy restriction on I-66 from HOV 2+ to HOV 3+, completing the Silver Line Metrorail extension to Loudoun County, and implementing the Active Traffic Management element of an ICM system.

The second tier of recommended improvements include the new transit services and TDM programs recommended by the 2009 DRPT I-66 Transit/TDM Study along with components of the WMATA enhancement plan deemed necessary to address Metrorail core capacity concerns in the I-66 corridor. The I-66 Multimodal Study did not evaluate the effectiveness of these improvements independently nor did it examine the timing and phasing strategy for them. It is assumed that the region will prepare a more rigorous implementation plan for these improvements as the travel conditions in the corridor warrant.

### Package Recommendations

A hybrid or composite package of elements from several packages is recommended for consideration as the third tier and end-state set of multimodal improvements (joining the first and second tier articulated as core recommendations). Outlined below are the elements of the proposed hybrid package of improvements. The scope, timing, and phasing of these elements should be reassessed and/or refined in the future in response to changing demographics, travel patterns and conditions in the corridor, and/or the implementation of the core recommendations of this study. The package recommendations include:

- Completion of the elements of the bicycle and pedestrian network as detailed in Section 4.3, to enhance service as a viable alternative to motorized trip making in the corridor. Consideration should be given to the priority determination in Section 4.3 as funding becomes available.

- Full operability of an ICM system inside the Beltway as detailed in Section 4.5. These strategies maximize the use, operations, and safety of the multimodal network within the study corridor.
- Addition and enhancement to the suite of TDM programs in the corridor as detailed in Section 4.4. As funding becomes available for TDM, consideration should be given to the priority grouping established in this study for implementation.
- Implementation of the best performing transit recommendations from Multimodal Package 4. This involves examination of all the transit service improvements in Multimodal Package 4 to determine those with the highest ridership in the corridor.
- Implementation of HOT lanes on I-66, potentially during peak periods only, to: provide new travel options in the corridor; utilize available capacity on I-66; provide congestion relief on the arterials; and provide new transit services as an alternative to tolled travel.
- Addition of a third through lane on selected segment(s) of I-66, depending on the monitored traffic flow conditions and demand both on I-66 and the parallel arterials.
- Explore the full use of commonly used or proven design waivers/exceptions to enable remaining within the existing right-of-way for I-66.

## Conclusions

While there is significant growth forecast for Northern Virginia between now and 2040, the multimodal transportation infrastructure, programs, and services defined in this report provide the means to accommodate the forecast growth and associated travel demand. The spectrum of recommendations - both core and package - covers a range of timeframes to 2040. The timing and phasing of implementation of the recommendations will require significant consideration of funding availability, progress against core recommendations, and the quality of operations and conditions on the existing key infrastructure assets.

The implementation of the recommendations will most likely require funding beyond existing and anticipated resources that are already committed to other state and local transportation priorities. Section 5.0 of this report provides a summary of a wide array of revenue options to fund the study recommendations. They include revenue sources associated with user fees, general taxes and specialized taxes or fees. Financing options are also considered that could include private equity investment in surface transportation through Public-Private Partnerships (P3), with financing packages that combine public and private debt, equity, and public funding.

## **I-66 Multimodal Study inside the Beltway, August 2013 Supplemental Report Executive Summary**

The Final Report of the I-66 Multimodal Study discussed a hybrid package recommendation which was made up of promising elements of three of the evaluated multimodal packages. The study schedule, however, did not permit discrete testing of the hybrid package. The Supplemental Report discusses the refinement of the hybrid package into a smaller set of multimodal solutions referred to as the “Refined Package.” This package contains transit and transportation demand management (TDM) elements, roadway elements, bicycle and pedestrian elements, and a variety of technology elements.

### **Roadway Refinement**

The roadway refinement associated with the Refined Package includes implementation of high-occupancy/toll (HOT) lanes on I-66, tested for two tolling options – peak-period-only tolls and all-day tolls; and provision of an additional through-lane on a portion of eastbound I-66 and completion of a continuous third through lane on westbound I-66 between the Dulles Connector Road and Fairfax Drive.

The roadway refinement of I-66 associated with the Refined Package combines two primary concepts: 1) tolling I-66, and 2) widening I-66 along a critical portion.

- I-66 HOT system – Two tolling options are considered: 1) a peak-period-only HOT system, and 2) an all-day HOT system. Tolling is assumed in both the eastbound and westbound directions for both options (1) and (2). The analyses indicated that peak-only tolling has a greater increase in the daily Person Miles Traveled (PMT) than all-day tolling.
- I-66 widening (westbound) – The project baseline or 2040 CLRP+ includes the completion of auxiliary lane spot improvements 2 and 3 in the westbound direction of I-66 inside the Beltway. These spot improvement projects included in the 2040 CLRP+ do not include a third lane in the segment between the Sycamore Street off-ramp and the Washington Boulevard on-ramp. The Refined Package includes this connection, providing a third continuous through-lane from Fairfax Drive to the VA 267/Dulles Connector Road on-ramp.
- I-66 widening (eastbound) – The Refined Package includes an additional through lane on I-66 beginning at the merge with the VA 267/Dulles Connector Road off-ramp and extending eastward to the off-ramp to Fairfax Drive.

The Refined Package provides a third through-lane only where forecast demand and service level merit the new capacity, as a means of reducing costs and potential impacts versus providing a third lane the entire length of the corridor. In addition, to further mitigate costs and potential impacts of widening I-66 in the segments identified, the full exploration of use of

commonly used or proven design waivers/exceptions during the design phase of these projects is recommended.

Planning-level cost estimates were prepared for the roadway elements of the Refined Package. For the eastbound and westbound widening, it was assumed that the use of design waivers and exceptions for lane widths, shoulder widths, horizontal and vertical clearances, pier protection, side slopes, and drainage would be used where rights of way could be limited. The resulting estimate was that the roadway portion of the Refined Package would cost between \$160 million and \$180 million.

## **Transit Refinement**

An important aspect of developing the Refined Package was to include the best performing transit recommendations from Package 4, the high transit package of improvements in the original Multimodal Study. Package 4 included increased transit service frequencies for all routes entering the study area, setting a minimum headway on individual and trunk routes of 15 minutes in the peak and 30 off-peak, and new and enhanced Priority Bus services on I-66, US 29, and US 50 (from Fair Oaks to D.C.) The review and adjustment process refined the transit service recommendation to improve the productivity of the proposed services.

In the refinement process, all service changes proposed in the CLRP+ were retained. Service realignments or changes from jurisdiction transit development plans (TDPs) were also retained, as these improvements have previously undergone significant planning attention.

Low-productivity routes were reviewed as indicated by the model assignment. The following productivity thresholds were set for evaluation:

- Peak-period 35 passengers per hour and off-peak cut-off of 20 passengers per hour for WMATA bus lines; and
- Peak-period 25 passengers per hour and off-peak cut-off of 15 passengers per hour for ART bus lines.

For routes with service frequency changes in Package 4 that did not meet these thresholds, the route service frequency was adjusted or the route was eliminated. These adjustments were made separately for the peak and off-peak period.

Specific service changes that are included in the Refined Package can be found in Table A.20 of the Supplemental Report. The primary transit components that were retained in the Refined Package include:

- New and enhanced Priority Bus services with 17 minute peak period frequency on I-66, US 29, and US 50. This represents a scale back from the 10-minute service frequencies assumed in Package 4.
- Enhanced US 50 bus service with new routes from Tysons and Fair Oaks, continuing on US 50 into the D.C. Core.

The Refined Package transit services were in addition to those assumed in the baseline from the 2009 DRPT I-66 Transit and TDM Study. The service improvements detailed in the DRPT study (<http://www.drpt.virginia.gov/activities/I66study.aspx>) were estimated to cost \$83 million for capital, \$11.1 million annually for net operating, and \$200 million for supporting infrastructure. Also assumed in the baseline were the WMATA capacity expansions to 8 car trains throughout the system, including capacity enhancements at numerous stations.

The additional services recommended as part of the refined package were estimated at \$4.9 million capital annually (for vehicles) and \$21.6 million net operating, annually. Transit costs do not include additional costs associated with increased maintenance and storage needs.

## **Bicycle and Pedestrian Facilities' Refinement**

The Final Report for the I-66 Multimodal Study identified 60 potential projects that would enhance accommodations for bicyclists and pedestrians traveling along the I-66 corridor. Projects ranged significantly in scale from upgrading the Custis Trail along its entire length, to providing public bicycle parking in Rosslyn. The majority of the 60 original projects were sourced from ongoing planning activities in Fairfax County, the City of Falls Church, Arlington County, Washington Metropolitan Area Transit Authority (WMATA), and Virginia Department of Transportation (VDOT). Other projects were recommended either explicitly by stakeholders and the community, or were included based on general needs (e.g., need better transit access) articulated by stakeholders during Phase I at community meetings, during stakeholder interviews, or through the project survey.

During development of the Supplemental Report, the bicycle and pedestrian project list was refined through a multistep process that included consultation with local agency staff, assessment of a project's role in overall connectivity, and field investigation coupled with professional judgment. Projects already having significant momentum towards implementation, and those determined to be primarily the responsibility of the local government, have not been included in order to concentrate on overall non-motorized regional connectivity and mobility. Key criteria in project evaluation were, connecting major population or employment centers, support for longer distance movements through the study area, access to Metrorail stations, and improving the functionality of existing facilities. The resulting short list of projects supports mobility and congestion relief through enhancements to the connectivity and functionality of the regional bicycle network. These were among the highest ranked projects in Phase I of the I-66 Multimodal Study. These are projects that provide access to parts of the region that were previously unconnected, or projects that improve the functionality and performance of existing facilities.

Through this analysis, the project team identified seven projects that were deemed to be regionally significant. The total cost of completing all seven projects was estimated at approximately \$12 million, and includes the following projects.

***Custis Trail*** -widen the trail to 12 feet, where feasible; smooth cracked and heaved pavement; and upgrade trail lighting between Lynn Street in downtown Rosslyn and the intersection with the Washington & Old Dominion Trail (in Bluemont Park) near the western edge of Arlington County.

*Fairfax Drive Connector* - improve connectivity between the Custis Trail and the Bluemont Junction Trail, and the western edge of the Rosslyn-Ballston Corridor through wider sidewalks, improved signal timing, ramps and signage on N. Fairfax Drive west of N. Glebe Road.

*Arlington Boulevard Trail (Glebe to Beltway)* - trail along Arlington Boulevard through a combination of constructing an off-road sidepath, on-street infrastructure, and signage. The project will continue the existing Arlington Boulevard sidepath west from Glebe Road to the I-495 interchange.

*Arlington Boulevard Trail at I-495 Interchange* - bicycle and pedestrian accommodations across I-495 (Capital Beltway) in the vicinity of Arlington Boulevard.

*Arlington Boulevard Trail (Beltway West to City of Fairfax)* - create a trail along Arlington Boulevard through a combination of constructing an off-road sidepath, on-street infrastructure, and signage from the I-495/Arlington Boulevard interchange to the City of Fairfax border at Fairfax Boulevard.

*West Falls Church Connector Trail* - construct a trail between the West Falls Church Metro station and the Pimmit Hills neighborhood to the northwest.

*VA 7 Tysons to Falls Church* - construct an off-road connection between the Washington and Old Dominion Trail in Falls Church and Tysons, running parallel to VA 7 (Leesburg Pike).

## **Transportation Demand Management**

The Transportation Demand Management (TDM) strategies included in each of the Packages of the Multimodal Study were identical, and were carried forward in full to the Refined Package. Strategies included Marketing and Outreach, Vanpool Programs, Financial Incentives, and other ridesharing programs, which are documented in the Final Report.

The 2009 Department of Rail and Public Transportation (DRPT) Transit and TDM Study recommended \$3.6 million operating annually and \$5.8 million capital in new TDM strategies for the I-66 corridor both inside and outside the Beltway by the year 2030. The I-66 Multimodal Study inside the Beltway recommended an additional \$2.2 million in TDM strategies by 2040, amounting to \$6 million per year for TDM over and above what is currently spent in this region for TDM (the report notes \$11 million spent in 2012 for TDM in northern Virginia).

## **Integrated Corridor Management**

Integrated Corridor Management (ICM) brings together a variety of multimodal technology elements, providing drivers, transit users, carpoolers, and bicyclists with information to be able to make informed transportation decisions in advance or in real time. ICM strategies were not further evaluated or refined in the Supplemental Report.



# NATIONAL CAPITAL REGION

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## TRANSPORTATION PLANNING BOARD

Item #7

### **MEMORANDUM**

February 18, 2015

To: Transportation Planning Board

From: Kanathur Srikanth  
Director, Department of Transportation Planning

Re: Summary of comments received and proposed responses on the Project Submissions for Inclusion in the Air Quality Conformity Analysis for the 2015 CLRP and FY 2015-2020 TIP

### **Background**

At the January 21, 2015 meeting the Board was briefed on the draft project submissions for the 2015 Update to the CLRP and the FY 2015-2020 TIP. The project submissions were released for a 30-day public comment and interagency review period at the TPB Citizens Advisory Committee meeting on January 15. This comment period closed on February 14.

Comments submitted by individuals, organizations and businesses have been posted on the TPB's website at [www.mwcog.org/transportation/public/comments.asp](http://www.mwcog.org/transportation/public/comments.asp). This memorandum provides a summary of the comments received and responses provided by TPB staff in consultation with the implementing agencies. A compilation of the comments received is provided in a separate memorandum.

The Board will be briefed on the comments received and responses provided, and asked to approve the project submissions for inclusion in the Air Quality Conformity Analysis for the 2015 CLRP and FY 2015-2020 TIP.

### **Comments and Responses**

Comments were received on the following topics:

- A) Bicycle and Pedestrian Projects in the District and Region-wide,
- B) Multimodal Aspects of Both of the I-66 Projects,
- C) Tolling Policies of Both I-66 Projects,
- D) Widening of I-66 Inside the Beltway, and
- E) Environmental Mitigation and Congestion Management Documentation for I-66 Inside the Beltway,
- F) Detrimental Effects of Widenings in the I-66 Projects.

## A) Bicycle & Pedestrian Projects in the District and Region-wide

1. **Comment:** DDOT should coordinate with appropriate federal agencies while studying the Dedicated Bike Lanes projects.

**Response:** The proposed bicycle lane project is part of the DDOT's overall Bicycle network plan developed in consultation with stakeholders. DDOT will comply with all requirements to coordinate with the appropriate federal agencies as part of project design and implementation.

2. **Comment:** Given the significant projected increase in non-motorized travel, the TPB should encourage its members to increase investments in bicycling and pedestrian facilities, particularly around transit stations, and funding for Complete Streets projects.

**Response:** The TPB continues to encourage member jurisdictions to invest in bicycle and pedestrian projects through the Bicycle and Pedestrian Subcommittee, the Regional Transportation Priorities Plan, and the Complete Streets policy. Starting next year, the FY 2017-2022 TIP will track projects that support local jurisdictions' Complete Streets policies.

## B) Multimodal Aspects of Both of the I-66 Projects

1. **Comment:** The cost and schedule for the multimodal improvements for the I-66 Inside and Outside the Beltway projects is unclear. VDOT should promptly develop a detailed funding and implementation schedule for the transit and bicycle/ pedestrian improvements associated with the I-66 projects. The TPB should hold VDOT accountable for these and other transportation demand management improvements.

**Response:** The CLRP forms for both projects have been updated to provide more information regarding multi-modal services and improvements. VDOT and DRPT are currently working with stakeholders to further develop the transit and TDM elements for the projects. This work will serve as the basis for more detailed cost estimates and implementation schedules. The TPB's annual CLRP and TIP update process provides an opportunity for programming agencies to update project information, including costs and implementation schedules, as project development and implementation proceeds.

2. **Comment:** Median space should be preserved for westward extension of Metrorail.

**Response:** VDOT and DRPT are currently examining two alternatives, one of which preserves the median for future Metrorail extension. Irrespective of the median space, VDOT and DRPT are working to develop the current multi-modal improvements to I-66 so as to not preclude future extension of the Metrorail system in the I-66 corridor.



3. **Comment:** VDOT should conduct rigorous analyses and effective public outreach to demonstrate the wisdom of the proposed HOV-2 to HOT-3 conversion. Additionally the new HOT hours should at least equal the current eight daily hours of HOV restrictions on I-66 outside the Beltway

**Response:** VDOT will work closely with Arlington County, Fairfax County, the City of Falls Church, transit providers, and other stakeholders to implement a comprehensive outreach program. The outreach program will provide the opportunity for direct engagement with various groups along the corridor, including the local political leadership, transit service providers, various other interest groups, and business and community leaders. There will also be opportunities for the public to learn more about the Project, as well as provide comments, both through the CLRP process and the NEPA process.

The dynamic tolling is proposed to occur in both directions of I-66 during the peak periods only. The peak period hours will be determined in the environmental study analysis.

4. **Comment:** Potential impacts to existing adjacent bicycle and pedestrian facilities as a result of the widening component of the I-66 inside the Beltway project should be fully addressed.

**Response:** VDOT and DRPT will work with project stakeholders to select and implement bicycle and pedestrian improvements identified in the Multi-modal Study. VDOT and DRPT will seek to avoid or mitigate any adverse impacts to existing bike and pedestrian facilities. This will be addressed in the Environmental Study.

5. **Comment:** The Project must include a robust and detailed plan for funding, operating and maintaining high-quality transit both on I-66 and in east-west roads in the corridor such as Routes 50 and 29. Details regarding planned bicycle and pedestrian improvements should also be developed.

**Response:** The Project is multimodal in nature and the revised CLRP forms provide additional details on transit and TDM elements. A project funding plan is under development that will include all elements of the multimodal project. Bicycle and pedestrian accommodations in the corridor are currently being developed in cooperation with localities, and will be consistent with VDOT's Policy for Integrating Bicycle and Pedestrian Accommodations.

### **C) Tolling Policies of Both I-66 Projects**

1. **Comment:** Concerns about the proposed tolling associated with the Express Lanes component of the Project and the conversion to HOT-3 on I 66 Outside the Beltway. Concerns also regarding the ability of the planned improvements to address future transportation needs and the provision of mass transit and the appropriateness of "slugging."

**Response:** The needs of the corridor were studied as part of the Tier I environmental study, and the proposed package of improvements represents those components that are best suited to address the identified needs in the near-term. The Commonwealth's I-66 Corridor Improvements Project outside the beltway includes new high-frequency bus service with more predictable travel times and new or expanded commuter park and ride lots in the corridor. For additional details regarding the planned multimodal improvements, please refer to the latest CLRP submission.

With the Outside the Beltway improvements, users will have travel options, including general purpose lanes, managed express lanes, and high-frequency bus service, among others. The combined impact of these improvements is anticipated to improve travel times in the corridor, both in the general purpose lanes, as well as the express lanes. It is noted that the region's current Constrained Long Range Plan calls for all HOV lanes in Northern Virginia to be HOV-3+ by 2020.

VDOT and VDRPT encourages and facilitates carpooling in the region as a valuable mode of transportation by constructing and maintaining HOV/HOT lanes, park and ride lots, and promoting alternative modes via Commuter Connections and others. This project will provide time saving benefits to those who choose to carpool, as well as facilitate the formation of both formal and informal carpools at new and improved park and ride lots.

- 2. Comment:** Express bus service is critical to the success of the I-66 Outside the Beltway project. Any contract for private operation of toll facilities on I-66 outside the Beltway should include concessions to fund rapid bus service and other transit options in the corridor.

**Response:** For I-66 outside the Beltway, VDOT and DRPT are working together to finalize a comprehensive list of bus service enhancements that work in concert with Park-and-Ride lot improvements in the corridor. The details of these proposed improvements can be seen in the revised CLRP project description form. For I-66 inside the Beltway, toll revenues will be used in accordance with state and Federal law and will offset design, construction, operating and maintenance costs of the project. Revenues will also provide a funding source for multimodal improvements as identified in the CLRP project description form.

- 3. Comment:** Tolling of Washington Dulles International Airport users on I-66 inside the beltway would create a significant disincentive for passengers to choose Dulles International.

**Response:** The project team will work collaboratively with the Metropolitan Washington Airports Authority to explore potential solutions to address the concerns of the Authority and impacts to Washington Dulles Airport travelers.

4. **Comments:** The toll revenue must pay the capital and operating costs of the many recommended multimodal corridor improvements.

**Response:** Toll revenues will be used to offset design, construction, operating and maintenance costs of the project. Project revenues will also provide a funding source for multimodal improvements as identified in the revised CLRP project description form.

5. **Comment:** Similar HOT-3 projects should be considered on I-395 and the Dulles Airport Access Road.

**Response:** While the comment suggestions is outside of the scope of the projects proposed for inclusion in the 20125 CLRP update the suggestions will be shared with the state and local transportation agencies.

6. **Comment:** The I-66 Inside the Beltway project will adversely impact low-income residents without providing increased accessibility.

**Response:** The proposed project includes ridesharing, transit and improvements to bicycle and pedestrian facilities to enhance alternative modes of travel options in the I-66 corridor. Additionally this project builds on the Silver line Metrorail service and the accompanying changes to the bus services made by local jurisdictions and WMATA.

VDOT encourages and facilitates carpooling in the region as a valuable mode of transportation by constructing and maintaining HOV/HOT lanes, park and ride lots, and promoting alternative modes via Commuter Connections and others,

Benefits of the I-66 Corridor Improvements Project, Outside the Beltway and the I-66 Multimodal Improvement Project, Inside the Beltway will be applicable to all income levels or other demographic groupings. Drivers that choose to pay for the tolled services free more room on un-tolled roads, and the multi-modal nature of the projects adds travel alternatives for all user groups. Buses that use the tolled lanes will enjoy free-flow conditions due to the variable toll based on congestion.

The added capacity will also add space for high quality rapid bus service on the freeway. The projects will include significantly enhanced transit services, and the Outside the Beltway Corridor Improvement project includes new and expanded park and ride lots. Surveys conducted for current Congestion Pricing projects show that drivers of all income levels use priced express lanes. Although many low-income users don't choose to use the tolled highway every day, they support having the option.

## **D) Widening of I-66 Inside the Beltway**

1. **Comment:** The widening of I-66 inside the Beltway should be expedited and not delayed until 2040.

**Response:** The environmental study will consider this widening with a horizon year of 2040, and will also test an interim year of 2025 for this improvement.

2. **Comment:** The widening of I-66 inside the Beltway should be detached from the larger project so that the Express Lanes component may move forward in the CLRP while the widening is further studied and compared against less costly alternatives.

**Response:** The proposed I-66 Multimodal Improvement Project, Inside the Beltway is based on the recommendations from the 2012 I-66 Multimodal Study Inside the Beltway, which included widening among the multimodal improvements for the corridor. The study also outlines a range of other non-roadway widening improvements. The revised CLRP form provides more information. VDOT and DRPT will work with stakeholders to further define the appropriate multimodal services.

3. **Comment:** The proposed NEPA study for I-66 Inside the Beltway should not include any un-built capacity as the CLRP baseline or “no-build” condition.

**Response:** The proposed project reflects added roadway capacity to be built by 2040 and only the 2040 baseline condition of the CLRP will reflect this additional capacity.

## **E) Environmental Mitigation and Congestion Management Documentation for I-66 Inside the Beltway**

1. **Comment:** The I-66 project description forms lack the associated Congestion Management Documentation forms.

**Response:** As instructed in the Call for Projects document for the 2015 Update to the CLRP, Congestion Management documentation will be provided by the April 3, 2015 due date.

2. **Comment:** Environmental mitigation considerations for the I-66 Inside the Beltway project have not been identified.

**Response:** VDOT has revised the CLRP project description form to state, “The Environmental process has not been started yet. VDOT will assess the environmental impacts of the project as required by State and Federal law.”

## **F) Detrimental Effects of Widening in the I-66 Projects**

1. **Comment:** The I-66 Outside the Beltway project will be detrimental to public lands and private homes in Dunn Loring Village.

**Response:** The NEPA environmental study will consider the right-of-way needs of the project alternatives and will assess any impacts on neighborhoods and mitigation measures needed. The design team is continuing to refine project plans with the goal of minimizing right-of-way impacts.

## 2015 CLRP AND FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS (transit)

2/12/2015

ConID	Project ID	Improvement	Facility	From	To	Projected Complete
<b>DDOT</b>						
614		Construct	Anacostia Streetcar Extension	Howard Road Firth Sterling	Good Hope Road SE	<del>2017</del> 2016
615		Construct	Benning Rd. Streetcar Spur	Benning Rd.	Minnesota Ave. Metro Station	2015
613		Construct	Benning Road Streetcar	Oklahoma Avenue NE	45th Street/Benning Road Metro	<del>2020</del> 2016
668		Implement	DC Circulator	National Mall Area Route		2015
664		Implement Study	DC Circulator Expansion	<i>Union Station to Georgetown Route</i> Phase I TDP Routes— Wisconsin/Woodley	<i>Extension to</i> National Cathedral	2017 Not Coded
		Implement Study	DC Circulator Expansion	<i>Union Station to Navy Yard Route</i> Phase I TDP Routes Navy Yard/ M Street SE	<i>Extension to</i> Waterfront / Maine Ave. SW	2017 Not Coded
		Implement	<i>DC Circulator Expansion</i>	<i>Rosslyn to Dupont Circle Route</i>	<i>Extension to U St./ Howard University</i>	2017
616		Construct	DC Streetcar - Anacostia Initial Line (AIL)	Defense Blvd. and S. Capitol St. SE	Howard Rd. and Firth Sterling	<del>2017</del> 2015
582		Study	H St. NW Peak Period Bus-Only Lanes	17th St. NW	New York Ave. NW	Not Coded
544		Construct	H Street/Benning Road Streetcar	3rd Street NE (near Union Station)	Oklahoma Avenue, NE	2015 2014
583		Study	I St. NW Peak Period Bus Only Lanes	13th St. NW	Pennsylvania Ave. NW	Not Coded
612		Construct	M Street SE/SW Streetcar	Good Hope Road SE	Maine Avenue SW	2020
610		Construct	Union Station/Georgetown Streetcar	K St. / 34th St. NW <del>Wisconsin Ave. under Whitehurst Freeway NW</del>	3rd/H St. (near Union Station)	2020
<b>MDOT/MTA</b>						
587		Implement	Brunswick - Additional Access Point			2029
588		Implement	Brunswick - New Station			
617		Implement	Brunswick Line Service Improvements			2029
618		Implement	Camden Line Service Improvements			2029
481		Construct	Corridor Cities BRT	Shady Grove	Comsat	2020
619		Implement	Penn Line Service Improvements			2029
479		Construct	Purple Line Transitway	Bethesda	New Carrollton	2020
480		Construct	Silver Spring Transit Center	Phase II		2017

**2015 CLRP AND FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(transit)**

2/12/2015

ConID	Project ID	Improvement	Facility	From	To	Projected Complete
482		Construct	Takoma/Langley Park Transit Center	Intersection New Hampshire Ave. and University Blvd.	Takoma/Langley Park	2015
<b>MDOT/SHA</b>						
692		Study	MD 355 Bus Rapid Transit	MD 410	Redgrave Place	Not Coded
693		Study	MD 586 Bus Rapid Transit	MD 97	MD 355	Not Coded
741		Study	MD 97 Georgia Ave. Busway	MD 586	MD 108	Not Coded
486		Study	MD 97 Georgia Avenue Bus Rapid Transit	MD 586	MD 108	Not Coded
694		Study	US 29 /MD 384 Bus Rapid Transit	MD 410	MD 198	Not Coded
<b>Montgomery County</b>						
669		Study	Countywide BRT	various corridors		Not Coded
483	MCT7	Construct	Olney Transit Center	adjacent to or north of MD 108		2015
485		Study	Veirs Mill Bus Rapid Transit	Rockville Metrorail Station	Wheaton Metrorail Station	Not Coded
487	MCT22	Construct	Veirs Mill Road Bus Enhancement	Rockville	Wheaton	2020
<b>WMATA</b>						
514		Modify	Revised Metrorail Operating Plan			
462		Implement	Anacostia/Congress Heights Bus Improvements			2012
466		Implement	Eastover/Addison Bus Improvements			2014
461		Implement	East-West Highway (Prince George's County) Bus Improvements			2012
460		Implement	Greenbelt/Twinbrook Bus Improvements			2012
463		Implement	Little River Turnpike/Duke Street Bus Improvements			2015
467		Implement	North Capitol Street Bus Improvements			2015
465		Implement	Rhode Island Avenue (DC) Bus Improvements			2013
468		Implement	Silver Line Corridor Bus Service			2013
459		Implement	U Street/Garfield Bus Improvements			2011
464		Implement	University Boulevard/East-West Highway Bus Improvements			2013

## 2015 CLRP AND FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS (transit)

2/12/2015

ConID	Project ID	Improvement	Facility	From	To	Projected Complete
<b>VDOT</b>						
Needs Record		Widen	US 1 (bus/right-turn lanes)	VA 235 North	SCL Alexandria (I-95 Capital Beltway)	2035
511		Construct	Crystal City/Potomac Yard Busway (2 lane- dedicated)	Vicinity of Glebe Road Extended (City/County Line)	Crystal City Metro Station	2015 <del>2014</del>
676		Construct	<del>Crystal City Streetcar</del>	<del>Vicinity of Glebe Rd. Ext-City/County Line</del>	<del>Pentagon City Metro Station</del>	2019
488		Construct	Potomac Yard Transit Bus Lanes (2 lanes)	Four Mile Run	Braddock Road	2014
677		Study	US 1 Corridor Streetcar Conversion	Four Mile Run	Braddock Road	Not Coded
489		Construct	Metro Station (Proposed)	Potomac Yard		2021
490		Construct	<del>Columbia Pike Streetcar</del>	<del>Skyline Center</del>	<del>Pentagon City</del>	2017
493		Construct	Park-and-Ride Lot	Springfield CBD	vic. I-95 & Old Keene Mill Road	2015
670		Construct	Park-and-Ride Lot	Dulles Town Center	300 Spaces	2014
495		Construct	Park-and-Ride Lot	US 50 at Stone Ridge	150 spaces	2015
671		Construct	Park-and-Ride Lot	US 50 Dulles at East Gate	200 Spaces	2015
498		Construct	Park and Ride Lot	Brambleton	100 space expansion	2015
499		Construct	Park and Ride Lot	Arcola Center	300 spaces	2015
500		Construct	Park and Ride Lot	at EPG		2015
502		Construct	Dulles Corridor Metrorail	East Falls Church Metrorail Station	Wiehle Avenue	Complete
503		Construct	Dulles Corridor Metrorail	Wiehle-Reston East Station	VA 772	2016
629		Construct	VRE - Potomac Shores Commuter Rail Station	Potomac Shores	Prince William County	2017
504		Implement	VRE Service Improvements (Reduce Headways)	Fredericksburg and Manassas lines		2020
630		Construct	VRE 3rd Track	Arkendale, Stafford Co.	Powell's Creek, Prince William County	2015
506		Implement	<del>West End Transitway (TIGER Grant) Van Dorn - Pentagon BRT</del>	Van Dorn Street Metro	Pentagon	2015
505		Construct	<del>West End Transitway (City Funded) Van Dorn - Pentagon BRT</del>	Van Dorn Street Metro	Pentagon	2019
507		Construct	Landmark Transit Center	Duke Street and Van Dorn Street		2023
508		Implement	DASH Service Expansion	citywide		2019
Needs Record		Construct	Van Dorn Metro Station Access Improvements	Van Dorn St. Metro		2017



## 2015 CLRP AND FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS (transit)

2/12/2015

ConID	Project ID	Improvement	Facility	From	To	Projected Complete
509		Construct	Duke Street BRT Transitway	King Street Metro	Fairfax County Line	2024
672		Construct	Leesburg Park and Ride Lot (new location)	Crosstrails Blvd (approx)	300 Spaces	2018
673		Construct	Sterling Park and Ride Lot		200 Spaces	2014
674		Construct	One Loudoun Park and Ride Lot	VA 7 & Loudoun County Parkway	200 Spaces	2019
675		Study	Western Loudoun Park and Ride Lot		250 Spaces	Not Coded
		Implement	I-66 Corridor Enhanced Bus Service <i>(details shown with project description sheet)</i>	Inside the beltway		2025
		Implement	I-66 Corridor Enhanced Bus Service <i>(details shown with project description sheet)</i>	Inside the beltway		2040
		Implement	I-66 Corridor Enhanced Bus Service <i>(details shown with project description sheet)</i>	Outside the beltway		2022
		Implement	I-66 Corridor Enhanced Bus Service <i>(details shown with project description sheet)</i>	Outside the beltway		2040
		Construct	I-66 Corridor Park and Ride lot	US 15 in Haymarket		2022
		Construct	I-66 Corridor Park and Ride lot	University Blvd. in Gainesville		2022
		Construct	I-66 Corridor Park and Ride lot	Balls Ford Road in Manassas		2022
		Expand	I-66 Corridor Park and Ride lot	Prince William Parkway		2022
		Expand	I-66 Corridor Park and Ride lot	Stringfellow Road		2022
		Expand	I-66 Corridor Park and Ride lot	Monument Drive		2022
Needs Record		Expand	Fairfax Connector Bus Service Expansion	Countywide		2021
Needs Record		Construct	Bus Rapid Transit (BRT)	US 1 Richmond Highway	N. Kings Highway at Huntington Metro - Fort Belvoir	2030

**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
<b>DDOT</b>											
550		MRR08 A	Study	Long Bridge	Alexandria	L'Enfant					Not Coded
539	DI10		Downgrade	Southeast Boulevard	11th Street SE	Pennsylvania Ave. SE Barney Circle	1	3			2015
600			Study	I 395 14th Street/Rochambeau Bridge	conversion to HOV/HOT						Not Coded
601			Study	I 395 Southeast/Southwest Freeway managed lanes (convert or construct HOV/HOT lanes)	Case Bridge	11th Street Bridge					Not Coded
602			Study	I 295 managed lanes (convert or construct HOV/HOT lanes)	11th Street Bridge	Maryland state line					Not Coded
603			Remove/Close	I 395 SB Exit Ramp	SB to the 400 block of 3rd St. NW				1	0	2014
604			Construct	F Street NW	2nd Street NW	3rd Street NW			0	2	2016 2014
605	DI9		Reconstruct	I 295 Interchange at Malcolm X Blvd.	Add above grade ramp connection from NB I-295 off ramp to new St. Elizabeth's Access Road						2014
541	DP9A	AW011, AW024 A, AW001 A, AW025 A, CKTB6	Widen	South Capitol Street Corridor: Frederick Douglas Bridge	Independence Avenue	Martin Luther King, Jr. Blvd.	2	2	5	6	2015
542	DP9C		Construct	South Capitol Street Intersection	at Potomac Avenue						2015
543	DP9D		Construct	Suitland Parkway interchange	at Martin Luther King, Jr. Boulevard to complete movements						2016
606	DP10		Construct	St. Elizabeth's Access Road (along West Campus Boundary)	Firth Sterling	Malcolm X			0	3	2014
584	DS3		Construct	Southern Ave. SE	Branch Ave. SE	Naylor Rd. SE			0	2	2018
639	DS5		Reduce Capacity	M Street NW - add bike lane	Connecticut Avenue NW	14th Street NW			4	3	2014
638	DS5A		Reduce Capacity	M Street NW - add bike lane	29th Street NW	Connecticut Avenue NW			5	4	2014
546	DP11		Widen	Wisconsin Ave. NW	Garfield Street NW	34th St. NW			4	4/6	2014
449	DP12	SR071A	Reduce Capacity	17th Street NE/SE	Benning Avenue NE	Potomac Avenue SE			2	1	2015 2014

NOTE: Shaded areas represent changes from the 2014 CLRP. VDOT I-66 Alternatives (A and B) Identified with varied shading.

**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
582			Study	H St. NW Peak Period Bus-Only Lanes	17th St. NW	New York Ave. NW					Not Coded
583			Study	I St. NW Peak Period Bus Only Lanes	13th St. NW	Pennsylvania Ave. NW					Not Coded
558		EDOC2A	Reduce Capacity	C Street/N. Carolina Avenue	Oklahoma Avenue	14th Street NE			5	3	2016 2014
567	DP16		Reduce Capacity	East Capitol Street	40th Street	Southern Ave			6	4	2015
585	DS6		Reduce Capacity	Maryland Ave. NE	6th St. NE	15 St. NE			4	2	2015
608			Reconstruct	New Jersey Avenue NW 1-way to 2-way	H Street NW	N Street NW					2015
609			Reduce Capacity	South Capitol Street	Firth Sterling Ave.	Southern Ave Maryland state line			5	4	2015
663			Reduce Capacity	Adams Mill Rd. NW	Kenyon	Klinge			3	2	2014 2015
637	DP19		Reduce Capacity	4th Street SW	Pennsylvania Avenue SW	Virginia Avenue SW			4	2	2014
636	DP20		Reduce Capacity	Reno Road NW	36th Street NW	Tilden Street NW			4	2	2015
700			Reduce Capacity	4th Street SW	M Street	P Street			4	2	2015
701			Reduce Capacity	6th Street NE	Florida Avenue	K Street			2	1	2015
702			Reduce Capacity	7th Street NW	New York Avenue	N Street			4	2	2015
703			Reduce Capacity	12th Street NW	Pennsylvania Avenue	Massachusetts Avenue			4	3	2015
704			Reduce Capacity	14th Street NW	Florida Avenue	Columbia Road			4	2	2015
705			Reduce Capacity	Brentwood Parkway NE	6th Street/Penn Street	9th Street			4	2	2015
717			Reduce Capacity	Florida Avenue NE	3rd Street	West Virginia Avenue			6	4	2015
710			Reduce Capacity	Florida Avenue NE	2nd Street	3rd Street			6	5	2015
707			Reduce Capacity	New Jersey Avenue NW	H Street	Louisiana Ave			4	2	2015
713			Reduce Capacity	Pennsylvania Avenue NW	18th Street	20th Street			5	4	2015
712			Reduce Capacity	Pennsylvania Avenue NW	17th Street	18th Street			6	4	2015
715			Reduce Capacity	Pennsylvania Avenue NW	26th Street	28th Street			5	4	2015
716			Reduce Capacity	Pennsylvania Avenue NW	28th Street	29th Street			4	2	2015
714			Reduce Capacity	Pennsylvania Avenue NW	20th Street	26th Street			6	4	2015
709			Reduce Capacity	Wheeler Road SE	Alabama Avenue	Southern Avenue			4	2	2015

**MDOT/State Highway Administration**

Interstate											
126	MI2Q	MO839 1	Construct	I 270 Interchange	at Watkins Mill Road Extended		1	1	8	8+2	2018 2016
125	MI2SHO V MI2S	FR1921	Construct	I 270 /US 15	Shady Grove Metro Station	North of Biggs Ford Road	1	1		Varies	2030
202	NRS		Reconstruct	I 270	at MD 121		1	1	1	2	2016
697			Study	I 270	at Gude Drive		1	1			Not Coded

NOTE: Shaded areas represent changes from the 2014 CLRP.  
VDOT I-66 Alternatives (A and B) Identified with varied shading.

**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
210	MI4		Widen	I 70	Mt. Phillip Road	West of I 270	1	1	4	6	2020
151	MI4a	FR5801	Reconstruct	I 70	at Meadow Road		1	1			2020
121	MI1F	PG4191	Construct	I 95	at Contee Road with C/D lanes		1	1	8	8+4	Complete
108	MI1P	PG3331	Construct	I-95/I-495	at Greenbelt Metro Station		1	1	8	8+2	2020
439	MP12a		Construct	MD 200 (ICC)	I 95	US 1	0	1	0	4	Complete
696			Study	I 495 / I 270Y / I270	Potomac River (American Legion Bridge)	I 370					Not Coded
<b>Primary</b>											
139	MP10A	PG2531	Reconstruct	US 1	College Avenue	Sunnyside Avenue	2	2	4	4	2020
370	MP9	CA4131	Widen	MD 2/4 Solomons Island Road	South of MD 765A	North of Stoakley Road	2	2	4	6	2035
645	NRS		Reconstruct	MD 4	MD 2	MD 235	2	2	2	2	2040
644	MP9B		Widen	MD 4	Thomas Johnson Bridge at Patuxent River		2	2	2	4	2040
127	MP2C	AT1981	Widen	MD 3 Robert Crain Highway	I595/US 50/US 301	Anne Arundel County Line	2	2	4	6	2030
355	NRS	PG9171	Construct	MD 4	at Westphalia Road		2	5	4	6	2020
393	NRS	PG6181	Construct	MD 4 Pennsylvania Avenue	at Suitland Parkway		2	5	4	6	2019 2016
212	MP3A	PG9171	Widen/Upgrade	MD 4 Pennsylvania Avenue	I-95/I-495	MD 223	2	1	4	6	2035
394	MI1K	PG4941	Construct	MD 5	I-95/I-495	Branch Ave. Metro Station	1	1	8	8	2017 2020
440	NRS		Construct	MD 5	at Earnshaw/Burch Hill Roads		2	5	4	6	2025
205	MP4F	PG3916	Widen/Upgrade	MD 5 Branch Avenue	US 301 at T.B.	North of I95 /I 495	2	5	4	6	2025
354	NRS	PG1751	Construct	MD 5	at MD 373 and Brandywine Road Relocated		2	5	4	6	2017 2018
441	NRS		Construct	MD 5	at Surratts Road		2	5	4	6	2025
358	MP15	FR5711	Construct	US 15 Catoctin Mountain Highway	at Monocacy Blvd.		2	2	6	6	2017 2016
357	MP16		Construct	US 15 / US 340	Jefferson Tech Park		1	1	4	4	2015 2016
211	NRS	MO891 1	Construct	US 29 Columbia Pike	at Musgrove/Fairland Road				6	6	2025
551			Construct	US 29 Columbia Pike	at Tech Road / Industrial Road		5	5	6	6	2030

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VDOT I-66 Alternatives (A and B) Identified with varied shading.

## 2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS (highway)

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
552			Study	US 29 Columbia Pike	at Stewart Lane, Greencastle Road, & Blackburn Road		5	5	6	6	Not Coded
647	MP5e		Study	US 29 Columbia Pike	North of MD 650 New Hampshire Avenue	Howard County Line	2	5	6	6	Not Coded
111			Construct	MD 75 Relocated	South of MD 80		0	4	0	4	2020
391	FP2	FR3881	Widen	MD 85 Buckeystown Pike	English Muffin Way	north of Grove Road	2	2	2/4	4/6	2020
387	MP14	PG6191	Reconstruct	MD 202	at Brightseat Road		2	2	6	6	2025
353	NRS	PG7001	Upgrade	MD 210	at Kerby Hill Road/Livingston Road		2	5	6	6	2019 2020
124	MP6D	PG2211	Upgrade	MD 210 Indian Head Highway	I-95/495	MD 228	2	5	6	6	2030
110	MP8E	PG2881	Study	US 301	North of Mount Oak Road	I-595 / US 50	2	5	4/6	6+2	Not Coded

### Secondary

209	MS33		Widen	MD 27	MD 355	Snowden Farm Parkway A-305	2	2	4	6	2020
206	MS2F	MO886 1	Widen	MD 28 Norbeck Road /MD 198 Spencerville Road	MD 97	I 95	2	2	2/4	4/6	2025
137	MP12C	MO746 1	Construct	MD 97 Brookeville Bypass	Gold Mine Road South of Brookeville	North of Brookville	0	2	0	2	2018 2020
392	NRS	MO852 1	Upgrade	MD 97 Georgia Avenue	at MD 28 Norbeck Road		2	2	6	6	2030 2020
135	NRS	MO854 1	Upgrade	MD 97 Georgia Avenue	at Randolph Road		2	2	6	6	2016 2015
115	MS32		Widen	MD 117 Clopper Road	I270	West of Game Preserve Road	2	2	2	4	2025
698			Study	MD 119	at Sam Eig Highway						Not Coded
665	MS34		Study	MD 121	I 270	West Old Baltimore Road	3	3	4	6	Not Coded
118	MS6B	MO632	Widen	MD 124 Woodfield Road	Midcounty Highway	South of Airpark Drive	3	3	2	6	2020
1	MS6D	MO632 3	Widen	MD 124 Woodfield Road	North of Fieldcrest Road	Warfield Road	3	3	2	6	2020
356	MS35	PG6911	Widen	MD 197 Collington Road	MD 450 Relocated	Kenhill Drive	2	2	2	4/5	2025
648		FR5491	Study	MD 180 /MD 351	Greenfield Drive	Corporate Drive					Not Coded
359	MS10b		Study	US 1 / MD 201	I 95/495 Capital Beltway	North of Muirkirk	2	2	4	6	Not Coded
516	NRS	MO344 1	Construct	Montrose Parkway <del>MD-355</del>	Randolph Road	East of Parklawn Drive CSX Railroad	2	2	6	6	2020

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
175	MS18D	PG6541	Widen	MD 450 Annapolis Road	Stonybrook Drive	west of MD 3	2	2	2	4	2020
152	BRAC nrs	MO593 1	Reconstruct	BRAC Intersection Improvements near the National Naval Medical Center, Bethesda							2020 2012

**MDOT/Maryland Transportation Authority**

**Primary**

384	MP18		Construct	US 301 Gov. Nice Bridge	Charles County, MD	King George County, VA	2	2	2	4	2030
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**Frederick County**

**Secondary**

651	FS2a		Widen	Monocacy Boulevard	Schifferstadt Boulevard	Gas House Pike	3	3	2	4	2017
691		F3	Study	Spectrum Drive	Technology Way	MD 85 Buckeystown Pike	4	4	0	2	Not Coded

**Montgomery County**

**Secondary**

170	MC11C		Construct	A 305 Snowden Farm Parkway	MD 355	MD 27 Stringtown Road	0	3	0	4	2015
208	NRS		Construct	Burtonsville Access Road	MD 198 Spencerville Road	School Access Road in Burtonsville	0	4	0	2	2025
597	NRS		Construct	Century Boulevard	Current terminus south of Oxbridge Tract	Intersection with future Dorsey Mill Road	0	3	0	4	2020
198	NRS		Construct	Chapman Avenue	Randolph Road	Old Georgetown Road			0	2	2016
199	MC43		Construct	Dorsey Mill Road Bridge over I-270	Century Blvd.	Milestone Center Dr.	0	3	0	4	2020
112	MC7A		Widen	Goshen Road South	South of Girard Street	1000 feet north of Warfield Road	3	3	2	4	2025
172	MC11A		Construct	M 83 MidCounty Highway Extended	MD 27 Ridge Road	Middlebrook Road	0	2	0	4-6	2025
204	MC11D	509337-1	Construct	M 83 Midcounty Highway Extended	Middlebrook Road	Montgomery Village Avenue	0	2	0	4-6	2025
113	MC12F		Widen	MD 118 Germantown Road Extended	MD 355	M 83 at Watkins Mill Road	2	2	3	4	2020
161	MC14G		Widen	Middlebrook Road Ext.	MD 355	M 83	2	2	3	4	2025
214	MC15B		Construct	Montrose Parkway East	Eastern Limit of MD 355/Montrose Interchange	Veirs Mill Road/Parkland Road Intersection	0	2	0	4	2022
428			Construct	Platt Ridge Drive Extended	Its terminus at Jones Bridge Road	Montrose Driveway			0	2	2016
119	MC34		Widen	Snouffer School Road	MD 124 Woodfield Road	Centerway Road	3	3	2	4	2016

**Urban**

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
421		501204-1	Construct	Executive Blvd Extended East	MD 355 Rockville Pike	New Nebel Street Extended			0	4	2020
422			Construct	Executive Blvd Extended West	MD 187 Old Georgetown Road	Marinelli Road			0	4	2020
424		501116-6	Construct	Hoya Street	Executive Blvd	Montrose Parkway			0	4	2020
425		501116-1	Construct	Main Street / Market Street	MD 187 Old Georgetown Road	MD 355 Rockville Pike			0	2	2020
423		501116-5	Construct	MD 187 Old Georgetown Road	MD 187 Old Georgetown Road	Nicholson Lane/Tilden Lane			0	6	2020

**Prince George's County**

**Secondary**

361	PGS3a		Widen	Addison Road	Walker Mill Road	MD 214 Central Avenue	3	3	2	4	2019
362	NRS		Reconstruct	Addison Road	Sherieff Road	MD 704	4	4	2	2	2014
386	PGS5		Construct	Allentown Road Relocated	MD 210 Indian Head Highway	Brinkley Road		3		4	2025
365	PGS73	PGS73	Widen	Ardwick-Ardmore Road	MD 704	91st Ave.	4	4	2	4	2015
388	PGS9a		Widen	Bowie Race Track Road	MD 450 Annapolis Road	Old Chapel Road	4	4	2	4	2015
389	PGS9b		Widen	Bowie Race Track Road	MD 197 Laurel-Bowie Road	Old Chapel Road	4	4	2	4	2015
390	PGS10		Widen	Brandywine Road	Piscataway Road (north of)	Thrift Road	4	4	2	4	2020
418	PGS12		Widen	Brinkley Road	MD 414 St. Barnabas Road	MD 337 Allentown Road	3	3	4	6	2020
134	PGS13		Construct	Brooks Drive Extended	Marlboro Pike	Rollins Avenue	0	3	0	4	2020
136	PGS14		Widen	Cabin Branch Drive	Columbia Park Road	Sheriff Road (north of)	4	4	2	4	2015
140	PGS16a		Construct	Campus Way North	Lake Arbor Way	south of Lottsford Road	0	4	0	4	2023
138	PGS16b		Construct	Campus Way North Extended	south of Lottsford Road	Evarts Drive	0	4	0	4	2020
141	PGS17		Widen	Cherry Hill Road	Powder Mill Road	Selman Road	3	3	2	4	2019
142	PGS18		Widen	Church Road	Woodmore Road	Central Ave. (MD 214)	4	4	2	4	2011
144	PGS20b		Widen	Columbia Park Road	US 50	Cabin Branch Road	4	4	2	4	2020
143	PGS20a		Widen	Columbia Park Road	Cabin Branch Road	Columbia Terrace	4	4	2	4	2020
145	PGS21a		Widen	Contee Road	US 1	MD 201 Virginia Manor Road	4	4	2	4	2016
146	PGS22		Widen	Dangerfield Road	Cheltenham Avenue	MD 223 Woodyard Road	4	4	2	4	2020
147	PGS24b		Widen	Dower House Road	Foxley Road	MD 4 Pennsylvania Avenue	4	4	2	6	2015
155	PGS24a		Widen	Dower House Road	MD 223 Woodyard Road	Foxley Road	4	4	2	4	2025
156	PGS25		Widen	Fisher Road	Brinkley Road	Holton Lane	4	4	2	4	2025
157	PGS26		Construct	Forbes Boulevard Extended	south of Amtrak	MD 193 Greenbelt Road	0	4	0	4	2020
158	PGS27		Widen	Forestville Road	MD 337 Allentown Road	MD 4 Pennsylvania Avenue	4	4	2	2	2014
159	PGS29		Widen	Fort Washington Road	Riverview Road	MD 210 Indian Head Highway	4	4	2	4	2025
160	PGS30b		Widen	Good Luck Road	Cipriano Road	MD 193 Greenbelt Road	4	4	2	4	2025
162	PGS30a		Widen	Good Luck Road	MD 201 Kenliworth Avenue (east of)	Cipriano Road	4	4	2	4	2025
415	NRS4		Widen	Governor Bridge Road	US 301	Anne Arundel County	4	4	2	4	2020

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
164	PGS34a		Widen	Hill Road	MD 214 Central Avenue	MD 704 ML King Jr Highway	4	4	2	4	2016
163	PGS34b		Construct	Hill Road	MD 704 ML King Jr Highway	Sheriff Road	0	4	0	2	2015
416	PGS88		Construct	Iverson Street Extended	Wheeler Road	19th Avenue	0	4	0	4	2018
666	PGS35		Widen	Karen Boulevard	Walker Mill Road	MD 214 Central Avenue	4	4	2	4	2020
165	PGS38b		Widen	Livingston Road	Piscataway Creek	Farmington Road	4	4	2	4	2020
417	PGS38a		Widen	Livingston Road	MD 210 Indian Head Highway at Eastover	Kerby Hill Rd.	4	3	2	4	2015
213	PGS40a		Widen	Lottsford Road	Archer Lane	MD 193 Enterprise Road	3	3	2	4	2012
166	PGS39b		Widen	Lottsford Vista Road	MD 704 ML King Jr Highway	Ardwick-Ardmore Road/Relocated	4	4	2	4	2020
360	PGP4a		Construct	MD 193 Greenbelt Road	Baltimore-Washington Parkway (ramp to)		0	5	0	4	2025
167	PGS42		Widen	MD 223 Woodyard Road	Rosaryville Road	Dower House Road	2	2	2	4	2020
2	PGS42C		Widen	MD 223 Woodyard Road Relocated	Piscataway Creek/Floral Park Road	MD 4 /Livingston Road	3	3	2	4	2017
169	PGS44b		Widen	Metzerott Road	Adelphi Road	MD 193 University Boulevard	4	4	2	4	2020
168	PGS44a		Widen	Metzerott Road	MD 650 New Hampshire Avenue	Adelphi Road	4	4	2	4	2020
667	PGS45a		Widen	Mitchellville Road	Atlantis/Northview Drive	Mount Oak Road	4	4	4	6	
171	PGS46		Widen	Murkirk Road	US 1 Baltimore Avenue (west of)	Odell Road	4	4	2	4	2020
173	PGS47		Widen	Oak Grove and Leeland Roads	MD 193 Watkins Park Road	US 301 Robert Crain Highway	4	4	2	4	2020
174	PGS48		Widen	Old Alexandria Ferry Road	MD 223 Woodyard Road	MD 5 Branch Avenue	4	4	2	4	2015
192	PGS80		Construct	Old Baltimore Pike Extended	Muirkirk Road	Contee Road	0	4	0	2	2020
649	PGS50		Widen	Old Branch Avenue	MD 223 Piscataway Road (north of)	MD 337 Allentown Road	4	4	2	4	2020
395	PGS90		Construct	Old Fort Road Extended	MD 223 Piscataway Road	Old Fort Road	4	4	0	4	2020
369	PGS51a		Widen	Old Gunpowder Road	Powder Mill Road	Greencastle Road	3	3	2	4	2018
363			Reconstruct	Oxon Hill Road	National Harbor Ent.	Fort Foote North	4	4	2	2	2015
364	PGS52		Reconstruct	Oxon Hill Road	Fort Foote Road North	MD 210 @ Livingston Sq.Shopping Center	4	4	2	2	2015
193	PGS81		Construct	Presidential Parkway	Suitland Parkway	Melwood Road	0	3	0	6	2025
150	PGS54		Reconstruct	Rhode Island Avenue	MD 193	US Route 1	4	4	2	2	2016
176	PGS56a		Widen	Ritchie Road/Forestville Road	Alberta Drive	MD 4 Pennsylvania Avenue	3	3	2	4	2020
153	PGS55b		Widen	Ritchie-Marlboro Road	White House Road	Old Marlboro Pike	2	2	2	4	2020
177	PGS57		Widen	Rollins Avenue	MD 214 Central Avenue	Walker Mill Road	4	4	2	4	2020
178	PGS58		Widen	Rosaryville Road	US 301	MD 223 Woodyard Road	3	3	2	4	2020
179	PGS60B		Widen	Spine Road	MD 5 Branch Avenue / US 301	MD 381 Brandywine Road	3	3	2	4	2016
109	PGS61		Widen	Springfield Road	Lanham-Severn Road	Good Luck Road	4	4	2	4	2020
194	PGS82		Construct	St. Joseph's Drive	MD 202	Ardwick-Ardmore Road	0	4	0	4	2015
122	PGP2		Construct	Suitland Parkway Interchange at	Rena/Forestville Roads		5	5			2025
180	PGS62a		Widen	Suitland Road	MD 337 Allentown Road	Suitland Parkway	3	3	2	4	2018
123	PGS62b		Widen	Suitland Road	Suitland Parkway	MD 458 Silver Hill Road	3	3	2	4	2018

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
181	PGS63		Widen	Sunnyside Avenue	US 1	MD 201 Kenilworth Avenue	4	4	2	4	2020
182	PGS64		Widen	Surratts Road	Beverly Ave.	Brandywine Road	4	4	2	4	2015
183	PGS65		Widen	Temple Hill Road	MD 223 Piscataway Road	MD 414 St. Barnabas Road	3	3	2	4	2020
185	PGP5a		Construct	US 50 Columbia Park Road Ramp	US 50 Columbia Park Road Ramp Ramp						2025
187	PGS67a		Widen	Van Dusen Road	Contee Road	MD 198 Sandy Springs Road	3	3	2	4	2020
186	PGS67b		Construct	Van Dusen Road Interchange at	Contee Road						2025
188	PGS68		Widen	Virginia Manor Road	Muirkirk Road	Old Gunpowder Road	4	4	2	4	2014
429	PGS69a		Widen	Walker Mill Road	Silver Hill Road	I 95	3	3	2	4	2020
154	PGS91		Widen	Westphalia Road	MD 4 Pennsylvania Avenue	Ritchie-Marlboro Road	2	2	2	4	2020
189	PGS70		Widen	Wheeler Road	DC Limits	St. Barnabas Road	3	3	2	4	2018
437	PGS71		Widen	White House Road	Ritchie-Marlboro Road	MD 202 Largo-Landover Road	3	3	2	6	2020
190	PGS72		Widen	Whitfield Chapel Road	MD 450 Annapolis Road	Ardwick-Ardmore Road	4	4	2	4	2020
436	PGS40b		Construct	Woodmore Road	MD 193 Enterprise Road	Church Road	3	3	2	4	2015
<b>Anne Arundel County</b>											
	AA1d		Widen	I-97	US 50/301	MD 32/3	1	1	4	6	2025
	AA15a		Widen	I-295	I-195	MD 100	1	1	4	6	2015
	AA15c		Widen	I-295	I-695	I-195	1	1	4	6	2015
	AA15b		Construct	I-295 (New Interchange)	Hanover Road						2015
	AA4e		Widen	MD 3	MD 32	St. Stephen's Church Rd.	2	2	4	6	2025
	AA6e		Widen	MD 100	Howard Co. Line	I-97		5/1	4	6	2025
	AA8b		Widen	MD 175	MD 170	BW Parkway		2	4	6	2015
	AA30		Widen	MD 198	MD 32	BW Parkway	2	2	2	4	2025
	AA34a		Widen	MD 713	MD 175	Arundel Mills Boulevard		2	2	4	2025
	AA34b		Widen	MD 713	Arundel Mills Boulevard	MD 176		2	4	6	2025
<b>Carroll County</b>											
	CA1B		Widen	MD 140	Sullivan Road	Market St.		1	4/6	8	2025
	CA1C		reconstruct	MD 140 (w/ intchg @ MD 191)	Baltimore County Line	Kays Mill Rd.			4	4	2020
	CA2a		Widen	MD 26	MD 32	Reservoir			2	4	2015
	in base		Widen	MD 32	MD 26	Howard County Line		2	2	4	2020
	CA5		Widen	MD 97	MD 140	Pleasant Valley Rd		2	2	4	2020
	nrns		Construct	Boxwood Dr. Ext	Dogwood Dr. Terminus	MD 43 Ext.			0	2	2015
<b>Howard County</b>											
	HW1b		Widen	I-70	US 29	US 40	1	1	4	8	2025
	HW20		Widen	US 1	MD 100	PG/ Howard Line			4	6	2025
	HW10b		Widen	US 29 NB	Seneca Dr.	Middle Patuxent River		5	4	6	2015
	HW3c		Widen	MD 32	Cedar Lane	Anne Arundel County Line		1	4/6	8	2025
	HW3d		Widen	MD 32	MD 99	Carroll County Line		2	2	4	2025

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
	HW3e		construct/reconstruct	MD 32 (interchanges)	@ I-70/ MD 144	@					2014
	HW6d		Widen	MD 108	Woodland Rd.	1200' w. of Centennial Ln.	2	2	2	4	2014
	HW8b		Widen	MD 216	High School Access Rd.	Maple Lawn Blvd.		3	2	4	2015
	nrs		Widen	Guilford Rd.	US 1	Dorsey Run Road			2	4	2017
	HW14c		Widen	Snowden River Parkway	MD 100	Broken Land Parkway		3	4	6	2020
<b>VDOT</b>											
<b>Federal Lands</b>											
433	FED3a		Construct	Manassas Battlefield Bypass	US 29 West of Centerville	East of Gainesville, via 234		1		4	2035
243	VP1A	VP1A	Widen	US 1 Jefferson Davis Highway	Telegraph Road	VA 235 South	2	2	4	6	2016
434	FED3b		Remove/Close	US 29 Lee Highway	Pageland Lane	Bridge over Bull Run			2/4	0	2035
435	FED3c		Remove/Close	VA 234 Sudley Road	Southern Park Boundary	Northern Park Boundary			2	0	2030 2020
652	FED2	77404	Widen	Old Mill Rd. (future Mulligan Rd.)	US 1	VA 611 Telegraph Road	4	4		4	2014
<b>Interstate</b>											
426	VI1w	93577	Widen	I 66 HOV and SOV	US 29 0.8 miles east of	US 15 (1.2 miles west of)	1	1	4	8	2016
268	VI1WA	100566	Reconstruct	I 66 (HOV during peak)	US 15 (includes intch. reconst.)	US 29 Gainesville	1	1	4	8	2017
399	VI1AJ	81009	Construct	I 66 Vienna Metro Station bus ramp	Transit Ramps- from EB & to WB	Saintsbury Dr.	1	1	0	2	2014
47	VI1AH		Widen	I 66 EB Auxiliary Lanes	Cedar Lane	Gallows Road (west of)	1	1	3+1	3+1+1	2030
48	VI1AI		Widen	I 66 WB Auxiliary Lanes	Gallows Road (west of)	Cedar Lane	1	1	3+1	3+1+1	2030
271	VI1AF	78828	Reconstruct	I 66 WB Operational/Spot Improvements	Westmoreland Dr. / Washington Blvd Exit	Haycock Rd /Dulles Access Highway	1	1	3	4	2015 2020
350	VI1AG	78827	Reconstruct	I 66 WB Operational/Spot Improvements	Lee Highway/Spout Run On-Ramp	Glebe Road Off-Ramp	1	1	2	3	2020
718		105500	Widen / Revise Operations	I-66	I-495	US 50	1	1	3 general purpose in each direction + 1 HOV in peak direction during peak period	3 general purpose + 2 HOT each direction	2022

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
718		105500	Widen / Revise Operations	I-66	US 50	US 15	1	1	4 general purpose in each direction off-peak, 3 general purpose + 1 HOV in peak direction during peak period	3 general purpose+ 2 HOT in each direction	2022
740		97586	Revise Operations	I-66	I-495	US 29 near Rosslyn	1	1	HOV 2 in peak direction during peak period	HOT 3 in both directions during peak period	2017
787			Construct/Widen	I 66 Eastbound	Virginia Lane Overpass	VA 267 DTR	1	1	2	3	2040
788			Construct/Widen	I 66 Eastbound	VA 267 DTR	Washington Blvd. Off-Ramp	1	1	3	4	2040
789			Construct/Widen	I 66 Eastbound	Washington Blvd. Off-Ramp	<i>North Fairfax Drive</i>	1	1	2	3	2040
786			Construct/Widen	I 66 Westbound	Sycamore Street	Washington Blvd. On-Ramp	1	1	2	3	2040
747			Construct/Widen	I 66 Westbound	VA 267 DTR	I 495 Beltway	1	1	2	3	2040
748		Alt A	Construct	I-66 Express Lanes Interchange Ramps	EB Expr to NB GP EB Expr to SB GP NB GP to WB Expr SB GP to WB Expr SB Expr to WB Expr	I-495 Interchange (Capital Beltway GP and Express Lanes)	0	1	0	1	2022
749		Alt A	Construct	I-66 General Purpose Lanes Interchange Ramps	EB GP to SB Expr EB GP to NB Expr NB Expr to WB GP	I-495 Interchange (Capital Beltway GP and Express Lanes)	0	1	0	1	2022
750		Alt A	Relocate / Reconstruct	I-495 Interchange Ramp	Dual-lane loop ramp from NB I-495 GP to I-66 GP relocated to dual-lane flyover	@ I-66	1	1	2	2	2022

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
751		Alt A	Reconstruct	I-495 Interchange Ramps	EB GP to SB GP WB GP to SB GP WB GP to SB Expr NB GP to EB GP NB Expr to WB Expr SB GP to WB GP	@ I-66	1	1	1	1	2022
752		Alt B	Construct	I-66 Express Lanes Interchange Ramps	EB Expr to SB GP NB GP to WB Expr SB Expr to WB Expr	I-495 Interchange (Capital Beltway GP and Express Lanes)	0	1	0	1	2022
753		Alt B	Construct	I-66 General Purpose Lanes Interchange Ramp	NB Expr to WB GP	I-495 Interchange (Capital Beltway GP and Express Lanes)	0	1	0	1	2022
754		Alt B	Relocate / Reconstruct	I-495 Interchange Ramp	Dual-lane loop ramp from NB I-495 GP to I-66 GP relocated to dual-lane flyover	@ I-66	1	1	2	2	2022
755		Alt B	Reconstruct	I-495 Interchange Ramps	EB GP to SB GP WB GP to SB GP WB GP to SB Expr NB GP to EB GP	@ I-66	1	1	—	—	2022
756		Alt B	Construct	I-66 flyover ramp	EB general purpose to EB express lanes	.5 mile east of VA 243	0	1	0	1	2022
757		Alt A	Reconstruct	I-66 Interchange	Cloverleaf interchange converted to diverging diamond interchange	@ Nutley Street (VA 243)	1	1	—	—	2022
758		Alt B	Reconstruct	I-66 Interchange	Reconfigured interchange to replace EB to NB, NB to WB, SB to EB loop ramps with flyovers / direct ramps	@ Nutley Street (VA 243)	1	1	—	—	2022
759		Alt A	Revise Operations	I-66 Express Lanes Interchange Ramps	EB off-ramp, WB on-ramp to/from I-66 Express lanes BUS /HOV-3/HOT ONLY	@ Vaden Drive / Vienna Metro Station	1	1	Bus Only Operations from existing HOV Lanes	Bus / HOV-3 / HOT from proposed Express Lanes	2022
760		Alt B	Revise Operations	I-66 Express Lanes Interchange Ramps	EB off-ramp, WB on-ramp to/from I-66 Express lanes BUS ONLY	@ Vaden Drive / Vienna Metro Station	1	1	Bus Only Operations from existing HOV Lanes	Bus Only Operations from proposed Express Lanes	2022

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
761		Alt A	Reconstruct	I-66 Interchange	Reconfigured interchange to eliminate C-D roads & replace EB to NB loop ramp with flyover	@ Chain Bridge Road (VA 123)	1	1	—	—	2022
762		Alt B	Reconstruct	I-66 Interchange	Reconfigured interchange to eliminate C-D roads & replace EB to NB loop ramp with flyover	@ Chain Bridge Road (VA 123)	1	1	—	—	2022
763		Alt B	Construct	I-66 Express Lanes Interchange Ramps	EB on-ramp, WB off-ramp to/from I-66 Express lanes	@ Chain Bridge Road (VA 123)	0	1	0	1	2022
764		Alt A	Reconstruct	I-66 Interchange	Reconfigured interchange to replace NWB to WB loop ramp with flyover	@ Lee Jackson Mem Highway (US 50)	1	1	—	—	2022
765		Alt A	Construct	I-66 Express Lanes Interchange Ramps	EB on-ramp, WB off-ramp to/from I-66 Express lanes	@ Lee Jackson Mem Highway (US 50)	0	1	0	1	2022
766		Alt B	Reconstruct	I-66 Interchange	Reconfigured interchange to replace NWB to WB loop ramp with flyover	@ Lee Jackson Mem Highway (US 50)	1	1	—	—	2022
767		Alt A	Relocate / Reconstruct / Revise Operations	I-66 Interchange	Reconfigured interchange to shifted to the north of I-66; Conversion of existing HOV ramps to HOT; Construct new EB off-ramp, WB on-ramp to/from I-66 Express lanes	@ Monument Drive (US 50)	1	1	Bus / HOV-2 Reversible by time of day	Bus / HOV-3 / HOT Movements in both directions 24 hrs/day	2022
768		Alt B	Relocate / Reconstruct / Revise Operations	I-66 Interchange	Conversion of existing HOV ramps to HOT; Construct new EB off-ramp, WB on-ramp to/from I-66 Express lanes	@ Monument Drive (US 50)	1	1	Bus / HOV-2 Reversible by time of day	Bus / HOV-3 / HOT Movements in both directions 24 hrs/day	2022

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
769		Alt A	Revise Operations	I-66 Express Lanes Interchange Ramps	EB on-ramp, WB off-ramp to/from I-66 Express lanes (reversible)	@ Stringfellow Road	1	1	Bus / HOV-2 Reversible by time of day	Bus / HOV-3 / HOT Reversible by time of day	2022
770		Alt B	Relocate / Revise Operations	I-66 Express Lanes Interchange Ramps	EB on-ramp, WB off-ramp to/from I-66 Express lanes, relocated north of I-66	@ Stringfellow Road	1	1	Bus / HOV-2 Reversible by time of day	Bus / HOV-3 / HOT Movements in both directions 24 hrs/day	2022
771		Alt B	Construct	I-66 flyover ramp	EB express lanes to EB general purpose	1 mile west of VA 286	0	1	0	1	2022
772		Alt B	Construct	I-66 slip ramp	EB general purpose to EB express lanes	1 mile west of VA 286	0	1	0	1	2022
773		Alt B	Construct	I-66 flyover ramp	WB express lanes to WB general purpose	1 mile west of VA 286	0	1	0	1	2022
774		Alt B	Construct	I-66 slip ramp	WB general purpose to WB express lanes	1 mile west of VA 286	0	1	0	1	2022
775		Alt A	Construct	I-66 Express Lanes Interchange Ramps	EB Expr to NB GP WB Expr to NB GP WB Expr to SB GP NB GP to EB Expr SB GP to EB Expr SB GP to WB Expr	Route 28 Interchange	0	1	0	1	2022
776		Alt B	Construct	I-66 Express Lanes Interchange Ramps	EB Expr to NB GP WB Expr to NB GP SB GP to EB Expr SB GP to WB Expr	Route 28 Interchange	0	1	0	1	2022
777		Alt A	Construct	I-66 Express Lanes Interchange Ramps	EB on-ramp, WB off-ramp to/from I-66 Express lanes	@ Balls Ford Road Connector .75 mile west of VA Bus 234	0	1	0	1	2022

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
778		Alt B	Construct	<i>I-66 Express Lanes Interchange Ramps</i>	<i>EB on-ramp, WB off-ramp to/from I-66 Express lanes</i>	<i>@ Balls Ford Road / Ashton Avenue Connector .5 mile west of VA Bus 234</i>	0	1	0	1	2022
779		Alt B	Construct	<i>I-66 Express Lanes Interchange Ramps</i>	<i>EB on-ramp, WB off-ramp to/from I-66 Express lanes</i>	<i>@ Cushing Road Park-Ride Lot .5 mile east of VA 234 Bypass</i>	0	1	0	1	2022
780		Alt A	Construct	I-66 Express Lanes Interchange Ramps	EB on-ramp, WB off-ramp to/from I-66 Express lanes	@ University Boulevard .75 mile east of US 29	0	1	0	1	2022
781		Alt B	Construct	<i>I-66 Express Lanes Interchange Ramps</i>	<i>EB on-ramp, WB off-ramp to/from I-66 Express lanes</i>	<i>@ University Boulevard .75 mile east of US 29</i>	0	1	0	1	2022
782		Alt A	Construct	I-66 flyover ramp	EB general purpose to EB express lanes	.85 mile east of US 15	0	1	0	1	2022
783		Alt A	Construct	I-66 flyover ramp	WB express lanes to WB general purpose	.7 mile east of US 15	0	1	0	1	2022
784		Alt B	Construct	<i>I-66 Express Lanes Interchange Ramps</i>	<i>EB on-ramp &amp; off-ramp, WB on-ramp &amp; off-ramp to/from I-66 Express lanes</i>	<i>@ New connector road between Heathcote Boulevard and VA 55 .4 mile west of US 15</i>	0	1	0	1	2022
785		Alt B	Construct	<i>I-66 Express Lanes Access Connector Road</i>	<i>Heathcote Boulevard Extension</i>	<i>John Marshall Highway (VA 55)</i>	0	1	0	1	2022
270	VI2AC		Reconstruct	I 95 Interchange	VA 613 Van Dorn Street		1	1			2015
3	VI2RB		Widen	I 395 HOV Lanes ramp	Eads Street Exit ramp		1	1	1	2	2014
4	VI2R	70849	Revise Operations	I 95 I-395 HOV/Bus/HOT	VA 294 Prince William Parkway	VA 234 Dumfries Road (south of)	1	1	2	2	Complete
149	VI2R	70849 VI3b	Widen/ Revise Operations	I 95 I-395 HOV/Bus/HOT	I 495 Approx. 2 miles north of	VA 294 Prince William Parkway	1	1	2	3	Complete
430	VI2s	70849	Construct	I 395 northbound Auxiliary Lane	.28 mi. n. of Duke street northbound on ramp	Sanger Avenue	1	1	3	4	2015
444	VI2T		Widen	I 395 southbound	VA 236 Duke Street (north of)	VA 648 Edsall Road (south of)	1	1	3	4	2018
5	VI2RA		Construct	I 95 I-395 HOV/Bus/HOT	VA 234 Dumfries Road (south of)	VA 610 Garrisonville Road in Stafford County	1	1	0	2	Complete
6	NRS		Reconstruct	Boundary Chanel Drive	Old Jefferson Davis Highway (off of I-395 Boundary Chanel Interchange)						2018 2016
378	BRAC	BRAC0005	Construct	I 95 NB Off Ramp at Newington	I-95 NB	Fairfax County Parkway NB	1	1	0	1	2020

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## 2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS (highway)

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
9	VI2r11		Construct	I 95 HOV/Bus/HOT Ramp Between VA 648 (Edsall) and Turkeycock Run	I 395 NB HOV/HOT Lanes	I 395 NB GP Lanes	0	1	0	1	Complete
10	VI2r24		Construct	I 95 HOV/Bus/HOT Reversible Ramp	I 95 NB HOV/HOT Lanes	VA 7100 Fairfax County Parkway (Alban Road)	0	1	0	1	Complete
11	VI2r24		Construct	I 95 HOV/Bus/HOT Reversible Ramp	VA 7100 Fairfax County Parkway (Alban Road)	I 95 SB HOV/Bus/HOT Lanes	0	1	0	1	Complete
8	BRAC0004 / VI2ra		Construct	I 95 Reversible Ramp (Colocated w/ existing slip ramp from HOV to GP lanes)	I 95 NB HOV/BUS/HOT Lanes (Located N of Rte. 7100/I 95 I/C Phase II DAR)	EPG Southern Loop Road AM Only	<del>1</del> 0	1	0	1	2025 <del>2015</del>
379	BRAC0004 / VI2rb	BRAC0004	Construct	I 95 Reversible Ramp (Colocated w/ existing slip ramp from HOV to GP lanes)	EPG Southern Loop Road PM Only Phase I DAR	I 95 SB HOV/BUS/HOT Lanes N of Rte. 7100/I-95 I/C	<del>1</del> 0	1	0	1	Complete
7	BRAC0004 / VI2rc		Construct	I 95 Reversible Ramp (Colocated w/ existing slip ramp from HOV to GP lanes)	EPG Southern Loop Road PM Only Phase I DAR	I 95 NB GP Lanes	<del>1</del> 0	1	0	1	Complete
12	VI2r31		Construct	I 95 HOV/Bus/HOT Ramp SB Gen Purpose Lanes to SB HOV/Bus/HOT lanes	Between US 1 and VA 123		0	1	0	1	Complete
13	VI2r37		Construct	I 95 HOV/Bus/HOT Ramp SB Gen Purpose Lanes to SB HOV/Bus/HOT lanes	Between Opitz Blvd. and Dalve Blvd.		0	1	0	1	Complete
14	VI2r34		Construct	I 95 HOV/Bus/HOT Ramp NB HOV/Bus/HOT to Gen. use lanes	Between VA 123 (Gordon Rd.) & VA 294 (Prince William Pkwy.)		0	1	0	1	Complete
15	VI2r43		Construct	I 95 HOV/Bus/HOT Ramp SB HOV/Bus/HOT lanes to SB Gen Purpose Lanes	Between Dumfries Rd. and Joplin Rd.		0	1	0	1	Complete
16	VI2r43a		Construct	I 95 HOV/Bus/HOT Ramp SB Gen Purpose Lanes to SB HOV/Bus/HOT lanes	Between Dumfries Rd. and Joplin Rd.		0	1	0	1	2018
18	VI2r45a		Construct	I 95 HOV/Bus/HOT Ramp NB HOV/Bus/HOT lanes to NB Gen Purpose Lanes	Between Joplin Rd. and Russell Rd.		0	1	0	1	2018
19	VI2r44		Construct	I 95 HOV/Bus/HOT Ramp SB HOV/BUS/HOT lanes to SB GP lanes	Between VA 619 (Joplin Rd.) and VA 610 (Garrisonville Rd.)		0	1	0	1	Complete
17	VI2r45		Construct	I 95 HOV/Bus/HOT Ramp NB GP lanes to NB HOV/BUS/HOT Lanes	Between VA 619 (Joplin Rd.) and VA 610 (Garrisonville Rd.)		0	1	0	1	Complete
438	VI2R6A	UPC# 96261	Construct	I 395 NB HOV to Seminary & Seminary to SB HOV Ramps	Seminary Road Interchange		0	1	0	1	2015

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VDOT I-66 Alternatives (A and B) Identified with varied shading.



**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
20	VI4Iaux1		Widen	I 495 Capital Beltway NB Auxiliary Lane	North of Hemming Ave. Underpass	Braddock Road Off Ramp	1	1	4+2	5+2	2030
21	VI4Iaux2		Widen	I 495 Capital Beltway SB Auxiliary Lane	Braddock Road On Ramp	North of Hemming Ave. Underpass	1	1	4+2	5+2	2030
22	VI4Iaux3		Widen	I 495 Capital Beltway NB Auxiliary Lane	Braddock Road On Ramp	VA 236 Off Ramp	1	1	4+2	5+2	2030
24	VI4Iaux5		Widen	I 495 Capital Beltway NB Auxiliary Lane	VA 236 On Ramp	Gallows Road Off Ramp	1	1	4+2	5+2	2030
25	VI4Iaux6		Widen	I 495 Capital Beltway SB Auxiliary Lane	Gallows Road On Ramp	VA 236 Off Ramp	1	1	4+2	5+2	2030
29	VI4Iaux10		Widen	I 495 Capital Beltway NB Auxiliary Lane	US 50 On Ramp	I 66 Off Ramp	1	1	5+2	6+2	2030
32	VI4Iaux13		Widen	I 495 Capital Beltway SB Auxiliary Lane	VA 7 On Ramp	I 66 Off Ramp to WB	1	1	4+2	5+2	2030
35	VI4Iaux16		Widen	I 495 Capital Beltway SB Auxiliary Lane	VA 123 On Ramp	VA 7 Off Ramp	1	1	5+2	6+2	2030
38	VI4Iaux19		Widen	I 495 Capital Beltway NB Auxiliary Lane	VA 267 On Ramp	VA 193 Off Ramp	1	1	4+2	5+2	2030
39	VI4Iaux20		Widen	I 495 Capital Beltway SB Auxiliary Lane	VA 193 On Ramp	VA 267 Off Ramp	1	1	4+2	5+2	2030
40	VI4K		Construct	I 495 Capital Beltway HOT Lanes	American Legion Bridge	George Washington Parkway (south of)	1	1	8	8+2	2030
41	VI4KA		Construct	I 495 Capital Beltway HOT Lanes	George Washington Parkway (south of)	Old Dominion Drive (south of)	1	1	8	8+4	2025 <del>2015</del>
49	Part VI4IHOTa		Relocate	I 495 Capital Beltway Interchange Flyover Ramp (Phase 4)	EB Dulles Airport Access Highway to NB General Purpose	at VA 267 Dulles Toll Road	1	1	1	1	2030
519	Part VI4IHOTa		Construct	I 495 Capital Beltway Interchange (Phase IV)	Provide SB HOT to EB HOV & EB DTR to NB HOT movements	at VA 267 Dulles Toll Road	1	1			2030
517	Part VI4IHOTa		Widen	I 495 Capital Beltway Interchange Ramp (Phase III DTR)	Widen EB DTR ramp to 2 NB lanes	NB GP Lanes	1	1	1	2	2030
520	VI4Irmpl		Construct	I 495 Capital Beltway Interchange Flyover Ramp (Phase III)	I 495 Capital Beltway NB GP lanes	Dulles Airport Access Highway (DAAH) WB	0	1	0	1	2030
50	VI4IHOTb		Construct	I 495 Capital Beltway Interchange Ramp (Phase II, Ramp 3 DAAH)	I 495 Capital Beltway SB	Dulles Airport Access Highway WB	0	1	0	1	2020
684	SHOULDER		Construct	I 495 HOT lanes shoulder NB peak period only (operating until HOT lanes extend northward)	Old Dominion Drive (south of)	George Washington Parkway					2015

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
536	VP21F		Construct	VA 267 Dulles Greenway Egress Ramp	at Hawling Farm Boulevard (Future)		0	1	0	1	2015
534	VP15A		Construct	VA 267 Dulles Toll Road Ramp	New Boone Boulevard Extension at Ashgrove		0	1	0	2	2037
535	VP15B		Construct	VA 267 Dulles Toll Road Ramp	Greensboro Drive @ Tyco Road		0	1	0	2	2036
236	MW1	MW1	Widen	Dulles Airport Access Road	Dulles Airport	VA 123	1	1	4	6	2017
<b>Primary</b>											
549	VP1AH	90339	Widen	US 1 Jefferson Davis Highway	Fuller Road	Russell Road/Stafford County Line	2	2	4	6	2025
631	VP1AD	90339	Widen	US 1 Jefferson Davis Highway	Brady's Hill Road	VA 234 Dumfries Road	2	2	4	6	2025
632	VP1ADA		Widen	US 1 Jefferson Davis Highway	VA 234 Dumfries Road	Cardinal Drive/Neabsco Road	2	2	4	6	2030
383	VP1AE	PWC0013/ UPC# 100426	Widen	US 1	VA 638 Blackburn Dr/Neabsco Mills Rd	VA 636 Featherstone Rd	2	2	4	6	2016
84	VP1AF		Widen	US 1 Jefferson Davis Highway	Featherstone Road	Mary's Way	2	2	4	6	2020
239	VP1P		Widen	US 1 Jefferson Davis Highway (part of 1/123 interchange)	Mary's Way	Annapolis Way	2	2	4	6	2018
633	NRS		Reconstruct	US 1 Jefferson Davis Highway	at VA 123 Gordon Boulevard						2019 2018
634	VSP63	100938	Construct	Belmont Bay Drive Extension	US 1 Jefferson Davis Highway	Heron's View Way			0	4	2019 2018
85	VP1AG		Widen	US 1 Jefferson Davis Highway	Annapolis Way	Lorton Road	2	2	4	6	2035
322	VP1U	VP1U	Widen	US 1 Jefferson Davis Highway	VA 235 North	VA 235 South	2	2	4	6	2025
653	NRS		Study	VA 7 Interchange	VA 690				0	4	Not Coded
686	NRS	58599	Construct	VA 7 WB Truck Climbing Lane	VA 9	VA 7 Business West	5	1	4	5	2015
86	VP2JA	16006	Widen	VA 7 Bypass	VA 7 West	US 15 South King Street South	5	1	4	6	2040
299	VP2J		Widen	VA 7 Bypass	US 15 South King Street	VA7/US 15 East	5	1	4	6	2040
324	VP2MA			VA 7	Rolling Holly Drive	Reston Avenue	2	2	4	6	2015
221	VP2M		Widen	VA 7	Reston Avenue	West Approach to Bridge over Dulles Toll Road	2	2	4	6	2025
626	NRS	82135	Construct	VA 7 Leesburg Pike	Bridge over Dulles Toll Road		2	2	4	6	2030
627	VP2La		Widen	VA 7 Leesburg Pike	Dulles Toll Road	VA 123 Chain Bridge Road	2	2	6	8	Complete
628	VP2Lb		Widen	VA 7 Leesburg Pike	VA 123 Chain Bridge Road	I 495 Capital Beltway	2	2	6	8	2021
87	VP2N		Widen	VA 7 Leesburg Pike	I 495	I 66	2	2	4	6	2021
347	VP2B	TBD	Widen	VA 7	Seven Corners	Bailey's Crossroads	2	2	4	6	2025
685	NRS	99256	Close	VA 7 /US 15 Bypass	Overpass at Sycolin Road		1	1	4	4	Complete
682	NRS	105584	Construct	VA 7 Overpass at	George Washington Boulevard		0	4	0	4	2022
680	NRS	100435	Construct	VA 7	Lexington Drive Overpass		4	4	6	6	2020
621	hrs	99481	Construct	VA 7 Interchange	at VA 659 Belmont Ridge Road		2	2	6	6	2017

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## 2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS (highway)

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
654	NRS		Reconstruct	VA 7 Interchange	@ Ashburn Village Boulevard		1	1	6 0	6 4	2017
253	VP4E		Widen	US 15 James Madison Highway	US 29 Lee Highway	I-66 VA 55	2	2	2	4	2040
655	NRS		Widen	US 15 James Madison Highway	Monroe Glen Drive	Thoroughfare Road	3	3	2	4	2017
88	VP6H		Widen	VA 28	Fauquier County Line	VA 652 Fitzwater Drive	3	3	2	4	2040
309	VP6kA	105198	Widen	VA 28	VA 652 Fitzwater Drive	VA 215 Vint Hill Road	3	3	2	4	2016
90	VP6KB	92080	Widen	VA 28 Nokesville Road	VA 215 Vint Hill Road Relocated	VA 619 Linton Hall Road	3	3	2	6	2015
326	VP6MA	96721	Widen	VA 28	Godwin Drive	Manassas City limits (west)	3	2	4	6	2018
89	VP6K	105428	Widen	VA 28 Nokesville Road	Prince William Parkway	VA 619 Linton Hall Road	3	3	4	6	2020
310	VP6EAA		Widen/Upgrade	VA 28 PPTA Phase II	I 66	US 50	5 2	5 1	6	8	2025
310	VP6EBB		Widen/Upgrade	VA 28 PPTA Phase II	US 50	Sterling Blvd.	5 2	5 1	6	8	2016 2025
310	VP6ECC		Widen/Upgrade	VA 28 PPTA Phase II	Sterling Blvd.	VA 7	5 2	5 1	6	8	2025
344	VP6EB	78906	Construct	VA 28 Interchange at	VA 209 Innovation Avenue		1	1	6	6	2015
656			Study	VA 28 Manassas Bypass /VA 411	VA 234 Sudley Road	I 66 Proposed Interchange					Not Coded
737			Widen	VA 28 Centreville Road	VA 898 Old Centreville Road	Prince William County Line	2	2	4	6	2025
730		105482	Study	VA 28	US 29	Liberia Avenue					Not Coded
620	VP7s		Widen	US 29 (add NB lane)	I 66	Entrance to Conway Robinson MSF	3	2	4	5	2030
622	VP7AG		Widen	US 29 (add NB lane)	Legato Road	Shirley Gate/Waples Mill Rd.	2	2	2	3	2017
623	VP7AF	59094	Reconstruct	US 29 Bridge Little Rocky Run	Pickwick Road (0.2 miles east of)	VA 659 Union Mill Road	2	2	4	5	2015
624	VP7AE	52326	Construct	US 29 Interchange	VA 55 Linton Hall VA 619						2015
349	VP7AA		Widen	US 29	ECL City of Fairfax (vic. Nutley St.)	Espana Court	2	2	4	6	2025
625	VP7AB		Widen	US 29	Espana Court	I 495 Capital Beltway	2	2	4	6	2025
401	VSP57A		Construct	McGraws Corner Route 29 (Parallel)	US 29 Lee Highway (near US 15)	Sommerset Crossing Drive	0	4	0	4	2020
731			Widen	US 29 Lee Highway	VA 659 Union Mill Road	Buckleys Gate Drive	2	2	4	6	2024
305	VP8Q	LDN001 5 VP8Q	Widen	US 50	VA 659 Relocated	VA 742 Poland Road	2	2	4/5	6	2025
316	VP8C	68757	Widen	US 50	VA 742 Poland Road	VA 609 Pleasant Valley	2	2	4/5	6	2015 2014
93	VP8R	68757	Widen	US 50	VA 609 Pleasant Valley	VA 28	2	2	4/5	6	2015 2014
319	VP8H		Widen	US 50	ECL City of Fairfax	Arlington County Line	2	2	4	6	2025
273	VP8O	13531	Reconstruct	US 50 Interchange	VA 237 .223 miles East	VA 237 .424 miles East					Complete
94	NRS		Construct	US 50 Interchange	VA 606 Loudoun County Parkway		2	2	6 0	6 4	2025
657	NRS		Construct	US 50 Interchange	West Spine/Gum Springs Road		2	2	6 0	6 4	2035
658	NRS		Construct	US 50 Interchange	South Riding Boulevard		2	2	6 0	6 4	2035

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**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
659	NRS		Construct	US 50 Interchange	Tall Cedars Parkway		2	2	6	4	2035
245	VP10G	100938	Widen	VA 123	US 1	Annapolis Way	2	2	4	6	2019 2018
235	VP10H		Widen	VA 123 Ox Road	Hooes Rd.	Fairfax Co. Parkway	2	2	4	6	2025
337	VP10F	1784	Widen	VA 123 Ox Road	Fairfax Co. Parkway	Burke Center Parkway	2	2	4	6	2025
300	VP10R		Widen	VA 123	Burke Center Parkway	Braddock Road	2	2	4	6	2025
95	VP10S		Widen	VA 123	VA 677 Old Courthouse Road	VA 7 Leesburg Pike			4	6	2025
595	VP10T		Widen	VA 123 Chain Bridge Road	VA 7 Leesburg Pike	I 495 Capital Beltway	2	2	6	8	2021
92	VP24A	92080	Construct	VA 215 Vint Hill Road Relocated	VA 28 Nokesville Road	Schaefer Lane	0	3	0	4	2015
590	VP24B		Widen	VA 215 Vint Hill Road	VA 655 Schaeffer Lane	1566 Sudley Manor Drive	4	4	2	4	2020
678		105420 /T143	Construct	VA 234 Bypass Interchange	Balls Ford Road Relocated						2020
660		T5665	Construct	VA 234 Bypass Interchange	Dumfries Road/Brentsville Road						2025
727			Construct	VA 234 Prince William Parkway Interchange at	VA 1566 Sudley Manor Dr.						2030
311	VP13A		Widen	VA 236	Pickett Road	I 395	2	2	4	6	2025
679			Reconstruct	VA 244/VA 27 Interchange	I 395 (.03 MI North)	VA 244 (.29 MI North)					2015
264	VSF25aa	57167	Convert	VA 286 Fairfax County Parkway HOV	VA 267 Dulles Toll Road	Sunrise Valley Drive	5	5	6	4+2	2035
96	VSF25ea	57167	Widen	VA 286 Fairfax County Parkway HOV	Sunrise Valley	West Ox Road	5	5	4	4+2	2035
97	VSF25e	57167	Convert	VA 286 Fairfax County Parkway HOV	West Ox Road	US 50	5	5	6	4+2	2035
98	VSF25y		Upgrade	VA 286 Fairfax County Parkway HOV	US 50	VA 7735 Fair Lakes Parkway	2	5	6	4+2	2035
101	VSF25z		Widen/Upgrade	VA 286 Fairfax County Parkway HOV	VA 7735 Fair Lakes Parkway	I 66	2	5	6	6+2	2035
320	VSF25g		Widen	VA 286 Fairfax County Parkway	US 29	VA 123 Ox Road	5	5	4	6	2025 2020
400			Construct	VA 286 Fairfax County Parkway Interchange	VA 7700 Fair Lakes parkway and Monument Drive		2	5	4	6	Complete
728			Study	VA 286 Fairfax County Parkway	US 29 Lee Highway	Rolling Road					Not Coded
729			Study	VA 286 Fairfax County Parkway	VA 267 Dulles Toll Road	Rugby Road					Not Coded
304	VSF26		Construct	VA 289 Franconia-Springfield Parkway HOV	VA 286 Fairfax County Parkway	VA 2677 Frontier Drive	5	5		2	2025
104	VSF26a		Construct	VA 289 Franconia-Springfield Parkway HOV Interchange	Neuman Street		1	1			2025
105	VSF26b		Upgrade	VA 289 Franconia-Springfield Parkway HOV	VA 638 Rolling Road	VA 617 Backlick Road	5	1	6+2	6+2	2025

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## 2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS (highway)

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
408	VSP23d		Widen	VA 294 Prince William County Parkway	VA 776 Liberia Avenue	VA 642 Hoadly Road	2	2	4	6	2040
375	VSP23f	PWC0008	Widen	VA 294 Prince William Parkway	VA 641 Old Bridge Road	VA 640 Minnieville Road	2	2	4	6	2014
739			Construct	VA 294 Prince William Parkway	VA 840 University Boulevard						2030
107	VP15CD		Construct	Collector-Distributor Rd Eastbound (parallels Dulles Toll Rd.)	VA 828 Wiehle Avenue	VA 684 Spring Hill Road	0		0	2	2036
106	VP15CD		Construct	Collector-Distributor Rd Westbound (parallels Dulles Toll Rd.)	VA 684 Spring Hill Road	VA 828 Wiehle Avenue	0		0	2	2037
286	VP12O	99482	Construct	VA 234 Manassas Bypass (Bi-County Parkway)	VA 234 Bypass@I-66	US 50		5		4	2030 2020
<b>Urban</b>											
313	VU28B	100518	Construct	Battlefield Parkway	US 15 south of Leesburg	Dulles Greenway	0	2	0	4	2020
52	VU30F	50100	Widen	East Elden Street	Monroe Street	Fairfax County Parkway	3	2	4	6	2019
328	VU52	77378	Widen	Eisenhower Avenue	Mill Road	Holland Lane	3	3	4	6	2016
553	VU55	104830	Widen	Evergreen Mills Road	US 15 S. King Street	South City Limits of Leesburg	3	3	2	4	2022
681	VU56		Construct	Farrington Avenue	Van Dorn Street at Eisenhower Avenue	Edsall Road	0	4	0	2	2035
267	VU10B		Widen	Spring Street	Herndon Parkway East	Fairfax County Parkway	3	2	4	6	2020 2017
232	VU33	78853	Widen	Sycolin Road	VA7/US 15 Bypass	SCL of Leesburg	3	3	2	4	2020
398	VU32	17687	Widen	US 15 South King Street	Evergreen Mills Road	SCL of Leesburg	3	2	2	4	2015
382		89890/LEES0001	Construct	US 15 Bypass Interchange	VA 773 Edwards Ferry Road and Fort Evans Road <del>Edwards Ferry Rd.</del>	0.2 Mi. S of East Market Street to 0.3 Mi. N. of Edwards Ferry Road <del>0.2 mi. north to 0.3 mi. south</del>	2	2	4	4	2020
554		103999	Widen	US 15	Masons Lane	Greenway Dr	3	3	2	4	2015
290	VU45	15960 (PE & RW Only)	Widen	VA 234 Dumfries Road Business <del>VA-234 Dumfries Road</del>	South Corporate Limits	Hastings Drive	3	3	2	4	2018
594	NRS		Reconstruct	VA 234 Grant Avenue	Lee Avenue	Wellington Road	3	3	4	4	2020
53	nrs	8645	Construct	Intersection Improvement	King Street	Beauregard Street					2016
54	nrs		Construct	Ellipse	Seminary Road	Beauregard Street					2020
55	nrs	70580	Construct	Intersection Improvement	King/Quaker Lane	Braddock Road					2017
56	NRS	104328	Construct	Herndon Parkway (East): Transit Drop-off/Pick-Up Access to Metrorail Station	East of Rte 666/van Buren Street (@ 593 Herndon Parkway)	West of Rte 675 / Spring Street (@ 575 Herndon Parkway)	2	2	4	4	2017
725		UPC # 89889	Construct	Herndon Parkway	Van Buren Street						2017

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2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
57	VU54		Construct	Southern Collector Road	VA 7 Main Street at VA 287	A Street (2,200 feet north of Yaxley)	0	2	0	2	Complete
687	NRS	76408	Reconstruct	VA 17 Intersection Improvements in Warrenton	South of Frost Ave.	South of Winchester St.					2021

Secondary											
Arlington County											
411	AR17a		Widen	Washington Boulevard	Wilson	Kirkwood	3	3	3	4	2017 2016
Fairfax County											
336	FFX2a	FFX2a	Construct	VA 602 Reston Pkwy.	VA 5320 Sunrise Valley Dr.	VA 606 Baron Cameron Avenue	2	2	4	6	2020
732			Widen	VA 608 Frying Pan Road	VA 28 Sulley Road	VA 657 Centreville Road	3	3	2	4	2025
241	VSF4f	VSF4f	Widen	VA 611 Furnace Road	VA 123 Ox Road	VA 642 Lorton Road	3	3	2	4	2016 2014
60	VSF4c		Widen	VA 611 Telegraph Road	VA 613 Beulah St.	Leaf Road North	3	3	2	4	2014
218	VSF4ca		Widen	VA 611 Telegraph Road	Leaf Road North	VA 635 Hayfield Road	3	3	2	4	2025
298	VSF4i		Widen	VA 611 Telegraph Road	VA 635 Hayfield Road	VA 613 (Van Dorn St.)	3	3	2	4	2025
61		96509	Widen	VA 611 Telegraph Road	VA 633 S. Kings Highway	VA 613 S. Van Dorn	3	3	2	4	2015
62	VSF4h	11012	Widen	VA 611 Telegraph Road	VA 613 S. Van Dorn	VA 644 Franconia Road	3	3	2	3	2025
63	VSF15b		Construct	VA 613 Van Dorn Interchange	VA 644 Franconia Road		0	0	0	0	2025
301	VSF8g	VSF8g	Widen	VA 620 Braddock Road	VA 7100 VA 286 Fairfax County Parkway	VA 123 Ox Road	3	3	4	6	2025
334	VSF8j		Construct/Widen	VA 620 New Braddock Rd.	VA 28	US 29 @ VA 662 (Stone Rd.)	0/4	3	0/2	4	2025
736			Widen	VA 636 Hooes Road	VA 286 Fairfax County Parkway	VA 600 Silverbrook Road	3	3	2	4	2025
427	BRAC	10091	Widen	VA 638 Rolling Road NB off-ramp	NB Rolling Rd.	NB Fairfax Co. Pkwy	3	3	2	4	2015
302	VSF10a		Widen	VA 638 Rolling Road	VA 286 Fairfax County Parkway	VA 644 Old Keene Mill Road	3	3	2	4	2020
586	VSF10E	102905	Widen	VA 638 Rolling Road	Rt 5297 DeLong Drive	Fullerton Drive	3	3	2	4	2022
377	VSF10c	16505	Widen	VA 638 Pohick Road	VA 1	I 95	3	3	2	4	2025
269	VSF13d	16505	Widen	VA 642 Lorton Road	VA 123 (Ox Road)	VA 600 Silverbrook Road	3	3	2	4	2016 2014
217	FFX11a		Widen	VA 645 Stringfellow Road	US 50	VA 286 Fairfax County Parkway	3	3	2	4	2020
287	VSF16G	60864	Widen	VA 645 Stringfellow Road	VA 7735 Fair Lakes Blvd.	US 50	3	3	2	4	2015
64	VSF37a		Widen	VA 650 Gallows Road	VA 7 Leesburg Pike	VA 299 699 Prosperity Ave.	2	2	4	6	2038
65	VSF33a		Widen	VA 651 Guinea Road	VA 6197 Roberts Parkway	VA 4807 Pommeroy Drive	3	3	2	4	2025
255	FFX12a		Construct	VA 651 New Guinea Road	VA 123 Ox Road	Roberts Road	0	3	0	4	2025
688	VSF17b		Construct	VA 655 Shirley Gate Road	VA 286 Fairfax County Parkway	VA 620 Braddock Road	0	3	0	4	2025
346	VSF18C	74749	Widen	VA 657 Centreville Road	VA 8390 Metrotech Dr.	VA 668 McLearen Road	3	3	4	6	2040
66	VSF42		Construct	Boone Boulevard Extension	VA 123 Chain Bridge Road	Ashgrove Lane			0	4	2036
67			Construct	New Bridge/Road Crossing	Tysons Corner Center Ring Road	Old Meadow Road			0	4	2036
68	VSF43		Widen	Magarity Road	VA 7 Leesburg Pike	VA 694 Great Falls Street			2	4	2037
442	VSF41	103907	Construct/Widen	VA 8102 Scotts Crossing Rd	VA 123 Dolly Madison Blvd	Jones Branch Dr			0/2	4	2018
69	NRS		Construct	Greensboro Drive WB	Spring Hill Road	Tyco Road	0	4	0	2	2034
724			Construct	VA 2677 Frontier Drive	Franconia-Springfield Transportation Center	VA 789 Loisdale Road					2024

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(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
<b>Loudoun County</b>											
661	NRS		Construct	VA 606 Ramp	VA 606 Eastbound	Lockridge Road Northbound			0	2	2020
330	VSL1B	97529, 105064	Widen/Upgrade	VA 606 Old Ox Rd	VA 634 Moran Rd	VA 621 Evergreen Mills Rd	4	3	2	4	2017 2020
566	VSL10E		Widen	VA 607 Loudoun County Parkway	US 50	VA 606 at new Arcola Blvd.	3	3	4	6	2030
329	VSL10C		Construct	VA 607 Loudoun County Parkway	VA 606 Old Ox Rd / VA 842 Arcola Rd	VA Ryan Rd / Loudoun County Parkway	0	3	0	4	2015
275	VSL10bb		Widen/Upgrade	VA 607 Loudoun County Parkway	W&OD Trail	Redskin Park Drive	4	3	4	6	2025
323	VSL10bf		Widen/Upgrade	VA 607 Loudoun County Parkway (dirt road)	Redskin Park Drive	Gloucester Parkway	4	3	2	4	2015 2014
689	VSL54		Widen	Farmwell Road	Smith Switch	Ashburn Road	4	4	2	6	2017
683	NRS		Construct	Waxpool Road/ Loudoun County Parkway Interchange					0	4	2019
335	VSL45	VSL45	Widen/Upgrade	VA 643 Dulles Greenway VA 643- (Sycolin Road) Phas II	Leesburg Town Limits	Crosstrails Boulevard	4	3	2	4	2018 2035
72	VSL4ac	76244 & 99481	Widen	VA 659 Belmont Ridge Road	VA 7 Leesburg Pike	Dulles Greenway Croson Lane	4	3	2	4	2018
746			Widen/Upgrade	VA 659 Belmont Ridge Road	Croson Lane	Dulles Greenway	4	3	2	4	2025
372	VSL4E	LDN0005	Widen/Upgrade	VA 659 Gum Springs Road	VA 620 Braddock Road	US 50 John Mosby Highway	4	3	2	4	Complete
297	VSL4f		Widen/Upgrade	VA 659 Gum Spring Rd.	Prince William County Line	VA 620 Braddock Road	4	3	2	4	2035
641	VSL58		Construct	VA 772 Transit Station Connector Bridge	Dulles Greenway	VA 772 Transit Station			0	4	2019
662	NRS	69870	Construct	VA 868 Davis Drive	VA 606 Old Ox Road	VA 846 Sterling Boulevard		4	0	4	2025
333	VSL46	68767, 70760, 93144, 93899, 105331	Construct	VA 1036 Pacific Boulevard	VA 846 Sterling Boulevard	Richfield Way Gloucester Parkway	0	3	0	4	2016 2013
74	VSL52	104418	Construct	VA 2150 Cloucester Parkway	VA 607 Loudoun County Parkway	VA 1036 Pacific Boulevard	0	3	0	4	2016
573	VSL61		Construct	Arcola Boulevard (Southern Segment)	US 50	Loudoun County Parkway	0	4	0	4	2022
575			Construct	Arcola Boulevard (Center Segment)	Glascock Road	Evergreen Mills Road	0	4	0	4	2022
574			Construct	Arcola Boulevard (Northern Segment)	Evergreen Mills Road	Loudoun County Parkway	0	4	0	4	2022
76	VSL40F	10858	Construct	Clairborne Parkway	Croson Lane	Ryan Road	0	4	2	4	2015
577	VSL56		Construct	Crosstrail Boulevard	Sycolin Road	Kincaid Boulevard	0	4	0	4	2019

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(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
578	VSL62		Widen	Evergreen Mills Road (Eastern Segment)	Loudoun County Parkway	Belmont Ridge Road	4	4	2	4	2025
580			Construct	Evergreen Mills Road (Western Segment)	Arcola Boulevard	Belmont Ridge Road		4	0	4	2025
564	NRS		Construct	Glascock Road (Eastern Segment)	Arcola Boulevard	Loudoun County Parkway	0	4	0	4	2023
565	NRS		Construct	Glascock Road (Western Segment)	Arcola Boulevard	Northstar Boulevard	0	4	0	4	2023
568	VSL57		Construct	Mooreview Parkway (Missing Link)	Amberleigh Farm Drive	Old Ryan Road	0	4	0	4	2019
569	VP12Q-		Construct	Northstar Boulevard (Missing Link #78)—MOVED TO PRIMARY PROJECTS PART OF VP12Q	US 50	Tall Cedars Parkway		5	0	4	2019
570	VP12R		Construct	Northstar Boulevard (Missing Link #79)	Shreveport Drive	US 50	0	3-2	0	3-4	2022
571	VP12P-		Construct	Northstar Boulevard (Missing Link #80)—MOVED TO PRIMARY PROJECTS PART OF VP12Q	Tall Cedars Parkway	Braddock Road		5	0	4	2017
572	VSL59		Construct	Prentice Drive (Western Segment)	Loudoun County Parkway	Loudoun Station Drive	0	4	0	4	2019
556	VSL59		Construct	Prentice Drive Eastern Segment	Lockridge	Loudoun County Parkway	0	4	0	4	2019
75	VSL48A	91773	Construct	Riverside Parkway	River Creek Parkway	Upper Meadow Drive/Kingsport Dr.	4	4	2	4	2015 2014
557			Construct	Riverside Parkway	Rivercreekparkway	Kingsport Drive	0	4	0		2019
561	VSL49A		Construct	Russell Branch Parkway (Eastern Segment)	Ashburn Village Road	Ashburn Road	0	4	0	4	2017
559	VSL49B		Construct	Russell Branch Parkway (Western Segment)	Belmont Ridge Road	Tournament Parkway	0	4	0	4	2017
560	VSL55		Construct	Shreveport Drive (Eastern Segment)	Belmont Ridge Road	Loudoun County Parkway	0	4	0	4	2017
563			Construct	Shreveport Drive (Western Segment)	Evergreen Mills Road	Belmont Ridge Road	0	4	0	4	2017
562	VSL60	105783	Construct	Sterling Boulevard Extension	Pacific Boulevard	Moran Road	0	4	0	4	2019
77	VSL53		Construct	Tall Cedars Parkway	Pinebrook Road	Gum Springs Road			0	4	2015
576			Construct	Creighton Road (completion of eastern end)	Belmont Ridge Road	Evergreen Mills Road	0	4	0	4	2013
555			Widen	VA 2119 Waxpool Road	Demott Road	Ashburn Boulevard	4	4	2	4	2018
<b>Prince William County</b>											
643	VSP67	104802	Construct	VA 2190 Summit School Road Extension	Telegraph Road	VA 2190 Summit School Road (south end of existing)	4	4	2	4	2020
219	VSP25b	104802	Widen	VA 1781 New Telegraph Road/Summit School Road	Horner Road/Park'n'Ride Lot Access VA-849 Catoe Hill Road	VA 2190 Summit School Road Extension	4	4	2	4	2020

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2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
257	VSP25c		Widen	VA 1781 Telegraph Rd.	VA 294 (Prince William Pkwy)	VA 849 (Caton Hill Rd.)	4	4	2	4	2020
81	VSP2h		Widen	VA 619 Joplin Road eastbound	I 95 ramp	US 1			2	3	2015
367	VSP3a		Widen/Upgrade	VA 621 Balls Ford Road	<del>Miramar Drive</del> <del>VA 234 Sudley Road</del>	<del>Bethlehem Road</del> <del>Ashton Avenue</del>	4	3	2	4	2030 2040
79	VSP3b	80347	Widen/Upgrade	VA 621 Balls Ford Road	<del>Bethlehem Road</del> <del>Ashton Avenue</del>	<del>Doane Drive</del> <del>Groveton Road</del>	4	3	2	4	2030 2025
690	VSP64		Construct	VA 621 Balls Ford Road Relocated	Doane Drive	Devlin Road	0	3	0	4	2020
596			Widen	VA 621 Balls Ford Road	VA 1600 Ashton Avenue	VA 622 Groveton Drive	3	3	2	4	2025
376	VSP5e	103484	Widen	VA 640 Minnieville Road	VA 643 Spriggs Road	VA 234 Dumfries Road	3	3	2	4	2017 2015
244	NRS	90499	Reconstruct	VA 643 Purcell Road	VA 234 Dumfries Rd.	<del>Vista Brook Dr.</del> <del>VA 642 Hoadly Road</del>	4	4	2	2	2017 2025
646	VSP17ba		Widen	VA 674 Wellington Road	VA 621 Devlin Road/Balls Ford Road	VA 234 Prince William Parkway Bypass	3	3	2	4	2025
338	VSP17b		Widen	VA 674 Wellington Road	VA 234 Bypass Prince William Parkway	VA 668 Rixlew Lane	3	3	2	4	2035
581			Widen	VA 674 Wellington Road	Rt 294 Prince William Parkway	Rt 621 Balls Ford Road	3	3	2	4	2025
589			Widen	VA 674 Wellington Road	621 Devlin Road	234 Rte. 234 Bypass (Prince William Parkway)			2	4	2030
308	VSP18	VSP18	Widen	VA 676 Catharpin Rd.	VA 55 John Marshall Highway	Heathcote Blvd.	3	3	2	4	2040
325	VSP20C	VSP20c	Widen/Upgrade	VA 1392 Rippon Boulevard Extension	West of Wigeon Way	Rippon VRE Station	4	3	2	4	2040
738			Construct	VA 840 University Boulevard Extension	Devlin Road	Progress Court		3	0	4	2020
83	VSP47e	104896	Construct	<del>University Boulevard/Devlin</del> <del>University Boulevard/Progress Ct.</del>	Sudley Manor Drive	<del>Devlin Road</del> <del>Wellington Rd/Progress Ct.</del>	0	3	0	4	2020 2016
82	VSP2i	92999	Widen	VA 619 Fuller Road	US 1	VA 619 Fuller Heights Road Relocated			2	4	2016 2015
593	VSP65		Widen	VA 638 Neabsco Mills Road	US 1 Jefferson Davis Highway	VA 784 Dale Boulevard			2	4	2020
642	VSP62a		Construct	Rollins Ford Road	Wellington Road	Linton Hall Road	0	3	0	4	2020
371	VSP62	90226 T6494	Construct	Rollins Ford Road	Songsparrow/Yellow Hammer Drive	VA 215 Vint Hill Road			0	4	Complete
591	VSP66		Construct	VA 627 Van Buren Road	VA 234 Dumfries Road	VA 610 Cardinal Drive	0	4	0	4	2035
745			Construct	VA 234 Potomac Shores Parkway	US 1 Jefferson Davis Highway	VA 4700 River Heritage Boulevard	0	4	0	4	2020
743			Widen	VA 4700 River Heritage Boulevard	VA 234 Potomac Shores Parkway	Dominica Drive	4	4	2	4	2020
744			Construct	VA 4700 River Heritage Boulevard	Dominica Drive	VA 234 Potomac Shores Parkway	0	4	0	2	2020
742			Construct	VA 4700 River Heritage Boulevard	US 1 Jefferson Davis Highway	VA 234 Potomac Shores Parkway / Harbor Station	0	4	0	4	2020

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(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
<b>FAMPO</b>											
	VI2rf		Construct	I 95 : HOV / Bus / HOT Lanes	Rte. 610 (Garrisonville Rd. ) in Stafford County	VA 17 in Spotsylvania County (exit 126)	1	1	0	2	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Telegraph Road (North of Aquia Creek)	SB GP Lanes to SB HOT Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Telegraph Road (North of Aquia Creek)	NB HOT Lanes to NB GP Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	North of Garrisonville Road (south of Aquia Creek)	NB GP Lanes to NB HOT Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Garrisonville Road and Courthouse Road	SB GP Lanes to SB HOT Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Garrisonville Road and Courthouse Road	NB HOT Lanes to NB GP Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Garrisonville Road and Courthouse Road	SB HOT Lanes to SB GP Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Garrisonville Road and Courthouse Road	NB GP Lanes to NB HOT Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Rt 628 (North of Stafford Regional Airport)	SB HOT Lanes to SB GP Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Rt 628 (North of Stafford Regional Airport)	NB GP Lanes to NB HOT Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Centerpoint Road (St.Co.Airport Access Rd.) and Rt 652	SB GP Lanes to SB HOT Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Centerpoint Road (St.Co.Airport Access Rd.) and Rt 652	NB HOT Lanes to NB GP Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Centerpoint Road (St.Co.Airport Access Rd.) and Rt 652	SB HOT Lanes to SB GP Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Centerpoint Road (St.Co.Airport Access Rd.) and Rt 652	NB GP Lanes to NB HOT Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	South of Rt 17 (North of Rappahannock River)	NB HOT Lanes to NB GP Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Just South of Rappahannock River	SB HOT Lanes to SB GP Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Just north of Rt 3	NB GP Lanes to NB HOT Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Rt 620 and Rt 208	NB GP Lanes to NB HOT Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Rt 620 and Rt 208	SB HOT Lanes to SB GP Lanes	1	1	0	1	2025
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Rt 1 and Rt 17	NB GP Lanes to NB HOT Lanes	1	1	0	1	2025

NOTE: Shaded areas represent changes from the 2014 CLRP.  
VDOT I-66 Alternatives (A and B) Identified with varied shading.

**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
			Construct	I 95 : HOV / Bus / HOT Lanes: Ramp	Between Rt 1 and Rt 17	SB HOT Lanes to SB GP Lanes	1	1	0	1	2025
			Reconstruct	I-95 interchange	at Courthouse Rd. (exit #140)						2025
	FAI1E		Upgrade	Inside I-95 shoulders for use as travel lanes in peak periods	1.3 mi. n. of Garrisonville Rd.	.4 mi. n. of Amleg Rd.					2020
	FAP5F		Widen	US-1	Prince William County Line	VA-637, Telegraph Rd. (Northern Intersection)			4	6	2025
			Reconstruct	US-1/US-17/PR-218 Intersection							2020
	FAP5I		Widen	US 1(Bridge Replacement)	US 17 (Butler Rd.)	Princess Anne St.	2	2	4	6	2025
	FAS22A		Widen	VA-3 (William St)	Gateway Blvd.	William St./Blue Gray Parkway			4	6	2030
	FAS22		Widen	VA 3 (Spotsylvania)	Chewing Lane	VA 627 (Gordon Rd.)	2	2	4	6	2013
	FAP6A		Widen	US 17 Bypass (Mills Dr.)	I-95	Caroline County Line	2	2	2	4	2030
	FAP6E		Widen	Tidewater Trail 17 Business/VA 2	US SCL Fredericksburg	US 17 Bypass (Mills Dr.)	2	2	2	4	2040
	FAP6C		Widen	US 17 (Warrenton Rd.)	McLane Drive	Stafford Lakes Parkway	2	2	4	6	2020
	FAP6D		Widen	US 17 (Warrenton Rd.)	Stafford Lakes Parkway	VA 612 (Hartwood Road)	2	2	4	6	2040
	FAP7		Widen	VA 218 (Butler Rd)	US 1	VA 212 (Chatham Heights Rd)	4	4	2	4	2030
	FAS40		Widen	VA 208 (Courthouse Road)	US 1 (Jefferson Davis Hwy)	Smith Station Road	3	3	4	6	2040
<b>Fredericksburg</b>											
	FAU1			Fall Hill Ave./ Mary Washington Blvd. Extension	Mary Wash. Blvd.	Gordon Shelton Blvd.			2	4	2020
				Lafayette Blvd. (Phase 1)	Sophia St	VA-3 (Blue & Gray Parkway)					2025
	FAU2			Gateway Blvd. Extended	William St. (PR-3)	Fall Hill Ave (UR-3965)			0	4	2030
<b>Stafford County Secondary</b>											
	FAS43			VA 606 (Ferry Rd)	VA 3 (Kings Highway)	VA 608 (Brook Rd)	4	3			2035
	FAS5b			VA 630 (Courthouse Rd)	Winding Creek Dr.	VA 648 (Shelton Shop Rd)	4	4	2	4	2030
	FAS13			VA 648 (Shelton Shop Rd.)	VA 610 (Garrisonville Rd)	VA 627 (Mountainview Rd)	4	4	2	4	2035
<b>Spotsylvania County Secondary</b>											
	FAS18c			VA 620 (Harrison Rd)	VA 610 (old Plank Rd.)	VA 627 (Gordon Rd.)	4	4	2	4	2025
	FAS18B			VA-620 (Harrison Rd.)	US-1 BUS (Lafayette Blvd.)	VA-639 (Salem Church Rd.)			2	4	2025
	FAS28			VA 628 (Smith Station Rd)	VA 608 (Massaponax Church Rd.)	VA 627 (Gordon Rd.)	4	4	2	4	2035
	FAS19			VA 636 (Mine Rd./ Hood Dr.)	VA 208 (Courthouse Rd.)	US 1	4	4	2	4	2025

NOTE: Shaded areas represent changes from the 2014 CLRP.  
VDOT I-66 Alternatives (A and B) Identified with varied shading.

**2015 CLRP and FY2015-2020 TIP AIR QUALITY CONFORMITY INPUTS  
(highway)**

2/12/2015

ConID	Project ID	Agency ID	Improvement	Facility	From	To	Facility		Lanes		Completion Date
							Fr	To	Fr	To	
	FAS20b			VA 639 (Leavells Rd.)	VA 208 (Courthouse Rd.)	VA 628 (Smith Station Rd.)	4	4	2	4	2035

**ITEM 8 - Action**  
February 18, 2015

Approval of Scope of Work for the Air Quality Conformity Assessment for the 2015 CLRP and the FY 2015-2020 TIP

**Staff**

**Recommendation:** Approve the enclosed scope of work for the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP.

**Issues:** None

**Background:** At the January 21 meeting, the Board was briefed on the draft scope of work for the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP which was released for a 30-day public comment period that ended February 14. The Board will be briefed on the comments received and recommended responses, and asked to approve the scope of work for the air quality conformity assessment for the 2015 CLRP and FY 2015-2020 TIP.



**AIR QUALITY CONFORMITY ASSESSMENT:  
2015 CONSTRAINED LONG RANGE PLAN AND  
FY2015-2020 TRANSPORTATION IMPROVEMENT PROGRAM**

**SCOPE OF WORK**

**I. INTRODUCTION**

This scope of work provides a context in which to perform the conformity analysis and presents an outline of the work tasks required to address all regulations currently applicable.

Projects solicited for the 2015 Constrained Long Range Plan (CLRP) and FY2015-2020 Transportation Improvement Program (TIP) are scheduled to be finalized at the February 18, 2015 TPB meeting. This scope of work reflects the tasks and schedule designed for the air quality conformity assessment leading to adoption of the plan on October 21, 2015. This work effort addresses requirements associated with attainment of the ozone standards (volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) as ozone precursor pollutants), and fine particles (PM<sub>2.5</sub>) standards (direct particles and precursor NO<sub>x</sub>), as well as maintenance of the wintertime carbon monoxide (CO) standard.

The plan must meet air quality conformity regulations: (1) as originally published by the Environmental Protection Agency (EPA) in the November 24, 1993 Federal Register, and (2) as subsequently amended, most recently on March 14, 2012, and (3) as detailed in periodic FHWA/FTA and EPA guidance. These regulations specify both technical criteria and consultation procedures to follow in performing the assessment.

**II. FEDERAL REQUIREMENTS**

As described in the 1990 Clean Air Act Amendments, conformity is demonstrated if transportation plans and programs:

1. Are consistent with most recent estimates of mobile source emissions
2. Provide expeditious implementation of TCMs
3. Contribute to annual emissions reductions.

The federal requirements governing air quality conformity compliance are contained in §93.110 through §93.119 of the Transportation Conformity Regulations (April 2012), as follows:

<b>CONFORMITY CRITERIA &amp; PROCEDURES</b>	
All Actions at all times	
§93.110	Latest Planning Assumptions
§93.111	Latest Emissions Model
§93.112	Consultation
§93.113	TCMs
§93.114	Currently conforming Plan and TIP
§93.115	Project from a conforming Plan and TIP
§93.116	CO, PM10 and PM2.5 hot spots
§93.117	PM10 and PM2.5 Control Measures
§93.118 and/or §93.119	Emissions Budget and/or Interim Emissions

**§ 93.110 Criteria and procedures: Latest planning assumptions** - The conformity determination must be based upon the most recent planning assumptions in force at the time of the conformity determination.

**§ 93.111 Criteria and procedures: Latest emissions model** - The conformity determination must be based on the latest emission estimation model available.

**§ 93.112 Criteria and procedures: Consultation** – The Conformity must be determined according to the consultation procedures in this subpart and in the applicable implementation plan, and according to the public involvement procedures established in compliance with 23 CFR part 450.

**§ 93.113 Criteria and procedures: Timely implementation of TCMs** - The transportation plan, TIP, or any FHWA/FTA project which is not from a conforming plan and TIP must provide for the timely implementation of TCMs from the applicable implementation plan.

**§93.114 Criteria and procedures: Currently conforming transportation plan and TIP** - There must be a currently conforming transportation plan and currently conforming TIP at the time of project approval.

**§93.115 Criteria and procedures: Projects from a plan and TIP** - The project must come from a conforming plan and program.

**§93.116 Criteria and procedures: Localized CO, PM10, and PM2.5 violations (hot spots)** -The FHWA/FTA project must not cause or contribute to any new localized CO, PM10, and/or PM2.5 violations or increase the frequency or severity of any existing CO, PM10, and /or PM2.5 violations in CO, PM10, and PM2.5 nonattainment and maintenance areas.

**§93.117 Criteria and procedures: Compliance with PM10 and PM2.5 control measures** -The FHWA/FTA project must comply with PM10 and PM2.5 control measures in the applicable Implementation Plan.

**§93.118 Criteria and procedures: Motor vehicle emissions budget** - The transportation plan, TIP, and projects must be consistent with the motor vehicle emissions budget(s).

**§93.119 Criteria and procedures: Interim emissions in areas without motor vehicle budgets** - The FHWA/FTA project must satisfy the interim emissions test(s).



**Assessment Criteria:**

- Ozone season pollutants will be assessed by comparing the forecast year pollutant levels to the most recently approved 8-hour ozone area VOC and NOx mobile emissions budgets. The 2009 Attainment and 2010 Contingency budgets were deemed adequate for use in conformity by EPA in February 2013. These budgets were submitted to EPA by the Metropolitan Washington Air Quality Committee (MWAQC) in 2007 as part of the 8-hour ozone State Implementation Plan (SIP).
- PM2.5 pollutants will be assessed by comparing the forecast year pollutant levels to the mobile budgets in the PM2.5 Maintenance Plan. The Maintenance Plan was approved by EPA effective November 5, 2014.
- Wintertime CO will be assessed by comparing the forecast year pollutant levels to the budgets in the CO Maintenance Plan. The Maintenance Plan was approved by EPA effective June 3, 2005.

**III. TECHNICAL APPROACH**

The table below summarizes the key elements of the Technical Approach:

	<b>Ozone</b>	<b>Wintertime CO</b>	<b>Fine Particles</b>
Pollutant	VOC, NOx	CO	Direct PM2.5, Precursor NOx
Emissions Model	MOVES2010a		
Conformity Test	<u>Budget Test:</u> Using mobile budgets most recently approved by EPA. 2009 attainment and 2010 contingency budgets found adequate for use in conformity by EPA in Feb. 2013. All budgets were set using Mobile6 emissions model and submitted to EPA in 2007.	<u>Budget Test:</u> Using mobile budgets established with the Wintertime CO Maintenance Plan approved by EPA in 2005. All budgets set using Mobile6 emissions model..	<u>Budget Test:</u> Using mobile budgets established in the PM <sub>2.5</sub> Maintenance Plan approved by EPA in 2014. All budgets set using MOVES 2010a emissions model.
Emissions Analysis Timeframe	Daily	Daily	Annual
Vehicle Fleet Data	<b>NEW!</b> 2014 vehicle registration data for all jurisdictions		
Geography	8-hour ozone non-attainment area	DC, Arlington, Alexandria, Montgomery Co., Prince George’s Co.	8-hour ozone non-attainment area less Calvert County
Network Inputs	Regionally significant projects		
Land Activity	<b>NEW!</b> Cooperative Forecasts Round 8.4		
Modeled Area	3,722 TAZ System		
Travel Demand Model	Version 2.3.57		

#### **IV. CONSULTATION**

The TPB adheres to the specifications of the consultation procedures (as outlined in the consultation procedures report adopted by the TPB on May 20, 1998). The TPB will participate in meetings of MWAQC, its Technical Advisory Committee, and its Conformity Subcommittee to discuss the Scope of Work, TERMS development process, and other elements as needed. The TPB will discuss at meetings or forums, as needed, the following milestones:

- CLRP & TIP Call for Projects
- Scope of work
- TERM proposals
- Project submissions: documentation and comments
- Analysis of TERMS, list of mitigation measures
- Conformity assessment: documentation and comments
- CLRP Performance
- Process: comments and responses

#### **V. WORK TASKS**

The work tasks associated with the 2015 CLRP air quality conformity analysis are as follows:

1. Receive project inputs from programming agencies and organize into conformity documentation listings by:
  - Project type, limits, etc.
  - Phasing with respect to forecast years
  - Transit operating parameters, e.g. schedules, service
2. Update Travel Model Base Transit Service to reflect:
  - Service current to December 2014
  - Fares current to February 2014
3. Update Vehicle Fleet Data based on the 2014 VIN
4. Review and Update Land Activity files to reflect Round 8.4 Cooperative Forecasts with respect to:
  - Households by auto ownership, population, and employment
  - Coordination with agencies outside the MWCOG Cooperative Forecast area (BMC, FAMPO, etc.)
  - Zonal data files
  - Employment Data Census Adjustment
  - Exogenous Travel (external, through trips etc.)

5. Prepare forecast year highway, HOV, and transit networks including regionally significant projects (including I-66 Alternative A), as follows:
  - 2015, 2017, 2020, 2025, 2030, and 2040 highway networks, including HOV & HOT routes with all facilities assumed at HOV-3 for 2020 and beyond
  - 2015, 2017, 2020, 2025, 2030, and 2040 transit network input files
  - Update highway tolls, as necessary
6. VDOT I-66 Alternative B (additional access/ramps outside the beltway):
  - Modify 2025,2030, and 2040 networks
  - Execute travel demand modeling for 2025, 2030, and 2040
  - Calculate emissions for 2025, 2030, and 2040
7. VDOT I-66 Alternative: No-Build:
  - Modify 2025,2030, and 2040 networks
  - Execute travel demand modeling for 2025, 2030, and 2040
  - Calculate emissions for 2025, 2030, and 2040
8. Execute travel demand modeling for years 2015, 2017, 2020, 2025, 2030, and 2040; for years 2025, 2030, and 2040 by applying a transit constraint at 2020 levels through the core of the TPB planning area.
9. Derive Mobile Emissions Estimates for years 2015, 2017, 2025, 2030, and 2040
10. Identify extent to which plan provides for expeditious implementation of TCMs contained in ozone state implementation plans and provide emissions reductions estimates for TERMS in current TIP
11. Document timely implementation of TCMs and estimated emissions reductions from TERMS in the FY2015-2020 TIP; under the oversight of the Technical Committee and the TPB, identify additional measures, if needed, should the plan or program fail the budget test and incorporate measures into the plan
12. Summarize key inputs and outputs (VMT, mode share, emissions, etc.) of the conformity determination for use in the CLRP Performance Analysis.
13. Assess conformity and document results in a report
  - Document methods
  - Draft conformity report
  - Forward to technical committees, policy committees
  - Make available for public and interagency consultation
  - Receive comments
  - Address comments and present to TPB for action
  - Finalize report and forward to FHWA, FTA and EPA

# SCHEDULE FOR DEVELOPMENT & ADOPTION

of the 2015 Update of the Financially Constrained Long-Range Transportation Plan (CLRP)  
& FY 2015-2020 Transportation Improvement Program (TIP)

2014	October 15*	TPB is briefed on the draft Call for Projects document and summary brochure.
	November 19	TPB releases final Call for Projects. Transportation agencies begin submitting project information through online database.
	December 12	<b>DEADLINE:</b> Transportation agencies complete online submission of draft project inputs.
2015	January 9	Technical Committee reviews draft CLRP & TIP project submissions and draft Scope of Work for the Air Quality Conformity Analysis.
	January 15	CLRP & TIP project submissions and draft Scope of Work released for <b>30-day comment period</b> .
	January 21*	TPB is briefed on project submissions and draft Scope of Work.
	February (TBD)	TPB staff briefs Metropolitan Washington Air Quality Committee Technical Advisory Committee (MWAQC TAC) on submissions and Scope of Work.
	February 14	Comment period ends.
	February 18*	TPB reviews comments and is asked to approve project submissions and draft Scope of Work.
	April 3	<b>DEADLINE:</b> Transportation agencies finalize CLRP forms (including Congestion Management Documentation forms where needed) and amendments to the FY 2015-2020 TIP. Submissions must not impact conformity inputs. Note that the deadline for changes affecting conformity inputs was February 18, 2015.
	September 4	Technical Committee reviews draft CLRP & TIP and Conformity Analysis.
	September 10	Draft CLRP & TIP and Conformity Analysis are released for <b>30-day comment period</b> at Citizens Advisory Committee (CAC) meeting. CLRP Performance Analysis and Regional Priorities Plan Assessment are also published.
	September 16*	TPB is briefed on the draft CLRP & TIP and Conformity Analysis.
	September (TBD)	TPB staff briefs MWAQC TAC on the draft CLRP & TIP and Conformity Analysis.
October 10	Comment period ends.	
October 21*	TPB reviews comments and responses to comments, and is presented with the draft CLRP & TIP and Conformity Analysis for adoption.	

\*Regular monthly TPB meeting

## **ITEM 9 - Information**

February 18, 2015

### Briefing on the COG Cooperative Forecasting Process

#### **Staff**

**Recommendation:** Receive briefing on the COG Cooperative Forecasting Process and the Round 8.4 Forecasts of future population, household and employment growth in the region.

**Issues:** None

**Background:** At its February 11 meeting the COG Board approved the Draft Round 8.4 Cooperative Forecasts for use by the TPB in the Air Quality Conformity Analysis of the 2015 CLRP and FY 2015 to 2020 Transportation Improvement Program.

# Round 8.4 Cooperative Forecasts

## National Capital Region Transportation Planning Board

Paul DesJardin  
Director of Community Planning and Services  
February 18, 2015



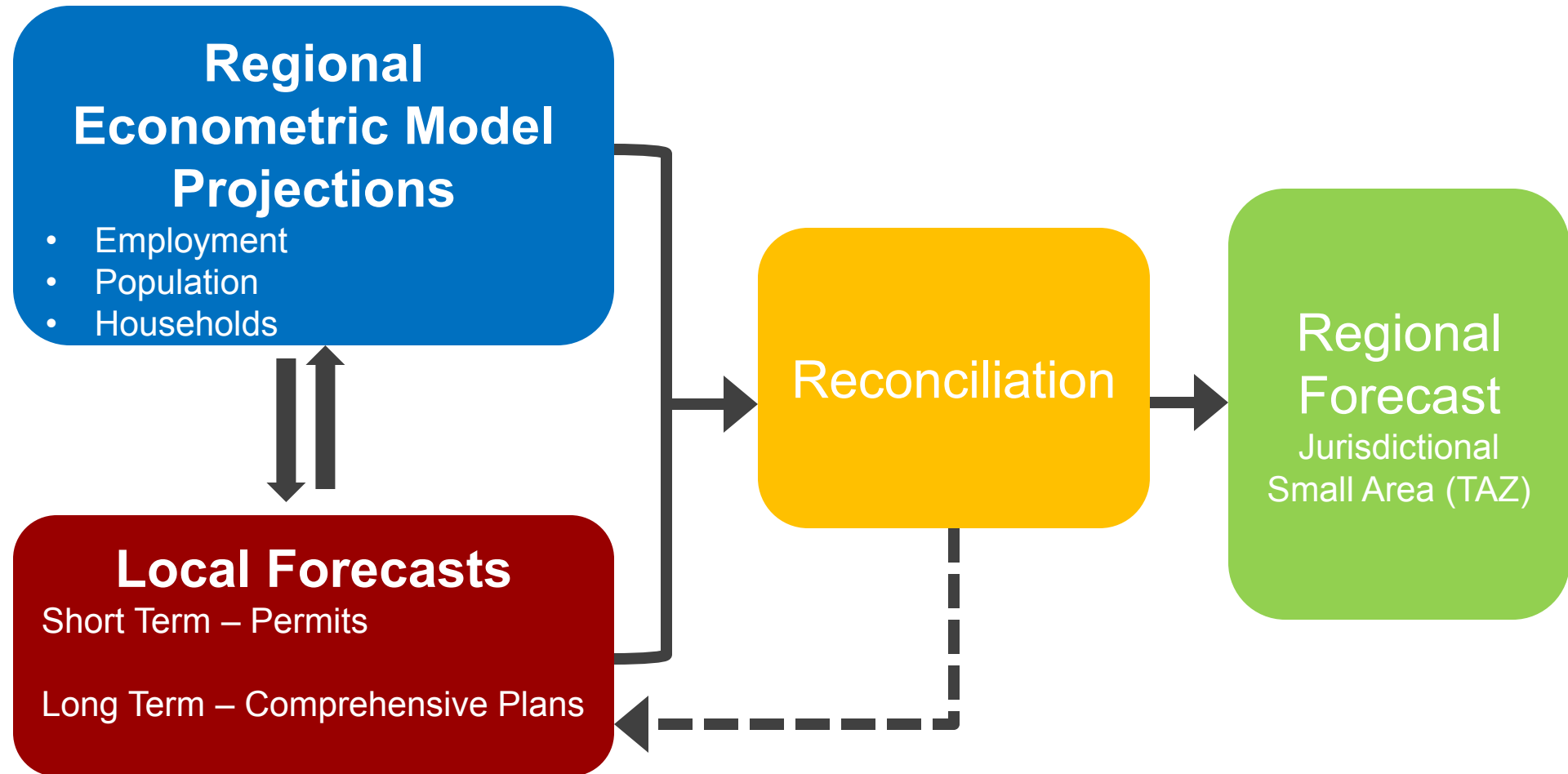
# Use of Round 8.4 Cooperative Forecasts

**2015 Air Quality  
Conformity  
Analysis**

**TPB CLRP  
Performance  
Analysis**

**Activity Center  
Growth Trends**

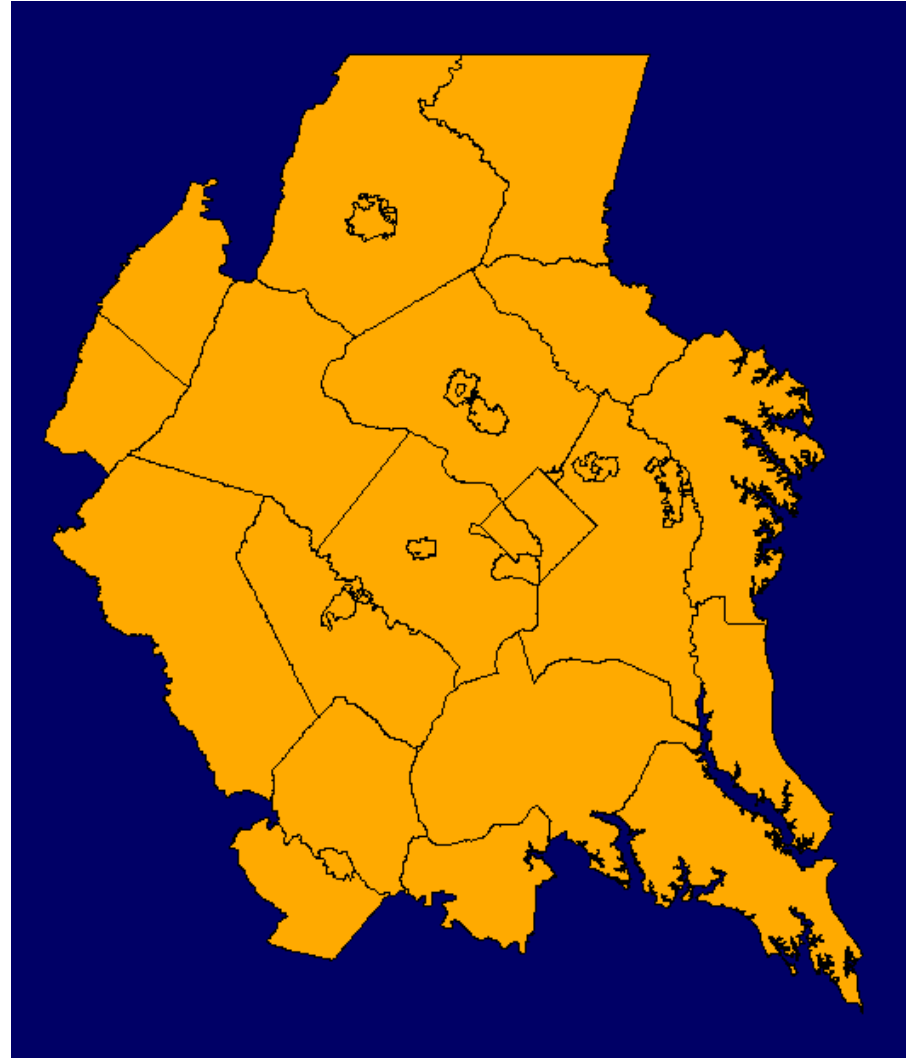
# Cooperative Forecasting Process





# Growth Forecasts for All Jurisdictions in the TPB Modeled Area are included in Round 8.4

- **COG and TPB Member Jurisdictions**
- **BMC Counties in TPB Modeled Area**
  - Anne Arundel, Carroll & Howard
- **FAMPO**
  - Fredericksburg, King George, Spotsylvania & Stafford
- **Others**
  - Calvert, St. Mary's , Clarke & Jefferson



# Round 8.4 Jurisdictional Updates

- **Arlington County**
- **City of Alexandria**
- **Fairfax County** (*Population and Households Only*)
- **Prince William County**
  
- **New Forecasts for Anne Arundel, Carroll, and Howard Counties from the Baltimore Metropolitan Council**

# Summary of Round 8.4 Cooperative Forecasts

	TPB Modeled Area (Thousands)		2015 to 2040 Growth	
	<u>2015</u>	<u>2040</u>	<u>Number</u>	<u>Percent</u>
<b>EMPLOYMENT</b>	4,137.5	5,557.2	1,419.7	36.2%
<b>POPULATION</b>	7,046.4	8,758.9	1,712.5	25.8%
<b>HOUSEHOLDS</b>	2,631.8	3,357.0	725.2	29.4%

# Comparison of 2040 Forecasts: Round 8.3 and Round 8.4

## TPB Modeled Area

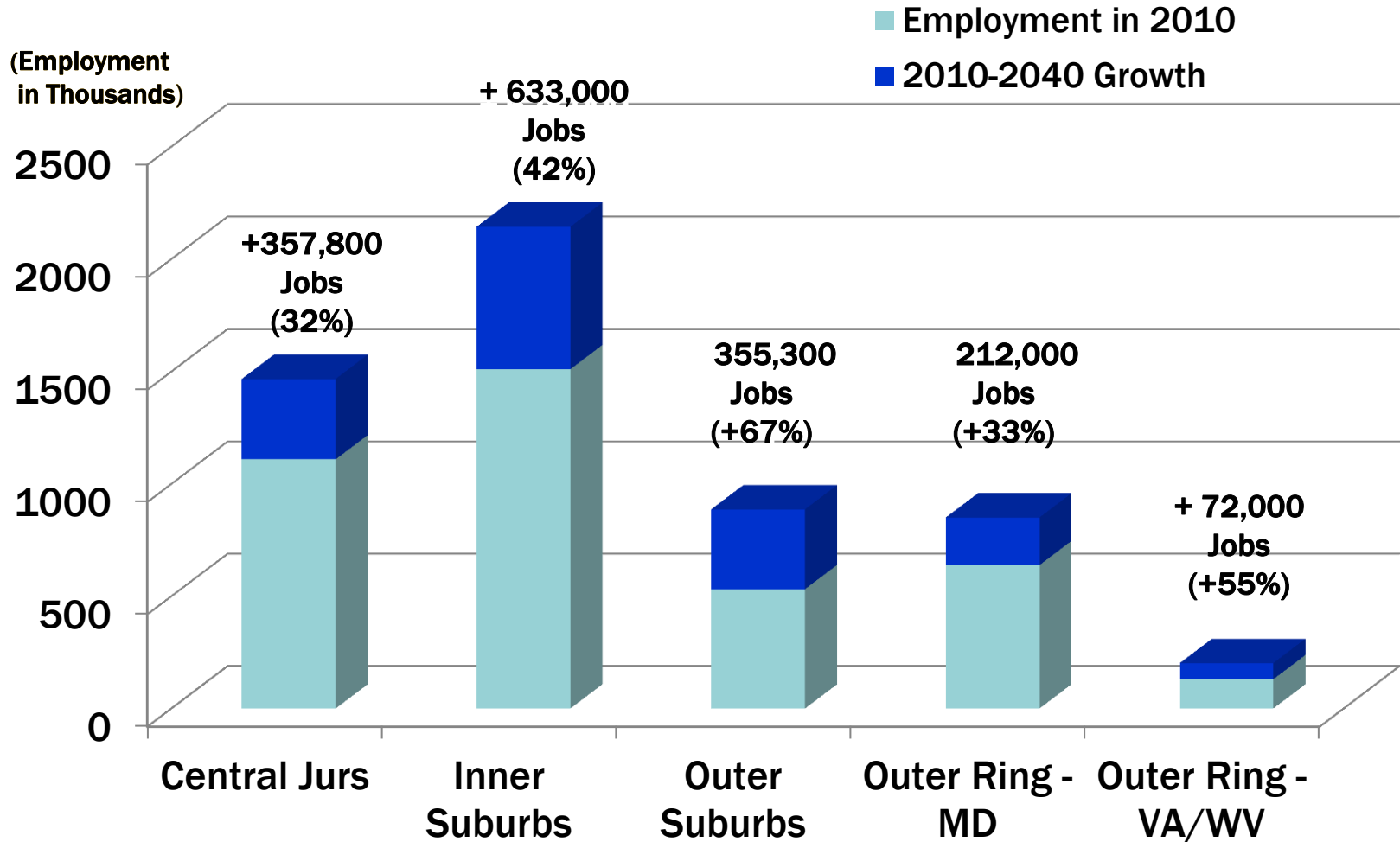
(Thousands)

	<b>Round <u>8.3</u></b>	<b>Round <u>8.4</u></b>	<b><u>Number</u></b>	<b><u>Percent</u></b>
<b>EMPLOYMENT</b>	5,572.7	5,557.2	-15.5	-0.3%
<b>POPULATION</b>	8,794.6	8,758.9	-35.7	-0.4%
<b>HOUSEHOLDS</b>	3,372.6	3,357.0	-15.6	-0.5%

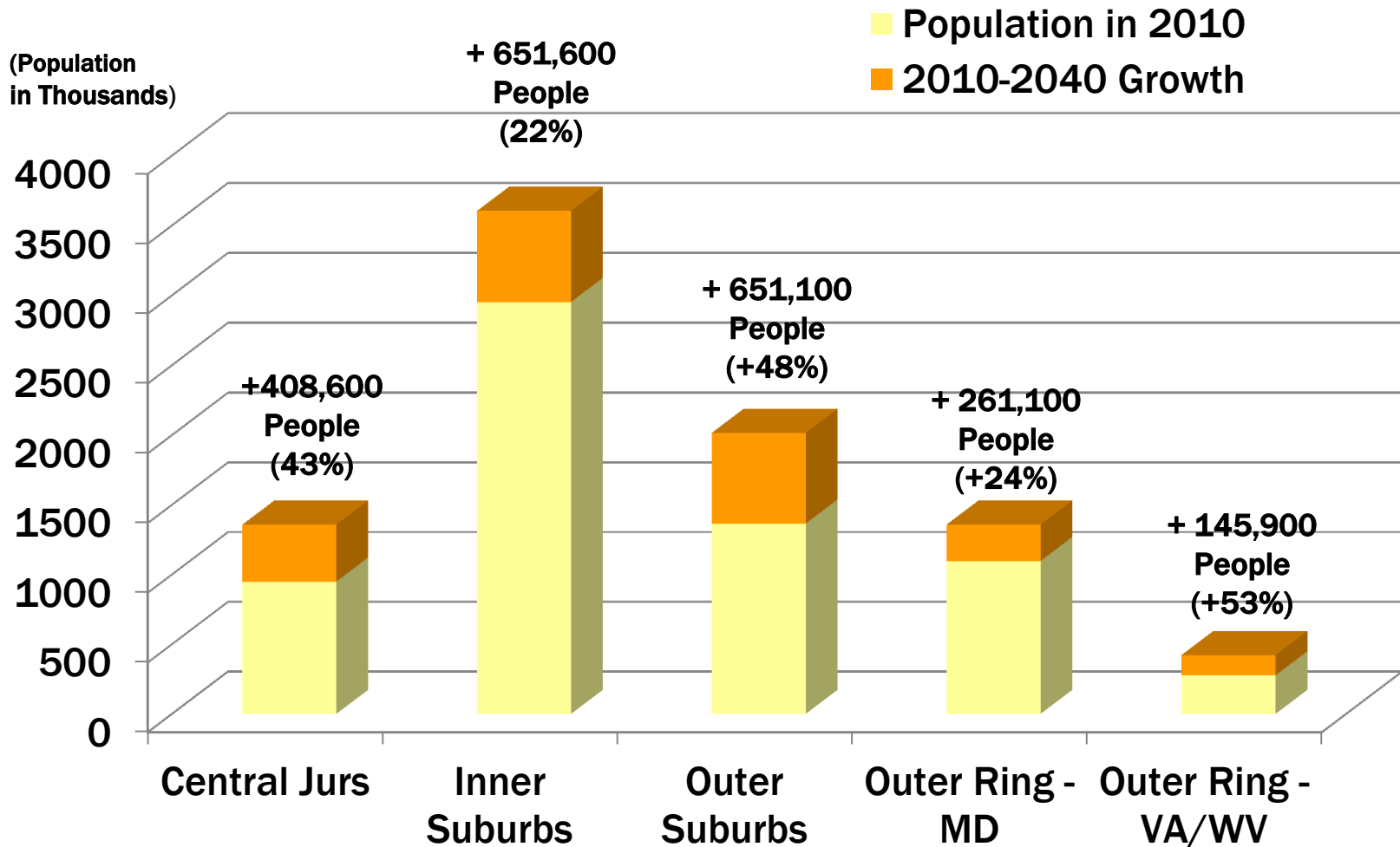
# Forecasts for Jurisdictions in TPB Modeled Area Have Been Grouped Geographically for Analysis Purposes

Central Jurisdictions	Inner Suburbs	Outer Suburbs	Outer Ring - MD	Outer Ring - VA/WV
<ul style="list-style-type: none"> <li>• District of Columbia</li> <li>• Arlington</li> <li>• Alexandria</li> </ul>	<ul style="list-style-type: none"> <li>• Montgomery</li> <li>• Prince George's</li> <li>• Fairfax (County)</li> <li>• Fairfax (city)</li> <li>• Falls Church</li> </ul>	<ul style="list-style-type: none"> <li>• Loudoun</li> <li>• Prince William</li> <li>• Manassas</li> <li>• Manassas Park</li> <li>• Calvert</li> <li>• Charles</li> <li>• Frederick County (MD)</li> <li>• Stafford</li> </ul>	<ul style="list-style-type: none"> <li>• Anne Arundel</li> <li>• Carroll</li> <li>• Howard</li> <li>• St. Mary's</li> </ul>	<ul style="list-style-type: none"> <li>• Fredericksburg</li> <li>• King George</li> <li>• Spotsylvania (portion)</li> <li>• Clarke</li> <li>• Fauquier</li> <li>• Jefferson (WV)</li> </ul>

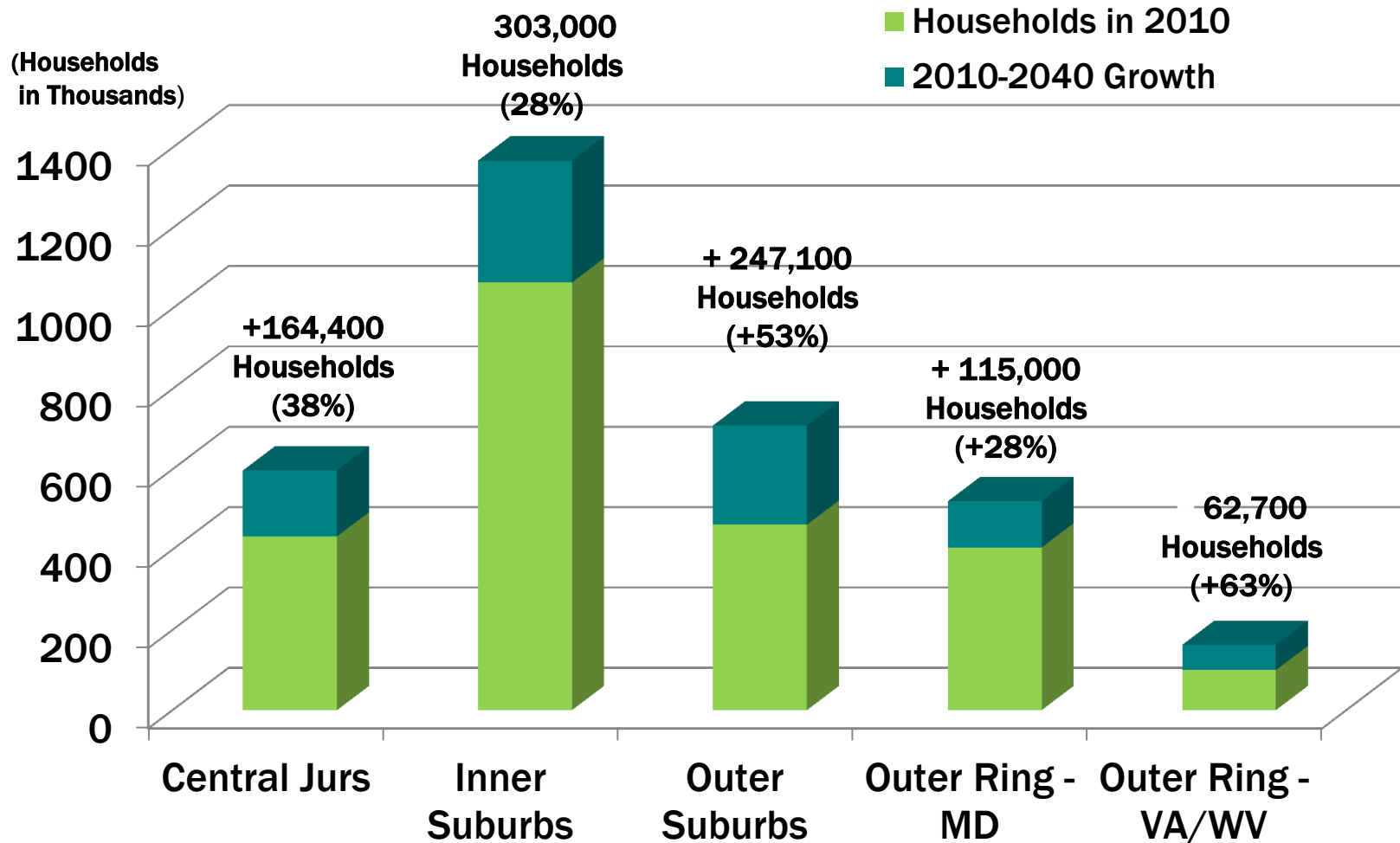
# Forecast Employment Growth (2010-2040)



# Forecast Population Growth (2010-2040)

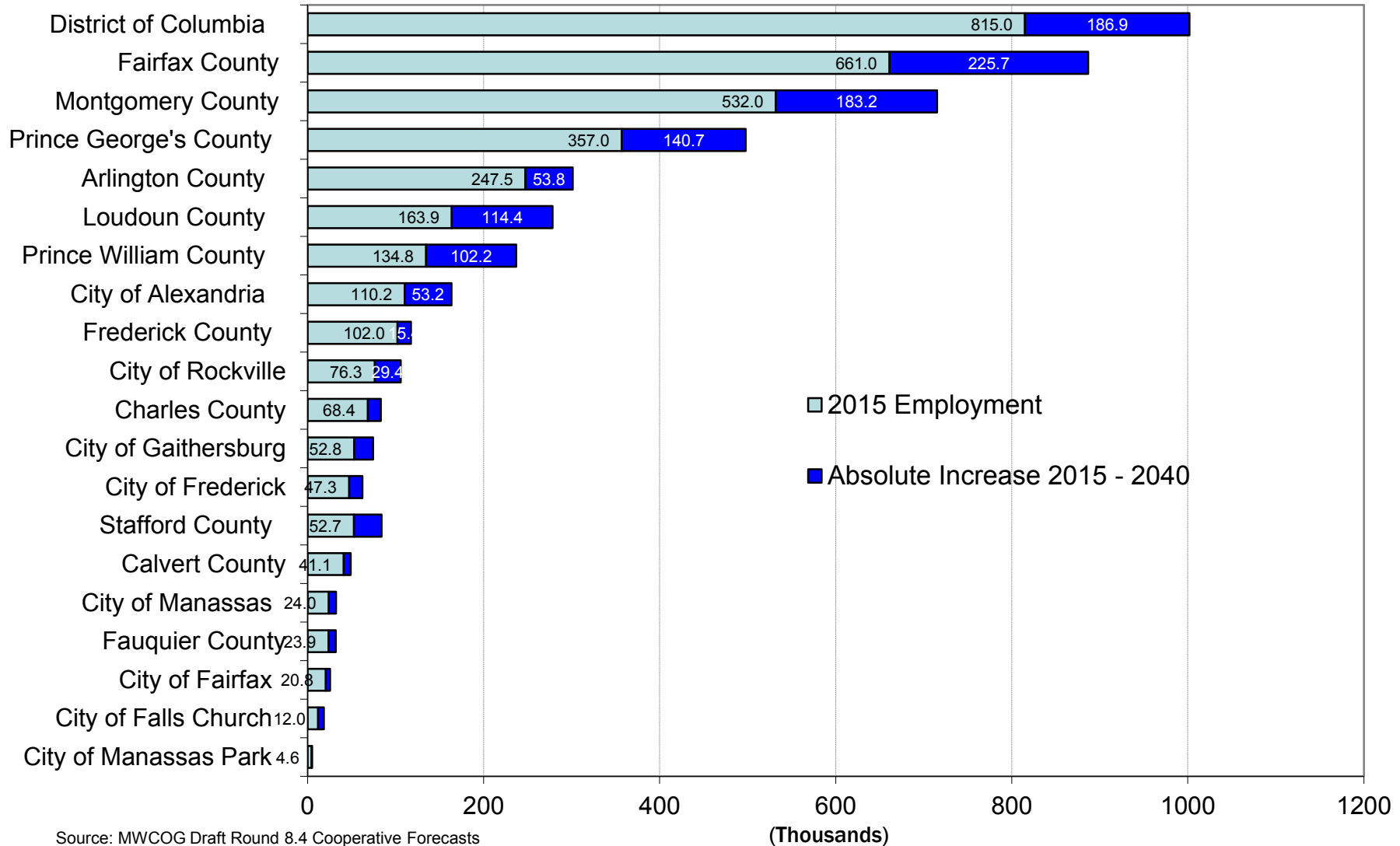


# Forecast Household Growth (2010-2040)



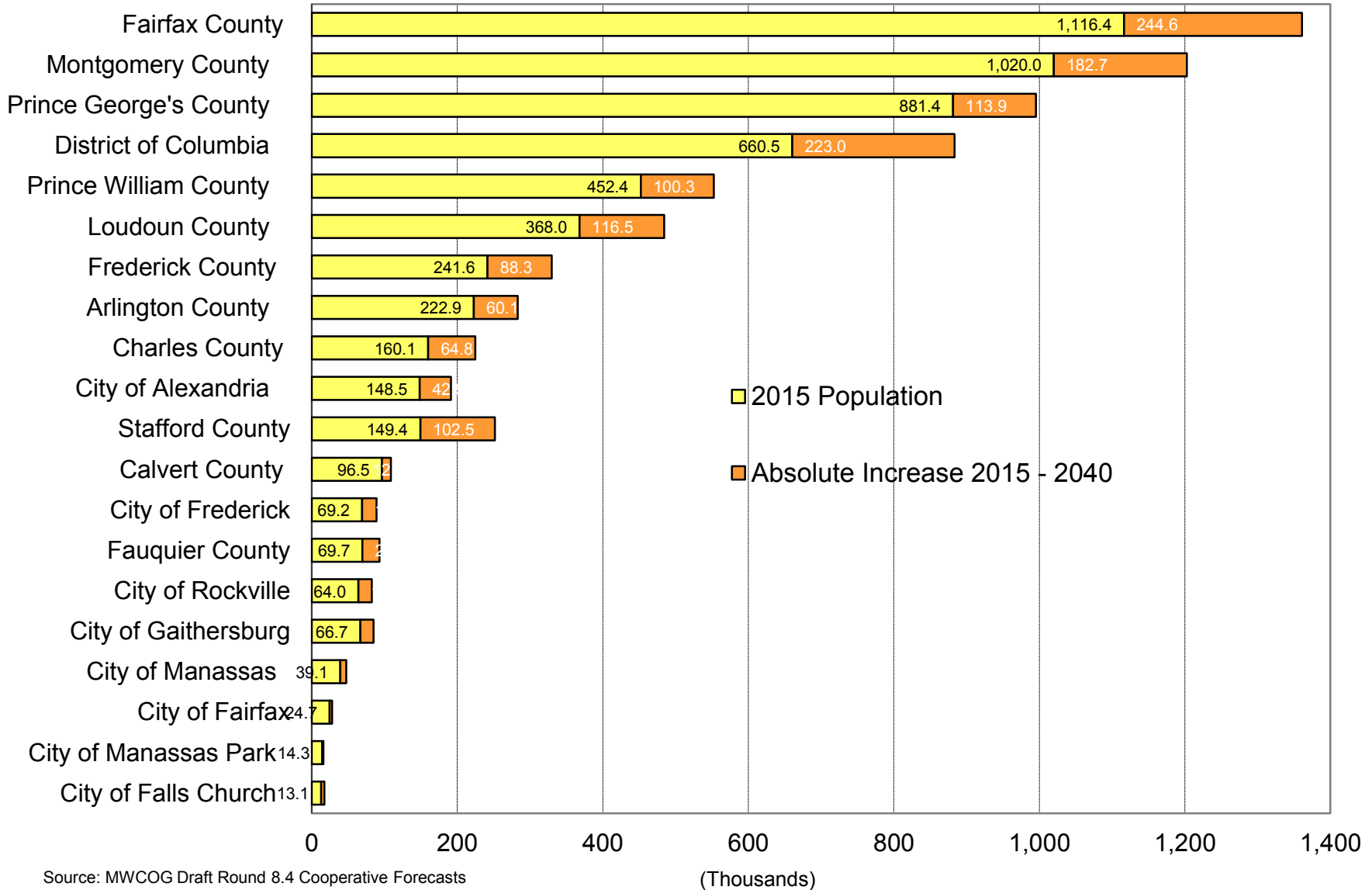


# Employment 2015 - 2040

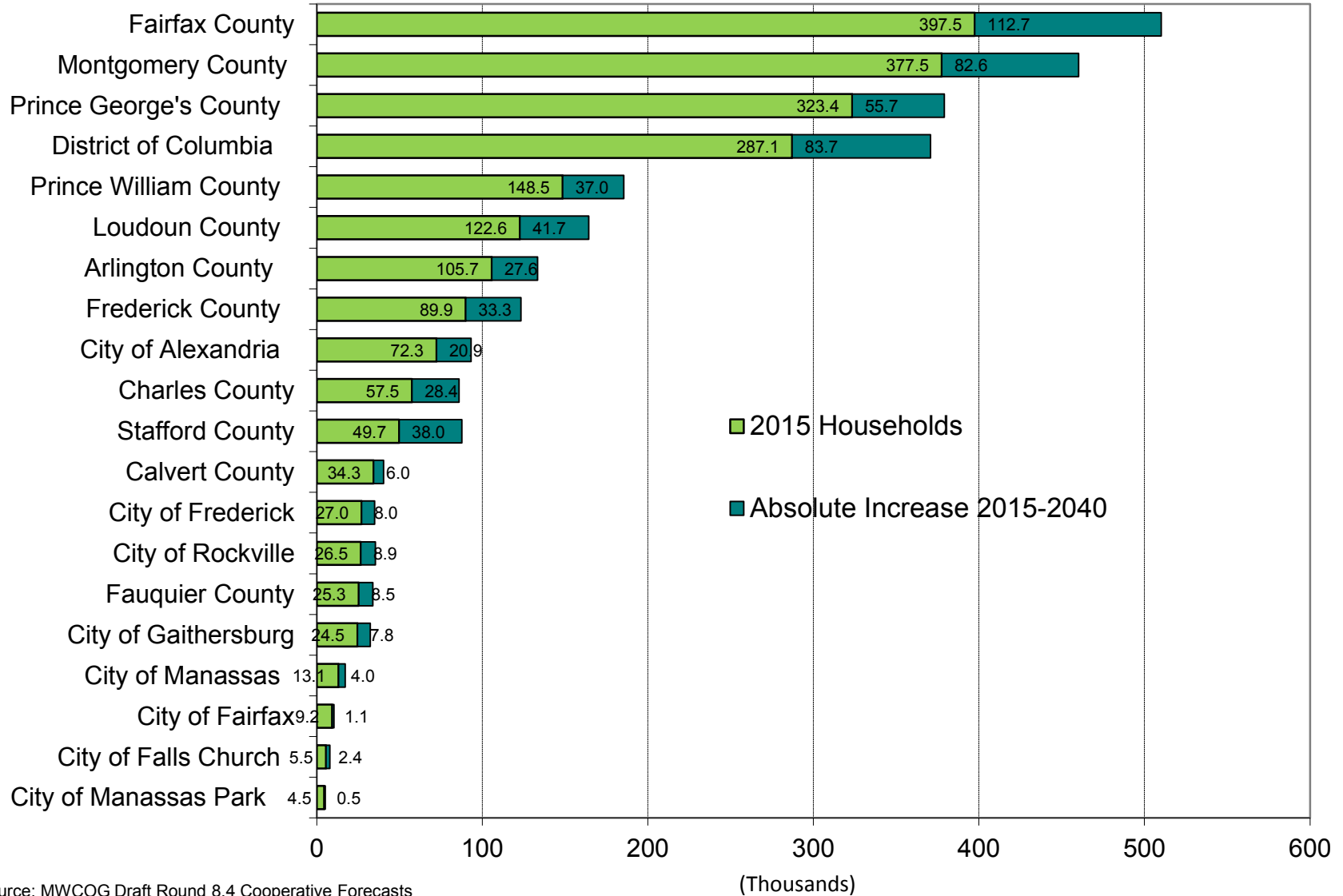


Source: MWCOG Draft Round 8.4 Cooperative Forecasts

# Population 2015 - 2040



# Households 2015 - 2040



Source: MWCOG Draft Round 8.4 Cooperative Forecasts

# Round 8.4: Next Steps

- **Local jurisdictions submit Round 8.4 forecasts by Traffic Analysis Zone (TAZ)**
- **COG Board will approve “Draft Round 8.4” for use in the Air Quality Conformity Analysis of the 2015 Update to the Financially Constrained Long-Range Transportation Plan (CLRP) and the FY 2015-2020 Transportation Improvement Program (TIP) – February 2015**
- **Final approval and adoption by the COG Board - October 2015**

# Planning for Growth: Next Steps

- **Cooperative Forecasts**
  - Round 8.4: *Alexandria, Arlington, Prince William, Fairfax County (population and households only)*
  - Round 9.0: *new regional economic model forecast;*
    - *housing and population trends;*
    - *employment density / space absorption*
- ***Region Forward Coalition***
  - Economic competitiveness
  - Housing affordability
  - Progress report / “State of the Region”

# Questions . . .

## **ITEM 10 - Information**

February 18, 2015

Review of Draft FY 2016 Unified Planning Work Program (UPWP)

### **Staff**

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

**Issues:** None

**Background:** The Board will be asked to approve the FY2016 UPWP at its March 18 meeting. The TPB Technical Committee reviewed this draft at its February 6 meeting.





**NATIONAL CAPITAL REGION  
TRANSPORTATION PLANNING BOARD**

**FY 2016**

**UNIFIED PLANNING WORK PROGRAM  
FOR TRANSPORTATION PLANNING  
FOR THE  
WASHINGTON METROPOLITAN REGION**

**DRAFT**

**February 12, 2015**

The preparation of this program was financially aided through grants from the District of Columbia Department of Transportation; Maryland Department of Transportation; Virginia Department of Transportation; U.S. Department of Transportation, Federal Highway Administration; and the U.S. Department of Transportation, Federal Transit Administration, under the Federal Transit Act.



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## **I. INTRODUCTION**

### **Purpose**

The **FY 2016 Unified Planning Work Program (UPWP) for Transportation Planning for the Washington Metropolitan Region** incorporates in one document all federally assisted state, regional, and local transportation planning activities proposed to be undertaken in the region from July 1, 2015 through June 30, 2016. The UPWP provides a mechanism for the coordination of transportation planning activities in the region, and is required as a basis and condition for all federal funding assistance for transportation planning by the joint planning regulations of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

This work program describes all transportation planning activities utilizing federal funding, including Title I Section 112 metropolitan planning funds, Title III Section 5303 metropolitan planning funds, and Federal Aviation Administration Continuing Airport System Planning (CASP) funds. It identifies state and local matching dollars for these federal planning programs, as well as other closely related planning projects utilizing state and local funds.

### **Planning Requirements**

The planning activities outlined in this work program respond to a variety of regulatory requirements. The Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) of 2005 defines the structure of the metropolitan planning process. On February 14, 2007, the FHWA and FTA issued final regulations regarding metropolitan planning in response to SAFETEA-LU. The Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) Act, which became law on July 6, 2012, made some important modifications to the metropolitan planning process, primarily requiring metropolitan planning organizations (MPOs) to establish and use a performance-based approach to transportation decision making and development of transportation plans. This work program has been developed to comply with the MAP-21 requirements regarding metropolitan planning essentially as presented in the proposed MPO planning rule published June 2, 2014.

On October 15, 2014, the TPB approved the 2014 Financially Constrained Long Range Transportation Plan (CLRP) for the National Capital Region. In January 2015, FHWA and FTA found that the 2014 CLRP and FY 2015-2020 TIP conform to the region's State Implementation Plans. On October 28 and 29, 2014, FHWA and FTA conducted a Certification Review of the metropolitan planning process of the Washington, DC-VA-MD TMA which is the responsibility of the National Capital Region Transportation Planning Board and the Fredericksburg Metropolitan Area Metropolitan Planning Organization. The report on this certification review is anticipated in the Spring 2015.

The Clean Air Act Amendments (CAAA) of 1990 requires that the transportation actions and projects in the CLRP and Transportation Improvement Program (TIP) support the attainment of federal health standards for ozone. The CLRP and TIP have to meet specific requirements as specified by the Environmental Protection Agency (EPA) regulations issued on November 24, 1993, with amendments on August 15, 1997 and supplemental guidance on May 14, 1999, regarding criteria and procedures for determining air quality conformity of

transportation plans, programs and projects funded or approved by the FHWA and FTA. These conformity requirements are also addressed in this document.

## **Regional Planning Goals**

In 1998, the TPB adopted a set of policy goals that have since served to guide its planning work program. These goals are:

- The Washington metropolitan region's transportation system will provide reasonable access at reasonable cost to everyone in the region.
- The Washington metropolitan region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy throughout the entire region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing, services and recreation in a walkable environment.
- The Washington metropolitan region's transportation system will give priority to management, performance, maintenance, and safety of all modes and facilities.
- The Washington metropolitan region will use the best available technology to maximize system effectiveness.
- The Washington metropolitan region will plan and develop a transportation system that enhances and protects the region's natural environmental quality, cultural and historic resources, and communities.
- The Washington metropolitan region will achieve better inter- jurisdictional coordination of transportation and land use planning.
- The Washington metropolitan region will achieve enhanced funding mechanisms for regional and local transportation system priorities that cannot be implemented with current and forecasted federal, state, and local funding.
- The Washington metropolitan region will support options for international and inter-regional travel and commerce.

Known as the TPB Vision, these goals are broad in scope, and also encompass a variety of strategies and objectives. Together, these goals, strategies, and objectives provide a framework for setting out core principles for regional transportation planning. MAP-21 requires the planning process to consider projects and strategies that address eight planning factors. These eight planning factors are encompassed by the TPB Vision's policy goals and are considered when developing the CLRP. Each planning factor is included in one or more of the TPB Vision goals, objectives and strategies, except for security, which is implicitly addressed in the TPB Vision.

On January 15, 2014, after a three-year process, the TPB approved the Regional Transportation Priorities Plan (RTPP) for the National Capital Region. The Priorities Plan developed a comprehensive set of regional transportation goals and challenges, and then identified three regional priorities that local, state, and regional agencies should consider when developing projects. In FY 2016, the Priorities Plan will influence policy actions, funding strategies and potential projects considered for potential incorporation into the CLRP.

## Addressing Changing Planning Priorities

### MAP-21 Requirements

MAP-21 calls for metropolitan planning organizations, public transportation providers and states **to establish and use a performance-based approach to transportation decision making to support seven national goals**. The USDOT must establish performance measures related to seven goal areas for the federal-aid highway system. The goal areas include: safety, infrastructure, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays. Additional goal areas for public transportation address transit safety and transit asset management.

Once the performance measures are finalized, the states and public transportation providers then have a year to establish performance targets in support of those measures; and 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 metropolitan transportation plan and the transportation improvement program (TIP) are required to include a description of the performance measures and targets used in assessing the performance of the transportation system. The metropolitan transportation plan will also have to include a system performance report evaluating the condition and performance of the transportation system with respect to the established targets. The TIP is also required to include a description of the anticipated effect of the TIP toward achieving the performance targets set in the plan.

Regional and federal factors that are non-regulatory may evolve from one year to the next, but are nonetheless influential in the planning activities that are conducted and described in this work program. As these factors continue to evolve, the UPWP is adjusted annually to focus on new and emerging priorities. This UPWP builds upon the previous UPWP, and is the result of close cooperation among the transportation agencies in the region. This UPWP was prepared with the involvement of these agencies, acting through the TPB, the TPB Technical Committee and its subcommittees. This UPWP details the planning activities that must be accomplished to address the annual planning requirements such as preparing the TIP and a Congestion Management System. It also describes the tasks required to meet the approval dates for the region's CLRP and the TIPs, and outlines the activities for the subsequent years.

### **Responsibilities for Transportation Planning**

The National Capital Region Transportation Planning Board (TPB) is the organization responsible for conducting the continuing, cooperative, comprehensive (3-C) transportation planning process for the Metropolitan Washington Region in accordance with requirements of MAP-21. The TPB is the official Metropolitan Planning Organization (MPO) for transportation planning for the Washington metropolitan region, designated by the Governors of Maryland and Virginia and the Mayor of the District of Columbia.

The TPB is composed of representatives from the 20 cities and counties, including the District of Columbia, that are members of the Metropolitan Washington Council of

Governments (COG), the two state and the District transportation agencies, the Washington Metropolitan Area Transit Authority (WMATA), the Metropolitan Washington Airports Authority (MWAA), four federal agencies, the General Assemblies of Maryland and Virginia, and private transportation service providers. When matters of particular importance are before the TPB, a special voting procedure may be invoked that weights the votes of local jurisdiction members according to population.

Figure 1 lists the organizations represented on the TPB and its Technical Committees. Figure 2 shows the geographical location of each of the participating local jurisdictions. The TPB also serves as the transportation policy committee of COG. This relationship serves to ensure that transportation planning is integrated with comprehensive metropolitan planning and development, and is responsive to the needs of the local governments in the area.

Policy coordination of regional highway, transit, bicycle, pedestrian and intermodal planning is the responsibility of the TPB. This coordinated planning is supported by the three departments of transportation (DOTs), FTA, FHWA, and the member governments of COG. The TPB coordinates, reviews, and approves work programs for all proposed federally assisted technical studies as part of the UPWP. The relationship among land use, environmental and transportation planning for the area is established through the continuing coordinated land-use, environmental and transportation planning work programs of COG and TPB. Policy coordination of land use and transportation planning is the responsibility of COG, which formed the Region Forward Coalition in 2010 to foster collaboration in these areas, and the Transportation Planning Board. COG's regional land use cooperative forecasts are consistent with the adopted regional Long Range Transportation Plan.

The chairman of the TPB and the state transportation directors are members of the Metropolitan Washington Air Quality Committee (MWAQC), which was formed under the authority of the governors of Maryland and Virginia and the mayor of the District of Columbia to recommend the region's air quality plans. These recommendations are forwarded to the governors and mayor for inclusion in the State Implementation Plans (SIPs) they submit to EPA.

In the Washington Metropolitan region, the roles and responsibilities involving the TPB, the three state DOTs, the local government transportation agencies, WMATA, and the local government public transportation operators for cooperatively carrying out state transportation planning and programming have been established over several years. As required under the final planning regulations, the TPB, the state DOTs and the public transportation operators have documented their transportation planning roles and responsibilities in the Washington Metropolitan Region in a Memorandum of Understanding (MOU) that was executed by all parties on January 16, 2008. The MOU is included in the Appendix and the responsibilities for the primary planning and programming activities are indicated in Figure 3.

Included in the Appendix is the 2004 agreement between the TPB and the Fredericksburg Area MPO (FAMPO) in Virginia in which FAMPO committed to be responsible for meeting the TMA responsibilities for the transportation planning and programming requirements within the Metropolitan Washington Urbanized Area portion of Stafford County and producing the required planning documents on the TPB's current planning cycle.



Each year, the TPB Call for Projects document is transmitted to FAMPO requesting new and updated information on the projects located in the portion of Stafford County in the Washington DC TMA to be included in the update of the CLRP. FAMPO is also requested updated information on the Congestion Management System (CMS) for this portion of Stafford County. FAMPO transmits this information to TPB on the schedule included in the TPB Call for Projects document.

### **FY 2016 Regional Planning Priorities**

Efforts will continue to address establishing performance measures and targets in coordination with the three state DOTs, WMATA and the local government public transportation operators in accordance with the new MAP-21 planning regulations and performance management requirements for MPOs. With the completion in January 2014 of the three-year process to develop the RTPP, the focus will turn to assessing what policy actions, funding strategies and potential projects are proposed for inclusion in the CLRP.

Efforts will continue to improve the coordination between land use and transportation planning. The TPB public participation process and technical planning procedures will also continue to be strengthened. In addition to these activities directly involving the TPB, a number of corridor studies and other planning studies and programs are underway throughout the region (see Figure 4).

## Figure 1

### ORGANIZATIONS REPRESENTED ON THE TPB AND/OR ITS TECHNICAL COMMITTEES

#### VIRGINIA

Arlington County	Northern Virginia Regional Commission
Fairfax County	Northern Virginia Transportation Commission
Loudoun County	Virginia Department of Transportation
Fauquier County	Virginia Department of Rail and Public Transportation
Prince William County	Virginia Department of Aviation
City of Alexandria	Virginia General Assembly
City of Fairfax	Potomac and Rappahannock Transportation Commission
City of Falls Church	
City of Manassas	
City of Manassas Park	
Northern Virginia Transportation Authority	

#### MARYLAND

Frederick County	City of Greenbelt
Montgomery County	City of Rockville
Prince George's County	City of Takoma Park
Charles County	The Maryland-National Capital Park and Planning Commission
City of Bowie	Maryland Department of Transportation
City of College Park	Maryland General Assembly
City of Frederick	
City of Gaithersburg	

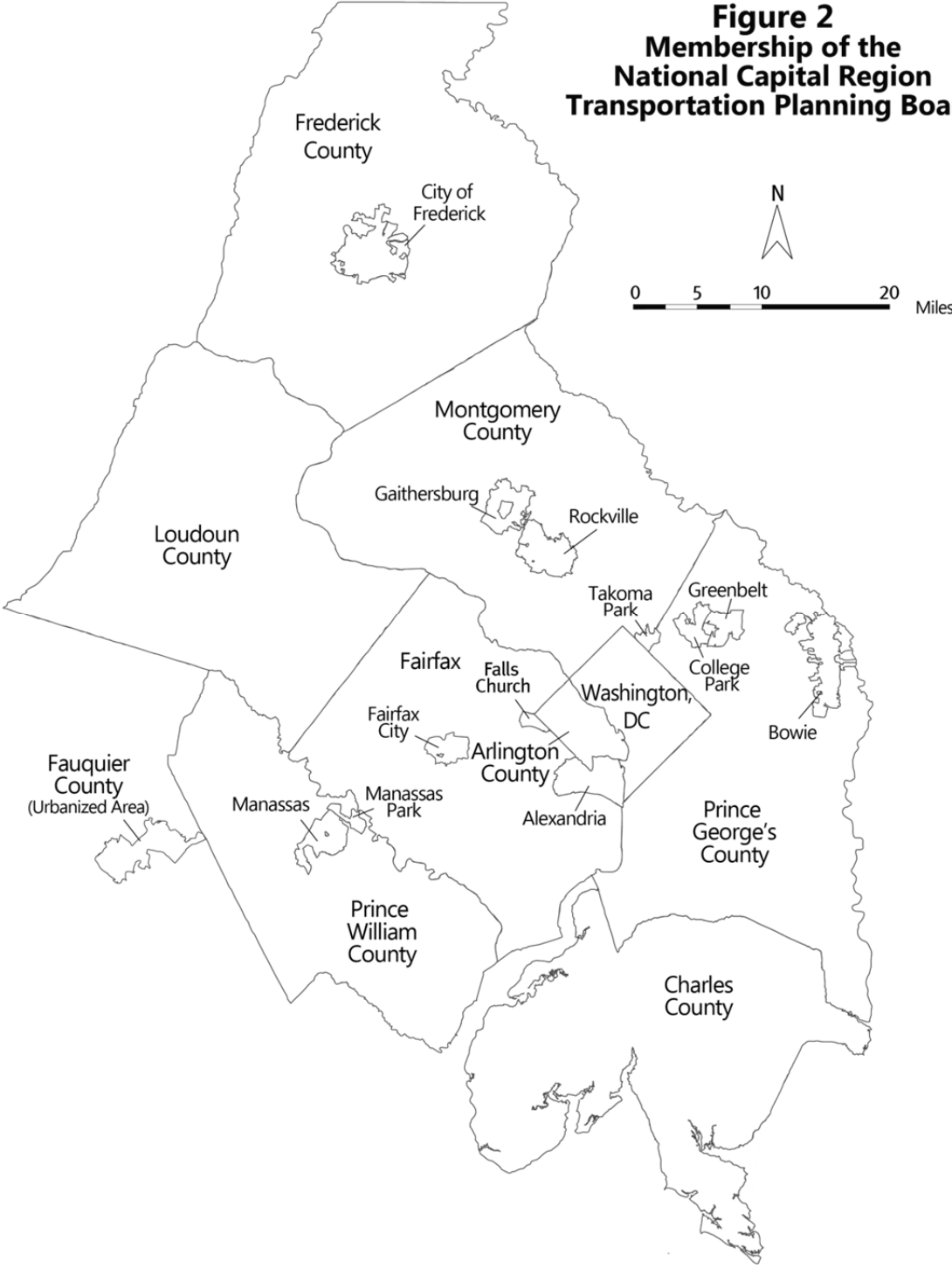
#### DISTRICT OF COLUMBIA

D.C. Council  
D.C. Department of Transportation  
D.C. Office of Planning

#### REGIONAL, FEDERAL AND PRIVATE SECTOR

Washington Metropolitan Area Transit Authority  
Private Transportation Service Providers  
Metropolitan Washington Airports Authority  
Federal Highway Administration  
Federal Transit Administration  
National Capital Planning Commission  
National Park Service

**Figure 2**  
**Membership of the**  
**National Capital Region**  
**Transportation Planning Board**



**Figure 3**

**TRANSPORTATION PLANNING AND PROGRAMMING RESPONSIBILITIES**

<b>RESPONSIBILITY</b>	<b>AGENCIES</b>
<b>UPWP Development</b>	TPB, DOTs, WMATA, Local Gov'ts
<b>Planning Certification</b>	TPB, DOTs
<b>Performance-based Planning</b>	TPB, DOTs, WMATA, Public Transportation Providers
<b>CLRP Development</b>	
Transportation/Land-Use Planning Plan Inputs/Update	TPB, MDPC, Local Gov'ts DOTs, WMATA, Local Gov'ts, NVTA, PRTC, FAMPO
Project Selection	TPB, DOTs, WMATA, and Local Gov'ts
Air Quality Conformity	TPB, FAMPO
Financial Plan	TPB, DOTs, WMATA, Local Gov'ts
Congestion Management Process	TPB, DOTs, Local Gov'ts, FAMPO
Safety Element	TPB, DOTs, Local Gov'ts,
Participation Plan	TPB
Freight Plan	TPB, DOTs, Local Gov'ts.
<b>TIP Development</b>	
TIP Inputs	DOTs, WMATA, Local Gov'ts, NVTA, PRTC,
Project Selection	TPB, DOTs, WMATA
Air Quality Conformity	TPB, FAMPO
Financial Plan	TPB, DOTs, WMATA, Local Govt., NVTA, PRTC
Human Service Transportation Coordination Planning	TPB, WMATA, human services agencies
Private Enterprise Participation	TPB, WMATA, Local Gov'ts, NVTC/PRTC
Public Involvement Plan	TPB
Projects Fed Funding	TPB, DOTs, WMATA
<b>Air Quality 2010 Attainment Plan</b>	MWAQC, TPB, DOTs
CO <sub>2</sub> Mobile Emissions Reduction	WMATA, state AQ agencies
<b>Climate Change Adaptation</b>	TPB, DOTs, WMATA, Local Gov'ts
<b>Corridor Studies</b>	DOTs, WMATA, TPB
<b>Travel Demand Forecasting</b>	TPB
<b>Travel Monitoring</b>	TPB, DOTs, WMATA, Local Gov'ts

**Figure 4****TRANSPORTATION PLANNING STUDIES WITHIN THE WASHINGTON METROPOLITAN AREA 2015**

Name	Primary Agencies	Schedule	Products
<b>Regional</b>			
Update of Constrained Long-Range Plan	TPB, state DOTs, WMATA, local govts.	2015	CLRP
Station Area Plans (multiple stations)	WMATA	on-going	Plans
Station Access Studies (multiple stations)	WMATA	on-going	Plans
Priority Corridor Dev. Plans (multiple corridors)	WMATA	on-going	Plans
Bus Service Eval. Studies	WMATA	on-going	Studies
Connect Greater Washington System Plan	WMATA	2015	Report
2040 Regional Transit System Implementation Plan	WMATA	2016	Report
Policy Alternatives to the 2040 RTSP Build Network	WMATA	2015	Report
LRT/ Streetcar Interoperability	WMATA	on-going	Report
Metrobus Passenger Survey	WMATA/MWCOG	2015	Dataset, Report
Late-Night Bus Service	WMATA	2015	Report
Silver Spring Capacity Study	WMATA	2015	Report
Farragut West – Farragut North Passageway Study	WMATA	2015	Report
Metrobus Emerging Corridor Studies	WMATA	ongoing	Report
Metrobus Network Effectiveness Study	WMATA	2015	Report

**Figure 4 PLANNING STUDIES** (Continued)

Name	Primary Agencies	Schedule	Products
Metrorail Line Load Application	WMATA	2015	Application
Metro Operating Cost Model Update	WMATA	2015	Application/Model
Metrorail Station Area Strategic Investment Plan	WMATA	2015	Report/Application Model
CLRP Transit Project Impacts on Metro	WMATA	2015	Report
<b>Virginia</b>	<b>PLANNING STUDIES</b>	<b>2014</b>	
I 66 Tier 2 EIS (Outside the Beltway)	VDOT	2015	FEIS
Significant Projects Ratings Study (HB 599)	VDOT	2014	Ratings Report
Potomac River Crossings Planning Study	VDOT	2014	Demand Report
Buckland Area Study	VDOT	2015	Report
DACPMA Hwy. EA	VDOT	2014	EA Report
Bi County Parkway	VDOT	2014	FEIS
VA Rte. 28 Study	VDOT	2015	Improvement Options
Fairfax County Pkwy Study Phase 1	VDOT	2015	Near-term Operational Improvements
Route 7 (VA 7) Transit Corridor Study	NVTC	2016	FTA New Starts Alternatives Analysis
US 1 Multimodal Alternative	VDRPT	FY2015	Analysis Study Recommended NEPA Action Documentation and environmental work/project development

**Figure 4 PLANNING STUDIES** (Continued)

Name	Primary Agencies	Schedule	Products
VRE Extension to Gainesville	VRE	2015	NEPA Document
<b>Maryland</b>	<b>PLANNING STUDIES</b>	<b>2014</b>	
Capital Beltway Study	MDOT, VDOT, Montgomery & Prince George's Counties	On-hold	DEIS
I-270 Multi-Modal Corridor Study - Highway	MDOT/SHA, Montgomery & Frederick Counties	On-hold	FEIS
Corridor Cities Transitway Study	MDOT/MTA	2015	EA/FONSI
Purple Line (Bethesda to Silver Spring/ Silver Spring to New Carrollton)	MDOT/MTA	2014	FEIS
Southern Maryland Transit Study	MDOT/MTA	2015	Report
MD 5 Transportation Study( I-495 to US 301)	MDOT/SHA	2014	DEIS
US 301 Waldorf Study (US 301from T.B. to south of Waldorf)	MDOT/SHA	2014	Feasibility Study
MD 223 Corridor Study (Steed Road to MD 4)	MDOT/SHA	2014	Report
MD 97 Safety Accessibility Study (16th Street to Forest Glen Road)	MDOT/SHA/MTA	2015	Not Determined
MD 97 (BRT) (Glenmont Metro to Montgomery General Hospital – Olney)	MDOT/SHA/MTA	2014	Not Determined
MD 586 Veirs Mill BRT	MDOT/SHA/MTA	2015	DEIS
US 301 Planning for Operations Study (US 50 to Potomac River)	MDOT/SHA	2015	Report

**Figure 4 PLANNING STUDIES**

(Continued)

Name	Primary Agencies	Schedule	Products
I-270 Planning for Operations Study (I-495 To MD 109)	MDOT/SHA	2015	Report
Region-wide Bus on Shoulder Feasibility	MDOT/MTA/SHA WMATA/VDOT/ Counties	2014	Report
MD 28 Corridor Study MD 97 to I-95	MDOT/SHA	2017	Not Determined
Montgomery County BRT Study	MDOT/MTA/SHA	tbd	Not Determined
<b>District of Columbia</b>	<b>PLANNING STUDIES</b>	<b>2014</b>	
14th Street Bridge Feasibility Study	FHWA, DDOT, VDOT	on-going	EIS
South Capitol Street (EIS)/AWI	DDOT	on-going	EIS
First Place and Galloway NE Redesign (Fort Totten Metrorail Station)	DDOT/WMATA	on-going	Report/Design
Citywide Travel Demand	DDOT	on-going	Travel Model
Great Streets Program	DDOT	on-going	Design
Managed Lane Study	DDOT	2014	NEPA
DC Streetcar- Anacostia Ext EA and Section 106	DDOT/FTA/FHWA	2014	EA & Sec 106
DC Streetcar - Union Station to Georgetown	DDOT/FTA/FHWA	2014	NEPA
DC Streetcar- Benning Rd Ext Environmental	DDOT/FTA/FHWA	2014	EA
DC Streetcar – M Street Ext Environmental	DDOT/FTA /FHWA	2014	EA
Virginia Avenue Tunnel	CSX/FHWA/DDOT	2014	EIS



<b>Figure 4 PLANNING STUDIES</b> Name	(Continued) Primary Agencies	Schedule	Products
Long Bridge Environmental	DDOT / FRA	2014	NEPA
C Street N.E. Implementation Study	DDOT	2014	Study
moveDC	DDOT	2014	Plan
DC Streetcar System Plan (2014 Update)	DDOT	2014	Plan
Metropolitan Branch Trail Fort Totten to Eastern Avenue Concept Study	DDOT	2014	Study
Southeast/Southwest Special Events Study	DDOT	2014	Study
State Freight Plan	DDOT	2014	Plan
North South Corridor Study	DDOT	2014	Study



## **Total Proposed Funding by Federal Source for FY 2016**

Proposed federal funding for the transportation planning activities in this UPWP relies upon five sources: FTA Section 5303, FHWA Section 112, FAA Continuous Airport System Planning (CASP), FHWA State Planning and Research (SPR) and special federal funding. The proposed funding amounts (including state and local matching funds) for the TPB work program are shown in Table 1 on page 17.

The new FY 2016 funding level in Table 1 under the "FTA Section 5303" column is assumed to be the same as the FY 2015 level, and new funding under the "FHWA Section 112" column is assumed to be the same as the FY 2015. The total FY 2016 budget for the Basic Program with unobligated funding from FY 2014 is assumed to be the same as the FY 2015 total. The FY 2016 funding levels and budget will be amended in the fall of 2015 after the new federal funding amounts are determined.



**TABLE 1**  
**FY 2016 TPB PROPOSED FUNDING BY FEDERAL, STATE AND LOCAL SOURCES**  
**(July 1, 2015 to June 30, 2016)**

	FTA SECT 5303 80% FED & 20% STA/ LOC	FHWA SECT 112 80% FED & 20% STA/ LOC	FAA CASP 90% FED & 10% LOC	TOTALS
<b>ALLOTMENTS PROVIDED BY DDOT</b>				
<b>NEW FY 2016</b>	532,855	2,150,307		2,683,162
<b>UNOBLIGATED FY 2014</b>	23,993	107,656		131,649
<b>CARRYOVER FY 2015</b>				0
<b>SUBTOTAL</b>	556,848	2,257,963		2,814,811
<b>ALLOTMENTS PROVIDED BY MDOT</b>				
<b>NEW FY 2016</b>	1,277,256	3,610,288		4,887,544
<b>UNOBLIGATED FY 2014</b>	249,550	550,550		800,100
<b>CARRYOVER FY 2015</b>				0
<b>SUBTOTAL</b>	1,526,806	4,160,838		5,687,644
<b>ALLOTMENTS PROVIDED BY VDRPT &amp; VDOT</b>				
<b>NEW FY 2016</b>	1,037,185	2,861,800		3,898,985
<b>UNOBLIGATED FY 2014</b>	72,000	408,145		480,145
<b>CARRYOVER FY 2015</b>				0
<b>SUBTOTAL</b>	1,109,185	3,269,945		4,379,130
<b>TPB BASIC PROGRAM</b>				
<b>TOTAL NEW FY 2016</b>	2,847,296	8,622,395		11,469,691
<b>TOTAL UNOBLIGATED FY 2014</b>	345,543	1,066,351		1,411,894
<b>SUBTOTAL</b>	3,192,839	9,688,746		12,881,585
<b>TOTAL CARRYOVER FY 2015</b>	0	0		0
<b>TOTAL BASIC PROGRAM</b>	3,192,839	9,688,746		12,881,585
<b>GRAND TOTAL</b>	3,192,839	9,688,746	450,000	13,331,585

"New FY2016 funds" are newly authorized funds for the FY2016 UPWP

"Unobligated FY2014 funds" are unexpended funds from the completed FY2014 UPWP

"Carryover FY2015 funds" are programmed from the FY2015 UPWP to complete specific work tasks in the FY2016 UPWP



## II. PROPOSED FY 2016 TPB WORK PROGRAM AND BUDGET

### Program Structure

The TPB is responsible for the federally required planning process, serves as a forum for regional coordination, and provides technical resources for decision-making. This work program presents the work activities that support the TPB responsibilities. This work program comprises seven major activities and follows the structure in the FY 2015 program. These work activities include: (1) Plan Support; (2) Coordination and Programs; (3) Forecasting Applications; (4) Development of Networks/Models; (5) Travel Monitoring; (6) Technical Assistance; and (7) Continuous Airport System Planning. The tasks to be completed under each of the work activities are described in the following sections. The staff of the COG Department of Transportation Planning will carry out these activities, with the assistance of staff in other COG departments and supplementary consultant support.

The work program has been structured to clearly identify the specific work products to be developed, the linkages between them, and the TPB entity responsible for oversight of the products. Figures 5 and 6 on pages 21-22 illustrates the relationship between and among the TPB work activities.

The first major activity, **Plan Support**, includes the preparation and coordination of the policy and planning products necessary for conducting an effective transportation planning process for the region. The UPWP, the transportation improvement program (TIP) and the financially-constrained long-range plan (CLRP) are required by federal law and regulations. A new activity will coordinate the development of measures and targets to be incorporated into performance-based planning for the CLRP and TIP as required in MAP-21.

The second major activity, **Coordination and Programs**, includes related activities such as the regional congestion management process (CMP), safety planning, management, operations and technology, emergency preparedness, freight planning, public transportation planning, and bicycle and pedestrian planning. These activities will support the development of performance measures and targets. Public participation applies to all of the policy products. Human services transportation coordination planning incorporates the MPO role in the new MAP-21 FTA Section 5310 Enhanced Mobility program for elderly persons and persons with disabilities. The Transportation /Land Use Connection (TLC) Program supports the improvement of coordination between land use and transportation planning and incorporates the MPO role in the MAP-21 Transportation Alternatives Program.

The third major activity, **Forecasting Applications**, includes forecasting applications such as air quality conformity and regional studies to provide the substantive inputs for the policy products.

The fourth major activity, **Development of Networks and Models** interacts with **Travel Monitoring**, the fifth major activity. Together, these activities provide empirical travel information from congestion monitoring and survey and analysis activities. Both products and methods activities provide input for the technical products.

The sixth major activity, **Technical Assistance**, activity responds to requests from state and local governments and transit operating agencies for applying TPB methods and data to support corridor, project, and sub-area transportation and land use studies related to regional transportation planning priorities.

Finally, the seventh major activity, **Continuous Airport System Planning (CASP)** utilizes the methods and data work activities for airport and airport-serving facilities in the region.

## Work Activity Budgets

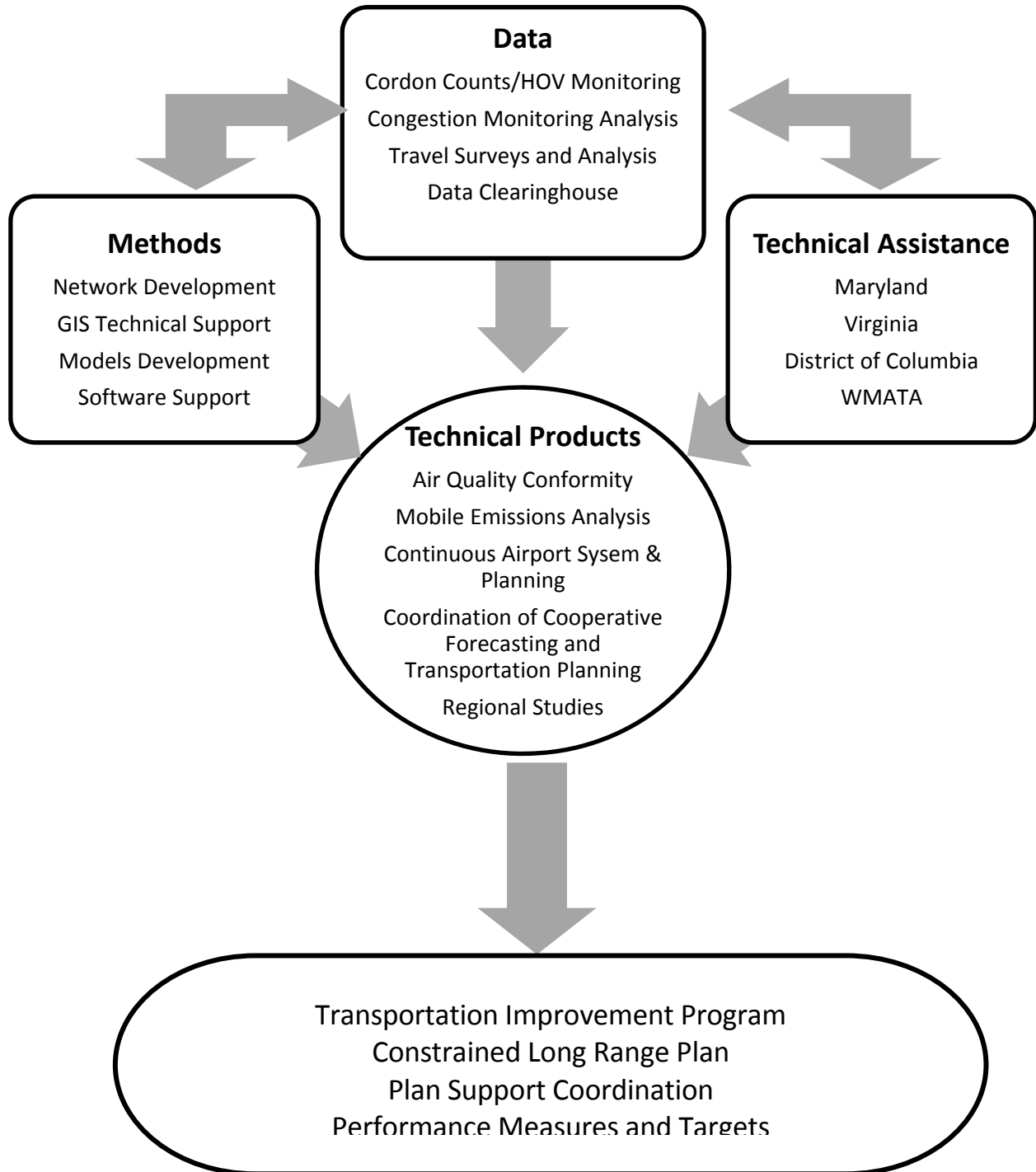
The proposed budget levels by funding source, which include FTA and FHWA funds together with state and local match, are shown in Table 2 on page 23. The TPB committee structure is shown in Figure 6 on page 25. The TPB committee or sub-committee responsible for the specific work activities listed in Table 2 are shown under the descriptions for each task starting on page 27. A detailed breakdown of staffing, consultant costs and other budgetary requirements is provided in Table 3 on page 24.

Funding for the TPB Basic Work Program is similar to the FY 2015 level. The FY 2016 UPWP continues and modifies some work activities in the FY 2015 UPWP to address MAP-21 requirements. The structure and content of this work program are summarized as follows:

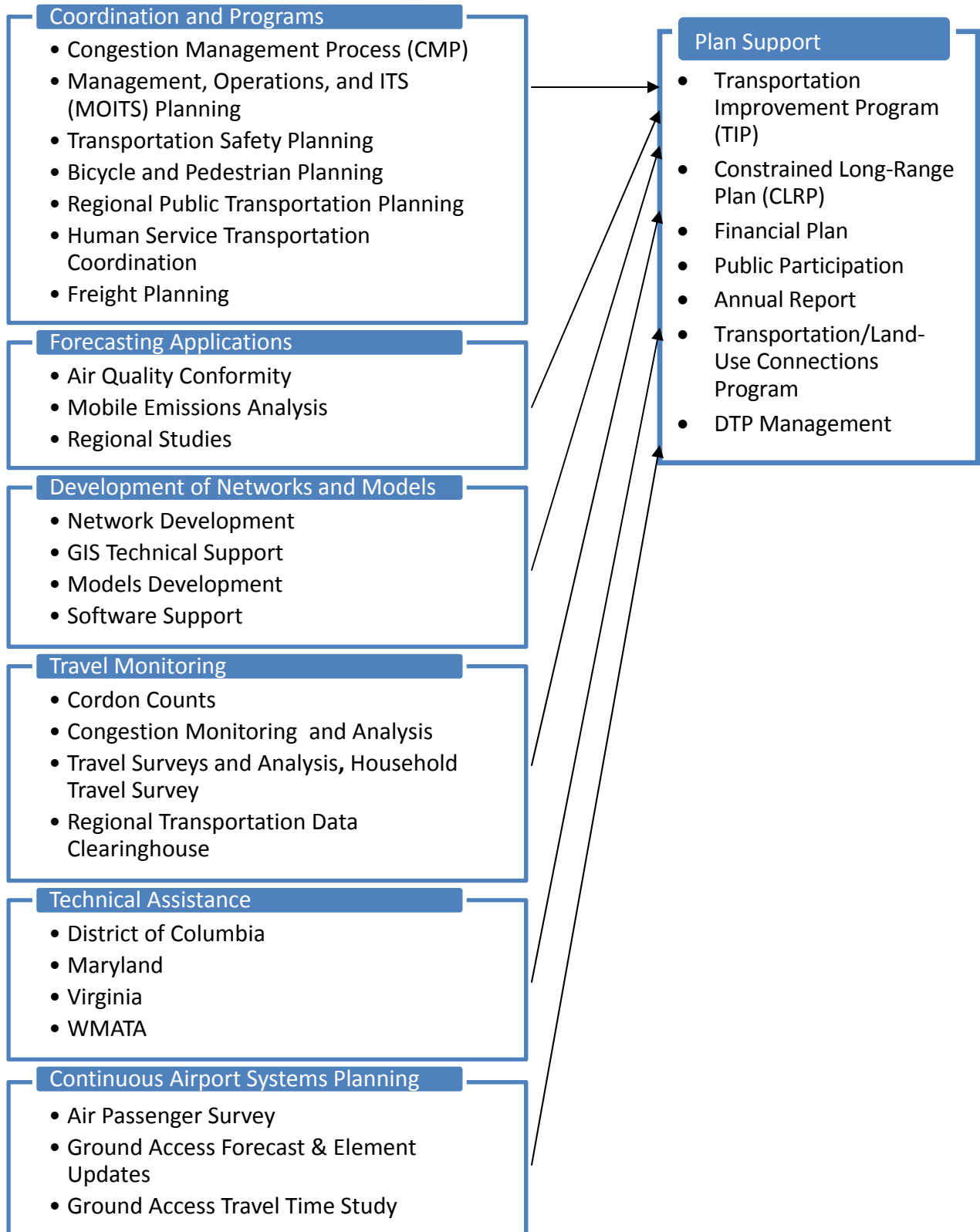
- **Section 1 - Plan Support**, a new activity will coordinate the development of measures and targets to be incorporated into performance-based planning for the CLRP and TIP as required in MAP-21. The other activities have been conducted on an annual basis in previous years.
- **Section 2 - Coordination Planning**, all of the activities have been conducted on an annual basis in previous years and will address the development of new performance measures and targets required in MAP-21.
- **Section 3 - Forecasting Applications**, under regional studies, transportation support for the COG multi-sector greenhouse gas working group and the development of a regional list of unfunded transportation projects began in FY 2015. The other activities have been conducted on an annual basis in previous years.
- **Section 4 - Development of Networks/Models** and **Section 5 - Travel Monitoring**: all of the activities have been conducted on an annual basis in previous years.
- **Section 6 - Technical Assistance** and **Section 7 - Continuous Airport System Planning (CASP)** are conducted each year.
- **Section 8 - Service/Special Projects**, service work or special technical studies as specified in contracts between the transportation agencies and COG may be included in the UPWP. Services or special projects are authorized and funded separately by the transportation agencies.



**Figure 5: Overview of Planning Products and Supporting Activities**



**Figure 6: Visual Representation of UPWP Work Activity Relationships**



**TABLE 2**  
**TPB FY 2016 WORK PROGRAM BY FUNDING SOURCES**

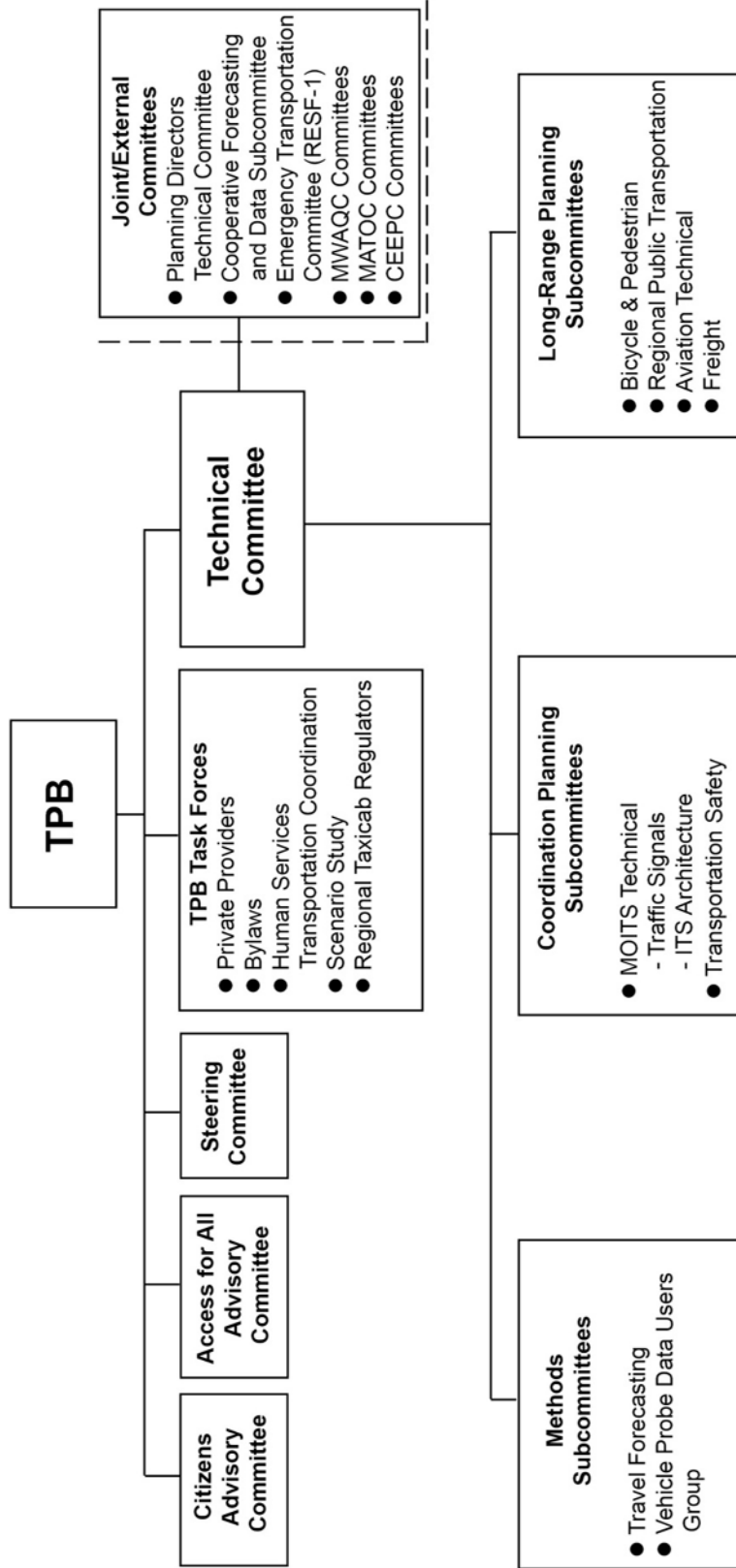
<b>WORK ACTIVITY</b>	<b>TOTAL COST</b>	<b>FTA/STATE/ LOCAL</b>	<b>FHWA/STATE/ LOCAL</b>	<b>OTHER FUND</b>
<b>1. PLAN SUPPORT</b>				
A. Unified Planning Work Program (UPWP)	73,550	18,285	55,265	
B. Transp Improvement Program (TIP)	225,300	56,012	169,288	
C. Constrained Long-Range Plan	625,885	155,601	470,284	
D. Financial Plan	65,550	16,296	49,254	
E. Public Participation	466,060	115,867	350,193	
F. Performance-Based Planning for CLRP/TIP	100,000	24,861	75,139	
G. Annual Report	83,350	20,722	62,628	
H. Transportation/Land Use Connection Program	434,900	108,120	326,780	
I. DTP Management	488,333	121,404	366,929	
Subtotal	2,562,928	637,166	1,925,762	
<b>2. COORDINATION and PROGRAMS</b>				
A. Congestion Management Process (CMP)	213,150	52,991	160,159	
B. Management, Operations, & ITS Planning	354,050	88,020	266,030	
C. Emergency Preparedness Planning	78,400	19,491	58,909	
D. Transportation Safety Planning	130,100	32,344	97,756	
E. Bicycle and Pedestrian Planning	126,250	31,387	94,863	
F. Regional Public Transportation Planning	180,600	44,899	135,701	
G. Human Service Transportation Coordination	142,700	35,476	107,224	
H. Freight Planning	156,050	38,795	117,255	
I. MATOC Program Planning Support	124,850	31,039	93,811	
Subtotal	1,506,150	374,442	1,131,708	
<b>3. FORECASTING APPLICATIONS</b>				
A. Air Quality Conformity	590,500	146,803	443,697	
B. Mobile Emissions Analysis	714,500	177,631	536,869	
C. Regional Studies	587,200	145,983	441,217	
D. Coord Coop Forecasting & Transp Planning	839,400	208,682	630,718	
Subtotal	2,731,600	679,100	2,052,500	
<b>4. DEVELOPMENT OF NETWORKS/MODELS</b>				
A. Network Development	800,800	199,086	601,714	
B. GIS Technical Support	571,000	141,956	429,044	
C. Models Development	1,214,500	301,935	912,565	
D. Software Support	186,200	46,291	139,909	
Subtotal	2,772,500	689,268	2,083,232	
<b>5. TRAVEL MONITORING</b>				
A. Traffic Counts	261,000	64,887	196,113	
B. Congestion Monitoring and Analysis	364,100	90,518	273,582	
C. Travel Surveys and Analysis				
Household Travel Survey	1,034,800	257,260	777,540	
D. Regional Trans Data Clearinghouse	330,700	82,215	248,485	
Subtotal	1,990,600	494,881	1,495,719	
<b>Core Program Total (1 to 5)</b>	<b>11,563,778</b>	<b>2,874,857</b>	<b>8,688,921</b>	
<b>6. TECHNICAL ASSISTANCE</b>				
A. District of Columbia	268,316	34,422	233,894	
B. Maryland	488,754	62,702	426,052	
C. Virginia	389,899	50,020	339,879	
D. WMATA	170,838	170,838		
Subtotal	1,317,807	317,982	999,825	
<b>Total, Basic Program</b>	<b>12,881,585</b>	<b>3,192,839</b>	<b>9,688,746</b>	
<b>7. CONTINUOUS AIRPORT SYSTEM PLANNING</b>				
A. Process 2015 Air Passenger Survey - Ph 1	400,000			400,000
B. Ground Access Travel Time Update	50,000			50,000
				0
Subtotal	450,000			450,000
<b>GRAND TOTAL</b>	<b>13,331,585</b>	<b>3,192,839</b>	<b>9,688,746</b>	<b>450,000</b>



TABLE 3  
TPB FY 2016 BUDGET AND WORK PROGRAM BY EXPENDITURE CATEGORY

WORK ACTIVITY	DIRECT SALARIES DTP STAFF	DIRECT SALARIES OTHER COG STAFF	M & A 25%	LEAVE BENEFITS 15%	FRINGE BENEFITS 28%	INDIRECT COSTS 31%	DATA & PC COSTS	CONSULTANT	DIRECT COSTS	TOTAL
<b>1. PLANS SUPPORT</b>										
A. Unified Planning Work Program	29,368	0	7,342	6,975	12,232	17,334	100	0	200	73,550
B. Transportation Improvement Program	80,225	0	20,058	19,053	33,414	47,352	300	25,000	0	225,300
C. Constrained Long-Range Plan	222,922	15,000	59,481	56,507	99,095	140,431	1,250	25,000	6,200	625,885
D. Financial Plan	22,271	0	5,588	5,289	9,278	13,145	0	10,000	0	65,565
E. Public Participation	132,169	0	31,380	31,380	55,048	82,398	0	75,000	0	481,147
F. Private Enterprise Participation	39,892	0	9,973	9,474	16,615	23,540	0	0	500	100,000
G. Annual Report	14,373	0	3,593	3,414	5,988	8,305	0	15,000	32,500	87,171
H. Transportation/Landuse Connection Program	69,320	0	17,350	16,463	28,872	40,815	0	290,000	2,000	434,900
I. DTP Management	108,880	0	28,745	25,408	44,557	63,144	0	10,000	10,000	211,500
Subtotal	717,519	15,000	183,130	173,973	305,084	440,570	1,550	420,000	305,000	2,561,836
<b>2. COORDINATION and PROGRAMS</b>										
A. Congestion Management Process	84,254	0	21,084	20,010	35,062	49,730	0	0	3,000	213,150
B. Management, Operations, & ITS Planning	140,744	0	35,188	33,427	58,820	83,073	0	0	3,000	364,050
C. Emergency Preparedness Planning	11,881	4,517	4,099	3,894	6,830	9,383	0	0	37,500	87,084
D. Transportation Safety Planning	51,358	0	12,840	12,168	21,391	30,314	0	0	2,000	130,100
E. Bicycle and Pedestrian Planning	49,815	0	12,454	11,831	20,748	29,403	0	0	2,000	128,250
F. Regional Bus Planning	71,405	0	17,851	16,959	29,740	42,148	0	0	2,500	180,900
G. Human Service Transportation Coordination	56,410	0	14,102	13,397	23,495	33,295	0	0	2,000	142,700
H. Freight Planning	61,762	0	15,441	14,689	25,724	36,455	0	0	2,000	158,050
I. MATOC Program Planning & Support	49,854	0	12,414	11,793	20,681	29,308	0	0	1,000	124,850
Subtotal	577,283	4,517	145,450	138,178	242,320	352,086	0	0	95,000	1,514,834
<b>3. FORECASTING APPLICATIONS</b>										
A. Air Quality Conformity	215,321	19,820	58,735	55,799	97,853	138,872	2,000	0	2,500	590,500
B. Mobile Emissions Analysis	228,856	52,061	70,222	66,749	117,056	165,885	10,000	0	3,500	714,500
C. Regional Studies	162,554	51,900	53,614	50,633	89,320	126,579	0	50,000	2,300	581,200
D. Coordination, Cooperative Forecasting and Transportation Planning	145,782	167,500	78,320	74,404	130,482	184,811	65,500	0	2,500	839,400
Subtotal	752,613	291,111	260,931	247,885	434,711	616,048	67,500	50,000	10,800	2,731,600
<b>4. DEVELOPMENT OF NETWORKS/MODELS</b>										
A. Network Development	309,833	0	77,408	73,538	128,862	182,758	0	25,000	3,500	800,900
B. GIS Technical Support	188,854	0	49,213	46,753	81,960	116,191	0	0	80,000	571,000
C. Models Development	380,797	0	95,199	90,439	158,802	224,762	0	250,000	14,700	1,214,500
D. Software Support	72,848	0	18,212	17,301	30,341	42,968	2,000	0	2,500	186,200
Subtotal	960,132	0	240,033	228,031	399,895	566,708	2,000	275,000	100,700	2,772,500
<b>5. TRAVEL MONITORING</b>										
A. Cordon Counts	88,834	0	16,708	15,873	27,838	39,448	0	0	94,300	281,000
B. Congestion Monitoring and Analysis	100,291	0	25,073	23,819	41,771	59,198	0	100,000	13,949	364,100
C. Travel Surveys and Analysis	122,161	0	30,540	29,013	50,980	72,105	16,500	700,000	13,900	1,034,900
D. Regional Transportation Data Cleaninghouse	122,862	0	30,841	29,109	51,047	72,341	26,000	0	0	330,700
Subtotal	411,849	0	102,962	97,814	171,535	243,090	41,500	800,000	121,849	1,990,600
Core Program Total (1 to 5)	3,419,397	310,628	932,506	885,881	1,553,556	2,218,503	112,550	1,545,000	593,349	11,571,370
<b>6. TECHNICAL ASSISTANCE</b>										
A. District of Columbia	67,315	0	16,829	15,987	28,037	39,732	0	95,000	5,415	268,319
B. Maryland	131,204	0	32,801	31,161	54,646	77,442	0	150,000	1,500	488,754
C. Virginia	136,274	0	34,068	32,365	56,758	80,434	0	50,000	0	389,899
D. WMATA	68,463	0	17,123	16,287	28,527	40,427	0	0	0	170,838
Subtotal	403,286	0	100,821	95,780	167,959	238,036	0	305,000	6,915	1,317,807
TOTAL BASIC PROGRAM	3,822,883	310,628	1,033,328	981,661	1,721,524	2,456,538	112,550	1,850,000	600,264	12,889,177
<b>7. CONTINUOUS AIRPORT SYSTEM PLANNING</b>										
CASP TOTAL	102,236	0	25,559	24,281	42,581	60,344	0	195,000	0	450,000
<b>8. SERVICE/SPECIAL PROJECTS</b>										
GRAND TOTAL	3,924,319	310,628	1,058,887	1,005,942	1,764,105	2,516,882	112,550	2,045,000	600,264	13,339,177

Figure 7  
TPB Committee Structure



### III. MAJOR WORK ACTIVITIES

#### 1. PLAN SUPPORT

##### A. THE UNIFIED PLANNING WORK PROGRAM (UPWP)

The Unified Planning Work Program (UPWP) for the Metropolitan Washington Region describes all transportation planning activities utilizing federal funding, including Title I Section 134 metropolitan planning funds, Title III Section 8 metropolitan planning funds, and Federal Aviation Administration Continuing Airport System Planning (CASP) funds. The UPWP identifies state and local matching dollars for these federal planning programs, as well as other closely related planning projects utilizing state and local funds.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Clean Air Act Amendments of 1990 (CAAA) created a number of planning requirements. The Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU), which became law on August 11, 2005, reaffirmed the structure of the metropolitan planning process, and increased federal financial support for it. On February 14, 2007, FHWA and FTA issued the final regulations regarding metropolitan planning in response to SAFETEA-LU. The Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) Act, which became law on July 6, 2012, made some important modifications to the metropolitan planning process, primarily requiring metropolitan planning organizations (MPOs) to establish and use a performance-based approach to transportation decision making and development of transportation plans. This work program has been developed to comply with the MAP-21 requirements regarding metropolitan planning essentially as presented in the proposed MPO planning rule published June 2, 2014. After the FHWA and FTA regulations on MPO planning are final, the activities will be reviewed to identify revisions that may be necessary to comply with them.

In 1994, the TPB developed and adopted the first financially-constrained Long Range Transportation Plan for the National Capital Region (CLRP). In July 1997, the first three-year update of the CLRP was approved by the TPB, the second update was approved in October 2000, and the third update was approved in December 2003. The fourth update was approved in October 2006. In November 2010, the TPB approved the fifth update and on October 15, 2014, the sixth update was approved.

The Environmental Protection Agency (EPA) issued regulations on November 24, 1993, followed with a succession of guidance documents, and on July 1, 2004 published the 8-hour ozone standard conformity guidance, which taken together provide criteria and procedures for determining air quality conformity of transportation plans, programs and projects funded or approved by the FHWA and FTA. These conformity requirements are addressed in this document. Under these regulations, the State Implementation Plans (SIP) for improving air quality for the region must be adopted by the states and submitted to EPA by specified dates.

The FY 2016 UPWP defined by this document details the planning activities to be accomplished between July 2015 and June 2016 to address the annual planning requirements such as preparing the Transportation Improvement Program, federal

environmental justice requirements, and Air Quality Conformity. It describes the tasks required to meet approval dates for the region's SIPs, and outlines the activities for the subsequent years.

In addition, this document describes the integration of program activities and responsibilities of the TPB Technical Committee and its subcommittees for various aspects of the work program. It provides an overview of the regional planning priorities and describes the major transportation planning and air quality planning studies being conducted throughout the region over the next two years.

During FY 2016, certain amendments may be necessary to reflect changes in planning priorities and inclusion of new planning projects. Under this task, Department of Transportation Planning (DTP) staff will identify and detail such amendments for consideration by the TPB as appropriate during the year.

In the second half of FY 2016, staff will prepare the FY 2017 UPWP. The document will incorporate suggestions from the federal funding agencies, state transportation agencies, transit operating agencies, local governments participating in TPB, and the public through the TPB's public involvement process. The new UPWP will be presented in outline to the TPB Technical Committee and the TPB in January 2016, as a draft to the Technical Committee in February and as a final document for adoption by the Technical Committee and the TPB in March 2016. The approved UPWP will be distributed to the TPB and the Technical Committee, and made available to the public on the TPB web site.

This task will also include the preparation of monthly progress reports for each of the state agencies administering the planning funding, and the preparation of all necessary federal grant submission materials.

Oversight:	Technical Committee
Cost Estimate:	\$73,550
Products:	UPWP for FY 2017, amendments to FY 2016 UPWP, monthly progress reports and state invoice information, federal grant materials
Schedule:	Draft: February 2016    Final: March 2016

**B. THE TRANSPORTATION IMPROVEMENT PROGRAM (TIP)**

The Transportation Improvement Program (TIP) for the Metropolitan Washington Area is a six year program of highway, transit, bicycle and pedestrian, congestion mitigation/air quality, safety and transportation enhancement projects. The TIP will be updated every two years and amended as necessary between updates. Up-to-date information on project amendments and modifications in the TIP is available in the on-line TIP database. A printed TIP document will be produced every two years. The TIP must be approved by the TPB and the governors of Maryland and Virginia and the mayor of the District of Columbia, and is required as a condition for all federal funding



assistance for transportation improvements within the Washington Metropolitan Statistical Area.

TIP documentation describes major projects from the previous TIP that have been implemented and identifies significant delays in the implementation of major projects. The Program Development Process and Project Development Process sections of the TIP explain the TPB's actions during the project selection process, including:

- Reviewing project inputs for consistency with the Air Quality Conformity Analysis;
- Producing a financial summary of all funding sources proposed by an agency;
- Reviewing priority project lists developed by the Bicycle and Pedestrian, Freight, and Regional Public Transportation Subcommittees for inclusion on the TIP and;
- Programming TIGER and Section 5310 Enhanced Mobility projects.

Citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, freight shippers, users of public transit, and all other interested parties will be given an opportunity to review and comment on the FY 2015-2020 TIP and any subsequent amendments to the TIP as described under the TPB's public participation plan which was adopted in updated in September 2014. To facilitate public review, project information from the TIP and CLRP will be made accessible through an online, searchable database. Visual representation of the projects will be enhanced with a GIS system for displaying projects. A summary guide that highlights the funding and projects in the TIP will be prepared and will guide users to the online database.

The database application for submitting TIP project data, CLRP projects, and air quality conformity data will continue to be improved to facilitate reviewing the TIP and CLRP information. Interactive means of sharing the information in the TIP and CLRP such as querying capabilities and specialized maps or graphs will be available.

#### The TIP Schedule and Project Selection

The 2014 CLRP and the FY 2015-2020 TIP were approved on October 15, 2014. The TIP will be prepared with the assistance of and in cooperation with the transportation implementing agencies in the region, including the state departments of transportation, the District of Columbia Department of Transportation, the National Park Service, the Washington Metropolitan Area Transit Authority (WMATA) and other public transit operators, and local government agencies. Projects included in the TIP will be reviewed for consistency with the policies and facilities delineated in the adopted CLRP for the region. Only projects or phases of projects that have full funding anticipated to be available within the time period contemplated for completion are included in the TIP. A financial plan will be prepared to demonstrate how the TIP can be implemented, and indicate the sources of public, private and innovative funding. This financial plan will be expanded with additional analysis and visual aids such as graphs and charts, online documentation and an accompanying summary brochure for the CLRP and TIP.

During the year administrative modifications and amendments will likely need to be made to the FY 2015-2020 TIP to revise funding information or reflect changes in priorities or the introduction of new project elements. Such modifications and

amendments will follow the procedures adopted by the TPB on January 16, 2008 amended in December 2014.

In November 2014, the TPB issued a call for projects document requesting project submissions for the 2015 CLRP. Amendments to the FY 2015-2020 TIP that accompany updates to the 2014 CLRP will be prepared for review by the TPB Technical Committee, the TPB, and the public between January and September 2015.

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.

### Annual Listing of TIP Projects that Have Federal Funding Obligated

TPB must publish or otherwise make available an annual listing of projects, consistent with the categories in the TIP, for which federal funds have been obligated in the preceding year. With the assistance of and in cooperation with the transportation implementing agencies in the region, TPB will prepare a listing of projects for which federal funds have been obligated in FY 2014.

Oversight:	Technical Committee
Cost Estimate:	\$225,300
Products:	Amendments and administrative modifications to the FY 2015-2020 TIP, Updated guide to the TIP
Schedule:	October 2015

### C. CONSTRAINED LONG-RANGE TRANSPORTATION PLAN (CLRP)

The financially Constrained Long-Range Plan (CLRP) includes all “regionally significant” highway, transit and High-Occupancy Vehicle (HOV), bicycle and pedestrian projects, and studies that the TPB realistically anticipates can be funded and implemented by 2040. Some of these projects are scheduled for completion in the next few years; others will be completed much later. Each year the plan is updated to include new projects and programs, and analyzed to ensure that it meets federal requirements relating to air quality and funding.

Under SAFETEA-LU, the last four-year update of the CLRP was approved by the TPB on November 17, 2010 and included an expanded financial analysis of transportation revenues expected to be available through 2040. As required by MAP-21, the 2014 CLRP was approved in October 2014. The CLRP is updated annually with amendments that include new projects or adjust the phasing or other aspects of some of the projects or actions in the plan, or change specific projects as new information on them becomes available.

#### New Performance-Based Approach

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 Transportation Vision, which was adopted by the TPB in October 1998, contains a vision statement, long-range goals, objectives, and strategies to guide transportation planning, decision-making and implementation in the region. It addresses the planning factors in MAP-21. The Vision is the TPB Policy Element of the CLRP. The CLRP website ([www.mwcog.org/clrp](http://www.mwcog.org/clrp)) describes how the plan performs related to MAP-21 planning factors as reflected by the goals of the TPB Vision. The goals from COG’s Region Forward efforts are reflected in the TPB Vision, which includes a broader set of policy goals for transportation than Region Forward.

The TPB's Regional Transportation Priorities Plan (RTPP), adopted by the TPB in January 2014, identifies near-term, on-going and long term strategies that address the most pressing challenges that the region faces in meeting the TPB's regional Vision goals. The challenges and high-pay off strategies with wide regional support identified in RTPP can inform the identification of new projects and programs for inclusion in future updates to the CLRP.

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.

The CLRP will be documented in several ways and public materials will be provided during plan development and after plan approval. The CLRP website will be utilized to document the plan update by describing the development process related planning activities, major projects, performance of the plan and how the public can get involved. The website also makes CLRP-related process and technical documentation readily accessible. The TPB will continue to make the plan information more accessible and visual. Projects in the plan will be accessible through an online database that the public can easily search. Projects will be mapped using GIS where possible and displayed along with project descriptions and in an interactive map. These maps will also be used in printed media, such as the CLRP and TIP summary brochure. The TPB will also continue to improve the quality of public materials about the plan during its development and after approval so that the materials are more useful to a wide variety of audiences, using less technical jargon and more "public friendly" language.

### The 2015 CLRP

In October 2014, the TPB issued its "Call for Projects" document which requested new projects programs and strategies, and updated information to be included in the 2015 CLRP. Materials describing the draft 2015 CLRP will be developed in the spring of 2015, including maps and major project descriptions, and analysis from the previous

year's CLRP. The development of the 2015 CLRP will include two opportunities for the public to comment on the Plan and it will be prepared and reviewed between January and September 2015 with approval scheduled for October 2015.

A description of the performance measures and targets under development or to be used in assessing the performance of the transportation system will be drafted. In September 2015, before the TPB approves the 2015 CLRP, a performance analysis of the CLRP to 2040 will be conducted utilizing the established performance measures. The plan will be also be evaluated for disproportionately high and adverse effects on low-income and minority population groups.

#### The 2016 CLRP

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 with approval expected in October.

#### Environmental Consultation

During the development of the CLRP the TPB will 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 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:	Technical Committee
Cost Estimate:	\$625,885
Products:	2015 CLRP and documentation, including the RTPP/ CLRP Comparative Assessment and System Performance; Call for Projects for the 2016 CLRP,
Schedule:	October 2015

#### D. FINANCIAL PLAN

## The Financially Constrained Long-Range Transportation Plan (CLRP)

The CLRP must be updated every four years as required by MAP-21. The CLRP is updated annually with amendments that include new projects or adjust the phasing or other aspects of some of the projects or actions in the plan, or change specific projects as new information on them becomes available. The 2014 CLRP was the four-year update of the plan.

As required under MAP-21 and federal planning regulations, both the TIP and the CLRP must have a financial plan that demonstrates how they can be implemented and show the sources of funding expected to be made available to carry them out. The financial analysis for the 2014 CLRP includes federal and state revenue projections, cost estimates for new system expansion projects, and cost estimates for system maintenance and rehabilitation. All revenue and cost estimates are in year of expenditure from 2015 through 2040.

In early 2014, in consultation with state and local DOTs and public transportation operators, an initial financial analysis was conducted to determine estimated revenues reasonably expected to be available for projected expenditures for use in preparing project submissions for the draft 2014 CLRP. By mid- 2014, the financial analysis for the 2014 CLRP which covers 2015 to 2040 will be finalized in consultation with the state and local DOTs and public transportation operators. In spring 2015, the financial analysis for the 2014 CLRP will be reviewed and updated for use in preparing submissions for the 2015 CLRP.

## The Transportation Improvement Program

A financial plan for the FY 2015-2020 TIP as amended will be prepared. Since federal funding is apportioned to states, financial summaries for all TIP projects from agencies in the District of Columbia, Maryland and Virginia as well as WMATA and other transit agencies will be prepared. All projects submitted by these agencies will be grouped by the proposed federal funding categories under Surface Transportation (Title I) and Transit (Title III).

The funds programmed in the TIP for each state by federal program category will be compared with the information provided by the states and transit operators on the estimated available Federal and State funds for the program period. The funds programmed in the TIP for each state by federal program category in the first and second years will be compared with the trends of the annual funding programmed in previous TIPs and with the funding reported in the annual listings of TIP projects that have federal funding obligated. Comparisons that indicate significant changes from past trends will be reviewed with the implementing agency to clarify the change. Implementing agencies will ensure that only projects for which construction and operating funds can reasonably be expected to be available will be included in the TIP. In the case of new funding sources, strategies for ensuring their availability will be identified by the implementing agency and included in the TIP. The product will be a financial summary that focuses on the first two years of the six-year period of the TIP, and it will be incorporated as a main section of the TIP for review by the public and approval by the Technical Committee and the TPB. The

TIP will also summarize funding that the implementing agencies have programmed specifically for bicycle and pedestrian projects and identify projects that include bicycle and/or pedestrian accommodations.

Oversight:	Technical Committee
Cost Estimate:	\$65,550
Products:	Update of the financial analysis for 2015 CLRP and FY 2015-2020 TIP
Schedule:	June 2016

#### E. PUBLIC PARTICIPATION

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
Cost Estimate:	\$466,060
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:	On-going, with forums and meetings linked to preparation of CLRP and TIP

#### F. PERFORMANCE BASED PLANNING FOR THE CLRP AND TIP

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
Cost Estimate:	\$100,000
Products:	Performance Analysis Report of the CLRP and TIP
Schedule:	Performance Report of the 2015 CLRP: October 2015 MAP-21 Measures: June 2016

#### G. TPB ANNUAL REPORT AND TPB NEWS

TPB staff annually produces *The Region* magazine, which provides a non-technical review and analysis of transportation issues in the Washington region. Elected officials and citizens are the primary target audience of this magazine, which has an annual circulation of approximately 1,100 and is distributed throughout the year as the TPB's flagship publication.

The TPB News is produced monthly to provide a timely update on the activities of the TPB, including decisions made at the TPB's monthly meeting. The TPB News has a circulation of approximately 1,100 paper copies, and an electronic distribution of approximately 500.

In January 2012, the TPB launched the new TPB Weekly Report, which is a web-based newsletter featuring a short article every week on a single topic of interest in regional transportation. This publication is distributed electronically, including notifications through social media sites, such as Twitter and Facebook.

- The new issue of *The Region* will describe the main activities completed in 2014.
- Produce the monthly newsletter *TPB News*.
- Write and distribute the *TPB Weekly Report*,

Oversight:	Transportation Planning Board
Cost Estimate:	\$83,350

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

Schedule: June 2016

#### H. TRANSPORTATION/LAND USE CONNECTION (TLC) PROGRAM

The TLC Program provides support to local governments in the Metropolitan Washington region as they work to improve transportation/ land use coordination at the community level. Through the program, the TPB provides its jurisdictions with consultant-provided, short-term technical assistance to catalyze or enhance planning efforts. Begun as a pilot in November 2006, the program also provides a clearinghouse to document national best practices, as well as local and state experiences with land use and transportation coordination. By the end of FY2013, 62 TLC technical assistance projects will have been completed. These projects cover a range of subjects, including promoting “complete streets” improvements to ensure pedestrian and bicycle access to transit, identifying transportation and public realm improvements to facilitate transit-oriented development, and offering recommended changes in local government policies on issues such as urban road standards or parking policies.

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 suballocated 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
Cost Estimate:	\$434,900
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

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

- Supervision of the preparation, negotiation, and approval of the annual work program and budget, involving the State Transportation Agencies, the Technical Committee, the Steering Committee, and the TPB.
- Day-to-day monitoring of all work program activities and expenditures by task.
- Day-to-day management and allocation of all staff and financial resources to ensure that tasks are completed on schedule and within budget.
- Preparation for and participation in regular meetings of the TPB, the Steering Committee, the Technical Committee, and the State Technical Working Group.
- Attendance at meetings of other agencies whose programs and activities relate to and impact the TPB work program, such as local government departments.
- Response to periodic requests from TPB members, federal agencies, Congressional offices, media, and others for information or data of a general transportation nature.
- Review of transportation proposals of regional importance submitted to TPB through the intergovernmental review process. Where significant regional impacts are likely, staff will obtain Technical Committee and Board review and approval of comments prepared.

In addition to salaries, nominal amounts are utilized for travel related to non-project specific meetings attended by the senior staff, data processing for financial monitoring and analysis, and conferences such as FTA and FHWA seminars on federal regulations and financial management. These activities represent three to four percent of the total amount allocated for DTP Management.

Oversight:	Transportation Planning Board
Cost Estimate:	\$488,333
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)

The regional Congestion Management Process (CMP) is a federally required component of the metropolitan transportation planning process. The CMP is to address the systematic management of traffic congestion and provision of information on transportation system performance. No single occupant vehicle (SOV) capacity expanding project can receive federal funds unless it is part of the regional CMP. The federal MAP-21 legislation continues the requirement for a CMP, with emphasis on congestion data as part of a performance measurement-based metropolitan planning process.

Under this work task, TPB will compile information and perform analyses for major aspects of the regional CMP:

- 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 assess strategies that address congestion, in coordination with MOITS, the Metropolitan Area Transportation Operations Coordination Program (see also Task 2.I), the Air Quality Conformity program (see also Task 3.A.), and the regional Commuter Connections Program (see [www.commuterconnections.org](http://www.commuterconnections.org)). Analyze transportation systems condition data archives from private sector sources, especially the 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;
  - 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 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
Cost Estimate:	\$213,150
Products:	Updated CMP portions of the CLRP; CMP Documentation Form; National Capital Region Congestion Report; FY2016 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

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 compiling and analyzing data to support the "system reliability" National Goal for Performance Management, and coordinating with member states on system reliability targets.
- Regional Transportation Management: 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, including MATOC's focuses on traffic/transit coordination, severe weather operations, and construction zone coordination.
- Data: Facilitate transportation systems usage and condition data from Intelligent Transportation Systems (ITS) sources for application in regional transportation planning, particularly through the MATOC/University of Maryland Regional Integrated Transportation Information System (RITIS).
- Operations in Emergencies: Coordinate planning activities of day-to-day transportation operations with emergency preparedness, in conjunction with the COG Regional Emergency Support Function 1 – Emergency Transportation Committee (see also Task 2.C).
- Traveler Information: Address federal requirements on real-time incident data.
- Congestion Management Process: Analyze technology and operations strategies to address non-recurring congestion aspects of the regional Congestion Management Process (see also Task 2.A).
- 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.
- Multi-modal Coordination: Examination of traffic and transit management interactions in daily operations.
- Climate Change: Monitor local and national practices regarding transportation operational procedures to adapt to climate change effects and provide support for regional climate change mitigation or adaptation planning efforts that relate to transportation technology and operations.
- Monitor local and national developments regarding operations and technology aspects of the emerging field of transportation system resilience.
- MOITS Strategies: Analyze strategies designed to reduce congestion, reduce emissions, and/or better utilize the existing transportation system.
- Monitor local and national developments regarding emerging connected vehicle and automated vehicle technologies.



- 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
Cost Estimate:	\$354,050
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

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 non-motorized 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 roles of roadway and transit agencies as support functions 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

Cost Estimate: \$78,400

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

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 non-motorized 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 public roadway traffic, transit, bicyclist, and pedestrian transportation. 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 traffic, transit, bicyclist, and pedestrian 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

Cost Estimate: \$130,100

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

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 was completed in FY2015, and provides 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 one 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

Cost Estimate: \$126,250

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

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
Cost Estimate:	\$180,600
Products:	Annual report, data compilation, reports on technical issues, and outreach materials
Schedule:	Monthly

#### G. HUMAN SERVICE TRANSPORTATION COORDINATION

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
Cost Estimate:	\$142,700
Products:	Project Priorities and Recommendations for Enhanced Mobility Funding
Schedule:	June 2016

#### H. FREIGHT PLANNING

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 FY2015, and provides guidance for continued regional planning activities. Major topics to be addressed include the following:

- Support the Regional Freight Subcommittee.
- Follow up on the Regional Freight Plan completed in FY2015.
- 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

Cost Estimate: \$156,050

Products: 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

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 committees and working groups, including the MATOC Steering Committee, Information Systems Subcommittee, Operations Subcommittee, Transit Task Force, Severe Weather Working Group, and Construction Coordination Working Group.
- 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
Cost Estimate:	\$124,850
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 Technical Subcommittee.
Schedule:	Monthly

### 3. FORECASTING APPLICATIONS

#### A. AIR QUALITY CONFORMITY

The objective of this work activity is to ensure that TPB plans, programs and projects meet air quality requirements. The 1990 Clean Air Act Amendments require that detailed systems level detailed technical analyses are conducted to assess air quality conformity of transportation plans and programs. Procedures and definitions for the analyses were originally issued as EPA regulations in the November 24, 1993 *Federal Register*, and subsequently amended and issued, most recently in a March 2010 EPA publication. In addition, federal guidance has also been published at various times by the EPA, FHWA and FTA.

The 2015 Constrained Long Range Plan (CLRP) and FY2015-20 Transportation Improvement Program (TIP) will address ozone, wintertime carbon monoxide, and fine particles (particulate matter, PM<sub>2.5</sub>) requirements, including differing geographical boundaries, inventory time periods, and evaluation criteria by pollutant. The schedule for adoption of the updated plan and TIP calls for most of the work to be completed in FY2016. As the Public Comment Period extends beyond the end of FY2015 and into the start of FY2016, it is anticipated that the final stages of the plan development consisting of incorporation of the public comments, development of the final report, adoption by the TPB and subsequent transmittals will take place in October 2015. Upon adoption of the 2015 CLRP, a new Air Quality Conformity cycle will begin for the 2016 CLRP and FY2017-2022 TIP, which will run throughout FY2016.

The interagency and public consultation procedures of TPB are based on the November 24, 1993 EPA regulations, which were adopted by TPB in September 1994 and subsequently amended to reflect additional requirements in August 15, 1997 regulations, which were adopted by TPB in May 1998. These procedures address the preparation of the annual UPWP and TIP and any updates to the regional plan or programs. The procedures involve timely announcement of upcoming TPB activities relating to air quality conformity and distribution of relevant material for consultation purposes.

The FY2016 work program will include the following tasks:

- Completion of conformity analysis of the 2015 CLRP & FY2015-2020 TIP 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 & FY2017-2022 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
Cost Estimate:	\$590,500
Products:	Final report on 2015 CLRP & FY2015-20 TIP Air Quality Conformity Assessment; Work Program for 2016 CLRP & FY2017-2022 TIP Conformity Assessment
Schedule:	June 2016

## B. MOBILE EMISSIONS ANALYSIS

The objective of this work activity is to conduct a broad range of analyses aiming to quantify emissions levels of various pollutants and ensure that TPB plans, programs and projects meet air quality requirements. A component of this work activity is the analysis, assessment and evaluation of the performance of Transportation Emissions Reduction Measures (TERMs) associated with PM2.5 and 8-hour ozone SIPs.

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 MOVES2 2014 may also be necessary.

Oversight:	Technical Committee and Travel Management Subcommittee, in consultation with MWAQC committees
Cost Estimate:	\$714,500
Products:	Reports on TERM evaluation and on greenhouse gas emissions reduction strategies; Updated mobile source emissions inventories / reports as required addressing ozone and PM2.5 standards and climate change requirements
Schedule:	June 2016

## C. REGIONAL STUDIES

### 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 interim (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 should be reviewed to determine how it should be updated in 2017

to inform the 2018 CLRP, along with the quadrennial financial analysis and annual call for projects. Preparatory work for this review is anticipated to begin in the first half of 2016 (latter 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

Cost Estimate: \$587,200

Products: Transportation Sector input for the COG “What We Can Do” to reduce GHG report. Interim - 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

Schedule: June 2016

#### D. COORDINATION OF COOPERATIVE FORECASTING AND TRANSPORTATION PLANNING PROCESSES

Under this work activity staff will support the Planning Directors Technical Advisory Committee (PDTAC) and the TPB Technical Committee in the coordination of local, state and federal planning activities and the integration of land use and transportation planning in the region.

The following work activities are proposed for FY 2016:

- 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

Estimated Cost: \$839,400

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

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

Cost Estimate: \$800,800

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

Under this work activity staff will provide Geographic Information System (GIS) data and technical support to users of the COG/TPB GIS for many important 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.

The following work activities are proposed for FY 2016:

- 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

Estimated Cost: \$571,000

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

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 MWCOC'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 2014) 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  
Cost Estimate: \$1,114,500

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

This work element supports the infrastructure needs of the TPB microcomputer-based travel demand forecasting model and the emissions models used in air quality applications. It consists of software, hardware and knowledge-based maintenance of all the systems needed for successful model runs. Activities performed under this work activity include: (1) development and testing of revisions and upgrades of the software currently in use (2) tests of new software needed for the successful execution of model runs, file management and upkeep, data storage, retrieval and transfer systems etc. (3) training of TPB staff in use of models and adopted systems. Throughout FY2013 staff will closely monitor the performance of all software and hardware systems and it will research and evaluate potential system upgrades through testing and demonstration.

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: TPB Technical Committee

Cost Estimate: \$186,200

Products: Operational travel demand forecasting process plus operational MOVES2010 Models; File transfer, storage and retrieval processes; DTP staff training in CUBE/ TP+, CUBE / Voyager, and MOVES2010 systems; and Microcomputer hardware to support CUBE/ TP+, CUBE / Voyager, MOVES2010, and other operations.

Schedule: June 2016

## 5. TRAVEL MONITORING

### A. CORDON COUNTS

In FY 2016 staff will conduct detailed traffic counts of trip trips at sample of identified counting location on major truck routes throughout the region. Staff will also process, tabulate and analyze the truck count data and prepare a technical report documenting the procedures used and the results of the truck data analysis. This technical report will include information on truck volumes by time of day and vehicle classification.

Oversight:	Freight Planning Subcommittee
Estimated Cost:	\$261,000
Products:	Truck Counts and Technical Report
Schedule:	Truck Counts – Spring 2016 Technical Report – June 2016

### B. CONGESTION MONITORING AND ANALYSIS

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 data archive from the I-95 Corridor Coalition 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 in conjunction with (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

Estimated Cost: \$364,100

Product: 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

### C. TRAVEL SURVEYS AND ANALYSIS

#### **Household Travel Survey**

The 2007/2008 Regional Household Travel Survey data has been supplemented in FY 2012-FY 2015 by the collection of household travel survey data in focused geographic subareas throughout the region. In FY 2016, staff will continue to support users of TPB household travel survey data, update user documentation, provide technical assistance to the users of these survey data. Staff will also continue planning for the next region-wide household survey that will begin in 2016 and be conducted over three fiscal years. 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.

The following work activities are proposed for FY 2016:

- 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.
- Continue planning for a large sample methodologically enhanced activity-based region-wide household travel survey that will begin in 2016 and continue over three fiscal years. A pre-test and evaluation of the survey methodology to conduct the enhanced activity-based region-wide household survey will be



completed in FY 2016.

Oversight:	Travel Forecasting Subcommittee
Estimated Cost:	\$1,034,800
Product:	Processing and Analysis of Household Travel Survey Analyses, Information Reports and Presentations, Planning for Large Sample Region-wide Household Travel Survey.
Schedule:	June 2016

#### D. REGIONAL TRANSPORTATION DATA CLEARINGHOUSE

Efficient access to a comprehensive data set containing current and historic data on the characteristics and performance of the region's transportation system is vitally important for transportation planning, air quality analysis, models development, congestion management and project evaluations. Under this work item state will continue to work with local, state, WMATA and other regional agencies to transfer data to and from the Regional Transportation Data Clearinghouse and to update the Data Clearinghouse with updated highway and transit performance data as these data become available.

The following work activities are proposed for FY 2016:

- 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 GIS web-based applications.

Oversight:	Technical Committee
Estimated Cost:	\$317,900
Product:	Updated Clearinghouse Database and Documentation; Web Interface to Access Clearinghouse Data
Schedule:	June 2016

## 6. TECHNICAL ASSISTANCE

The TPB work program responds to requests for technical assistance from the state and local governments and transit operating agencies. This activity takes the form of individual technical projects in which the tools, techniques, and databases developed through the TPB program are utilized to support corridor, project, and sub-area transportation and land use studies related to regional transportation planning priorities. The funding level allocated to technical assistance is an agreed upon percentage of the total new FY 2016 funding in the basic work program. The funding level for each state is an agreed upon percentage of the total new FTA and FHWA planning funding passed through each state. The funding level for WMATA is an agreed upon percentage of the total new FTA funding. The specific activities and levels of effort are developed through consultation between the state and WMATA representatives and TPB staff.

### A. DISTRICT OF COLUMBIA

#### 1. Program Development, Data Requests and Miscellaneous Services

This project accounts for staff time spent in developing scopes of work for requested projects and in administering the work program throughout the year. Work activities involve meeting with DDOT staff to discuss proposed projects, drafting and finalizing work statements and tasks, creating project accounts when authorized, and progress reporting throughout the projects.

Additionally, this project establishes an account to address requests which are too small or too short-lived to warrant separate scopes of work. Requests may include staff time to participate in technical review committees and task forces and execution of small technical studies.

Cost Estimate:	\$10,000
Product:	specific scopes of work
Schedule:	on-going activity

The program for FY 2016 remains to be specified.

**TOTAL DISTRICT OF COLUMBIA COST ESTIMATE: \$268,316**

### B. MARYLAND

#### 1. Program Development Management

This work task will account for DTP staff time associated with the administration of this Technical Assistance work program throughout the year. Work activities would involve meetings with participating agencies to discuss proposed/new projects, development of monthly progress reports, budgetary reporting and technical quality control. This work task also includes staff time needed for the development of the annual planning work program.

Cost Estimate: \$15,000

Schedule: On-going activity

The program for FY 2016 remains to be specified.

**TOTAL MARYLAND COST ESTIMATE: \$488,754**

## C. VIRGINIA

### 1. Program Development And Data/Documentation Processing

This work element accounts for DTP staff time associated with the administration of this Technical Assistance work program throughout the year. Work activities would involve meetings with participating agencies to discuss proposed/new projects, development of monthly progress reports, budgetary reporting and technical quality control. This work task also includes staff time to process requests for data/documents from Northern Virginia as advised by VDOT throughout the year.

Cost Estimate: \$15,000

Product: Data, documentation, scopes of work, progress reports

Schedule: On-going activity

The program for FY 2016 remains to be specified.

**TOTAL VIRGINIA COST ESTIMATE: \$389,899**

## D. WMATA

### 1. Program Development

This project is established to account for DTP staff time spent in developing scopes of work for requested projects and for administering the resultant work program throughout the year. Work activities will involve meeting with WMATA staff to discuss projects, drafting and finalizing work statements and tasks, creating project accounts when authorized, and reporting progress on projects throughout the year. In addition, this project will provide staff with resources to attend required meetings at WMATA.

Cost Estimate: \$5,000

Schedule: on-going activity

### 2. Miscellaneous Services

This miscellaneous account is a mechanism established to address requests which are too

small or too short-lived to warrant separate work scopes. Past work has included requests for hard copy, plots, tape, or diskettes of data from any of the planning work activities at COG.

Cost Estimate: \$5,000

Schedule: on-going activity

The program for FY 2016 remains to be specified.

**TOTAL WMATA COST ESTIMATE: \$222,878**

## **7. CONTINUOUS AIRPORT SYSTEM PLANNING PROGRAM**

The purpose of the CASP program is to provide a regional process that supports the planning, development and operation of airport and airport-serving facilities in a systematic framework for the Washington-Baltimore Air Systems Planning Region, which includes the region's three major commercial airports: Baltimore-Washington International Thurgood Marshall Airport (BWI), Ronald Reagan Washington National Airport (DCA), and Washington Dulles International Airport (IAD). Oversight of the program is the responsibility of the TPB Aviation Technical Subcommittee. Previous UPWP documents have highlighted three projects in the CASP program, but due to reductions in available FAA funding some elements of the program have been consolidated and the program now focuses on two elements per cycle: the regional Air Passenger Survey and subsequent analysis, and either the combined Ground Access Forecast and Ground Access Element Update or the Ground Access Travel Time Update. The survey is conducted in the fall of odd-numbered calendar years, followed by the analysis and reporting and then the Ground Access Forecast and Ground Access Element. The Ground Access Travel Time update is conducted during non-survey (even-numbered) calendar years. The Air Cargo Element Update will be completed in FY2015 and is typically updated every 8-10 years. The elements of the multi-year CASP work program for FY 2016 are as follows:

### **Process 2015 Air Passenger Survey – Phase 1**

The purpose of the APS is to collect information about travel patterns and user characteristics of air passengers using the three major commercial airports and to help determine airport terminal and groundside needs. Data from the air passenger surveys will provide the basis for analysis of major changes in airport use in the region and planning for future airport improvements. Phase 1 of this project conducts the bi-annual fall survey of departing passengers at BWI, DCA, and IAD (survey design, sample generation, and data collection) and results in a final survey database for general analysis. This portion of Phase 1 is funded directly by the Metropolitan Washington Airports Authority (MWAA) and BWI. Analysis of the survey file and issuance of the survey General Findings Report completes Phase 1 and is funded by COG's grant from the Federal Aviation Administration (FAA) that funds all other aspects of the CASP program.

Cost Estimate:                      \$400,000

### **Ground Access Travel Time Update**

The purpose of the Ground Access Travel Time Study Update is threefold: (1) provide current data on travel times and levels of services for highway and transit access to the region's three commercial airports in support of airport access planning activities; (2) analyze changes in travel conditions and levels of service on principal airport serving roadways and transit facilities; and (3) analyze changes in highway and transit accessibility to airports resulting from recent highway and transit improvements.

Unlike previous updates to the Ground Access Travel Time study that relied on field data collection using GPS-equipped probe vehicles, this update will use data from the I-95

Corridor Coalition Vehicle Probe Project (VPP) (colloquially referred to as “Inrix data” after the data collection company). These data, which COG already uses extensively in congestion monitoring activities, is continuous (24/7/365) and covers most of the regional interstate highways and major arterials. Any portion of a route between a regional activity center and one of the three regional commercial service airports that is identified as desirable for study but is not covered by the VPP data will be considered for field data collection using probe vehicles (consideration of how to best integrate field collected probe vehicle data with VPP must be given). A review of monitored routes and expansion to include more regional activity centers identified in the most recent update from the Region Forward coalition will occur prior to data analysis. The key metric for this update will be the highway Travel Time Index, which is the ratio between free-flow and congested travel times.

Cost Estimate: \$ 50,000

TOTAL CASP COST ESTIMATE: \$450,000

## **8. SERVICE/SPECIAL PROJECTS**

In addition to the TPB basic work program in the UPWP and the Continuous Airport System Planning (CASP) program, service work or special technical studies as specified in contracts between the transportation agencies and COG may be included in the UPWP. Services or special projects are authorized and funded separately by the transportation agencies.





# REVIEW OF DRAFT FY2016 UNIFIED PLANNING WORK PROGRAM (UPWP)

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Transportation Planning Board  
Item 10

February 18, 2015

Kanti Srikanth  
Director, Department of Transportation Planning



NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

# What is the UPWP?

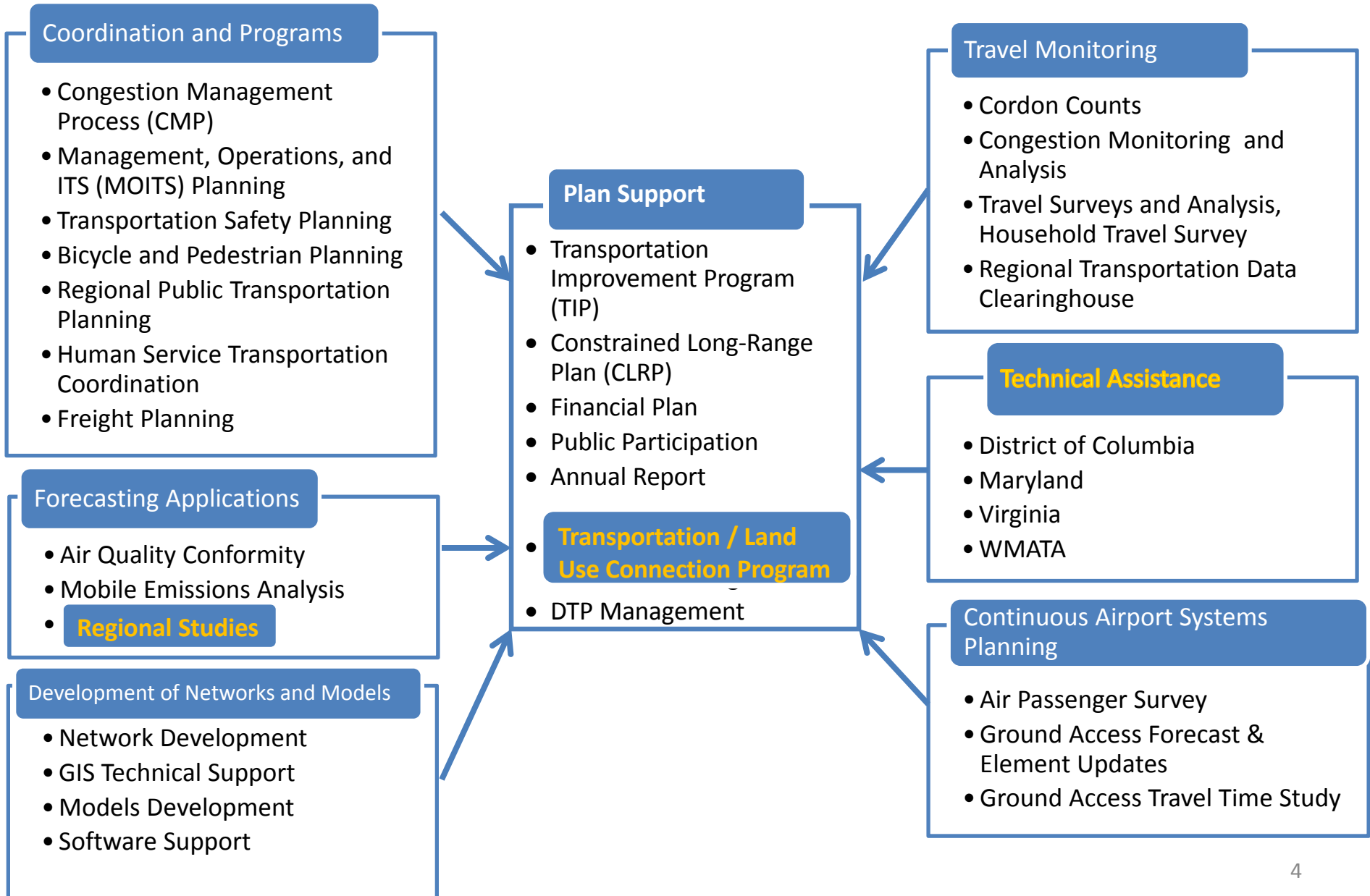
- The TPB's Annual budget and work program document
  - federally mandated work activities
  - TPB's additional, discretionary regional planning activities
  - federally assisted state, regional, and local planning activities
- Required as a basis and condition for all federal funding for transportation planning at the MPO and State levels
- Continues and builds upon the activities in the current program.
  - Forecast travel patterns and trends
  - Projected On-Road Mobile Emissions
- Prepares to address new planning requirements in Moving Ahead for Progress in the 21st Century (MAP-21)



# Funding Sources and Amounts for the UPWP

<b>A. FHWA And FTA Planning Funds</b>				
<b>A.1 NEW</b>				
Federal		80%		\$11,469,691
FHWA (Sec. 112)			\$6,897,916	
FTA (Sec. 5303)			\$2,277,837	
State Match (DOTs)		10%	\$1,146,969	
Local Match (COG Dues)		10%	\$1,146,969	
<b>A.2 FY 14 Underruns Brought Forward</b>				\$1,411,894
<b>Sub-Total FHWA And FTA Planning Funds</b>				<b>\$12,881,585</b>
<b>B. FAA Planning Funds + Airports Contract</b>				
Federal		90%		\$112,500
Local Match (COG Dues)		10%		\$12,500
Airports (BWI, DCA, IAD)		100%		\$325,000
<b>Sub-Total FAA And Airports Planning Funds</b>				<b>\$450,000</b>
<b>GRAND TOTAL FY 2016 UPWP FUNDING</b>				<b>\$13,331,585</b>
Additional carryover funds from current FY anticipated in March				
Funding earmarked for activities started in FY 15 to be completed in FY 16				

# Overview Of UPWP Program Elements



# How is the Work Program Structured?

- Federal Metropolitan Planning Regulations and Guidelines
  - Seven Major Program Areas
    - 1. Plan Support \$2,562,900
    - 2. Coordination & Programs \$1,506,200
    - 3. Forecasting Applications \$2,731,600
    - 4. Networks and Travel Models \$2,772,500
    - 5. Travel Monitoring \$1,990,600
    - 6. Technical Assistance \$1,317,800
    - 7. Airport Systems Planning \$ 450,000
- 
- TOTAL** **\$13,331,600**
-

# What are the FY 16 Budget Changes?

- Overall budget level same as FY 2015
- Most current work activity budget levels unchanged.
- Amendment anticipated in the fall once federal and state budget levels are finalized.
- \$458,400 increase in core program budget.  
*(Change in Technical Assistance program allocation)*
- Notable Budget changes:

– Performance-Based Planning for CLRP/TIP	\$100,000
– Models Development	\$100,000
– Regional Household Travel Survey	\$300,000
– Air Passenger Surveys	\$325,000

# New Activity Highlights

- MAP 21 Requirements For Performance Based CLRP/ TIP
- Models Development / Application
  - Travel Demand Model
  - Emissions Estimation Model (*MOVES 2014*)
- Regional Studies
  - Multi-section Greenhouse Gas Initiative
  - Unfunded Projects Plus Exploration of New Funding
  - RTPP And MAP 21 Performance Measures Reconciliation
- Regional Household Travel Survey
  - Decennial Update (*2017*); *Federal requirement*
  - Travel Behavior And Patterns

# How is the UPWP Reviewed and Finalized?

- January: Outline and budget  
*Reviewed by TPB Technical Committee and TPB*
- **February:** Draft UPWP  
*Reviewed by TPB Technical Committee and TPB  
Released for public comment*
- March: Final UPWP final review by TPB  
*Reviewed by TPB Technical Committee  
Presented for TPB approval on March 18*
- April: UPWP submitted to FTA and FHWA  
for approval
- July 1, 2015 – Implement work program elements



REVIEW OF DRAFT FY2016  
UNIFIED PLANNING WORK PROGRAM (UPWP)

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THANK YOU  
QUESTIONS?

February 18, 2015

Kanathur Srikanth  
Director, Department of Transportation Planning



NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

**ITEM 11 - Information**  
February 18, 2015

Review of Draft FY 2016 Commuter Connections Work Program  
(CCWP)

**Staff**

**Recommendation:** Receive briefing on the enclosed draft of the Commuter Connections Work Program (CCWP) for FY 2016 (July 1, 2015 through June 30, 2016).

**Issues:** None

**Background:** The Board will be asked to approve the FY 2016 CCWP at its March 18 meeting. The TPB Technical Committee reviewed this draft at its February 6 meeting.

**DRAFT FY 2016 WORK PROGRAM FOR THE  
COMMUTER CONNECTIONS PROGRAM  
FOR THE GREATER WASHINGTON  
METROPOLITAN REGION**

**February 18, 2015**

**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD  
METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS**



The preparation of this program document was financially aided through grants from the District Department of Transportation; Maryland Department of Transportation; Virginia Department of Transportation; and the U.S. Department of Transportation.

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## SUMMARY

### Program Overview

The Fiscal Year 2016 Commuter Connections Work Program (CCWP) consists of a core program of regional transportation demand management operational activities funded jointly by state and local jurisdictions, plus jurisdictional programs that are conducted at the discretion of individual state funding agencies.

### Funding

The regional state funding shares for the program elements are defined using a formula agreed to by the state funding agencies. Funding agencies for the programs listed in this document include the District Department of Transportation, Maryland Department of Transportation, and the Virginia Department of Transportation. The Maryland Transit Administration and the Virginia Department of Rail and Public Transportation provide direct funding to their local jurisdictions for transportation demand management activities that support the regional Commuter Connections program. The costs of the jurisdictional activities are allocated directly to the jurisdiction or jurisdictions that choose to conduct them. This ensures that the regional activities upon which all other activities depend will be conducted regionally, and that the costs are allocated to the participating funding agencies according to the agreed upon funding formula. At the same time, considerable flexibility is available to the state funding agencies and other agencies to define and fund discretionary activities that respond to their individual policy and funding priorities.

The FY 2016 Commuter Connections program elements are classified as follows:

<b>REGIONAL PROGRAMS</b>	<b>JURISDICTIONAL PROGRAMS</b>
Commuter Operations Center	Employer Outreach*
Guaranteed Ride Home	GRH Baltimore
Marketing	
Monitoring and Evaluation	

*\*Includes both a Regional and Jurisdictional Component*

The CCWP was re-structured and streamlined in FY 2006 to clarify and simplify funding responsibilities. The FY 2016 CCWP continues this effort aimed at streamlining the administration and oversight processes for the program. Commuter Connections has expanded incrementally since its inception in 1974 as the Commuter Club, with different program elements having different jurisdictional participation and funding shares. As the program became more complex, it became increasingly difficult to track how much each state funding agency was participating in and paying for each program element. Therefore, a funding formula was devised.

### Planning Process Requirements

The TPB is required by federal regulations to approve a congestion management process which includes travel demand management as part of the metropolitan transportation plan. Commuter Connections constitutes the major demand management component of the congestion

management process to be approved by the TPB. Commuter Connections also provides transportation emission reduction measure benefits for inclusion in the air quality conformity determination, which must be approved by the TPB as part of the annual update of the Constrained Long Range Plan and Transportation Improvement Program. In addition, Commuter Connections programs may be needed to meet future Climate Change and Green House Gas emission targets that may be set for the transportation sector in the region.

### Description of Commuter Connections Committees

The increasing complexity of the program prompted the creation of a working group to provide administrative and programmatic oversight of the core program cost elements. An agreement was signed in FY 2011 between COG and the state funding agencies for the support of the Commuter Connections TDM program in the Washington metropolitan region. The agreement will continue to be reviewed and updated as needed during FY 2016. COG and the state funding agencies have an established working group; the State TDM (STDM) Work Group, which meets monthly (except for the month of August) and consists of representatives of the state transportation funding agencies in the District of Columbia, Maryland and Virginia. The State TDM Work Group helps to define the program content and budget for each fiscal year and helps to develop a detailed annual Work Program in collaboration with COG/TPB staff and the Commuter Connections Subcommittee. The draft work program is reviewed by program stakeholders and the Commuter Connections Subcommittee. The final Work Program is reviewed by the TPB Technical Committee and approved by the TPB. Program developments and/or significant changes to the CCWP made by the State TDM Work Group will be reviewed with the TPB's Technical Committee and in some cases the TPB's Steering Committee in the event the items or information will be presented to the TPB.

The State TDM Work Group also review's all RFP's and RFQ's as part of the work program and will identify selection committee members for individual contract solicitations. The State TDM Work Group will review and approve all CCWP work products with input from the Commuter Connections Subcommittee. Upon request, COG/TPB staff can provide additional details for projects being implemented under each program area.

As shown in Figure 2 on Page 9, the Commuter Connections Subcommittee will continue to provide overall technical review of the regional program elements in this Work Program and meet every other month. The Subcommittee will also review, provide comments, and endorse reports and other products for release. The Bike To Work Day Steering Committee will meet every other month from September to May to organize the regional Bike To Work Day event. The Car Free Day Steering Committee will meet every other month from March until September to organize the regional Car Free Day event. The Commuter Connections Ridematching Committee will continue to meet quarterly on technical issues regarding the regional TDM software system. The TDM Evaluation Group will meet as needed to provide direction and review of the regional TDM evaluation project. The Employer Outreach Committee will meet quarterly to review and discuss Employer Outreach efforts. The Regional TDM Marketing Group will also meet quarterly to provide input and coordination of regional TDM advertising and marketing efforts. Oversight for jurisdictional program elements will be provided by the states and agencies that are funding them.

Specialized project work groups will continue to meet as needed to address particular implementation issues, such as the development of regional TDM marketing campaigns and the Employer Recognition Awards. A Strategic Plan was adopted in November 2007 and has been updated annually and most recently in January 2014 that serves as a framework regarding the roles and responsibilities of the Commuter Connections stakeholders. The Strategic Plan can be accessed at [www.commuterconnections.org](http://www.commuterconnections.org) under the 'About Us' Publications link and includes a mission statement, definition of Commuter Connections, overall program and operating objectives, network responsibilities for each program area that include objectives and acceptable performance levels, a committee structure, sample meeting calendar, and internal and external report deliverables.

### Key Elements and Highlights

The key elements and highlights of the FY 2016 Commuter Connections Work Program are summarized as follows:

- The Commuter Operations Center will provide ridematching services to commuters through a central toll free number "1-800-745-RIDE" and [www.commuterconnections.org](http://www.commuterconnections.org) web site, and support to commuter assistance programs operated by local jurisdiction, transportation management associations, and employer-based commuter assistance programs.
- Guaranteed Ride Home (GRH) will provide users of alternative commute modes up to four free rides home per year in a taxi or rental car in the event of an unexpected personal or family emergency or unscheduled overtime.
- Marketing will provide frequent regional promotion of alternative commute options, including; car/vanpooling, teleworking, mass transit, bicycling, walking; and support programs such as Guaranteed Ride Home, the Commuter Connections network ridematching services and Bike to Work Day. The Marketing program aims to raise awareness of alternative commute options, and support the Commuter Connections network in persuading commuters to switch to alternative commute modes from the use of single-occupant vehicles, and persuading commuters currently using alternative commute modes to continue to use those modes. The 'Pool Rewards incentive program provides a cash incentive to new carpoolers and vanpoolers. Commuter Connections will coordinate the region's Car-Free Day event as part of World Car Free Day. The Car-Free Day event will encourage commuters and the general population to leave their cars home or to use alternative forms of transportation such as carpools, vanpools, public transit, bicycles, or walking.
- Monitoring and Evaluation provides data collection and analysis activities as well as program tracking and monitoring reports for each program area. The regional TERM Evaluation Framework Methodology document will be updated, the 2016 State of the Commute survey will be conducted, and the 2016 GRH Applicant survey will be conducted. Monitoring and evaluation activities are used extensively to determine the program's effectiveness. Evaluation results have been used in the past to make program

adjustments; for example, the 'Pool Rewards program was expanded to include vanpools and funding for the project was customized to meet actual demand, the Telework program was streamlined due to increased participation by the private sector; changes have been made to the Guaranteed Ride Home program guidelines based on participant survey feedback; and target marketing for GRH was re-introduced in the region after it was found that there was a dramatic drop in registrations when the marketing for this measure was streamlined into the mass marketing program.

- Employer Outreach will support outreach and marketing to the region's employers to implement new or expanded employer-based alternative commute modes and incentives such as transit and vanpool benefits, telework, preferential parking for carpools and vanpools, carpool and vanpool formation and incentives, flexible work schedules, and bicycling amenities. The outreach program also encourages employees' use of alternative commute modes such as ridesharing, transit, telework, bicycling, and walking. The outreach program also provides assistance to employers to hold bicycling seminars for employees, maintaining an up-to-date regional Bicycling Guide, providing information on workforce housing programs to promote "Live Near Your Work," and offering car-sharing and bike-sharing information to lower employers' fleet management costs. Maryland jurisdictions will provide resources to employers on the benefits of teleworking and assist them in starting or expanding telework programs.
- GRH Baltimore will provide users of alternative commute modes in the Baltimore metropolitan region and St. Mary's county up to four free rides home per year in a taxi or rental car in the event of an unexpected personal or family emergency or unscheduled overtime. Additionally, a GRH Baltimore region and St. Mary's County Applicant Survey will be conducted in FY 2016.

Figure 1 on page 7 of this document illustrates that the Commuter Connections service area is much larger than the Washington 8-hour ozone nonattainment area for workers eligible for the GRH program and larger still for workers who can access the Commuter Connections ridesharing services. The total Commuter Connections service area has approximately 10 million residents.

### **Program Background**

Commuter Connections is a continuing commuter assistance program for the Washington region which encourages commuters to use alternatives to driving alone in a private automobile, including ridesharing, transit, telecommuting, bicycling, and walking. The program has evolved and expanded over the past four decades following its inception in 1974 as the Commuter Club. In the mid-1980s, in an effort to better share regional ridesharing information the Commuter Club was expanded into the Ride Finders Network, which included Alexandria, Fairfax County, Montgomery County, Prince William County and the Northern Virginia Transportation Commission. By 1996, after steady growth in both size and strength, the Ride Finders Network became Commuter Connections, the commuter transportation network serving the Washington metropolitan region, encompassing twelve counties, four cities, and eight federal agencies. The Commuter Operations Center component of the current Commuter Connections Program



represents the evolution of the earlier Commuter Club and Ride Finders Network programs.

In the mid-1990s, several new elements were added to the Commuter Connections Program as Transportation Emissions Reduction Measures (TERMs) to help meet regional air quality conformity requirements. All of these measures were designed to produce specific reductions in Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NOx) by reducing vehicle trips and vehicle miles of travel associated with commuting. The measures were developed by the Travel Management Subcommittee of the TPB Technical Committee, and adopted into the regional Transportation Improvement Program (TIP) by the Transportation Planning Board (TPB). These measures were funded jointly by the District of Columbia, Maryland, and Virginia Departments of Transportation, with some variation in funding shares for the different measures.

<u>Measure</u>	<u>Date Implemented</u>
Commuter Operations Center	1974
Metropolitan Washington	
Telework Resource Center	1996
Integrated Ridesharing	1996
Employer Outreach	1997
Guaranteed Ride Home	1997
Employer Outreach for Bicycling	1998
Mass Marketing of Alternative Commute Options	2003
GRH Baltimore	2010

As the program elements shown above were implemented, their performance was evaluated over time. In FY 2006, the measures were revised to focus resources on the most effective program components. The total daily impacts of the Commuter Connections program were calculated in FY 2014 to be:

	<u>Daily Impacts</u>
VT Reductions:	132,000
VMT Reductions:	2,500,000
NOx Reductions (Tons):	1.0
VOC Reductions (Tons):	0.5
	<u>Annual Impacts</u>
PM 2.5 Reductions (Tons)	12
PM 2.5 Precursor NOx Reductions (Tons)	280
CO2 Reductions (Tons)	262,000

Extensive monitoring and evaluation have been carried out for the Commuter Connections Program over the past several years, and comprehensive data sets are available for reviewing the performance of individual program elements and identifying areas for both strengthening the performance of the program and streamlining the oversight and management procedures. The Program has been shown through the FY 2012 – 2014 TERM Analysis Report to be a highly cost-effective way to reduce vehicle trips (VT), vehicle miles of travel (VMT), and vehicle emissions associated with commuting. The following overall cost-effectiveness measures for the Commuter Connections Program are based on the results of the FY 2012 – 2014 TERM Analysis Report that

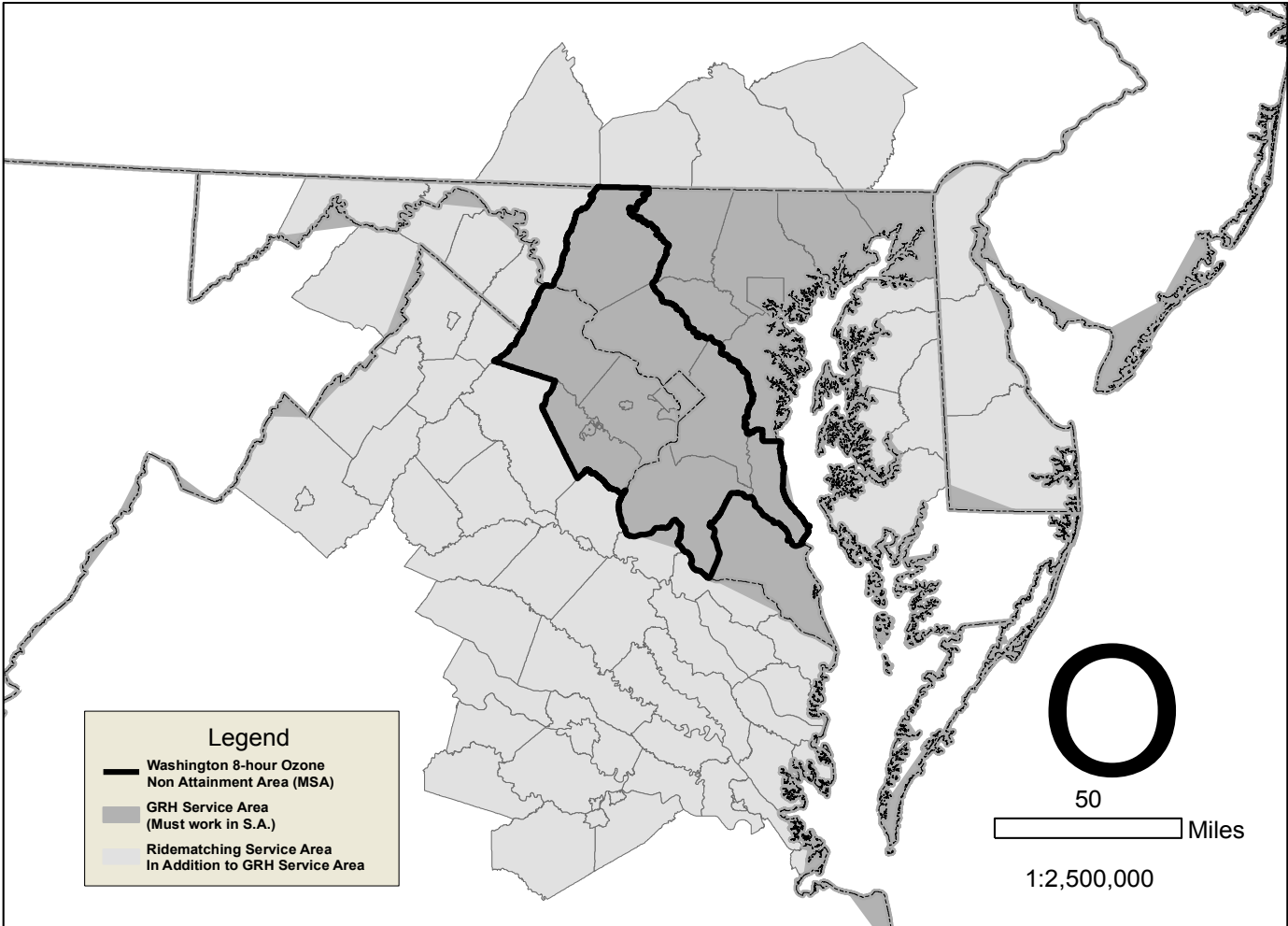
was released on November 18, 2014:

<b><u>Daily Impacts</u></b>	
Cost per VT reduced:	\$0.16
Cost per VMT reduced:	\$0.01
Cost per ton of NOx reduced:	\$20,000
Cost per ton of VOC reduced:	\$41,000

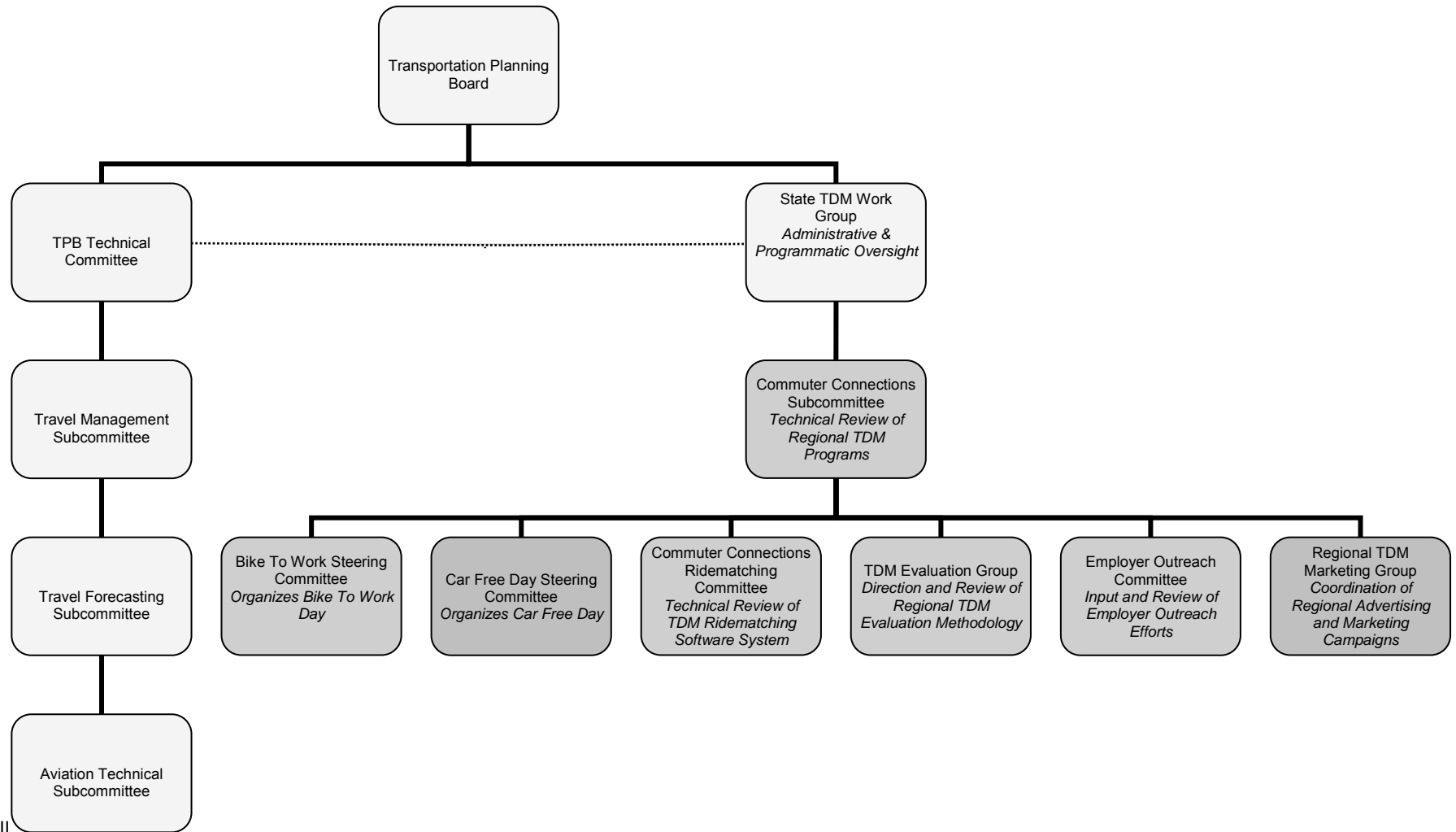
<b><u>Annual Impacts</u></b>	
Cost Per PM 2.5 Reduced	\$461,000
Cost per PM 2.5 Precursor NOx Reduced	\$ 19,000
Cost per CO2 Reduced	\$ 21

The Commuter Connections Program is generally regarded as among the most effective commuter assistance programs in the nation in terms of reductions effected in vehicle trips and vehicle miles of travel. Existing data collected on Commuter Connections program performance has been used to refine and enhance the program and to streamline procedures for program oversight and administration.

Figure 1: Geographic Areas Serviced by Commuter Connections



**FIGURE 2: COMMUTER CONNECTIONS STRUCTURE**



**Table 1  
FY 2016 COMMUTER CONNECTIONS BUDGET AND WORK PROGRAM EXPENDITURES**

<b>WORK ACTIVITY</b>	<b>DIRECT SALARIES STAFF</b>	<b>M&amp; A 25%</b>	<b>LEAVE BENEFITS 19%</b>	<b>FRINGE BENEFITS 28%</b>	<b>INDIRECT COSTS 31 %</b>	<b>DATA &amp; PC COSTS</b>	<b>CONTRACT SERVICES</b>	<b>DIRECT COSTS</b>	<b>TOTAL</b>
<b>Commuter Operations Center</b>	\$145,711	\$36,428	\$34,606	\$60,689	\$86,004	\$89,534	\$70,000	\$17,636	\$540,608
<b>Guaranteed Ride Home</b>	\$107,614	\$26,904	\$25,558	\$44,821	\$63,518	\$6,000	\$148,000	\$308,871	\$731,286
<b>Marketing</b>	\$195,359	\$48,840	\$45,638	\$80,034	\$114,660	\$4,000	\$690,000	\$1,681,634	\$2,860,165
<b>Monitoring and Evaluation</b>	\$142,207	\$35,552	\$33,774	\$59,229	\$83,936	\$1,000	\$494,500	\$17,802	\$868,000
<b>Employer Outreach</b>	\$46,183	\$11,546	\$10,968	\$19,235	\$27,259	\$15,000	\$0	\$522,087	\$652,278
<b>GRH Baltimore</b>	\$19,383	\$4,846	\$4,603	\$8,073	\$11,440	\$0	\$59,000	\$62,655	\$170,000
<b>TOTAL</b>	\$656,457	\$164,116	\$155,147	\$272,081	\$386,817	\$115,534	\$1,461,500	\$2,610,685	\$5,822,337

**Table 2  
 COMMUTER CONNECTIONS FISCAL YEAR 2016 BUDGET  
 BY STATE FUNDING AGENCY AND PROGRAM ELEMENT**

FUNDS SOURCE	Commuter Operations Center	Guaranteed Ride Home	Marketing	Monitoring & Evaluation	Employer Outreach*	GRH Baltimore	TOTALS
District of Columbia	\$55,389	\$85,561	\$334,639	\$101,556	\$16,882	\$0	\$594,027
State of Maryland	\$212,560	\$328,347	\$1,284,214	\$389,732	\$569,695	\$170,000	\$2,954,548
Commonwealth of Virginia	\$205,459	\$317,378	\$1,241,312	\$376,712	\$65,701	\$0	\$2,206,562
Other**	\$67,200						\$67,200
<b>TOTAL</b>	<b>\$540,608</b>	<b>\$731,286</b>	<b>\$2,860,165</b>	<b>\$868,000</b>	<b>\$652,278</b>	<b>\$170,000</b>	<b>\$5,822,337</b>

\* Virginia and the District of Columbia have allocated \$755,889 dollars to local jurisdictions and contractors to implement the TERM. DC has allocated \$260,231 and Virginia has allocated \$587,666.

\*\*Software User Fees

## Detailed Task Descriptions and Cost Estimates for the FY 2016 Commuter Connections Work Program

### I. COMMUTER OPERATIONS CENTER

The Commuter Operations Center has been in existence since 1974 and provides local jurisdictions, Transportation Management Associations (TMAs), and federal government agencies a centralized database for commuting information. As part of the overall program, COG/TPB staff provides the following services:

- Ridematching coordination, training and technical assistance to local agencies;
- transportation information services to the general public;
- maintenance of the regional commuter database system hardware and software programming code; and
- data updates to software system.

The program is comprised the four project areas listed below. The total annual budget for the Commuter Operations Center regional program is \$540,608.

#### A. RIDEMATCHING COORDINATION AND TECHNICAL ASSISTANCE

Each month, COG receives several hundred applications for ridematching and transit information. More than 90% of these applications are received through the Commuter Connections Web site. COG/TPB staff reviews and processes all applications received through the Web site. Matchlists for carpool and vanpool information are sent daily by mail or email (depending on the applicant's preference). Each local Commuter Connections network member has access to the regional TDM on-line system and is notified through a customized queue when a commuter application has been entered through the Commuter Connections Web site from a commuter living in that network member's jurisdiction or in some cases; depending on the network member, it may be a commuter working in their service area. The queue serves as notification that the network member staff should take ownership of the record and follow up with the commuter to provide additional assistance, as needed. Applications received at COG through the mail or fax are forwarded to the network member serving the applicant's home jurisdiction or work jurisdiction for entry into the rideshare database.

The following local jurisdictions, transportation agencies, transportation management associations, and federal government agencies deliver ridematching and commuter assistance services through the Commuter Connections network to their residents and/or workers:

District of Columbia	Maryland	Virginia
COG/TPB	ARTMA	City of Alexandria
	Baltimore City	Arlington County

<b>District of Columbia</b>	<b>Maryland</b>	<b>Virginia</b>
	The BWI Partnership	Army National Guard Readiness Center
	Baltimore Metropolitan Council	Dulles Area Transportation Association
	Bethesda Transportation Solutions	Fairfax County
	Food and Drug Administration	George Washington Regional Commission
	Frederick County	LINK – Reston Transportation Management Association
	Harford County	Loudoun County
	Howard County	Northern Neck Planning District Commission
	Maryland Transit Administration	Northern Shenandoah Regional Valley Commission
	Montgomery County	Potomac and Rappahannock Regional Commission
	National Institutes of Health	Rappahannock – Rapidan Regional Commission
	North Bethesda Transportation Center	
	Prince George's County	
	Tri-County Council for Southern Maryland	

COG/TPB staff administers ridematching services on behalf of the District of Columbia and Arlington County. The local jurisdiction commuter assistance programs listed in Maryland and Virginia receive separate grants from the Maryland Transit Administration and the Virginia Department of Rail and Public Transportation to provide local services and to help support regional TDM program activities.

The Commuter Connections web-based TDM system includes ridematching databases from one commuter assistance program in southern Virginia and the entire state of Delaware and were incorporated into the TDM system's database to provide improved commuter ridematching through a single database for Virginia, Maryland and the District. These programs are: RideShare (serving the Charlottesville region) and Rideshare Delaware (serving the state of Delaware). The staffs from these programs and the commuters they serve have access to the TDM system for matching in carpools and vanpools and have customized access to other modules in the system such as SchoolPool and Guaranteed Ride Home. COG/TPB staff provides technical assistance to these three programs.



During FY 2015, COG/TPB staff will continue to provide technical support and training to Commuter Connections network member agencies for the regional Commuter Connections TDM software system. Staff will continue to review and distribute ridematching applications received from employers and the general public. Matchlist and renewal notice generation and distribution services will also be provided through COG. COG/TPB staff will produce network member technical assistance reports from the Commuter Connections TDM system, and provide staff support and coordination to the Commuter Connections State TDM Work Group, the Commuter Connections Subcommittee, the Commuter Connections Ridematching Committee, and to the Federal ETC Advisory Group. COG/TPB staff will also fulfill daily network member data requests. Federal Agency Employee Transportation Coordinator training will be coordinated and in some instances given by COG/TPB staff. Staff will also produce an annual Commuter Connections Work Program for FY 2017. The funding agreement between COG and the state funding agencies will continue to be reviewed for a final update and signatures during FY 2016.

COG/TPB staff will also work to expand the regional SchoolPool program so that more schools, safe routes to school coordinators and jurisdictions use the service, maintain the special events ridematching software module, and monitor the trip tracking software module and expand the use of the Commuter Challenge module.

**Cost Estimate:** \$120,268

**Products:** Database documentation of specific technical actions implemented. *(COG/TPB staff)*

Documentation of Subcommittee and Ridematching Committee meetings. *(COG/TPB staff)*

Documentation of daily technical client member support given through COG's Help Desk. *(COG/TPB staff)*

Daily matchlist generation and distribution. *(COG/TPB staff)*

TDM Web Based System Training Manual updates, as needed. *(COG/TPB staff)*

Monthly commuter renewal notices as part of the purge process. *(COG/TPB staff)*

Review and update existing Emergency Management Continuity of Operations Plan for Commuter Connections program services. *(COG/TPB staff)*

Transportation Demand Management Resources Directory update twice yearly. *(COG/TPB staff)*

Federal ETC Web site updates. *(COG/TPB staff)*

FY 2017 Commuter Connections Work Program. *(COG/TPB staff)*

**Services:**

Software client Member Help Desk technical support. *(COG/TPB staff)*

Software and customer service training, as needed. *(COG/TPB staff)*

Federal agency ETC training and support to the Federal ETC Advisory Group. *(COG/TPB staff)*

Staff the Commuter Connections Subcommittee, Ridematching Committee, and STDM Work Group *(COG/TPB Staff)*

Work with state funding agencies to review and update Funding Agreement *(COG/TPB staff in conjunction with State Funding Agencies)*

**Schedule:**

July 1, 2015 - June 30, 2016

**Oversight:**

Ridematching Committee

- Communicate Technical Support Issues
- Share knowledge and experience on “Hot Topic” Issues
- Provide input and feedback on Software Technical Policies (i.e. purge process, Help Desk)
- Provide requests for software training

Commuter Connections Subcommittee

- Provide input and comments to FY 2017 CCWP
- Provide input and feedback on all programs and projects in CCWP

STDM Work Group

- Provide input and comments to FY 2017 CCWP
- Provide input, feedback and approval on all programs and projects in CCWP
- Review and provides updates, if needed, to Funding Agreement

B. TRANSPORTATION INFORMATION SERVICES

COG has provided transportation information services for 40 years in the Washington Metropolitan region. The Commuter Operations Center provides basic carpool/vanpool, transit, telecommuting, bicycling, and walking information. Specialized transportation information is also provided in support of Bike to Work Day, Car Free Day, Air Quality Action Days, Job Access Reverse Commute, SchoolPool, Special Events, Commuter Challenge, Bulletin Board and other regional commuter service programs.

COG staffs the regional commute information telephone number 1-800-745-RIDE. Calls received at COG are transferred to the local Commuter Connections network member site (based on jurisdiction of residence or in some cases work location of the caller) where applicable. COG/TPB staff provides transportation information services to those commuters who cannot be assigned to a client member site, including residents of the District of Columbia. COG receives several hundred calls per week through the 800 number. COG staff also responds to daily requests and questions received by email.

During FY 2016, COG/TPB staff will continue to provide traveler information on alternatives to driving alone to the general public by telephone, Web site, electronically, and through printed information. Staff will continue processing applications from the general public and/or from Commuter Connections network members who request the service on a permanent or temporary basis based on information requests received. COG/TPB staff will answer the regional "800" telephone line, TDD line, and respond to e-mails on information requests from the Commuter Connections TDM system Web service.

**Cost Estimate:** \$90,728

**Products:** Provide commuter traveler information on alternatives to driving alone to the general public through the Web site, electronically, or through printed information.  
(COG/TPB staff)

**Services:** Provide commuter traveler information on alternatives to driving alone to the general public by telephone.  
(COG/TPB staff)

Process applications from the general public.  
(COG/TPB staff)

Answer and respond to commuter calls from the regional "800" Commuter Connections line and COG TDD line. (COG/TPB staff)

Respond to commuter e-mails from the Commuter Connections TDM Web service. (COG/TPB staff)

Provide general public customer service. (COG/TPB staff)

**Schedule:** July 1, 2015 - June 30, 2016

**Oversight:** Ridematching Committee

- Provide input and feedback to information services policies and procedures.

C. TRANSPORTATION INFORMATION SOFTWARE, HARDWARE, AND DATABASE MAINTENANCE

The regional Transportation Demand Management (TDM) software system is provided as a regional database resource with secure online access to nearly 30 commuter assistance programs that include local rideshare agencies, Transportation Management Associations, and federal government agencies. The commuter assistance programs use the TDM software system to service their local commuters' transportation needs for alternative commuting information.

This project includes the daily routine monitoring and maintenance of the TDM software system as well as the hosting of the on-line system through COG's data center. Tasks include: daily backup of the TDM database, maintenance of the TDM Web system servers, contingency management services, Windows support to TDM Oracle database and to virtual web server, oracle database administration and support, documentation of system and system changes, Storage Area Network (SAN) connectivity and maintenance, and the maintenance and replacement of hardware as needed.

This project will also include ongoing software code upgrades to the Web-based TDM system. Changes made to the software code will be reflected in a responsive web design format in order to be displayed on smart phone devices such as Android, Blackberry, and iPhone. Access to specific system modules will be provided through a mobile application.

**Cost Estimate:** \$273,624  
**Consultant Costs as Part of Estimate:** \$ 70,000  
*(Maintenance Contracts/Software)*

**Services:** Provide daily routine monitoring and maintenance of the TDM system and database for approximately 30 commuter assistance programs. *(COG/TPB staff)*

Maintain and update TDM system servers, software programming code, and web hosting. *(COG/TPB staff in consultation with contractor).*

**Schedule:** July 1, 2015- June 30, 2016

**Oversight:** Ridematching Committee

- Provide input and feedback to TDM system maintenance policies.
- Provide recommendations for TDM Web based system software code upgrades.

#### D. COMMUTER INFORMATION SYSTEM

The Commuter Information System project provides the TDM system with a GIS based information system that includes transit stop data, telework center locations, park and ride lot locations, and bicycling information as part of the ridematching functionality.

During FY 2016, COG/TPB staff will continue integration activities of new transit, telework center, park and ride lot, and bicycle route data into the TDM system server. Staff will also continue to obtain updated transit data, street centerline information and park-and-ride lot data from local jurisdictions and transit properties and reformat this data as necessary to the proper GIS format for use on the regional TDM system. Updates to the park-and-ride and telework center datasets for use on the TDM system will continue as will updates to the interactive GIS-based Web site application to include updated local and regional information for 11,000 plus transit, telework center, park-and-ride lots, and bicycle lanes/paths records. The bicycle routing module will also be updated to reflect any new and/or expanded bicycle paths and/or trails.

**Cost Estimate:** \$55,988

**Services:** Update local and regional information for transit, telework center locations, park and ride lots, and bicycle route information which will be used in the TDM Web system. *(COG/TPB staff)*

**Schedule:** July 1, 2015 - June 30, 2016

**Oversight:**

Ridematching Committee

- Provide input into data source updates for TDM web based system.

**II. REGIONAL GUARANTEED RIDE HOME PROGRAM**

The regional Guaranteed Ride Home (GRH) program eliminates a major barrier to using transit, carpooling, vanpooling, bicycling or walking to work. Studies have shown that a commuter’s fear of being “stranded” at work if they or a family member become ill, or if they must work unexpected overtime, is one of the most compelling reasons commuters do not rideshare or use transit to travel to work. The regional GRH program eliminates this barrier by providing a free ride home in the event of an unexpected personal emergency or unscheduled overtime. The GRH program’s free ride home is offered only to commuters that carpool, vanpool, use transit, bicycle, or walk to work at least two days per work week. As a result of the GRH program, some single occupant vehicle drivers will switch to a ridesharing or transit commuting alternative, and current ridesharing and transit users will increase the usage of these alternative commute modes. The GRH program is an insurance program for those commuters who do not drive alone to their worksite.

The Guaranteed Ride Home program is a regional program and consists of the project area previously outlined in Figure 1. The annual budget for the Guaranteed Ride Home program for the two project areas outlined below is \$731,286.

**A. GENERAL OPERATIONS AND MAINTENANCE**

COG/TPB staff processes all GRH applications received through the Commuter Connections web-based TDM software system, or by mail or fax. Using the web based TDM system, COG/TPB staff registers qualifying applicants, produces GRH registration ID cards, and sends ID card and participation guidelines to new registrants. Commuters can obtain information about the GRH program and complete an application on the Commuter Connections Web site, [www.commuterconnections.org](http://www.commuterconnections.org). Commuters may also call COG’s Commuter Connections 800 telephone number, 1-800-745-RIDE, to ask questions about the GRH program and/or request information and an application. The 800 number is equipped with a menu so that callers can choose the menu item that best fits their needs. All GRH questions and requests for information and applications are taken by COG/TPB staff.

COG/TPB staff also mails GRH applications to GRH users who have used the GRH program without formally registering. GRH guidelines permit a commuter to use the GRH service one time as a “one-time exception” before they register. Also, COG/TPB staff mails transit vouchers to GRH users who used transit as part of their GRH trip. All vouchers and invoices from transportation service providers are processed by COG/TPB staff.

In the event the commuter has not supplied an e-mail address, COG/TPB staff mails a re-registration notice to commuters who could not be contacted by telephone. The notice contains an application which the commuter can complete and send to COG to re-register. The commuter can also call Commuter Connections or visit the Commuter Connections Web site to re-register.

During FY 2016, staff will assist the Commuter Connections Subcommittee in reviewing the GRH participation guidelines for any recommended changes. These recommendations will be presented to the Commuter Connections Subcommittee for their final review and approval. In the past, recommendations have been made to modify and add participation guidelines to better convey the GRH trip authorization, GRH re-registration, and one-time exception rules and restrictions.

COG/TPB staff will continue to respond to the general public and to GRH applicants for registrations and re-registrations to the program. Registered commuters will be notified when their GRH registration is about to expire. Staff will continue to prepare and send new and re-registration GRH ID cards, registration letters, and participation guidelines on a weekly basis. Staff will also continue to monitor and maintain the GRH applicant database and server. COG/TPB staff will continue to update and maintain program participation guidelines, and provide annual customer service training to the daily operations contractor and COG/TPB staff assigned to the project.

**Cost Estimate:** \$215,982

**Direct Costs (Telephone, Copies, etc) as Part of Estimate: \$26,843**

**Products:** GRH new and re-registration ID cards and registration letters  
(COG/TPB staff)

GRH Program participation guidelines. (COG/TPB staff)

**Services:** Process application requests from the general public for registration and re-registration to the program. (COG/TPB staff)

Notify commuters when registration is about to expire.  
(COG/TPB staff)

Monitor and update GRH applicant database. (COG/TPB staff)

**Schedule:** July 1, 2015 - June 30, 2016

**Oversight:** Commuter Connections Subcommittee

- Provide input and feedback on GRH program participation guidelines and policies.

**B. PROCESS TRIP REQUESTS AND PROVIDE TRIPS**

GRH transportation service is provided by several taxi companies, a rental car company, and a paratransit company, all under contract with COG. Commuters make their GRH trip request through a menu option provided on COG’s Commuter Connections 800 telephone number. This menu option transfers calls for GRH trips directly to an operations contractor. This contractor reviews and assesses the trip request and approves or denies the request based on the GRH Participation Guidelines. The contractor then arranges the approved trips with the appropriate transportation providers. If a trip request is denied, the commuter is offered an arranged trip at their own expense.

During FY 2016, COG/TPB staff will continue management and monitoring of contract services for day-to-day operations services. Day to day operations include confirming ride request eligibility; dispatching rides through the ten ride service providers; tracking ride requests in the GRH database; and processing invoices for payment for ride service providers, the daily operations contractor and for the general public for transit vouchers.

Customer service training will be provided to all Guaranteed Ride Home call center agents.

**Cost Estimate:** \$515,304

***Consultant/Contractor Costs as Part of Estimate:***

<i>(Daily Operations)</i>	\$148,000
<i>(Cab and Car Rental Companies)</i>	\$285,000

**Services:**

Process GRH trip requests, approve/deny requests, and arrange rides. *(Daily Operations Contractor)*

Management and monitoring of contract services for day-to-day operations and ten cab and car rental ride service providers. This includes processing invoices for payment for contractors and for the general public for transit vouchers. *(COG/TPB staff)*

Customer service training for GRH call center agents. *(COG/TPB Staff)*

Provide GRH Rides *(Cab and Car Rental Companies)*



**Schedule:** July 1, 2015 - June 30, 2016

**Oversight:** Commuter Connections Subcommittee

- Provide input and feedback on GRH program operations.

### **III. MARKETING**

The Marketing program delivers a “brand promise” for Commuter Connections as an umbrella solution for commuters seeking alternative commuting options within the region through regional marketing campaigns and special events and initiatives. The use of media and other forms of communication at high reach and frequency levels are used to communicate the benefits of alternative commute methods to Single Occupant Vehicle (SOV) commuters most likely to shift to non-SOV travel.

Marketing is a regional program and consists of five project areas listed below. The total annual project cost for the program tasks is \$2,869,165.

#### **A. TDM MARKETING AND ADVERTISING**

Regional TDM marketing campaigns aim to encourage both current SOV and non-SOV populations to either start or to continue using alternative transportation modes for commuting. Regional TDM marketing campaigns complement other on-going Commuter Connections program services that have been implemented in the region by increasing their overall efficiency and effectiveness.

Commuter Connections regional marketing campaigns may include, but are not limited in the use of direct mail to households and employers, radio, television, Web site advertisements and banner ads, phone book advertising, keyword search engine sponsorships, bus and rail advertising, and special event advertising. COG/TPB staff and its network members may also participate in promotions at employment sites and special events.

The overall objective of the project will be to continue to brand Commuter Connections and to meet the Mass Marketing TERM impact goals. A marketing/advertising/public relations contractor will be used to produce and execute the creative, copywriting, and earned media (public relations) plan.

The marketing/advertising/public relations contractor provides expertise to develop the regional marketing campaign. The program builds upon current regional TDM marketing efforts by local, state, and regional agencies to establish a coordinated and continuous year round marketing effort for regional TDM programs. Partnerships between COG and area transit agencies have been established and are maintained to enable the promotion of incentives such as the GRH program to transit riders. COG has also partnered with local jurisdictions to promote various program services through value

added media opportunities.

A Marketing Communications Plan and Schedule is issued within the first quarter of the fiscal year that will outline the overall marketing strategy to be used for marketing campaign. Input on this plan will be provided by the state funding agencies and the Regional TDM Marketing Group members. A Marketing Planning Workgroup will then be formed provide input to the detailed creative development of the regional marketing campaigns. Campaign summary documents will be produced that will outline campaign specifics such as direct mail distribution points (i.e. zip codes), radio stations used, etc.

COG/TPB staff will update and implement a public relations plan and continuously update the SharePoint site for posting marketing and advertising materials for review by the regional Marketing Planning Workgroup members. An outbound email box has also been established at [docomments@mwcoq.org](mailto:docomments@mwcoq.org) for communications on reports and other work program products that require feedback by Commuter Connections committee groups.

A regional commute alternatives newsletter, *Commuter Connections*, will be published quarterly and distributed to several thousand employers. The focus of the newsletter is on federal, state, regional and local information and/or ideas employers can use to either start, expand or maintain employer-based commute benefit programs. In addition, COG/TPB staff works with the General Services Administration to produce a quarterly Employee Transportation Coordinator (ETC) newsletter insertion into the Commuter Connections newsletter, for distribution to more than 100 Federal ETC's.

COG/TPB staff will continue to maintain and update all Commuter Connections collateral materials and Web based information. The regional Resource Guide and Strategic Marketing Plan will also be updated with input from member agencies.

**Cost Estimate:** \$2,309,998

***Consultant/Contractor Costs as Part of Estimate:***

<i>(Advertising and Marketing Contractor)</i>	\$ 500,000
<i>(Media Buy)</i>	\$1,100,000
<i>(Postage/Printing)</i>	\$ 278,286

**Products:** SharePoint postings for marketing and advertising materials for review by workgroup members and all other Commuter Connections committees. *(COG/TPB staff)*

Earned media plan. *(COG/TPB staff in conjunction with consultant)*

Quarterly employer newsletter and Federal agency Employee Transportation Coordinator newsletter. *(COG/TPB staff in conjunction with consultant)*

Mass Marketing material updates and re-prints. *(COG/TPB staff in conjunction with consultant)*

Commuter Connections Web Site updates. *(COG/TPB staff in consultation with consultant as needed)*

Creative materials for regional TDM marketing campaigns. *(COG/TPB staff in conjunction with consultant)*

Bus and rail advertising development and placement. *(COG/TPB staff in conjunction with consultant)*

Special event advertising development and placement. *(COG/TPB staff in conjunction with consultant)*

Marketing Communications Plan and schedule. *(COG/TPB staff in conjunction with consultant)*

2015 Strategic Marketing Plan and Resource Guide. *(COG/TPB staff in conjunction with consultant)*

1<sup>st</sup> Half of the Fiscal Year Regional TDM Marketing Campaign Summary Document. *(COG/TPB staff in conjunction with consultant)*

2<sup>nd</sup> Half of the Fiscal Year Regional TDM Marketing Campaign Summary Document. *(COG/TPB staff in conjunction with consultant)*

**Services:**

Placement of advertisements including, but not limited to: Web site advertisement through banner ads, placement of keyword search engine sponsorships, radio, print, and television, as needed. *(Consultant)*

Placement of advertisements in printed and electronic telephone directories. *(COG/TPB staff)*

Staff the Regional TDM Marketing Group. *(COG/TPB staff)*

Track the effectiveness of advertising campaigns through call volumes and internet hits. *(COG/TPB staff)*

Process media placement invoices. *(COG/TPB staff)*

Monitor and adjust the implementation of regional marketing campaigns. *(COG/TPB staff)*

Attend and participate in commuter promotional events and special events, as needed. *(COG/TPB staff)*

Management and oversight of marketing contract. *(COG/TPB staff)*

**Schedule:**

July 1, 2015 - June 30, 2016

Marketing Communications Plan and Schedule: September 2015

2015 Strategic Marketing Plan and Resource Guide: December 2015

1<sup>st</sup> Half of the Fiscal Year Regional TDM Marketing Campaign Summary Document: December 2015

2<sup>nd</sup> Half of the Fiscal Year Regional TDM Marketing Campaign Summary Document: June 2016

**Oversight:**

Regional TDM Marketing Group

- Provide input and feedback on marketing plan, collateral materials, and recommendations made by the Marketing Planning Work Group.
- Provide information on current regional TDM marketing efforts by local, state, and regional agencies to establish and coordinate continuous year round marketing for regional TDM.

**B. BIKE TO WORK DAY**

A major marketing activity is the annual Bike to Work day event. Participation in this

event has grown steadily each year and includes bicyclists from all jurisdictions in the region. This event is co-sponsored by the Washington Area Bicyclists Association (WABA) and is supported by COG/TPB staff, the state funding agencies and local jurisdictions, and individual sponsoring companies and organizations. Some of the costs of the event are off-set by business and interest-group sponsors who receive publicity for their financial support.

Commuter Connections participation in Bike to Work day includes support for the planning and promotion of the event, the maintenance and management of the event web sites, and assistance at the various “pit stops” on the day of the event, development of promotional materials and advertising, and earned media. An “Employer Challenge” is also held which identifies the top five employers with the most registered participants in the event. A drawing is then held with the five employers to select a winner. The winning employers’ registered participants receive a free lunch event sponsored by Commuter Connections.

COG/TPB staff will continue to support and implement a regional Bike To Work Day event and promote the event to employers. This will be accomplished through management and oversight of the event web site, media placements and marketing coordination activities with the marketing/advertising/public relations contractor.

**Cost Estimate:** \$170,990

***Consultant/Contractor Costs as Part of Estimate:***

<i>(Advertising and Marketing Contractor)</i>	\$ 75,000
<i>(Media Buy)</i>	\$ 55,000
<i>(Postage/Printing)</i>	\$ 11,523

**Products:** Earned media plan. *(COG/TPB staff in conjunction with consultant)*

Creative materials for Bike To Work Day Event which may include, but is not limited to logo update, poster, take-away brochure, transit signage, t-shirts, custom banners for each pit stop, radio ad, writing copy for live radio reads, print ad, internet ads, HTML e-mail blasts, and public service announcements. *(COG/TPB staff in conjunction with consultant)*

Regional Proclamation. *(COG/TPB staff)*

**Services:** Coordinate regional pit stops for Bike To Work Day event in May 2016. *(COG/TPB staff)*

Coordination and management of event web site *(COG/TPB staff in conjunction with WABA staff and*

*consultant)*

Design and distribute event collateral materials to employers and the general public. *(COG/TPB staff in conjunction with consultant).*

Placement of advertisements; including, but not limited to: Web site advertisement through banner ads, placement of keyword search engine sponsorships, radio, and print, as needed. Activities include negotiation of value-added media.  
*(Consultant)*

Solicitation of corporate sponsors. *(COG/TPB staff in conjunction with consultant).*

Media outreach and coordination of interviews.  
*(COG/TPB staff in conjunction with consultant)*

Coordination of Employer Challenge. *(COG/TPB staff)*

Process media placement invoices. *(COG/TPB staff)*

Management and oversight of marketing contract.  
*(COG/TPB staff)*

Staff regional Bike To Work Day Steering Committee.  
*(COG/TPB staff)*

**Schedule:** July 1, 2015 - June 30, 2016

**Oversight:** Bike To Work Day

- Provide input and feedback on marketing collateral materials, radio advertisements and event logistics.

### C. EMPLOYER RECOGNITION AWARDS

COG/TPB staff will coordinate the annual Commuter Connections Employer Recognition Awards for employers showing commitment towards voluntarily implementing commute alternative programs and telecommuting at their respective worksite(s). COG/TPB staff will also explore additional public relations opportunities for the award winning agencies to be profiled or highlighted. During FY 2009, a review of the program occurred and recommended changes that were adopted were implemented during FY 2010. An Employer Recognition Awards work group will continue to provide

input to the collateral material developed for the award.

Coordination activities will include developing and distributing an awards nomination packet and soliciting nominations from employers through local jurisdictions, Chambers of Commerce and from the employers themselves. Staff will also work with the marketing contractor to review and classify the award submissions. A selection committee of objective transportation industry professionals will be recruited for the awards selection committee. The selection committee will be chaired by a member of the TPB.

The marketing contractor will work with COG/TPB staff to validate nomination entries and obtain and clarification needed from nominees. The marketing contractor will facilitate the selection committee process. Once the selection committee makes its recommendations, the award winners will be notified and a short video will be produced on each winning category. An awards booklet, giveaway, and short video briefs of each of the award winners will be produced for the awards ceremony. The awards ceremony will be held towards the end of the fiscal year. Staff will coordinate all logistics for the event including, but not limited to: securing speakers, writing remarks, securing event venue, and staffing the event. Additionally, COG's Office of Public Affairs along with the marketing contractor will identify media opportunities to highlight the winners.

**Cost Estimate:** \$109,127

***Consultant/Contractor Costs as Part of Estimate:***

<i>(Advertising and Marketing Contractor)</i>	\$65,000
<i>(Media Buy)</i>	\$ 7,500
<i>(Postage/Printing/Video)</i>	\$20,500

**Products:**

Awards nomination packet. *(COG/TPB staff in conjunction with consultant).*

Awards invitations *(COG/TPB staff in conjunction with consultant).*

Awards Booklet. *(COG/TPB staff in conjunction with consultant).*

Award Trophies. *(COG/TPB staff)*

Giveaway Item. *(COG/TPB staff in conjunction with consultant).*

Video Briefs. *(COG/TPB staff in conjunction with consultant).*

Event Photos. *(Consultant)*

	Print Ad. <i>(Consultant in conjunction with COG/TPB staff)</i>
<b>Services:</b>	Coordinate award submissions with local jurisdictions. <i>(COG/TPB staff)</i>
	Coordinate logistics for awards selection committee. <i>(COG/TPB staff in conjunction with consultant)</i>
	Facilitate selection committee meeting <i>(Consultant)</i>
	Identify and coordinate earned media opportunities. <i>(COG/TPB staff in conjunction with consultant)</i>
	Placement of print ad. <i>(Consultant)</i>
	Process media placement invoices. <i>(COG/TPB staff)</i>
	Coordinate event logistics including recruitment of speakers, writing speaker remarks, securing event venue, and staffing the event. <i>(COG/TPB staff)</i>
	Management and oversight of marketing contract. <i>(COG/TPB staff)</i>
<b>Schedule:</b>	July 1, 2015 - June 30, 2016
<b>Oversight:</b>	Commuter Connections Subcommittee <ul style="list-style-type: none"> <li>• Provide input and feedback on project and recommendations made by Employer Recognition Awards work group.</li> </ul>

#### D. 'POOL REWARDS

During FY 2009 COG/TPB staff issued a report on the feasibility of conducting a carpool incentive demonstration project called 'Pool Rewards. The carpool incentive demonstration project was launched in FY 2010 and was evaluated in FY 2014. The purpose of the carpool incentive demonstration project was to recruit and retain commuters in a carpool through cash or other incentives. Similar programs are in operation in major metropolitan areas such as Los Angeles and Atlanta. Research has shown that commuters who are paid to carpool tend to stay in a carpooling arrangement longer than those carpoolers who are not paid. Commuters who currently take transit or a vanpool to work are eligible to receive \$130 per month under the IRS Qualified Transportation Fringe



benefit provisions. Carpoolers are not eligible to participate. This type of a program has been used in a limited fashion in the Washington metropolitan region during large-scale construction projects such as the Wilson Bridge where the program was named “Bridge Bucks.” The program proved to be extremely successful in convincing commuters to use an alternative form of transportation other than driving alone during the construction period.

During FY 2009, a demonstration program began operations in the following corridors: 1) I-495 from Bethesda to Tyson’s Corner, 2) I-495 from MD-295 (BW Parkway) to I-270; and 3) I-395 from Washington DC into Northern Virginia. The program guidelines and implementation plans for each of these corridors were developed by a work group in FY 2009 and were deployed as part of the pilot project. The duration of the financial incentive for the three recommended corridors was for three months for participating commuters. During the course of the demonstration project in FY 2010, the corridor restrictions were lifted in March 2010 due to low participation rates.

An evaluation report was developed under the guidance of the State TDM Work Group and the TDM Evaluation Group. Based on the demonstration project results, the STDM Work Group determined the program’s continuation beginning in FY 2011 along with changes to program guidelines and the ‘Pool Rewards software module. After measuring the benefits produced from the carpool financial incentive program, comparisons were made from the expected outcomes to the actual outcomes in terms of auto occupancy and vehicle miles of travel, vehicle trips reduced and emission impacts. A follow-up survey conducted in FY 2011 of the original demonstration project participants showed a 93% carpool retention rate of all participants. A survey of new participants was conducted in FY 2011 and showed that 98% of the program participants planned to carpool after the incentive had ended. A survey of all program participants that had completed the program and were paid was conducted in FY 2014 and results showed a 55% carpool/vanpool retention rate. Continued evaluation will be conducted in order to adjust program guidelines and documentation of program participation from the user’s end. Results from the FY 2014 survey were used to adjust the program budget.

The current carpool incentive allows each participating carpooler to earn up to \$130 over a 90 day time frame through a trip-tracking process. In FY 2012 the ‘Pool Rewards program was expanded to include vanpools. Newly formed vanpools that originate in either the District of Columbia or in Maryland whose destination is in the Washington DC non-attainment region will be eligible to participate. Third-party vanpool providers on contract with COG/TPB provide the vanpool service and each of the ‘Pool Rewards eligible vanpools receive an on-going \$200 per month incentive. COG/TPB staff worked with WMATA to develop a monthly mileage reporting system for the Federal Transit Administration’s (FTA’s) National Transit Database. There will also be continued coordination with Virginia’s new incentive vanpool program.

In FY 2016, advertising materials will be updated along with on-line advertising as a way to entice additional project participants.

**Cost Estimate:**

**\$170,225**

**Consultant/Incentive Costs as Part of Estimate:**

(Advertising and Marketing Contractor)	\$ 20,000
(Media Buy)	\$ 50,000
(Pool Rewards Incentive Payments)	\$15,000 (carpools)
	\$45,000 (vanpools)

<b>Products:</b>	Marketing materials. (COG/TPB staff in conjunction with consultant)
<b>Services:</b>	Operation of 'Pool Rewards program which includes registering and verifying participants, monitoring trip logs, supervisor verification, and payments to program participants. (COG/TPB staff)
	Media Placements. (Consultant)
	Process media placement invoices. (COG/TPB staff)
	Management and oversight of marketing contract. (COG/TPB staff)
<b>Schedule:</b>	July 1, 2015 - June 30, 2016
<b>Oversight:</b>	Commuter Connections Subcommittee <ul style="list-style-type: none"><li>• Provide input and feedback on project recommendations for program continuation and/or expansion.</li></ul>

**E. CAR-FREE DAY**

During FY 2015, COG/TPB staff will coordinate with local jurisdictions to implement the regional Car Free Day campaign that will encourage residents to leave their cars behind or to take alternative forms of transportation such as public transit, carpools, vanpools, telework, bicycling or walking.

Car Free Day was first held in FY 2009. In FY 2012, evaluation results showed that there were over 11,700 individuals that pledged to go "car-free" for this event, a 70% increase over the previous year. In addition, there were approximately 5,500 vehicle trips reduced and 272,000 vehicle miles of travel reduced as a result of participation in this event. During FY 2013, the event was held on a Saturday and the participation rate was about half of that in FY 2012 (6,572 pledges). In FY 2014, the event date fell on a Sunday; however the region expanded the event to Car Free Days to include Friday and Saturday; however the participation rate fell sharply to 4,168. In FY 2015, pledges climbed back up to 4,656, a 13% increase over FY 2014.

This event will be held on September 22<sup>nd</sup> and is in tandem with the World Car Free Day event. In FY 2016, the event will fall on a weekday which will should attract additional participation. A marketing campaign along with public outreach efforts will be developed to coincide with this worldwide celebrated event.

<b>Cost Estimate:</b>	\$99,825
<b>Consultant/Contractor Costs as Part of Estimate:</b>	
(Advertising and Marketing Contractor)	\$ 30,000
(Media Buy)	\$ 45,000
(Postage/Printing)	\$ 16,250

**Products:** Marketing collateral which can include, but is not limited to development and printing of posters, transit signage, bus shelter signage and other related advertising collateral that will need to be printed. *(COG/TPB staff in conjunction with consultant)*

Development and production of radio ad, internet ads, and text messages, and HTML e-mail blasts. *(COG/TPB staff in conjunction with consultant)*

Earned media plan development and implementation. *(COG/TPB staff in conjunction with consultant)*

Update of Web site and social media. *(COG/TPB staff in conjunction with consultant)*

**Services:** Implement regional Car Free Day event prior to and after Monday, September 22, 2015 and promote event to the general public, employers and to the media. *(COG/TPB staff in conjunction with consultant )*.

Media Placements, including the negotiation of value-added placements. *(Consultant)*

Process media placement invoices. *(COG/TPB staff)*

Staff regional Car Free Day Steering Committee. *(COG/TPB staff)*

Management and oversight of marketing contract. *(COG/TPB staff)*

**Schedule:** July 1, 2015 - June 30, 2016

**Oversight:**

Car Free Day Steering Committee

- Provide input and feedback on marketing collateral materials, radio advertisements and event logistics.

#### **IV. MONITORING AND EVALUATION**

The Monitoring and Evaluation program will provide overall program and individual project results when appropriate for the various projects in the CCWP that will be used to track progress for the regionally adopted Transportation Emission Reduction Measures (TERMS). One project will solely focus on those activities directly related to data collection and analysis for the TERMS. Data collection and analysis for the TERMS occurs over a three year period. Results from this project will directly impact the FY 2015 – FY 2017 TERM Analysis report for Commuter Connections and the final results will be used to update the regional TERM Tracking Sheet. Cost effectiveness results are also calculated every three years. Impact and cost effectiveness results will also be used by the State TDM Work Group to make any necessary recommendations for changes to the TERMS being operated through Commuter Connections.

The second project area will include the ongoing tracking and monitoring activities for each of the CCWP program areas, including the Commuter Operations Center, Guaranteed Ride Home, Employer Outreach, and Marketing. A direct customer satisfaction survey will be performed to gauge the level of satisfaction for Guaranteed Ride Home. Monthly data collection and quarterly progress reports and an annual progress report will also be produced by COG/TPB staff.

The Monitoring and Evaluation program is a regional program and consists of the two project areas outlined below. The total annual project cost for the program tasks is \$868,000.

##### **A. TERM DATA COLLECTION AND ANALYSIS**

Data collection analysis for the Commuter Connections TERMS occurs over a three year period. The current cycle began in FY 2015 (July 1, 2014) and will conclude in FY 2017 (June 30, 2017). During FY 2015, the previous data collection cycle's TERM Analysis Report was finalized and published and the Placement Rate Study for the new data collection period was completed. In FY 2016, the Framework Methodology Document will be updated and published, and data collection activities will occur for the 2016 State of the Commute Report and 2016 GRH Applicant Survey. Draft Technical reports will be produced for both data collection activities. Retention rate surveys will also be conducted for Commuter Connections applicants and Guaranteed Ride Home applicants. During FY 2017, the final year in the data collection cycle, COG/TPB staff will conduct an evaluation of the regional Employer Outreach database as specified in the FY 2015–2017 TDM Evaluation Framework Methodology Document. An employer telework survey will also be conducted to gauge the effectiveness of assistance provided to employers to start and expand a telework program in Maryland. A Bike To Work Day survey of the FY 2016 program participants will be conducted and the 2016

State of the Commute Survey Technical Report will be finalized and a general public report will be prepared for printing. The 2016 Guaranteed Ride Home Applicant Survey Report will be finalized. The draft FY 2017 TERM Analysis report will also be prepared and a Retention Rate survey will be conducted as part of the Applicant Placement Rate Study..

During FY 2016, COG/TPB staff will work to update the FY 2015–FY 2017 TDM Evaluation Framework Methodology document. The TDM Evaluation Framework Methodology document is used as the “blueprint” in data collection activities for the three year Commuter Connections TERM Evaluation cycle and also provides the methodology used to calculate Commuter Connections program benefits. Updating this document will also provide an opportunity to re-visit program goals for each of the Commuter Connections TERMS relevant to recent impact and cost effectiveness data released in the FY 2012-FY2015 TERM Analysis report.

The 2016 State of the Commute Survey will also be designed and implemented as it is conducted every three years. The purpose of the State of the Commute report is to document trends in commuting behavior, such as commute mode shares and distance traveled, and prevalent attitudes about specific transportation services, such as public transportation, that are available in the region. The State of the Commute Survey is also used to help estimate the congestion and air quality impacts of Commuter Connections. The survey instrument used for data collection activities will be reviewed and updated accordingly, data collection activities will occur and a draft Technical Report will be produced. Results from the survey will be used in the FY 2015–2017 TERM Analysis report and will then be incorporated into the TPB’s regional TERM report.

COG/TPB staff will also be updating the survey instrument design for the in-depth Guaranteed Ride Home (GRH) Applicant survey. This survey is conducted every three years to assess the mode shift changes of 1,000 GRH program applicants. Data collected will be used to determine transportation and emission impacts of the program in the FY 2015–FY 2017 TERM Analysis Report. A survey report will be prepared and released by June 2016.

Retention rate surveys will also be conducted for Commuter Connections program applicants and Guaranteed Ride Home program applicants. The purpose of these two new surveys will be to document the retention rates of alternative mode use as a result of contacting Commuter Connections for program services. Respondents from the previous Applicant Placement Rate Study’s conducted in FY 2012 and FY 2015 will be re-contacted to ascertain whether or not they are still using alternative modes. Guaranteed Ride Home applicant survey respondents from the FY 2013 survey will also be conducted to determine their continued use of alternative modes.

Various presentations on the data collection instruments and reports will be prepared and given to the Commuter Connections TDM Evaluation Group, the Commuter Connections Subcommittee, the TPB Technical Committee, and the TPB, if warranted. The evaluation contractor will also be fulfilling data requests that are received or needed

by COG/TPB staff during the course of the fiscal year.

COG/TPB staff will also provide day to day management and monitoring of evaluation contract services and will report results through monthly data collection activities and quarterly progress reports and an annual progress report.

During FY 2016, data collection activities from local sales territories will continue as will the review of employer database records and the classification of employer records into levels of participation. Quarterly level of effort verification statements will be produced by COG/TPB staff.

**Cost Estimate:** **\$623,890**

**Consultant Costs as Part of Estimate:**  
*(TDM Evaluation Project Consultant)* \$464,500

**Products:** FY 2015- FY 2017 TDM Evaluation Framework Methodology Document. *(COG/TPB staff in conjunction with consultant).*

2016 State of the Commute Survey design and data collection activities. *(COG/TPB staff in conjunction with consultant).*

2016 State of the Commute draft Technical Report. *(COG/TPB staff in conjunction with consultant).*

2016 GRH In-Depth Applicant Survey and draft report. *(COG/TPB staff in conjunction with consultant).*

2016 Commuter Connections Applicant Retention Rate Survey design and data collection activities *(COG/TPB staff in conjunction with consultant).*

2016 Guaranteed Ride Home Applicant Retention Rate Survey design and data collection activities *(COG/TPB staff in conjunction with consultant).*

Quarterly level of effort Employer Outreach TERM verification statements. *(COG/TPB Staff)*

**Services:** Fulfillment of data requests. *(COG TPB Staff)*

Data documentation from monthly activity reports from ten local sales territories. *(COG TPB Staff)*

Management and oversight of TDM Evaluation contract. *(COG/TPB staff)*

**Schedule:** July 1, 2015 - June 30, 2016

FY 2015 – FY 2017 TDM Evaluation Framework  
Methodology Document: December 2015

2016 State of the Commute Survey Draft Technical Report:  
June 2016

2016 In-Depth GRH Applicant Draft Survey Report: June  
2016

2016 Commuter Connections Applicant Retention Rate Draft  
Survey Report: June 2016

2016 Guaranteed Ride Home Applicant Retention Rate Draft  
Survey Report: June 2016

**Oversight:** TDM Evaluation Group

- Provide input and feedback on data collection activities, survey methodology, and draft reports.

**B. PROGRAM MONITORING AND TRACKING ACTIVITIES**

COG/TPB staff will collect monthly program statistics, produce quarterly progress reports, monthly Executive Summary reports, and produce a FY 2014 annual summary of program statistics of the number and type of commuter traveler requests filled by COG and other client member program sites. Staff will collect and analyze data from the monthly customer satisfaction survey for all GRH program users, and produce a customer satisfaction survey report based on the findings. Survey results will be used to change program guidelines and/or policies as needed.

COG/TPB staff will assist local Employer Outreach sales representatives to conduct employer site surveys. A contractor will be used to provide technical assistance for the electronic surveying process and analysis of results, and data entry assistance for those employers using a paper copy of the survey. Survey tabulation and reporting will be provided by COG/TPB staff. Results from the employer database tabulated surveys are used to estimate the participation rates and impacts for employer-based TDM programs reported from the local sales jurisdictions. COG/TPB staff will also maintain and update the archived Employer Commute Survey database.

COG/TPB staff will also monitor monthly progress for local Employer Outreach sales jurisdictions based on their approved Scopes of Work and contract project goals.

Quarterly progress reports and level of effort tracking sheets listing results of each local sales jurisdiction will be prepared. An annual detailed snapshot of overall progress will be provided to appropriate state funding agencies for their respective jurisdictions.

COG/TPB staff will conduct the annual Employer Customer Satisfaction Survey and report.

COG/TPB staff will oversee a regional monitoring and evaluation program for Employer Outreach which includes data collection activities from local employer outreach sales territories. Local jurisdiction contract performance monitoring for Employer Outreach goals will also be a part of this activity.

Results from local employer telework sales calls and outreach services will be documented in terms of level of effort and progress and shown in quarterly progress reports. Quarterly documentation will also be provided on level of participation and effectiveness and results from sales and outreach activities for employer-based telework programs. Overall monitoring and evaluating employer-based telework programs throughout the region will continue.

Staff will also evaluate effectiveness of advertising campaigns through call volumes, internet hits, and the annual placement rate study. Marketing campaigns will be monitored through lead analysis and detailed campaign summary results. An event summary report will also be produced for the FY 2015 regional Bike To Work Day event.

Monthly program statistics will be collected and quarterly progress reports will be provided for all program areas in the FY 2016 CCWP and an annual progress report for FY 2015 will be produced.

<b>Cost Estimate:</b>	<b>\$244,110</b>
<b>Consultant Costs as Part of Estimate:</b>	
<i>(Employer Survey Project Consultant)</i>	<i>\$ 30,000</i>

<b>Products:</b>	Collect monthly program data and produce quarterly progress reports and monthly Executive Summary reports for the Commuter Operations Center, Guaranteed Ride Home, Employer Outreach, Marketing, Evaluation, and GRH Baltimore programs. <i>(COG/TPB staff)</i>
	Produce FY 2015 annual progress report. <i>(COG/TPB staff)</i>
	Collect and analyze data from monthly GRH customer satisfaction survey for FY 2015 program users, and produce a report showing results. <i>(COG/TPB staff)</i>



Quarterly Employer Outreach verification report.  
(COG/TPB staff)

Marketing lead analysis and campaign summary  
report. (COG/TPB staff)

FY 2015 Bike to Work Day Event Report (COG/TPB  
staff)

Survey reports to Employer Outreach representatives  
from Employer Commute Survey results. (COG/TPB  
staff)

**Services:**

Updating and Maintaining Employer Commute Survey  
archived database. (COG/TPB staff)

Management and oversight of Employer Survey  
contract. (COG/TPB staff)

Staff the TDM Evaluation Group (COG/TPB staff)

**Schedule:**

July 1, 2015 - June 30, 2016

FY 2015 4<sup>th</sup> Quarterly Progress Report: July 2015

FY 2015 Marketing Campaign Lead Analysis and  
Results: September 2015

FY 2015 Annual Progress Report: September 2015

FY 2016 1st Quarter Progress Report: October 2015

FY 2016 2<sup>nd</sup> Quarter Progress Report: January 2016

FY 2016 3<sup>rd</sup> Quarter Progress Report: April 2016

FY 2016 Marketing Campaign Lead Analysis and  
Results: March 2016

**Oversight:**

Commuter Connections Subcommittee

- Provide input and feedback on data collection activities for GRH customer satisfaction survey, monthly, quarterly, and annual progress reports.

Regional TDM Marketing Group

- Provide input and feedback on campaign lead analysis reports.

Employer Outreach Committee

- Provide input and feedback on quarterly employer outreach verification reports and Employer commute survey process, reports and survey result archives.

**V. EMPLOYER OUTREACH**

The Employer Outreach program provides and supports outreach efforts in ten jurisdictions located in the region’s MSA. This program contains regional and jurisdictional components. COG/TPB’s Commuter Connections staff provides overall administration and arranges for sales training and support for the jurisdictional components of the program and technical training on the regional sales contact management database. The local jurisdictions provide outreach to employers and work with employers to develop and implement new, or expand existing employer-based alternative commute programs.

The following local jurisdictions provide employer outreach services:

District of Columbia
Frederick County
Montgomery County
Tri-County Council for Southern Maryland
Prince George’s County
City of Alexandria
Arlington County
Fairfax County
Loudoun County
Prince William County

Most employers who promote commute alternatives do so for practical reasons associated with the operation of their businesses. But the community as a whole benefits from commute alternatives programs, which improve air quality, reduce traffic congestion, and support economic development. For this reason, many local governments in the region continue to offer programs that encourage commute options at the employment site. These programs range from marketing efforts and incentive programs conducted through ridesharing programs to “adequate public facilities ordinances” that have trip reduction requirements for affected employers. Additionally, the Virginia Department of Transportation administers funds directly to the local jurisdictions in Northern Virginia to implement the Employer Outreach TERM and has also allocated funding to the Telework!VA program for employers to either start or expand a telework program. The District Department of Transportation is using the pass-thru dollars for the TERM to hire a contractor directly. Results from these activities are reported and

analyzed under the regional Monitoring and Evaluation program.

The Commuter Connections program's ongoing goal has been to weave existing local employer and government programs into a coherent, voluntary regional network, and to promote ways in which worksite commute alternatives programs may grow, without imposing burdensome mandates upon employers.

Regional Components of the Employer Outreach Program include:

- 1) Maintaining and updating a web-based regional employer/employee sales contact database to facilitate local efforts and avoid duplication.
- 2) Coordination with WMATA's SmartBenefits program sales staff, and/or their assigned consultant(s).
- 3) Review of individual local sales contact databases on a continuing basis to ensure quality control.
- 4) Providing bicycling information to area employers to help and support bicycling to work by their employees.
- 5) Coordinating technical training for the regional sales database on an as needed basis.
- 6) Supporting the Employer Outreach Committee of the Commuter Connections Subcommittee which provides guidance to the program.
- 7) COG/TPB staff support for updating and printing customized sales materials and employer case studies both in hard copy and for inclusion on the Commuter Connections Web site.
- 8) Providing coordinated marketing materials for the program including; but not limited to, customized sales portfolio's, employer case studies, Live Near Your Work, Alternative Work Schedule, Climate Change Carbon Footprint, LEED, and Emergency Commute Preparedness information.
- 9) Providing customized information on voluntary commuting actions that can be taken by employers and the general public to reduce mobile source emissions, particularly on Air Quality Action days, through the Clean Air Partners program.
- 10) Offering sales training for the sales and service representatives in each of the participating jurisdictions.

The regional components of the program are listed in the two project tasks below. The total annual cost for the regional components of the Employer Outreach program is \$84,725.

Jurisdictional Components of the Employer Outreach Program include:

- 1) Contacting individual employers in each locality, (carried out by the local sales and service representatives) through the regional contact sales database which Commuter Connections maintains and updates.
- 2) Accomplishing local program goals in Maryland jurisdictions via staff, contractors, TMA's, or other entities. A scope of work is submitted to COG to expedite an annual program contract for each locality, and funding is allocated to localities based upon guidance to COG from the state funding agencies.
- 3) COG/TPB support for overseeing pass-thru funding to local sales jurisdictions for the implementation of voluntary transportation demand management strategies at private sector employment sites.
- 4) Providing sales support for the sales and service representatives in DC and Maryland.

The jurisdictional components of the program are outlined in the two project tasks below. The total annual costs for the jurisdictional components of the Employer Outreach program are \$567,553.

### **Regional Component Project Tasks**

#### **A. REGIONAL EMPLOYER DATABASE MANAGEMENT AND TRAINING**

During FY 2016, COG/TPB staff will continue to maintain and update the hardware and software for the computerized regional employer outreach database and monitor the regional web-based database upgrade installed during FY 2015. In addition, COG/TPB staff will coordinate training and provide technical assistance to local sales jurisdictions upon request.

**Cost Estimate:** \$69,725

**Services:** Management and monitoring of Employer Outreach regional database and provision of sales representative database training as needed.  
*(COG/TPB staff)*

Maintenance and update of regional contact management database. *(COG/TPB staff)*

**Schedule:** July 1, 2015 - June 30, 2016

**Oversight:** Employer Outreach Committee

- Provide input and feedback on technical issues regarding the regional Employer Outreach database.

B. EMPLOYER OUTREACH FOR BICYCLING

The Employer Outreach for Bicycling program provides information to area employers to help support and encourage bicycling to work by their employees. This information is included in the Employer Outreach materials provided to employers under the Employer Outreach Program.

Specific activities under the Employer Outreach for Bicycling Program include the update of a guide on biking to work (“Biking to Work in the Washington Area: A Guide for Employers and Employees), and incorporation of WABA bike mentors into the ridematching database. (WABA’s Web site now provides users with 24-hour matching to WABA bike mentors, automating a service that previously consumed considerable staff time, and which was available only during office hours).

COG/TPB staff also provides support and facilitation for other bike-to-work outreach activities including lunch time seminars, association meetings and strategic mailings.

**Cost Estimate:** \$15,000

**Printing as Part of Estimate** \$7,355

**Products:** Regional Bicycling to Work Guide updates.  
(COG/TPB staff)

**Services:** Employer assistance and seminars. (COG/TPB staff)

**Schedule:** July 1, 2015 - June 30, 2016

**Oversight:** Employer Outreach Committee

- Provide input and feedback on bicycling issues or outreach activities at employment sites.

**Jurisdictional Component Project Tasks**

A. MARYLAND LOCAL AGENCY FUNDING AND SUPPORT

Local jurisdictions work with employers to develop and implement new, or expand existing employer-based commuter benefit programs such as transit and vanpool benefits, preferential parking for carpools and vanpools, carpool and vanpool formation, and telework and flexible work schedules. Results from these efforts are recorded in the regional employer database.

Maryland jurisdictions will also provide general telework information to the general public, local agencies, and employers. Employer Outreach representatives will also work with employers in Maryland to establish new or expand existing telework programs.

**Cost Estimate:** Pass-thru to Local Jurisdictions: \$383,167  
**Telework component of pass-thru:** \$81,063

**Total Project Budget: \$464,230**

**Services:** New or expanded employer-based TDM programs in Maryland. (*local jurisdictions*).

New or expanded employer telework programs in Maryland. (*local jurisdictions*).

**Schedule:** July 1, 2015 - June 30, 2016

#### B. DC, MARYLAND, AND VIRGINIA PROGRAM ADMINISTRATION

This project task includes the management and monitoring of pass-thru funding by COG/TPB staff to local sales jurisdictions in DC and Maryland for contract compliance. It also includes support to DC and Maryland jurisdictions, consultants, or TMA staff in implementing voluntary transportation demand management strategies at private and/or non-profit sector employment sites. This task involves the review and approval of an annual Scope of Work by COG/TPB staff for each of the Maryland sales jurisdictions and day to day contract management. This task also includes COG/TPB staff support for updating and printing employer specific regional employer-based marketing materials as well as providing training opportunities.

**Cost Estimate:** \$103,323

**Products:**

Electronic and printed updates of customized sales portfolio materials, employer specific regional marketing materials (General Commuter Connections brochure, Alternative Work Schedules brochure, Emergency Commute Preparedness brochure, Live Near Your Work brochure, LEED brochure, Climate Change brochure), and case studies for DC, Maryland and Virginia. (*COG/TPB staff*)

**Services:**

Sales training offered for sales and service representatives in the region for DC, Maryland and

Virginia. (COG/TPB staff/sales training professionals).

Oversight to local sales jurisdictions in DC and Maryland to implement voluntary transportation demand management strategies at private sector employment sites. (COG/TPB staff)

Bi-annual sales support conference calls to DC and Maryland jurisdictions. Employer site visits by COG/TPB staff as requested or needed by DC and Maryland jurisdictions. (COG/TPB staff)

Staff the regional Employer Outreach Committee for DC, Maryland and Virginia. (COG/TPB staff)

**Schedule:** July 1, 2015 - June 30, 2016

**Oversight:** Employer Outreach Committee

- Provide input and feedback on administrative items such as training, employer-based collateral materials, and case studies.

## **VI. GUARANTEED RIDE HOME BALTIMORE**

A regional Guaranteed Ride Home (GRH) program was implemented in the Baltimore metropolitan region and in St. Mary's County beginning in FY 2011. The GRH Baltimore program will help to eliminate a major barrier to using transit, carpooling, vanpooling, bicycling or walking to work. Studies have shown that a commuter's fear of being "stranded" at work if they or a family member become ill, or if they must work unexpected overtime, is one of the most compelling reasons commuters do not rideshare or use transit to travel to work. The GRH Baltimore program eliminates this barrier by providing a free ride home in the event of an unexpected personal emergency or unscheduled overtime.

The GRH Baltimore is similar to the Washington metropolitan region's GRH program in offering a free ride home to commuters that carpool, vanpool, use transit, bicycle, or walk to work at least two days per work week. As a result of the GRH program, some single occupant vehicle drivers will switch to a ridesharing or transit commuting alternatives, and current ridesharing and transit users will increase the usage of these alternative commute modes. The program will be able to demonstrate both transportation and emission impacts that could be used as part of the Baltimore region's air quality conformity process. The GRH program is an insurance program for those commuters who do not drive alone to their worksite.

The budget for the Guaranteed Ride Home program includes two projects outlined below, and with a budget of \$170,000.

A. GENERAL OPERATIONS AND MAINTENANCE

Commuter Connections staff at the Metropolitan Washington Council of Governments (COG) will process all GRH applications received by mail, fax, and the Commuter Connections Web site. Using the GRH software system, COG registers qualifying applicants, produces GRH registration ID cards, and sends ID card and participation guidelines to new registrants. Commuters can obtain information about the GRH program and complete an application on the Commuter Connections Web site, [www.commuterconnections.org](http://www.commuterconnections.org). Commuters may also call COG's Commuter Connections 800 telephone number, 1-800-745-RIDE, to ask questions about the GRH program and/or request information and an application. The 800 number is equipped with a menu so that callers can choose the menu item that best fits their needs. All GRH questions and requests for information and applications are taken by COG/TPB staff.

COG staff also mails GRH applications to GRH users who have used the GRH program without formally registering. GRH guidelines permit a commuter to use the GRH service one time as a "one-time exception" before they register. Also, COG staff mails transit vouchers to GRH users who used transit as part of their GRH trip. All vouchers and invoices from transportation service providers are processed by COG staff.

In the event the commuter has not supplied their e-mail address, COG/TPB staff mails a re-registration notice to commuters who could not be contacted by telephone. The notice contains an application which the commuter can complete and send to COG to re-register. The commuter can also call Commuter Connections or visit the Commuter Connections Web site to re-register.

COG/TPB staff will assist the Commuter Connections Subcommittee in reviewing the GRH participation guidelines for any recommended changes. These recommendations will be presented to the Commuter Connections Subcommittee for their final review and approval. In the past, recommendations have been made to modify and add participation guidelines to better convey the GRH trip authorization, GRH re-registration, and one-time exception rules and restrictions.

COG/TPB staff will respond to the general public and to GRH applicants for registrations and re-registrations to the program. Registered commuters will be notified when their GRH registration is about to expire. Staff will continue to prepare and send new and re-registration GRH ID cards, registration letters, and participation guidelines on a weekly basis. Staff will also continue to monitor and maintain the GRH applicant database and server. COG/TPB staff will continue to update and maintain program participation guidelines, and provide annual customer service training to the daily operations contractor and COG/TPB staff assigned to the project.

During FY 2016, data collection activities will continue for a GRH Baltimore Customer satisfaction survey. The purpose of the survey will be to gauge the level of satisfaction from those who have used the program. A report will be developed and finalized from



the FY 2015 data collected.

In addition, COG/TPB staff will also be updating the survey instrument design for the in-depth Guaranteed Ride Home (GRH) Baltimore Region and St. Mary's County Applicant survey. This survey is conducted every three years to assess the mode shift changes of GRH program applicants. Data collected will be used to determine transportation and emission impacts of the program. A survey report will be prepared and released by June 2016.

**Cost Estimate:** **\$56,427**

**Consultant Costs as Part of Estimate:**  
(TDM Evaluation Project Consultant) \$17,500

**Direct Costs (Telephone, Copies, etc) as part  
Of Estimate:** \$ 3,465

**Products:** GRH new and re-registration ID cards and registration letters  
(COG/TPB staff)

GRH Participation Guidelines (COG/TPB Staff)

Final 2015 GRH Customer Satisfaction Survey Report. (COG/TPB staff).

2016 GRH Baltimore In-Depth Applicant Survey and draft report.  
(COG/TPB staff in conjunction with consultant).

**Services:** Process application requests from the general public for registration and re-registration to the program. (COG/TPB Staff)

Notify commuters when registration is about to expire. (COG/TPB staff)

Monitor and update GRH applicant database. (COG/TPB staff)

**Schedule:** July 1, 2015 – June 30, 2016

2015 GRH Customer Satisfaction Survey Report: November 2015

2016 In-Depth GRH Baltimore Applicant Draft Survey Report: June 2016

**Oversight:** Commuter Connections Subcommittee

- Provide input and feedback on GRH program participation guidelines and policies.

**B. PROCESS TRIP REQUESTS AND PROVIDE TRIPS**

GRH transportation service will be provided by several taxi companies, a rental car company, and a paratransit company, all under contract with COG. Commuters make their GRH trip request through a menu option provided on COG’s Commuter Connections 800 telephone number. This menu option transfers calls for GRH trips directly to an operations contractor. This contractor reviews and assesses the trip request and approves or denies the request based on the GRH Participation Guidelines. The contractor then arranges the approved trips with the appropriate transportation contractor.

The operations contractor contacts, by telephone, GRH registrants without e-mail addresses whose registration is near expiration and re-registers the qualifying commuters. While the system of calling commuters has been successful, many messages left on commuters’ voice mail are not returned. In such cases, re-registration is facilitated by COG staff as described in the previous section.

COG/TPB staff will continue management and monitoring of contract services for day-to-day operations services. Day to day operations include confirming ride request eligibility, dispatching rides through the ride service providers, tracking ride requests in the GRH database, processing invoices for payment for ride service providers, the daily operations contractor and for the general public for transit vouchers.

Customer service training will be provided to all Guaranteed Ride Home call center agents.

**Cost Estimate:** **\$113,573**

***Consultant/ Contractor Costs as Part of Estimate:***

(Daily Operations):	\$41,500
(Cab and Car Rental Companies)	\$59,187

**Services:** Process GRH trip requests, approve/deny requests, and arrange rides. *(Daily Operations Contractor)*

Management and monitoring of contract services for day-to-day operations, and ride service providers. This includes processing invoices for payment for contractors and for the general public for transit vouchers. *(COG/TPB staff)*

Provide GRH Rides (*Cab and Car rental Companies*)

**Schedule:** July 1, 2015 – June 30, 2016

**Oversight:** Commuter Connections Subcommittee

- Provide input and feedback on GRH program participation guidelines and policies.



# Commuter Connections FY 2016 Work Program

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National Capital Region  
Transportation Planning Board  
February 18, 2015



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## Definition from Strategic Plan

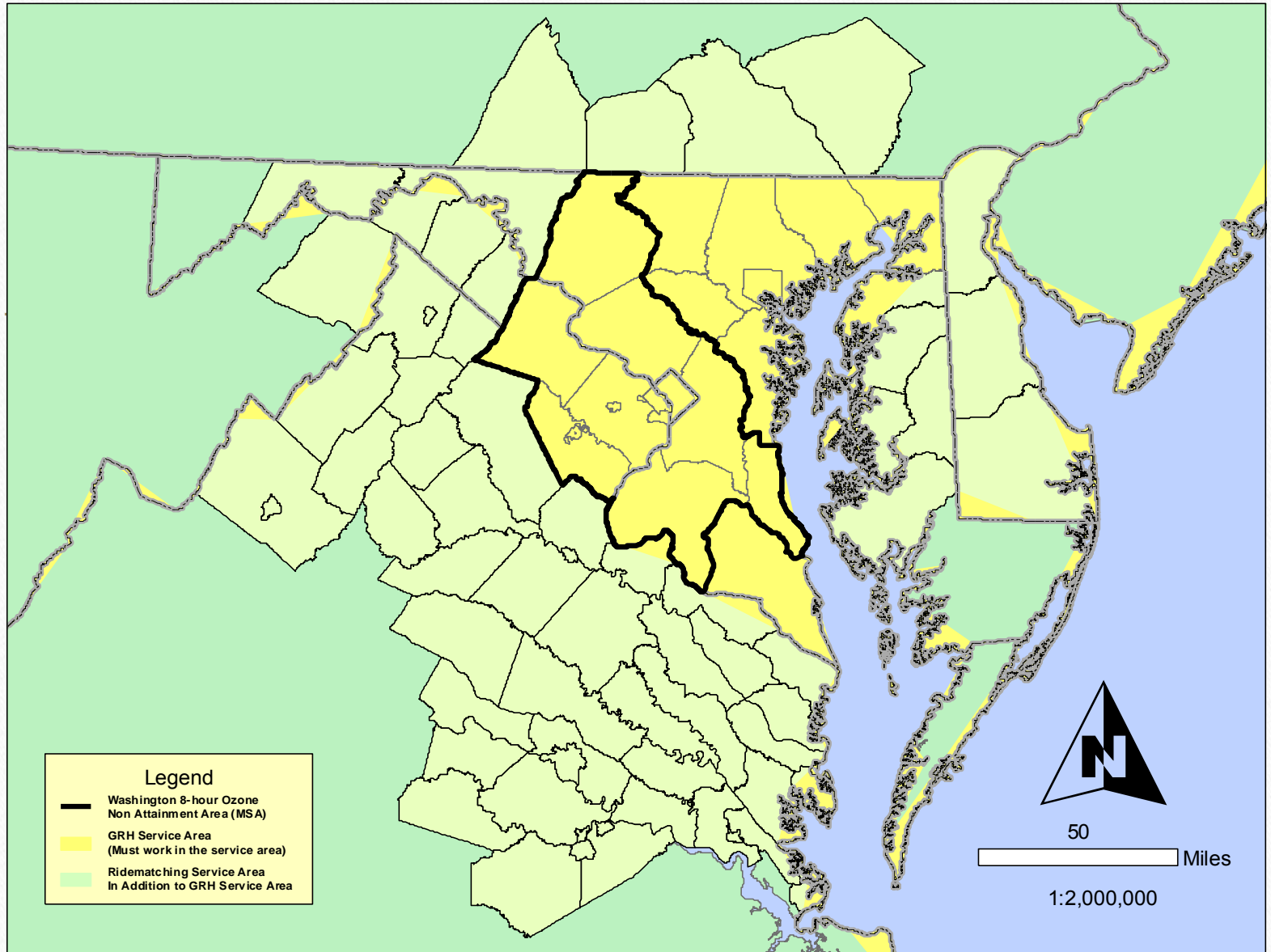
- Network of public and private transportation organizations, including COG, state funding agencies, and local organizations, that work together to assist and encourage people in the Washington region to use alternatives to the single-occupant automobile.

# Benefits of Commuter Connections

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- **Jurisdictions**
  - Helps reduce and manage commuter congestion, goods movement, tourist travel
  - Helps reduce emissions
  - Supports local efforts to attract and retain employers
- **Employers**
  - Recruitment/Retention
- **Workers**
  - More commute options
  - Reduced stress/costs/time
  - Improved quality of life

# Geographic Areas Serviced by Commuter Connections





## MSA Rankings for Transit Use

Metropolitan Statistical Area	Total Workers	% Carpool	% Transit
NYC/Long Island/N NJ/PA	8,719,316	7.4%	30.3%
LA/Long Bch/Santa Ana	5,816,255	11.4%	6.1%
Chicago/Naperville/Joliet	4,422,844	9.1%	11.5%
Dallas/Ft. Worth/Arlington	2,945,976	11.4%	1.6%
<b>Washington DC Metro</b>	<b>2,795,375</b>	<b>11.1%</b>	<b>13.9%</b>
Philadelphia Metro Area	2,751,491	8.9%	9.2%
Houston Metro Area	2,581,559	12.6%	2.7%
Atlanta Metro Area	2,494,475	10.9%	3.6%
Miami Metro Area	2,479,021	10.1%	3.8%
Boston Metro Area	2,277,958	8.1%	11.9%
San Francisco-Oakland	2,056,454	10.4%	14.5%



# Commuter Connections' Role in the Regional Planning Process

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- The TPB is required by Federal regulations to approve a congestion management process which includes TDM as part of the metropolitan transportation plan.
  - Commuter Connections constitutes the major demand management component of the region's congestion management process.

# Commuter Connections' Role in the Regional Planning Process

- 
- Commuter Connections also provides transportation emission reduction measure (TERM) benefits for inclusion in the air quality conformity determination approved by the TPB. This is part of the annual update of the region's Constrained Long Range Plan (CLRP) and Transportation Improvement Program (TIP).

# Commuter Connections' Role in the Regional Planning Process

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- Commuter Connections programs may be needed to meet Climate Change and Green House Gas emission targets that may be set for the transportation sector in the region.
- Commuter Connections' results may also help contribute to new performance measures and goals that will be set by the region under MAP-21 requirements.

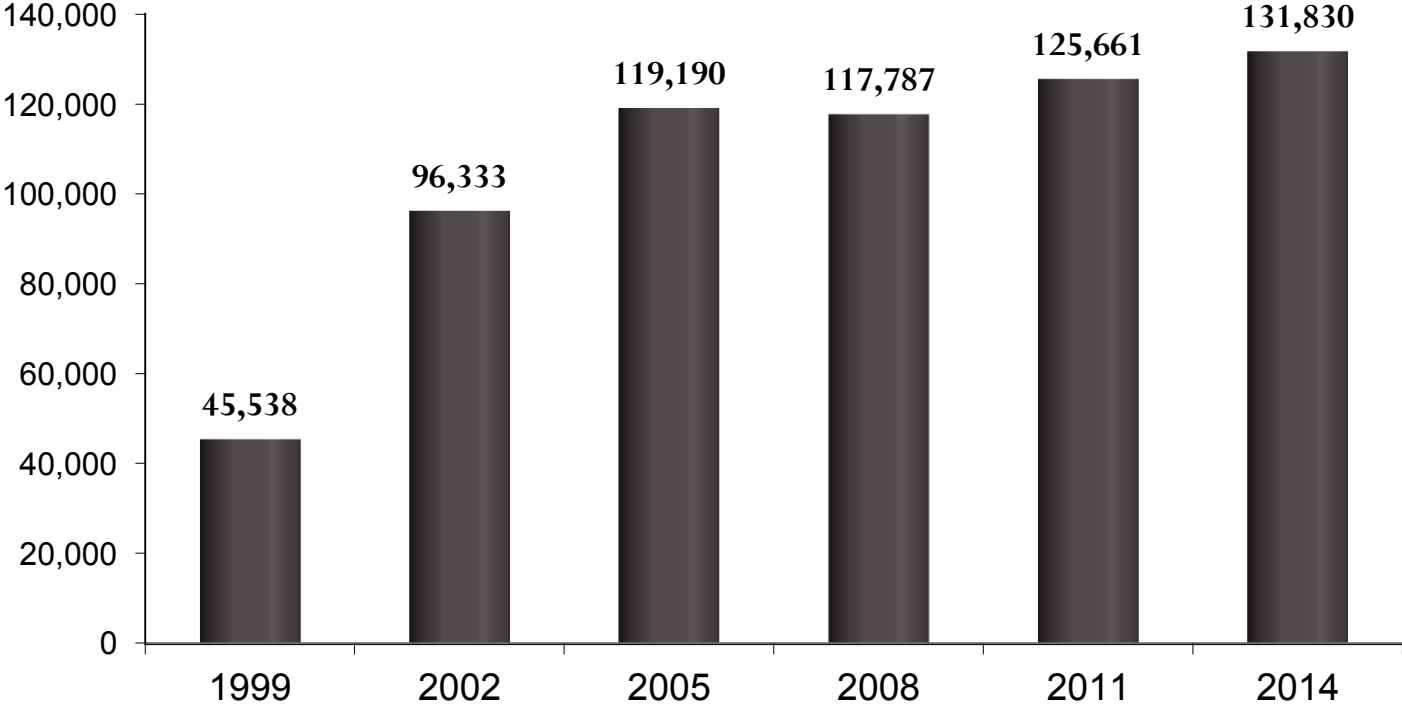
# Commuter Connections Daily Program Impacts

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<b>Measure</b>	<b>Reductions</b>
Vehicle Trips	132,000
Vehicle Miles of Travel	2,500,000
Nitrogen Oxides (NOx)	1.0 Tons
Volatile Organic Compounds (VOC)	0.5 Tons

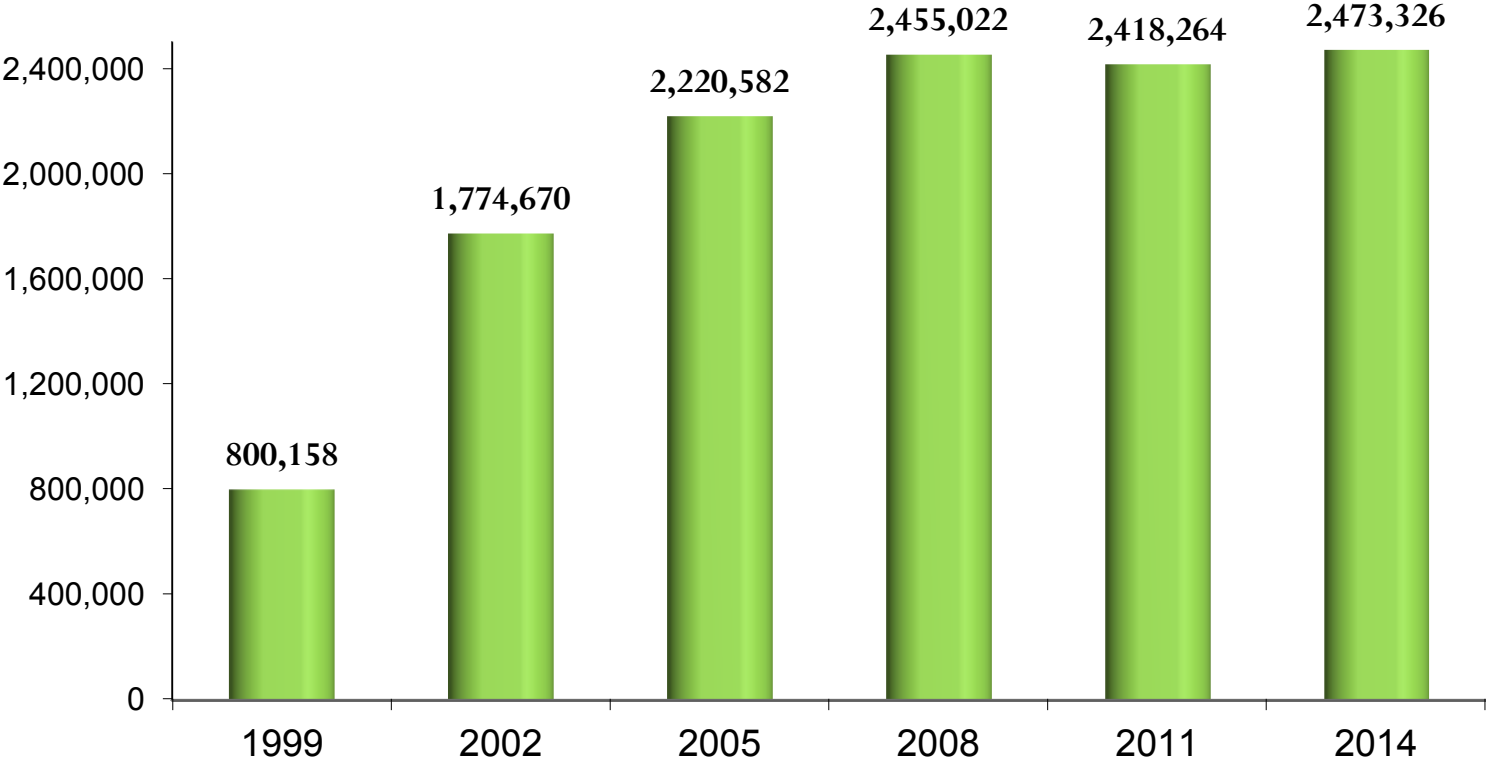
# Commuter Connections Vehicle Trip Reduction – 1999 to 2014

## Daily Vehicle Trips Reduced



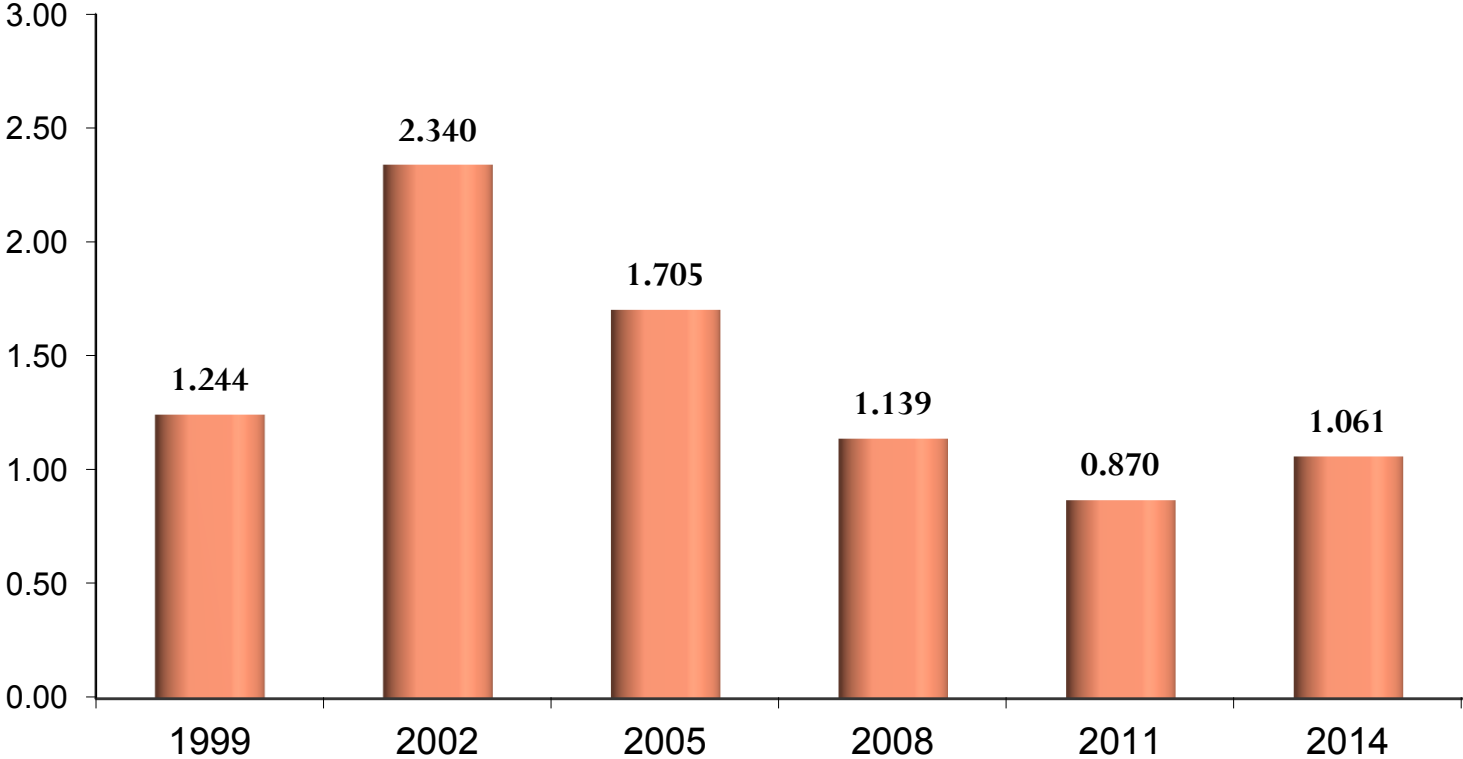
# Commuter Connections VMT Reduction – 1999 to 2014

## Daily VMT Reduced



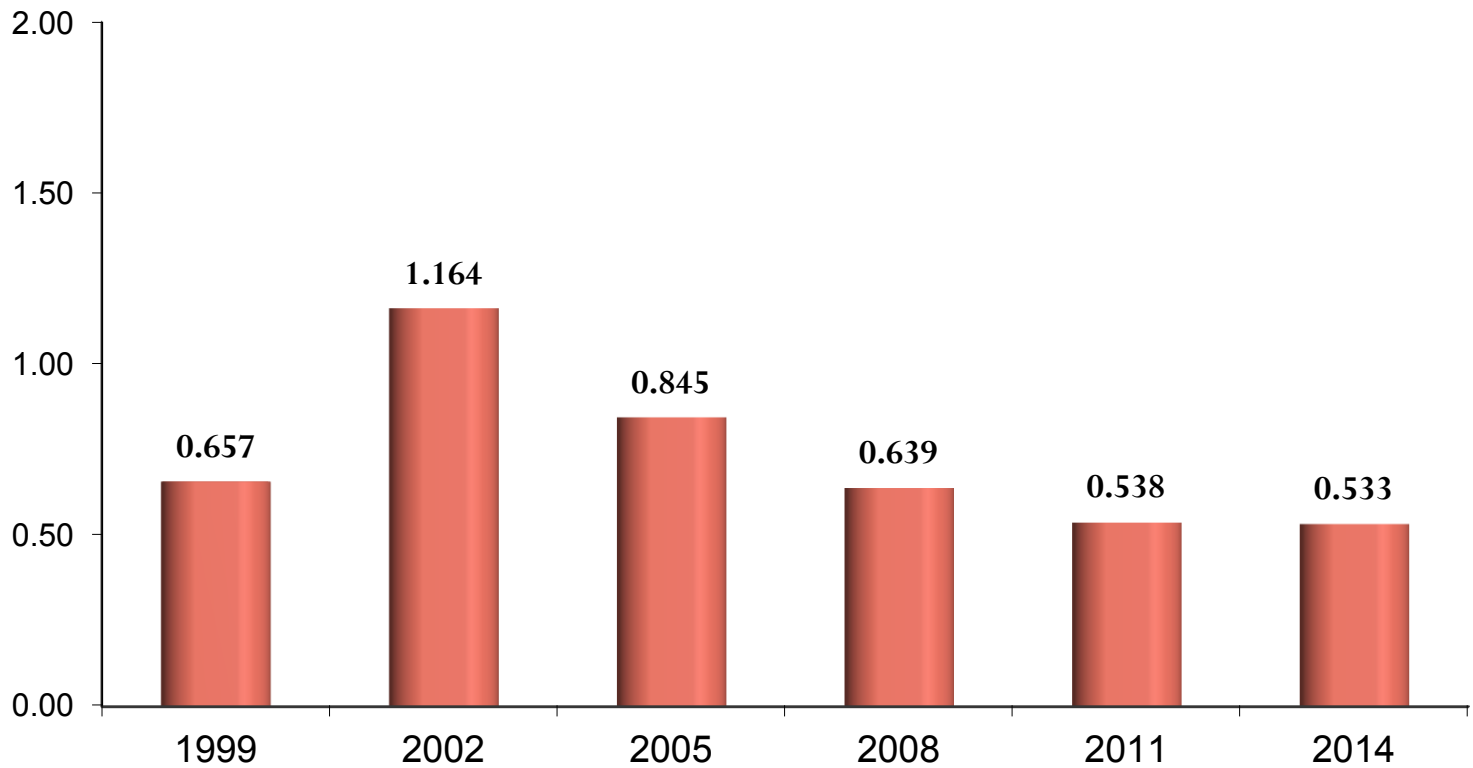
# Commuter Connections NOx Reduced (daily tons) – 1999 to 2014

Daily tons NOx Reduced



# Commuter Connections VOC Reduced (daily tons) – 1999 through 2014

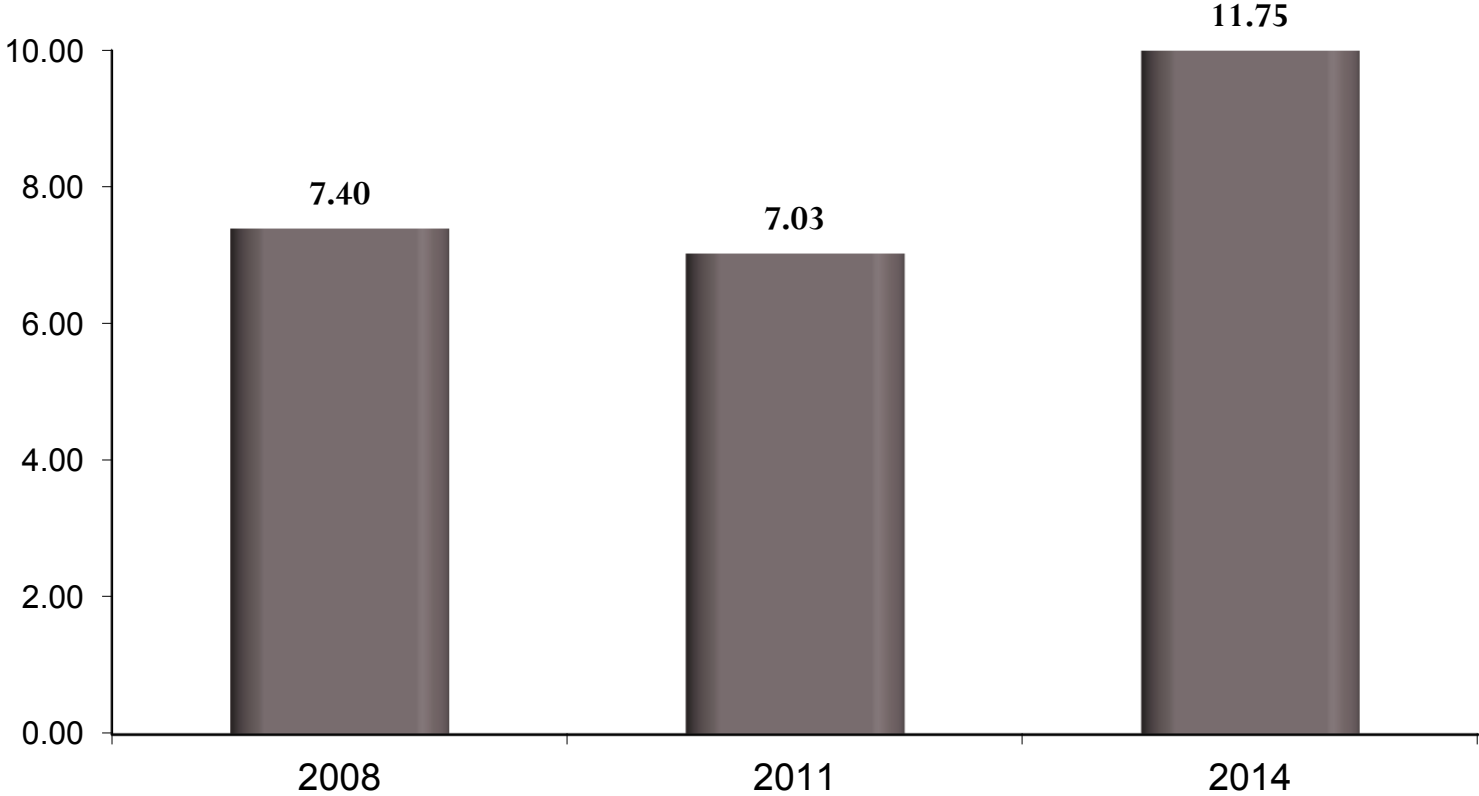
Daily tons VOC Reduced





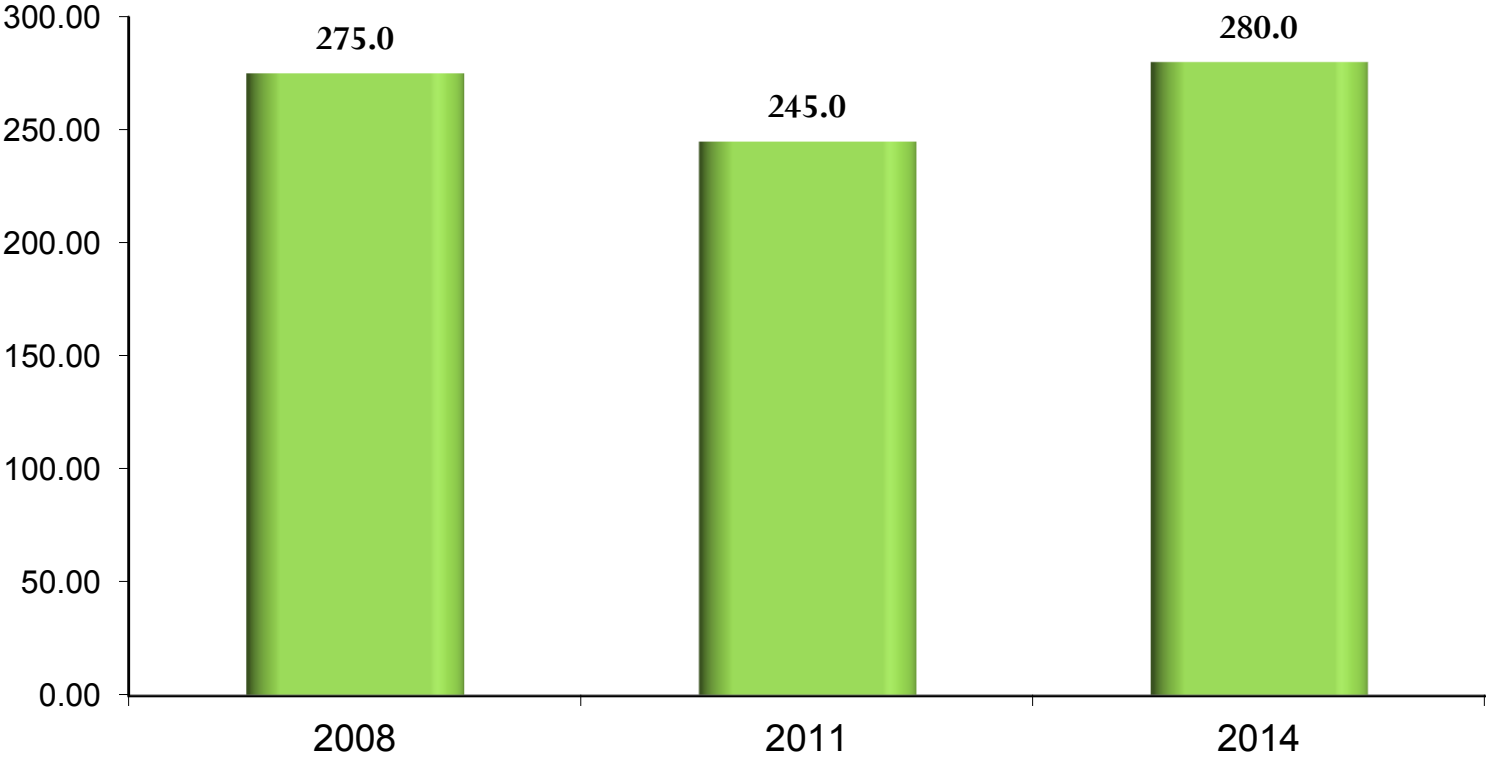
# PM 2.5 Reduced (annual tons) – 2008 to 2014 Commuter Connections TERMS + Commuter Operations Center

Annual tons PM 2.5 Reduced



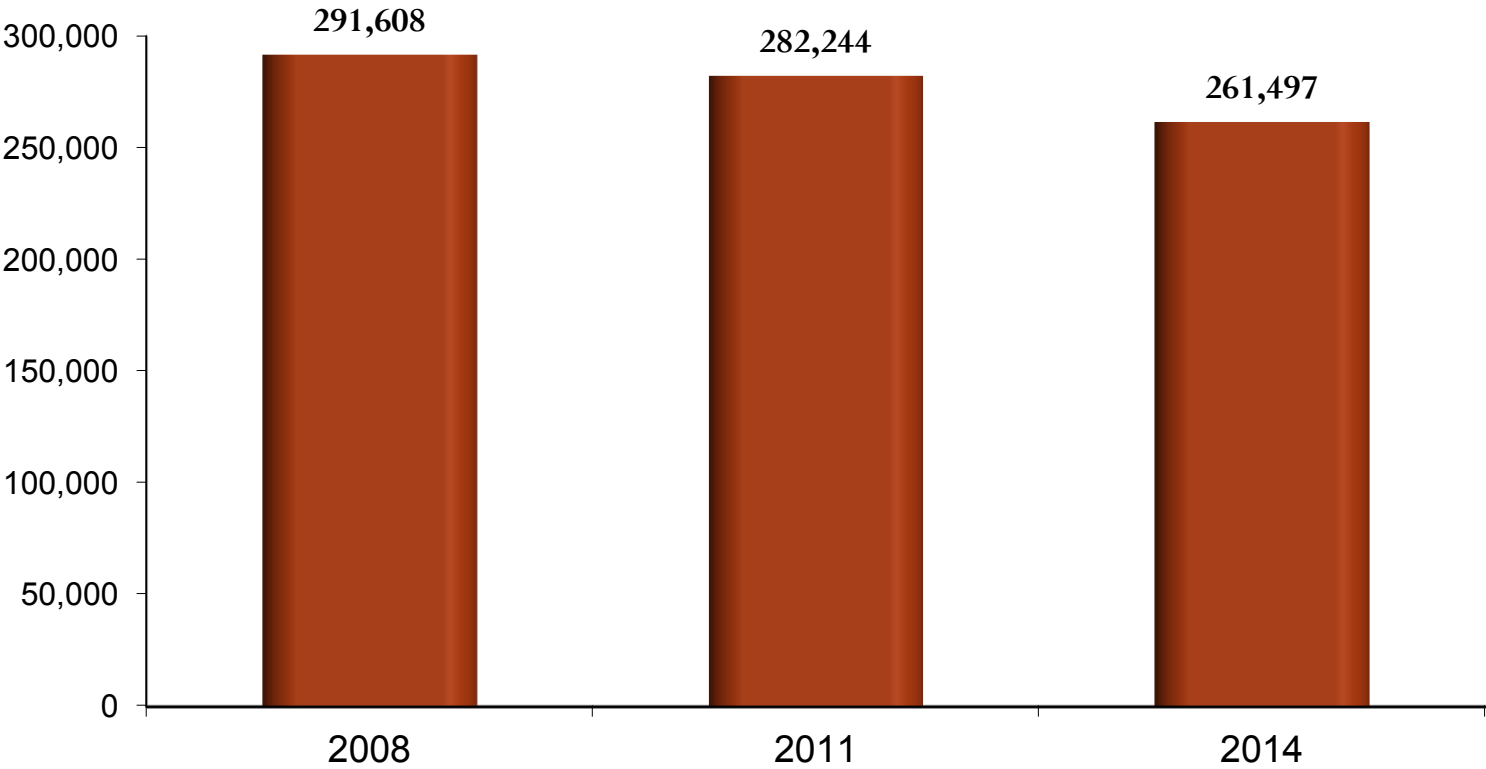
# Precursor NOx Reduced (annual tons) – 2008 to 2014 Commuter Connections TERMS + Commuter Operations Center

## Annual tons PM 2.5 Precursor NOx Reduced



# CO2 Reduced (annual tons) – 2008 to 2014 Commuter Connections TERMS + Commuter Operations Center

## Annual tons CO2 – Greenhouse Gases Reduced



# Cost Effectiveness of Commuter Connections

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- Cost per Vehicle Trip Reduced \$0.16
- Cost per Vehicle Mile of Travel Reduced \$0.01
- Cost per ton of NO<sub>x</sub> Reduced \$20,000
- Cost per ton of VOC Reduced \$41,000

# Proposed FY 2016 CCWP Budget

<b>Program</b>	<b>Cost FY15</b>	<b>Cost FY16</b>
Commuter Operations	\$516,441	\$540,608
GRH	\$703,227	\$731,286
Mass Marketing	\$2,763,444	\$2,860,165
Program Evaluation	\$460,000	\$868,000
Employer Outreach	\$632,228	\$652,278
GRH Baltimore	\$150,000	\$170,000
<b>TOTAL</b>	<b>\$5,225,340</b>	<b>\$5,822,337</b>

# Proposed FY 2016 CCWP Budget

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- Overall 11.4% increase from FY 2015
- Budget Breakdown: **\$5,822,337**
  - **COG/TPB Staff & Overhead: \$1,634,618 or 28% of the overall budget**
  - **Private Sector Services: \$3,318,911 or 57% of the overall budget**
  - **Local Jurisdiction Pass-Thru: \$464,320 or 8% of the overall budget**
  - **Direct Costs: \$404,488 or 7% of the overall budget**

# What's New In FY 2016 CCWP

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- Regional TDM Marketing
  - Adjustment to 'Pool Rewards budget based on Survey Results
- Monitoring and Evaluation
  - FY 2015 – 2017 TDM Evaluation Framework Methodology Document
  - 2016 State of the Commute Survey and Draft Technical Report publication
  - 2016 In-Depth GRH Applicant Surveys for DC and Baltimore Regions
  - 2016 Applicant Retention Rate Survey and Report
  - 2016 GRH Retention Rate Survey and Report

# Next Steps

- 
- State funding agencies have provided comments and have approved Draft FY 2016 CCWP.
  - Commuter Connections Subcommittee reviewed draft CCWP on November 18<sup>th</sup> and a comment period was established and the document was endorsed on January 20<sup>th</sup>.
  - Tech Committee received briefing of the Work Program on February 6<sup>th</sup> and will be briefed again on March 6<sup>th</sup>.



# Next Steps - continued

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- TPB will receive draft of the FY 2016 CCWP today and the document has been released for public comment. TPB will be asked to approve at its March meeting.
- TIP adjustments, if any, will be made and funding commitments secured by June.
- Program begins July 1.



Questions?

Nicholas W. Ramfos

Director, Commuter Connections

[nramfos@mwkog.org](mailto:nramfos@mwkog.org)

or

202-962-3313

## **ITEM 12 - Information**

February 18, 2015

Briefing on the Implementation of the TPB Regional Priority Bus Project under the Transportation Investments Generating Economic Recovery (TIGER) Program

### **Staff**

**Recommendation:** Receive briefing on the current status of the TPB Regional Priority Bus Project.

**Issues:** None

**Background:** The Board was briefed on this project at its June 18, 2014 meeting. The TIGER grant agreement was signed on December 14, 2010. It includes \$58.8 million in capital funding (100% Federal) for 16 project components. There are five implementing organizations: the City of Alexandria, the District Department of Transportation (DDOT), the Maryland Department of Transportation (MDOT), the Potomac and Rappahannock Transportation Commission (PRTC), and the Washington Metropolitan Area Transit Authority (WMATA).





# NATIONAL CAPITAL REGION

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## TRANSPORTATION PLANNING BOARD

### MEMORANDUM

**TO:** Transportation Planning Board

**FROM:** Eric Randall  
Department of Transportation Planning

**SUBJECT:** Briefing on the Implementation of the TPB Regional Priority Bus Project under the Transportation Investments Generating Economic Recovery (TIGER) Program

**DATE:** February 12, 2015

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This memorandum provides an update on the status of the Transportation Investments Generating Economic Recovery (TIGER) grant awarded to the TPB in February 2010 for *Priority Bus Transit in the National Capital Region*.

On January 15, 2015, FTA approved MWCOC's grant revision request (submitted October 28, 2014), which amended project component scopes and budgets for the grant. This has enabled final design and manufacture to proceed to complete the projects of the grant.

#### **Background**

In September 2009, the U.S. Department of Transportation (USDOT) announced a competitive TIGER Discretionary Grant Program of \$1.5 billion as part of the American Recovery and Reinvestment Act (ARRA). USDOT received 1,400 applications totaling nearly \$60 billion in requested funding, from which 51 awards were made, including an award to the TPB for \$58.8 million for capital improvements to support priority bus transit in the National Capital Region. The TIGER grant awarded to the TPB was the largest awarded to an MPO. Additional information on the TIGER Grant Program is available on the USDOT website at [www.dot.gov/tiger/](http://www.dot.gov/tiger/).

On December 14, 2010, the U.S. Secretary of Transportation, Ray LaHood, came to COG to sign the TIGER grant agreement. Five recipient "Project Owners" are implementing the projects funded by the grant: the City of Alexandria, Virginia; the District of Columbia Department of Transportation (DDOT); the Maryland Department of Transportation (MDOT); the Potomac and Rappahannock Transportation Commission (PRTC); and the Washington Metropolitan Area Transit Authority (WMATA). COG is administering the grant as the administrative agent for the TPB. This complex and multimodal project involves roadway managers, technology personnel, and transit operations staff from five agencies in implementing 16 component projects. The TIGER grant is a reimbursable project and the federal funds expire on September 30, 2016; all work should be completed by the end of June 2016 to ensure timely disbursement of the funds to the agencies.

The TIGER grant is helping to pay for the infrastructure needed to provide more efficient bus service along three transit corridors in Maryland, four in Virginia, and six in the District of Columbia. The

efficiency of the corridors is being improved by the investments in a bus transitway, replacement buses, bus-only lanes, queue jump lanes, transit signal priority (TSP) technology, traffic signal management technology, bus stop and station improvements, real-time passenger information (RTPI) technology, and other enhancements. The project also includes construction of a new transit center at Takoma-Langley and improvements at the Pentagon and Franconia-Springfield transit stations.

**Project Management**

The TIGER grant is being administered through the Federal Transit Administration (FTA). As the grantee, the TPB is responsible to the FTA for project management and performance monitoring of the implementation of the grant. The TPB has hired a contractor to assist with the grant administration and reporting. TPB staff and contractors meet monthly with the five project owners and with the FTA and its Project Management Oversight Contractor (PMOC) to review implementation of the grant. Monthly, quarterly, and annual reports are submitted on grant management and financial administration (via the FTA’s TEAM system), in addition to internal reports that provide TPB staff and project owners with consolidated progress information.

**Performance Monitoring**

To assess the results of the projects, a set of comprehensive “before” and “after” performance monitoring reports is required. In 2012, TPB staff and consultants completed a set of detailed “before” reports on each of the 16 component projects, which will be followed by “after” reports to be completed both one year and two years following implementation. The first “after” report is due in December 2015, with the final “after” report due in late 2018.

**Grant Implementation Summary**

The four years since the signing of the grant agreement have primarily been spent carrying out detailed design work for the construction projects and the several key technology procurements.

As of December 31, 2014, approximately \$22.5 million of the grant, or 38%, has been expended. With eighteen months left for grant work to take place, FTA is scrutinizing the progress of the TIGER grant. The major expenditures to date have been \$5.1 million for 13 replacement buses for PRTC, \$7.1 million for construction of the City of Alexandria’s US-1 (Potomac Yard) Transitway, \$2.7 million for PRTC’s Computer-Aided Dispatch and Automatic Vehicle Location (CAD/AVL) system, and \$2.0 million for DDOT’s corridor projects.

**Actual / Anticipated Expenditures for the TIGER Priority Bus Transit Grant**

	To date	2015	2016
Actual / Anticipated Expenditure (\$ millions)	\$ 22.5	\$ 23.3	\$ 13.0
Annual Share of Total Grant Expenditures	n/a	40%	22%
Cumulative Share of Total Grant Expenditures	38%	78%	100%

The following table provides a list of project accomplishments to date and the future schedule for major milestones and the completion of the component projects.

TIGER Grant Project Accomplishments (as of May 30, 2014)	
2011	<ul style="list-style-type: none"> <li>• <b>US 1 Transitway (City of Alexandria):</b> Design-build contract for Section B of the Crystal City – Potomac Yard (CCPY) Transitway on US-1 awarded in November .</li> </ul>
2012	<ul style="list-style-type: none"> <li>• <b>PRTC Buses and ITS Technology (PRTC):</b> Computer-Aided Dispatch and Automatic Vehicle Location (CAD/AVL) system contract awarded to Trapeze in May. Delivery of 13 buses from Gillig, Inc., taken between June and November.</li> <li>• <b>Georgia Avenue Bus Priority Improvements (DDOT):</b> Notice to proceed issued for design of exclusive bus lane. First public meeting for review of the bus lane design held in October.</li> <li>• <b>US 1 Transitway (City of Alexandria):</b> Construction began in July for relocation of auto traffic to a new set of northbound lanes.</li> </ul>
2013	<ul style="list-style-type: none"> <li>• <b>Takoma/Langley Transit Center (MDOT):</b> Maryland Transit Administration (MTA) finalized settlement with the remaining property owner in March.</li> <li>• <b>US 1 Transitway (City of Alexandria):</b> Construction began on the median bus lanes.</li> <li>• <b>Bus Corridor Priority Treatments (All):</b> WMATA awarded a contract in May for procurement of real-time passenger information (RTPI) on corridors in the District, Maryland, and Virginia.</li> <li>• <b>Bus Corridor Priority Treatments (All):</b> WMATA completed installation of its <i>Consolidated of on-board Auxiliary Bus Equipment</i> project on the Metrobus fleet, the first step in making the buses ready for Transit Signal Priority (TSP).</li> </ul>
2014	<ul style="list-style-type: none"> <li>• <b>US 1 Transitway (City of Alexandria):</b> The opening of the US-1 (Potomac Yard) Transitway took place on August 23 and the Metroway bus service connecting Alexandria and Old Town started.</li> <li>• <b>VA 7 (Leesburg Pike) Bus Priority Improvements (WMATA):</b> In March, WMATA awarded a contract for wayside equipment for TSP to be installed at traffic signals on VA 7 (Leesburg Pike). This initial procurement enabled other agencies to finalize the procurement, installation, operating costs, and maintenance that will be handled by each agency.</li> <li>• <b>14th Street to K Street and Theodore Roosevelt Bridge to K Street Bus Priority Improvements (DDOT):</b> Installation was completed for uninterruptable power supply (UPS) for traffic signals.</li> <li>• <b>DC Corridor Projects (DDOT):</b> RTPI sign installation started in December.</li> </ul>
Future Schedule (through June 30, 2016)	
2015	<ul style="list-style-type: none"> <li>• <b>Addison Road (WMATA):</b> Bus stop improvements were completed in 2013. RTPI signs are being installed with testing to take place through spring 2015.</li> <li>• <b>Pentagon and Franconia-Springfield Station Improvements (WMATA):</b> Construction of pedestrian access, safety, and security improvements at the Pentagon station will begin this summer, as will Franconia-Springfield station improvements, following completion of design activities and contract awards.</li> <li>• <b>VA 7 (Leesburg Pike) Bus Priority Improvements (WMATA):</b> TSP pilot location scheduled to be installed and tested in March, followed by wayside equipment installation along the corridor. Operational testing to take place throughout the summer.</li> <li>• <b>16th Street and Wisconsin Avenue Bus Priority Improvements (DDOT):</b> Bus stop improvements are nearly complete. Installation of TSP and queue jumps will follow.</li> <li>• <b>Georgia Avenue Bus Priority Improvements (DDOT):</b> Bus lane construction is scheduled to start in April and be largely complete by the end of the year.</li> <li>• <b>Van Dorn-Pentagon Rapid Bus (City of Alexandria):</b> Construction of bus stop improvements and queue jump lanes to take place.</li> <li>• <b>14th Street to K Street and Theodore Roosevelt Bridge to K Street Bus Priority Improvements (DDOT):</b> Installation of TSP begins in the Downtown Core.</li> <li>• <b>Takoma/Langley Transit Center (MDOT):</b> Opening scheduled for October.</li> </ul>
2016	<ul style="list-style-type: none"> <li>• <b>Pentagon and Franconia-Springfield Station Improvements (WMATA):</b> Complete construction.</li> <li>• <b>Bus Corridor Priority Treatments (All):</b> Complete installation of TSP and other improvements.</li> </ul>

## **Project Implementation Issues**

The TIGER grant period of performance ends on September 30, 2016, which given invoice processing time means all of the work to be reimbursed by the grant should be completed by the end of June 2016. Several project components are currently scheduled to be completed in early 2016, and may run near to this deadline.

### **1. FTA Approval for Project Revisions**

On January 15, 2015, the FTA communicated that the MWCOG Grant Revision request submitted on October 28, 2014, was approved. With the approval, several projects proposed in the original TIGER grant application that are no longer viable have been replaced with revised scopes of work.

- i. The TIGER Grant will now fund the final engineering and initial construction of a bus station with eight bays in the Hayes Street Lot that lies between I-395 and Army-Navy Drive.
- ii. At the Franconia-Springfield station, the scope of the project has changed to fund pedestrian canopies and revised circulation improvements.
- iii. In Maryland, funds have been reprogrammed to support the construction of the Takoma Langley Crossroads Transit Center.
- iv. In the District, the number of TSP locations was reduced in the downtown core, while the number of locations on 16<sup>th</sup> Street, Georgia Avenue and Wisconsin Avenue were increased to expand the effectiveness of the effort.

### **2. Transit Signal Priority (TSP) Systems**

Eight of the component projects involve the implementation of Transit Signal Priority (TSP) and construction of other improvements for bus service along key corridors across the region. The TSP technology procurement for the bus corridors is the most innovative portion of the TIGER grant; however it is proving to be the most challenging in achieving coordination among the multiple agencies and departments. Along with traffic signal optimization in the downtown core, timing traffic lights to detect and provide priority to buses is fundamental to improving the reliability of bus travel in the region. The goal of the TIGER grant is to enable multiple TSP demonstration projects across the region, opening the opportunity for widespread deployment of this technology in the region.

The TSP technology is scheduled to initially be installed and tested on VA 7 (Leesburg Pike) in March 2015, by WMATA in close coordination with VDOT and the local jurisdictions. WMATA has procured the TSP technology for the Metrobus fleet and is procuring the wayside equipment for the VA 7 project. The system will subsequently be tested in the District and in Maryland, with their respective, different wayside traffic signal technologies. DDOT is in the process of procuring the wayside technology for traffic signals in the District, with options for Maryland and the City of Alexandria. Successful compatibility testing across multiple wayside traffic signal systems is technologically challenging, and may experience delays that affect TSP projects planned for completion in the grant.

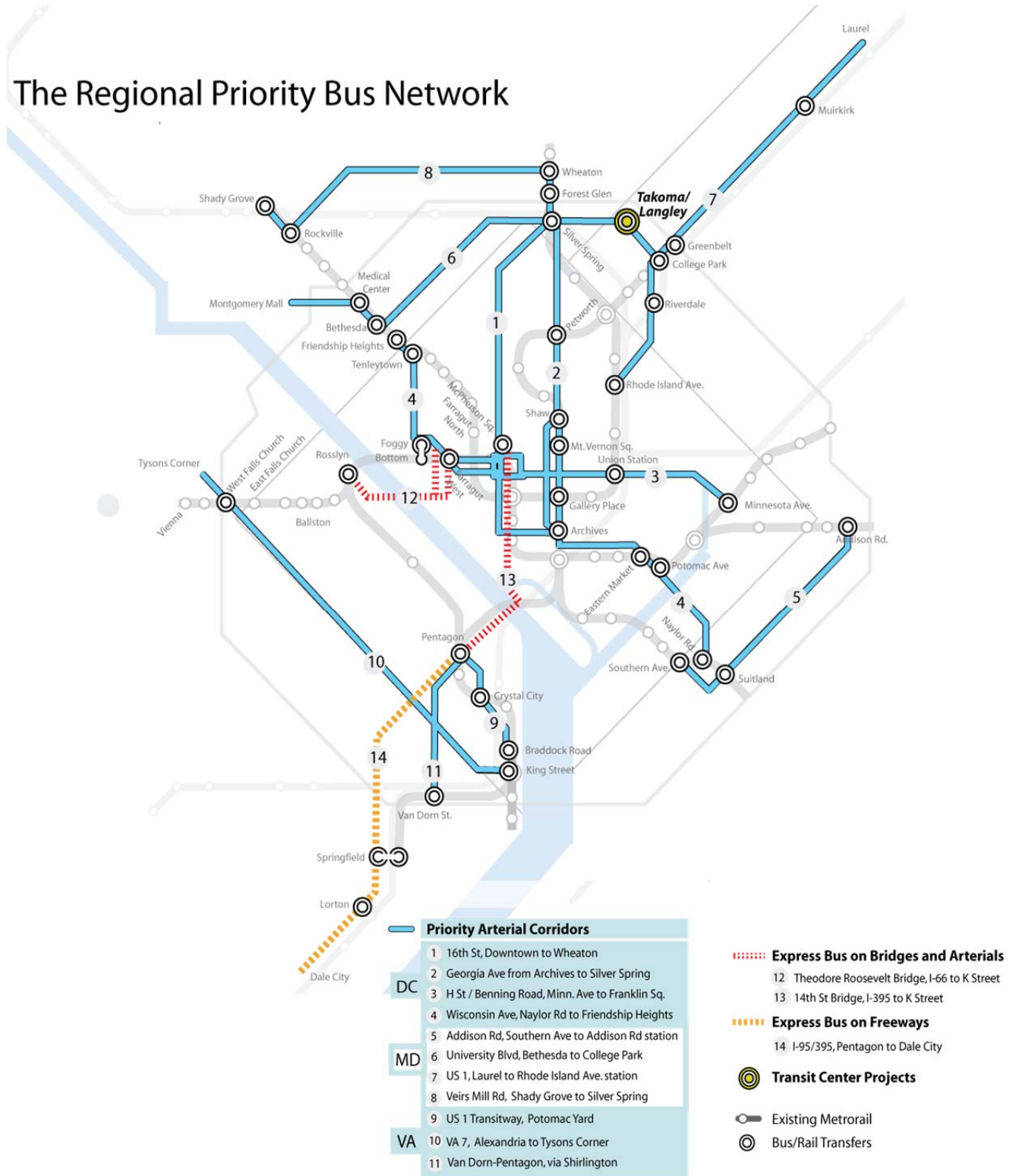
Attached to this memorandum as an appendix are a map of the TIGER projects and detailed descriptions of each of the sixteen project components.



# APPENDIX: MAP AND DETAILS OF 16 COMPONENT PROJECTS OF THE TIGER GRANT

The map below shows the 16 component projects of the TIGER grant.

## The Regional Priority Bus Network



The 16 component projects of the TIGER Priority Bus Transit grant are as follows:

### Project Component Descriptions

#	Project Components (As Revised January 15, 2015)
1	<b>16th Street Bus Priority Improvements (DDOT): \$1,292,317</b> Capital improvements include a queue jump lane, bus stop improvements, real time passenger information (RTPI) displays at up to 17 stop locations, and transit signal priority/traffic system management (left turn phase for bus) at 31 intersections.
2	<b>Georgia Avenue Bus Priority Improvements (DDOT): \$5,442,000</b> Improvements include a short bus-only lane that will be constructed on Georgia Avenue to alleviate current bus delays. Additionally, improvements include transit signal priority, bus stop improvements, queue jumps, and real time passenger information (RTPI) displays will be installed.
3	<b>H Street/Benning Road Bus Priority Improvements (DDOT): \$434,000</b> This project will implement RTPI displays and install security cameras at select locations.
4	<b>Wisconsin Avenue Bus Priority Improvements (DDOT): \$1,490,000</b> Capital improvements include transit signal priority and RTPI displays deployed to a number of express service stop locations.
5	<b>Addison Road Improvements (WMATA): \$2140,000</b> This is a WMATA priority bus corridor that connects the Addison Road and Southern Avenue Metrorail stations. The project includes the replacement of bus shelters along with installation of real-time passenger information displays at select locations.
6	<b>University Boulevard Bus Priority Improvements (MDOT): \$235,864</b> Planned improvements include installation of RTPI displays and a series of bus stop enhancements along the corridor.
7	<b>US 1 Bus Priority Improvements (MDOT): \$476,250</b> Improvements include queue jump lanes and transit signal priority.
8	<b>Veirs Mill Bus Priority Improvements (MDOT): \$98,479</b> Improvements include deployment of RTPI displays.
9	<b>US 1 Transitway (City of Alexandria): \$8,202,500</b> A bus transitway in the median of US 1 within the city limits will provide exclusive right of way for buses.
10	<b>VA 7 (Leesburg Pike) Bus Priority Improvements (WMATA): \$1,084,000</b> A WMATA Priority Corridor that connects the Cities of Alexandria and Falls Church with the commercial center of Tysons Corner, the TIGER grant funds improvements that include transit signal priority at up to 25 intersections along the corridor.
11	<b>Van Dorn-Pentagon Rapid Bus (City of Alexandria): \$646,550</b> The project will provide runningway improvements to support a future rapid bus service in the City of Alexandria from the Van Dorn Metrorail Station in the City of Alexandria to the Pentagon in Arlington County. TIGER funding will support signal prioritization technology, two super stops, and two queue jump lanes. These improvements will enhance transit service along three current bus routes in addition to a future new BRT route.
12	<b>Theodore Roosevelt Bridge to K Street Bus Priority Improvements (DDOT): \$1,703,683</b> Implementation of an integrated transit signal priority and traffic signal optimization system along E Street, northbound 18th Street, and southbound 19th Street. Additionally, uninterruptable power supply installation will take place at select traffic lights will prevent traffic signals outages following power interruptions.

#	Project Components (As Revised January 15, 2015)
13	<p><b>14th Street to K Street Bus Priority Improvements (DDOT): \$2,729,190</b>  Implementation of an integrated transit signal priority and traffic signal optimization system along 14<sup>th</sup> Street from the bridge to K Street. Additionally, uninterruptable power supply installation will take place at select traffic lights.</p>
14a	<p><b>Pentagon and Franconia-Springfield Station Improvements (WMATA): \$9,770,550</b>  Station improvements at Pentagon Station and Franconia/Springfield Station, including bus bays, real time bus information, and traffic circulation/access/security improvements. Major technology improvements include real-time bus information displays.</p>
14b	<p><b>PRTC Buses and ITS Technology (PRTC): \$9,650,000</b>  This component includes the replacement of 13 buses, with new vehicles using state-of-the-art clean-fuel technology. The project also includes security cameras outfitted on 15 buses and the procurement of computer-aided dispatch and automatic vehicle location (CAD/AVL) technology.</p>
TC	<p><b>Takoma/Langley Transit Center (MDOT): \$13,309,287</b>  This transit center at the intersection of University Boulevard and New Hampshire Avenue will consolidate the bus stops at the intersection into one facility (although some existing bus stops will still remain in order to prevent requiring pedestrians to cross busy roads to their final destinations). The transit center will provide a safe, attractive, comfortable and efficient facility for passengers and improve pedestrian safety and accessibility.</p>



# Briefing on the Implementation of the TIGER Grant for Priority Bus Transit in the National Capital Region

Transportation Planning Board  
February 18, 2015

Project Implementation Update

Eric Randall

Department of Transportation Planning



# Overview of the TIGER Grant

- The TPB's Transportation Investments Generating Economic Recovery (TIGER) Grant Agreement with USDOT was signed on December 14, 2010.
  - \$58.8 million in capital funding (100% Federal) for priority bus transit improvements.
  - Sixteen component projects with five implementing organizations: City of Alexandria, DDOT, MDOT, PRTC, and WMATA.
- TPB last briefed in June 2014.
  - Official correspondence among FTA, COG, and implementing organizations discussed at October and November TPB meetings.
  - On January 15, 2015, FTA approved MWCOG's grant revision request (submitted October 28). This amended project scopes and budgets and enabled final design and manufacture to proceed.

# Overview of the TIGER Grant

- **Progress to Date / Remaining**

	<u>To Date:</u>	<u>Remaining:</u>
Period of Performance:	Four years and one month (71%)	20 months to go (29%)
Actual/Anticipated Expenditures:	\$22.5 million (38%)	\$36.3 million (62%)

- **Project Status**

*Completed to Date*

- US-1 (VA) / Potomac Yard Transitway
- PRTC Bus Purchase (13 Buses)

*In 2015*

- Takoma/Langley Transit Center
- Real Time Passenger Info Displays

*In 2016*

- Transit Signal Priority
- Bus Corridor Capital Projects
- Franconia-Springfield & Pentagon transit stations

# TIGER Projects Nearing Completion

- **Buses and ITS (*PRTC*)**

- Computer-Aided Dispatch and Automatic Vehicle Location (CAD/AVL) system in mini-fleet testing. Complete in June 2015



- **Takoma/Langley Transit Center (*MDOT*)**

- Scheduled for opening in Fall 2015.



- **Real Time Passenger Information (*DDOT, WMATA, MDOT, Alexandria*)**

- Installation and testing of 179 RTPi signs in progress. Complete mid-2015.





# TIGER Projects Completing Design

- **Bus Corridor Priority Treatments**  
(DDOT, WMATA, MDOT, Alexandria)

- **Transit Signal Priority (TSP)**

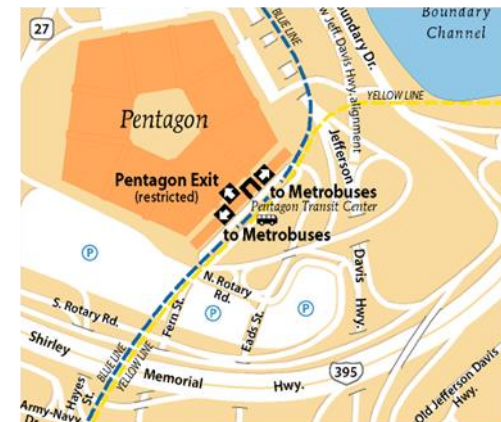
- Prototype deployment on VA-7 (Leesburg Pike) scheduled for March 2015. Install signals through 2016.
- Signal optimization in Downtown Core: March 2015.

- **Capital Improvements**

- Georgia Avenue Bus-Only lane: December 2015
- Van Dorn-Pentagon Corridor: 2016.
- University Boulevard, Veirs Mill Road, US 1 (MD): 2016.

- **Franconia-Springfield and Pentagon (WMATA)**

- Franconia-Springfield: Bus stop canopies and additional safety improvements for pedestrians.
- Pentagon Transit Center: Pedestrian access treatments and security systems. TIGER will also fund first half of construction of alternative bus bay site on Army-Navy Drive.



# Completing the TIGER Projects

Successful completion of the TIGER Projects still depends on successful accomplishment of several critical implementation steps.

1. Transit Signal Priority (TSP) Systems
  - Procurement of wayside equipment is still in progress. Installing TSP Systems across multiple wayside traffic signal systems is technologically challenging and may experience delays.
2. Pentagon and Franconia Springfield transit station projects
  - Design for elements of both projects is still in progress, to be followed by procurement for constructions, which may experience delays.
  - Permitting and easement approvals are also required.
3. Funds Expiration and Performance Monitoring
  - Work must be completed by the end of June 2016 to ensure timely invoicing before funds expire in September 2016.
  - Performance monitoring and reporting of the grant projects will continue through 2018.

**Propose to next brief TPB in July 2015 on progress of the TIGER Grant.**

# TIGER Grant for Priority Bus Transit in the National Capital Region

Questions?



**ITEM 13- Notice Item**

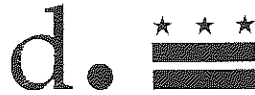
February 18, 2015

Notice of Proposed Amendment to Update Projects and Funding  
in the District of Columbia Section of the FY 2015-2020 TIP

Notice is provided that the District Department of Transportation (DDOT) has requested an amendment to update projects and funding in the District section of the FY 2015-2020 TIP. The Board will be asked to approve this amendment at the March 18 meeting.



**Government of the District of Columbia**  
**Department of Transportation**



**d. Policy, Planning and Sustainability Administration**

February 11, 2015

The Honorable Phil Mendelson, Chairperson  
National Capital Region Transportation Planning Board  
Metropolitan Washington Council of Governments  
777 North Capitol Street N.E., Suite 300  
Washington, DC 20002-4290

Dear Chairman Mendelson,

The District Department of Transportation (DDOT) requests that the FY 2015-2020 Transportation Improvement Program (TIP) be amended to include the District's updated Obligation Plan.

The Obligation Plan is a seven-year plan for obligating (initiating) projects. DDOT updates its Obligation Plan annually. The proposed amendment will update the District's element of the FY 2015-2020 TIP with project information and additional funding for the FY 2015-2020 program years as reflected in DDOT's most recently approved Obligation Plan.

We appreciate your cooperation in this matter. Should you have questions regarding this amendment, please contact Mark Rawlings at (202) 671-2234 or by e-mail at [mark.rawlings@dc.gov](mailto:mark.rawlings@dc.gov). Of course, feel free to contact me directly.

Sincerely,

Samuel Zimbabwe  
Associate Director, Policy, Planning, and Sustainability Administration (PPSA)



**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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**Interstate**

**11th Street Bridges and Interchange Reconstruction**

TIP ID: 3193	Agency ID: CD056A	Title: 11th Street Bridges SE, Replace and Reconfigure	Total Cost:	<b>\$37,500</b>
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Facility: 11th Street Bridge and Interchan	NHPP	80/20/0	22,500 c	7,000 c	5,000 c					12,000
From:										
To:	<b>Total Funds: 12,000</b>									

Description: To replace existing structure with new structures and provide direct access from I-295 to Downtown DC (via I-395).

TIP ID: 5554	Agency ID: HTF02A	Title: Garvee Bond Debt Service	Total Cost:	<b>\$82,390</b>
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Facility:	NHPP	80/20/0	11,763 c	11,768 c	11,770 c	11,774 c	11,772 c	11,771 c	11,771 c	70,626
From:										
To:	<b>Total Funds: 70,626</b>									

Description: This project consist of rehabilitation of existing deck, steel beams.

**Rehabilitation of I-395 HOV Bridge over Potomac River**

TIP ID: 6187	Agency ID: MRR27A	Title: Rehabilitation of I-395 HOV Bridge over Potomac River	Total Cost:	<b>\$39,250</b>
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Facility: I-395 HOV	NHPP	80/20/0	750 a							38,500 c
From: Over Potomac River										
To: Over Potomac River	<b>Total Funds: 38,500</b>									

Description: Repair extensive pier cracking, superstructure and substructure rehabilitation.

**Rehabilitation of I-66 Ramp to Whitehurst Freeway over Potomac Pkwy and Rock Creek (Bridge No.1303)**

TIP ID: 6416	Agency ID:	Title: Rehabilitation of I-66 Ramp to Whitehurst Freeway over Potomac Pkwy and Rock Creek (	Total Cost:	<b>\$6,000</b>
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Facility: I-66 Ramp to Whitehurst Freeway over Pot	NHPP	80/20/0					1,000 a	5,000 c		6,000
From: I-66 Ramp										
To: Whitehurst Freeway over Potomac Pkwy and	<b>Total Funds: 6,000</b>									

Description: Rehabilitation of the concrete substructures and superstructure and other related miscellaneous repairs of I-66 Ramp to Whitehurst Freeway over Potomac Pkwy and Rock Creek (Bridge No. 1303).



**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Return to L'Enfant</b>										
TIP ID: 5718 Agency ID:		Title: Return to L'Enfant						Total Cost:		\$27,000
Facility: I Center Leg Freeway	PRIV	0/0/0	12,000 a	50,000 c	50,000 c				100,000	
From: Massachusetts Avenue, NW			100,000 c							
To: E St., NW (Between 2nd & 3rd)										
									<b>Total Funds: 100,000</b>	

Description: This project is intended to accommodate planned growth with maintaining the functionality of the local and regional transportation system, enhance vehicular, pedestrian, and bicycle connection around and across the freeway. Support the full development potential and re-establish the L'Enfant Plan street grid. In addition to an EA, the project will require an Interstate Modification Report (IMR). The implementation of this project will be privately funded.

- a. Transfer excess right of way to a developer (Mass Ave, E Street, 2nd Street, and 3rd Street; exclusive of F Street and G Street).
- b. Eliminate the SB entrance ramp from 3rd Street to I-395 and exit ramp to 3rd Street to I-39. SB access will be maintained via entrance ramp and portal located on Massachusetts Avenue.
- c. Re-align NB 2nd Street ramp.
- d. Re-establish F Street and G Street between 2nd Street and 3rd Street.

<b>Primary</b>										
<b>Anacostia Waterfront Initiative</b>										
TIP ID: 5957 Agency ID: AW0, EW002C		Title: Pennsylvania Ave/Potomac Circle						Total Cost:		\$5,750
Facility: Pennsylvania Ave and Potomac Circle	HSIP	80/20/0	1,000 a	4,750 c					5,750	
From:										
To:										
									<b>Total Funds: 5,750</b>	

Description: Convert the former I-695 freeway into Southeast Boulevard and to reconfigure Barney Circle to provide at grade access and neighborhood connectivity to the waterfront. Improve pedestrian and bicycle access to the Sousa Bridge and along proposed Southeast Boulevard to the 11th Street Bridges.

Pedestrian and Bicycle Safety improvements including reconfiguration of the Pennsylvania Ave/Potomac Avenue intersection, new signals and crosswalks and improvement access to the Potomac Metro station.

TIP ID: 5723 Agency ID: AW027A		Title: St. Elizabeths Campuses Access Improvements						Total Cost:		\$108,980
Facility:	GSA Earmark	80/20/0	6,420 a	2,440 a	31,420 c	24,800 c			108,980	
From:				43,900 c						
To:										
									<b>Total Funds: 108,980</b>	

Description: Multimodal transportation improvements to accommodate the DHS consolidation at ST. Elizabeths East and West Campuses, and other nearby development. West Campus project will improve access and transportation flow in and around the area. Improvements include I-295 interchange reconfigurations, roadway, safety, ITS and operational improvements to nearby streets. Project details include:

- a. I-295 interchange reconfigurations – I-295/Malcolm X Ave., I-295/South Capitol St.; Malcolm X Ave. east and west of I-295- (PE)
- b. Roadway infrastructure in and around the two campuses – 13th St., Sycamore St., Dogwood St., Pecan St. Cypress St., and West Campus Access Rd. - (PE)
- c. MLK Ave, Malcolm X Ave., Firth Sterling, Alabama Ave. - (PE)

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

			Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>TIP ID: 5802</b>			<b>Agency ID: CD044A</b>			<b>Title: Program Manager AWI</b>						<b>Total Cost: \$52,500</b>

Facility: Citywide	NHPP	80/20/0	7,500 a	7,500 a	7,500 a	7,000 a	6,500 a	6,000 a	5,500 a	40,000
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From:											
To:	<b>Total Funds: 40,000</b>										

Description: Consultant services to supplement the NEPA process and implement design and construction of the AWI corridors. Work includes surveys; geotechnical and environmental investigation and testing preliminary ;roadway and bridge design and CE services during construction. Funding will be used for construction oversight and consultant services.

<b>TIP ID: 3290</b>			<b>Agency ID: SR049A</b>			<b>Title: Reconstruction of Kenilworth Avenue, NE</b>						<b>Total Cost: \$13,050</b>
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Facility: Kenilworth Ave, NE	NHPP	80/20/0				13,050 c				13,050
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From: East Capitol St Ramp											
To: Rail Over Pass north of Benning Rd	NHS	80/20/0	750 a								
	<b>Total Funds: 13,050</b>										

Description: Design of Kenilworth Ave/I295 from East Capitol Street, NE to Penn Rail Road Bridge over pass is a total reconstruction project. The length of the project is about 2,600 both directions. The design project will include upgrade of the existing curb and gutter, replace existing fences, remove the existing temporary Jersey Barriers and replace with permanent Jersey Barriers and address the current hydraulic problem.

**South Capitol Street**

<b>TIP ID: 6038</b>			<b>Agency ID:</b>			<b>Title: Garvee Debt Service</b>						<b>Total Cost:</b>
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Facility:	NHPP	80/20/0				12,320 c	18,030 c	18,030 c	18,030 c	66,410
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From:											
To:	<b>Total Funds: 66,410</b>										

Description: DDOT will use future FHWA annual allocations to pay service on the bonds.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
TIP ID: 3423 Agency ID: AW011, AW024 Title: South Capitol Street Corridor									Total Cost: \$554,172
Facility: DC	0/100/0			51,438 c	34,420 c	4,294 c	24,303 c		114,455
From: N St, MLK Ave, Suitland Pkwy, Memorial Bri									
To: DEMO	80/20/0	36,018 c	43,350 c	7,600 c					50,950
	GARVEE	80/20/0			48,690 c	84,270 c	76,330 c		209,290
	NHPP	80/20/0				22,320 c	22,320 c	22,320 c	66,960
									<b>Total Funds: 441,655</b>

Description: Redevelopment of the South Capitol Street corridor is a part of the Anacostia Waterfront Initiative. Concept plans for the replacement of the Frederick Douglas Memorial Bridge are under development as part of the EIS currently being prepared for the corridor.

- a. New Frederick Douglass Memorial Bridge: Full replacement and realignment of the Frederick Douglass Memorial Bridge.
- b. Reconfigure the interchange at Suitland Parkway and I-295: The improvements include the removal of existing cloverleaf ramps at the interchange, replacing them with a diamond interchange. The diamond interchange will include two at-grade signalized intersections, one at the I-295 northbound ramps and the other at I-295 southbound ramps.
- c. Reconfigure the interchange at Martin Luther King Jr. Ave. and Suitland Parkway. The existing MLK Jr. Bridge over Suitland Parkway will be replaced and a center ramp signalized interchange will be created to allow full movements to and from Suitland Parkway to MLK Jr. Ave.
- d. Boulevard streetscape treatments along South Capitol Street from between N Street and the SE/SW Freeway. In this segment, South Capitol Street will be rebuilt as a six-lane boulevard divided by a landscaped median.
- e. New Jersey Avenue Streetscape improvements: The streetscape concept will restore a consistent design to the avenue between the SE-SW Freeway and M Street SE.

**Secondary**

**Columbia Road NW, Reconstruction 16th to 18th Streets and Resurface 18th Street to Conn Ave**

TIP ID: 6189 Agency ID: MRR24A Title: Columbia Road, NW, Reconstruction 16th to 18th Streets and Resurface 18th Street to C									Total Cost: \$1,000
Facility: Columbia Road, NW	STP	80/20/0					1,000 a		1,000
From: 16th Street, NW									
To: Connecticut Ave, NW									
									<b>Total Funds: 1,000</b>

Description: Pavement reconstruction from 16th to 18th Street to remove old streetcar tracks and Resurface from 18th Street to Connecticut Ave. Improve curb and gutter, sidewalk, streetlight, traffic signals, upgrade ADA ramps, drainage catch basins, add LID's, median planter and replace trees.

**Florida Avenue Transportation Study**

TIP ID: 6195 Agency ID: ZU033A Title: Florida Avenue Transportation Study									Total Cost: \$12,000
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Facility: Florida Avenue, NE	STP	80/20/0		1,000 a					1,000
From: 1St Street, NE									
To: H Street, NE									
									<b>Total Funds: 1,000</b>

Description: Implementation of Florida Avenue Transportation Study recommendations, which may include reconstruction of Florida Ave from Benning Rd to New York Ave, safety improvements and streetscape upgrades.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Maryland Avenue Pedestrian Safety Project</b>										
TIP ID: 6014 Agency ID: SR088A		Title: Maryland Avenue NE Road Diet					Total Cost:		<b>\$3,600</b>	
Facility: Maryland Ave. NE	STP	80/20/0	300 a		3,300 c				3,600	
From: 2nd Street NE									<b>Total Funds:</b>	<b>3,600</b>
To: 15th Street NE										
Description: To improve pedestrian safety on Maryland Avenue from 2nd Street to 15th Street NE.										

<b>Mid City East</b>										
TIP ID: 6184 Agency ID: OSS14A		Title: Mid City East					Total Cost:		<b>\$3,000</b>	
Facility: Eckington, Bloomingdale, LeDroit, Hannover	STP	80/20/0	500 d		2,500 c				3,000	
From: Eckington									<b>Total Funds:</b>	<b>3,000</b>
To: Shaw										
Description: The Mid City East Livability Study seeks to improve physical connectivity among the neighborhoods of Mid City East and their connections to the opportunities and assets of the larger city. Local transportation networks are envisioned as safe and comfortable for travelers of all ages and abilities, contributing to the health of the community and environment and celebrating local identity. The study covers the neighborhoods of Eckington, Bloomingdale, LeDroit, Hannover-Bates, and parts of Shaw.										

<b>Neighborhood Roadside Improvements</b>										
TIP ID: 5295 Agency ID: SR071A, SR07		Title: Capitol Hill Transportation Study Infrastructure Improvements					Total Cost:		<b>\$8,000</b>	
Facility: 17th Street Corridor	STP	80/20/0	5,850 c	8,000 c					8,000	
From:									<b>Total Funds:</b>	<b>8,000</b>
To:										
Description: The project includes the design and/or construction of infrastructure improvements recommended in the Capitol Hill Transportation Study. The improvements aim to enhance pedestrian and vehicle safety, traffic calming, neighborhood circulation and access at select intersections and streets throughout Capitol Hill.  Review of Capitol Hill Study recommendation to address today's safety and transportation issues along this corridor. A. Capitol Hill Infrastructure Improvements, 17th St										

<b>Reconstruction of 18th Street, NW from Virginia Ave to Connecticut Ave/M Street</b>										
TIP ID: 6412 Agency ID:		Title: Reconstruction of 18th Street, NW from Virginia Ave to Connecticut Ave/M Street					Total Cost:		<b>\$1,000</b>	
Facility: 18th Street NW	STP	80/20/0			1,000 a				1,000	
From: Virginia Ave NW									<b>Total Funds:</b>	<b>1,000</b>
To: M Street NW										
Description: Pavement reconstruction including improvement of curb and gutter, sidewalk, streetlight, traffic signals upgrade ADA ramps, drainage catch basins, LID's, and replace trees.										

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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**Reconstruction of 21st Street, NW from Constitution Ave to G Street and from I Street to New Hampshire Ave**

TIP ID: <b>6413</b> Agency ID:	Title: <b>Reconstruction of 21st Street, NW from Constitution Ave to G Street and From I Street to</b>							Total Cost:	<b>\$1,000</b>
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Facility: 21st Street NW	STP	80/20/0				1,000 a			1,000
From: Constitution Ave NW / I Street NW									
To: G Street NW / New Hampshire Ave NW									
<b>Total Funds:</b>									<b>1,000</b>

Description: Pavement reconstruction including improvement of curb and gutter, sidewalk, streetlight, traffic signals upgrade ADA ramps, drainage catch basins, LID's, and replace trees on 21st Street NW, from Constitution Ave to G Street and from I Street NW to New Hampshire Ave NW

**Reconstruction of Columbia Rd NW from Michigan Ave./Park Place to 15th Street**

TIP ID: <b>6415</b> Agency ID:	Title: <b>Reconstruction of Columbia Rd NW from Michigan Ave NW/Park Place to 15th Street</b>							Total Cost:	<b>\$1,000</b>
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Facility: Columbia Rd NW	STP	80/20/0					1,000 d		1,000
From: Michigan Ave NW/ Park Place NW									
To: 15th Street NW									
<b>Total Funds:</b>									<b>1,000</b>

Description: Pavement reconstruction including improvement of curb and gutter, sidewalk, streetlight, traffic signals upgrade ADA ramps, drainage catch basins, LID's, and replace trees on Columbia Rd NW from Michigan Ave/Park Place to 15th Street NW

**Reconstruction of Harvard Street NW from 16th Street NW to Georgia Ave NW**

TIP ID: <b>6425</b> Agency ID:	Title: <b>Reconstruction of Harvard Street NW from 16th St NW to Georgia Ave NW</b>							Total Cost:	<b>\$1,000</b>
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Facility: Harvard Street NW	STP	80/20/0				1,000 a			1,000
From: 16th Street, NW									
To: Georgia Avenue NW									
<b>Total Funds:</b>									<b>1,000</b>

Description: Pavement reconstruction from Harvard Street from 16th Street to Georgia Ave, Improve Curb and gutter, sidewalk, streetlight, traffic signals, upgrade ADA ramps, drainage catch basins, add LID's median planter and replace trees.

**Reconstruction of Kenyon Street NW from Park Place to 13th Street**

TIP ID: <b>6414</b> Agency ID:	Title: <b>Reconstruction of Kenyon Street NW from Park Place NW to 13th Street NW</b>							Total Cost:	<b>\$6,500</b>
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Facility: Kenyon Street NW	STP	80/20/0				1,000 a	5,500 c		6,500
From: Park Place NW									
To: 13th Street NW									
<b>Total Funds:</b>									<b>6,500</b>

Description: Pavement reconstruction including improvement of curb and gutter, sidewalk, streetlight, traffic signals upgrade ADA ramps, drainage catch basins, LID's, and replace trees on Kenyon Street NW from Park Place NW to 13th Street NW

**Rehabilitation of Eastern Avenue NE from New Hampshire Ave, NE to Whitter Street NW**

TIP ID: <b>6419</b> Agency ID:	Title: <b>Rehabilitation of Eastern Avenue NE from New Hampshire Ave, NE to Whitter Street NW</b>							Total Cost:	<b>\$4,323</b>
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Facility: Eastern Avenue NE	STP	80/20/0		500 a					500
From: New Hampshire Ave NE									
To: Whitter Street NW									
<b>Total Funds:</b>									<b>500</b>

Description: Rehabilitate of Reconstruct Asphalt Overlay on concrete pavement, replace deteriorated catch basins, manholes, curb and ramps

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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**Bike/Ped**

**District-wide Bicycle and Pedestrian Management Program**

TIP ID: 3232	Agency ID: CM064A, ZUT0	Title: Bicycle and Pedestrian Management Program	Total Cost:						
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Facility: Citywide	CMAQ	80/20/0	2,935 c	250 a	165 c	1,165 c	605 c	165 c	165 c	2,680
From:				165 c						
To:										
<b>Total Funds:</b>										<b>2,680</b>

Description: The goal of this project is to increase the safety and convenience of bicycle and pedestrian travel. It includes the widening of existing routes, curve realignment, grade reduction, and signage and lighting upgrades. Included in the Bicycle and Pedestrian Management Program is:

- a. Bicycle Parking Racks
- b. Bicycle Lanes and Signs (mark dedicated bicycle lanes, including signage)
- c. BIKE\_Capital Bikeshare (CaBi)

**East Capitol Street Pedestrian Safety Project**

TIP ID: 6315	Agency ID: SR086A	Title: East Capitol Street Corridor Mobility & Safety Plan	Total Cost:							<b>\$3,800</b>
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Facility: Street	STP	80/20/0		400 a				3,300 c		3,700
From:										
To:										
<b>Total Funds:</b>										<b>3,700</b>

Description: Design and Construct pedestrian safety and traffic operations improvements

**Metropolitan Branch Trail**

TIP ID: 3228	Agency ID: AF073A, ZU024	Title: Metropolitan Branch Trail	Total Cost:							<b>\$7,432</b>
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Facility: Union Station District Line	CMAQ	80/20/0	400 a		5,500 c					5,500
From:										
To:	DEMO	80/20/0	732 a	500 a						1,700
				1,200 c						
<b>Total Funds:</b>										<b>7,200</b>

Description: The Metropolitan Branch Trail project will provide a 6.25-mile bicycle/pedestrian trail from Union Station north to the District Line along the railroad right-of-way. This trail will connect at the District line with a route continuing into Silver Spring MD. This project is intended to serve both recreational users and commuters to meet Transportation Control Measures (TCMs) and air quality objectives.

- a. L & M St.
- b. Ft. Totten

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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**National Recreational Trails**

TIP ID: <b>2796</b>	Agency ID: <b>AF066A</b>	Title: <b>National Recreational Trails</b>	Total Cost:						<b>\$2,100</b>
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Facility: Citywide	NRT	80/20/0	1,125 a	300 a	300 a	300 a	300 a	300 a	300 a	1,800
From:										
To:	<b>Total Funds: 1,800</b>									

Description: Programs associated with the Recreational Trails Program – a program established to develop and maintain recreational trails and trail-related facilities. Mostly small projects; often grants to local groups.

Through the D.C. Recreational Trails Program Advisory Committee, the Department of Transportation will provide or grant funding to non-profits to provide the following services for District trails: maintain and restore existing trails; develop and rehabilitate trailside and trailhead facilities and trail linkages; purchase and lease trail construction and maintenance equipment; construct new trails; acquire easements or property for trails; assess trail conditions for accessibility and maintenance; develop and disseminate publications and operate educational programs to promote safety and environmental protection related to trails (including supporting non-law enforcement trail safety and trail use monitoring patrol programs, and providing trail-related training).

TIP ID: <b>6243</b>	Agency ID: <b>ZU009A</b>	Title: <b>Suitland Parkway Trail Rehabilitation</b>	Total Cost:						<b>\$3,600</b>
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Facility: paved mulit-use trail	NRT	80/20/0	300 a	100 a	3,300 c					3,400
From:										
To:	<b>Total Funds: 3,400</b>									

Description: Rehabilitate the Suitland Parkway Trail

TIP ID: <b>6230</b>	Agency ID: <b>ZU010A</b>	Title: <b>New York Avenue Trail</b>	Total Cost:						<b>\$3,600</b>
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Facility: Paved trail/sidewalk	CMAQ	80/20/0	400 a	300 a	3,300 c					3,600
From:										
To:	<b>Total Funds: 3,600</b>									

Description: Design and build a new trail along New York Avenue NE.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source		Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Oxon Run Trail Restoration</b>											
TIP ID: 2780	Agency ID: AF089A	Title: Oxon Run Trail Restoration							Total Cost:	<b>\$12,500</b>	
Facility:	NRT	80/20/0	488 a	150 a						150	
From:											
To:	STP	80/20/0		9,650 c						9,650	
<b>Total Funds:</b>										<b>9,800</b>	

Description: The purpose of this project is to improve access within Oxon Run Park and the non-motorized network connections to surrounding destinations by rehabilitation the existing trails, as well as extending the trail network. The park is a central open space area within Southeast D.C. with miles of disconnected existing trails in degraded condition. The trail will be an important non-motorized Study Area. Alabama Ave, Southern Ave, 4th St, 1st St, South Capitol St, Mississippi Ave, Stanton Rd, Overlook Ave, Martin Luther King Jr Ave, Branch Ave, 6th St, Good Hope Rd, Atlantic St, Wheeler Rd, Naylor Rd, 23rd St, 2nd St, Morris Rd, Howard Rd, Malcolm X Ave, 25th St, Shepherd Pky, W St, Pennsylvania Ave, Blue Plains Dr, 27th St, 38th St, Chesapeake St, Galve ston St, V St, 13th St, Naylor Rd, Southern Ave, 295, 95, 210, 414, 5, Oxon Run Trail, Proposed South Capitol St Trail, Other Existing Trails, Other Proposed Trails, Metro 0 0.5 1 2 ,Park Area Miles, Maryland Blue Plains, Water Treatment Facility, NAVY Annex, Bolling Air Force Base, Oxon Run Park, Oxon Run Trail Context Map, District of Columbia Bald Eagle Recreation Center, St. Elizabeths Campus, Eastover Plaza, Town of Forest Heights MD, DC Village, Congress Heights, Oxon Cove Park, Suitland Parkway, Bell Acres Park(MNCPPC), Audrey Ln, Southern Ave ,To Points North In Maryland, To Points South In Maryland, The ARC ,South Capitol St, To Points North in Washington, Naylor Road, National Harbor, Bellvue Neighborhood, Anacostia, National Airport, City of Alexandria, Figure 1: Oxon Run trail context map 5 transportation route providing direct access from Southeast D.C. neighborhoods near the Southern Avenue metro station to the Bald Eagle Recreational Center in the Bellevue neighborhood, and Oxon Cove Park/Oxon Hill Farm, which connects to National Harbor in Maryland. The trail network will eventually connect to the D.C. Village development area, S. Capitol Street, neighborhoods adjacent to the Anacostia River, and downtown Washington D.C.

<b>Rock Creek Park Trail</b>											
TIP ID: 3230	Agency ID: AF005A	Title: Rock Creek Park Trail							Total Cost:	<b>\$8,550</b>	
Facility: M Street to Beach Drive	CMAQ	80/20/0		3,000 c	5,050 c					8,050	
From: Piney Branch Pkwy											
To: 16th Street	DEMO	80/20/0	500 a								
<b>Total Funds:</b>										<b>8,050</b>	

Description: Rehabilitate the paved trail in Rock Creek Park including selected widening, resurfacing, new connections, and a new bridge south of the Zoo tunnel. Retaining wall repair on Piney Branch.

<b>Safe Routes to School</b>											
TIP ID: 2888	Agency ID: CM086A	Title: Safe Routes to School							Total Cost:	<b>\$10,406</b>	
Facility: Safe Routes to School	SRTS	100/0/0	4,651 c	1,151 c	1,151 c	1,151 c	1,151 c	1,151 c	1,151 c	6,906	
From:											
To:											
<b>Total Funds:</b>										<b>6,906</b>	

Description: To enable and encourage children, including those with disabilities, to walk and bicycle to school, to make walking and bicycling to school safe and more appealing, and to facilitate the planning, development and implementation of projects that will improve safety, and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

Increase walking and bicycling to school and associated safety through planning, engineering, education, and enforcement.



**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>South Capitol Street Trail</b>										
TIP ID: 6114 Agency ID: ZUT10C		Title: South Capitol Street Trail						Total Cost:		
Facility:	CMAQ	80/20/0	700 a		7,700 c				7,700	
From:										
To:									<b>Total Funds: 7,700</b>	
Description: Design and construct a paved bicycle and pedestrian trail along South Capitol Street based on the 2010 concept plan.										

<b>Bridge</b>										
<b>Anacostia Freeway Bridges over Nicholson Street SE</b>										
TIP ID: 6082 Agency ID: MRR15A		Title: Anacostia Freeway Bridges over Nicholson Street SE (Bridges #1001, 1002)						Total Cost:		<b>\$8,000</b>
Facility:	Anacostia Freeway Bridges at Nicholson	NHPP	80/20/0	1,000 a	9,500 c				9,500	
From:										
To:									<b>Total Funds: 9,500</b>	
Description: Rehabilitation of subject bridges to eliminate all deficiencies and to make the facility safe for the traveling public. Two bridges are structurally deficient and must be rehabilitated under the requirements of MAP21.										

<b>H Street Bridge over Amtrak</b>										
TIP ID: 6039 Agency ID: CD054A		Title: H Street Bridge over Railroad						Total Cost:		<b>\$22,750</b>
Facility:	H Street NE	NHPP	80/20/0	500 a		4,250 c	6,500 c	12,000 c	22,750	
From:	Norht Capitol Street									
To:	3rd Street NE									<b>Total Funds: 22,750</b>
Description: Conduct environmental assessments. Prepare concept designs, design plans and specifications and construct documents for bridge replacement/rehabilitation. Includes work on the H Street NE Bridge from North Capitol St. to 3rd St. NE.										

<b>Long Bridge Study</b>										
TIP ID: 5711 Agency ID: MRR08A		Title: Long Bridge Study						Total Cost:		<b>\$588,000</b>
Facility:	Long Bridge	ARRA	100/0/0	1,700 d						
From:	Virginia Interface	ARRA/TIGER	100/0/0	5,000 a					5,000	
To:	12th Street, SW	PRIV	0/0/0	5,100 d						
								<b>Total Funds: 5,000</b>		
Description: The Long Bridge is a two-track railroad bridge owned and maintained by CSX. The project is to look at the bridge's structural, capacity, and operational needs for to accommodate freight, passenger, and multi-modal connectivity.										

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Monroe Street, NE Bridge over CSX &amp; WMATA</b>										
TIP ID: 6197	Agency ID: MRR26A	Title: Monroe Street, NE Bridge over CSX & WMATA							Total Cost:	\$22,400
Facility: Monroe Street Bridge	NHPP	80/20/0	1,700 a					20,700 c	20,700	
From:										
To:									<b>Total Funds: 20,700</b>	

Description: Existing Monroe Street Bridge over Metro tracks is in poor condition. This project is for the Bridge replacement.

<b>Rehabilitation of 14th Street, SW Bridge over Streetcar Terminal</b>										
TIP ID: 6426	Agency ID:	Title: Rehabilitation of 14th Street, SW Bridge over Streetcar Terminal							Total Cost:	\$6,000
Facility: 14 Street SW Bridge over Streetcar Terminal	NHPP	80/20/0	500 a		5,500 c				6,000	
From:										
To:									<b>Total Funds: 6,000</b>	

Description: Rehabilitation of the concrete substructures and superstructure and other related miscellaneous repairs.

<b>Rehabilitation of 16th St Bridge over Piney Branch Rd, NW (Bridge No. 0022)</b>										
TIP ID: 6418	Agency ID:	Title: Rehabilitation of 16th St Bridge over Piney Branch Rd. NW (Bridge No. 0022)							Total Cost:	\$10,000
Facility: 16th St Bridge NW over Piney Branch Rd. N	NHPP	80/20/0	1,000 a						1,000	
From:										
To:									<b>Total Funds: 1,000</b>	

Description: Rehabilitation of 16th Street Bridge over Piney Branch Parkway, NW, Bridge No. 0022, to include deck repair, utility replacement to preserve the integrity and extend the life of the masonry and reinforced concrete arch superstructure. Completion of the interior safety walkways, and railings

<b>Rehabilitation of K Street NW Bridge, over Whitehurst Freeway Ramp (Bridge No. 1304)</b>										
TIP ID: 6417	Agency ID:	Title: Rehabilitation of K Street NW Bridge, over Whitehurst Freeway Ramp (Bridge No. 1304)							Total Cost:	\$7,000
Facility: K Street Bridge over Whitehurst Freeway Ra	NHPP	80/20/0		1,000 a			6,000 c		7,000	
From:										
To:									<b>Total Funds: 7,000</b>	

Description: Rehabilitation of the concrete substructures and superstructure and other related miscellaneous repairs on K Street NW Bridge, over Whitehurst Freeway Ramp (Bridge No. 1304).

<b>Roadway and Bridge Improvement on Southern Avenue and Winkle Doodle Branch Bridge</b>										
TIP ID: 5353	Agency ID: ED028A	Title: Roadway and Bridge Improvement on Southern Avenue and Bridge #64 (over Winkle Do							Total Cost:	\$19,100
Facility: Southern Avenue	STP	80/20/0	1,100 a	1,100 a	15,100 c				16,200	
From: South Capitol Street										
To: 23rd Street									<b>Total Funds: 16,200</b>	

Description: The purpose of this project is to identify solutions that improve the livability of the Southern Avenue corridor from South Capitol Street SE to 23rd Street SE.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>Enhancement</b>									
<b>Transportation Enhancements Program</b>									
TIP ID: 3210 Agency ID: AF049A Title: <b>Transportation Alternatives Program</b>									Total Cost: <b>\$8,050</b>

Facility: Citywide	STP	80/20/0	2,300 a	1,150 a	1,150 a	1,150 a	1,150 a	1,150 a	1,150 a	6,900
From:										
To:									<b>Total Funds:</b>	<b>6,900</b>

Description: The Transportation Enhancements program is federally funded through the Transportation Equity Act for the 21st Century (TEA-21). The program funds projects that aim to strengthen the cultural, aesthetic, and environmental aspects of the nation's intermodal transportation system. Categories include pedestrian and bicycle facilities, scenic and historic preservation, archeological research, and environmental mitigation of runoff pollution.

<b>ITS</b>									
<b>Traffic Operations Improvements Citywide</b>									
TIP ID: 3216 Agency ID: OSS07A, CI060 Title: <b>Traffic Operations Improvements Citywide</b>									Total Cost:

Facility:	DEMO	80/20/0	96 a							
From:										
To:	NHPP	80/20/0	428 c	437 c	437 c	477 c	477 c	477 c	477 c	2,782
	NHS	80/20/0	310 a							
	STP	80/20/0	2,700 a	1,000 a	1,000 a	1,000 a	1,000 a	1,000 a	1,000 a	56,700
			17,365 c	7,700 c	7,800 c	7,900 c	8,000 c	8,000 c	8,000 c	
			1,500 e	650 e	600 e	600 e	550 e	500 e	400 e	
									<b>Total Funds:</b>	<b>59,482</b>

Description: This project modifies and improves vehicular and pedestrian traffic control systems, such as traffic signals, channelization, signs, pavement markings, and other traffic control measures on and off the Federal-aid highway system. Includes installation of a variety of traffic engineering devices and construction of nominal geometric alterations. The project will preserve and promote the efficient use of existing city streets through changes in the organization of vehicular and pedestrian traffic flows. Projects include:

- a. ITS On Call Technical Support Services
- b. MATOC Annual Fee
- c. Traffic Management Center Operations
- d. Citywide Thermoplastic Pavement Markings
- e. Advanced Traffic Management System
- f. Infrastructure Information Technology Support Services

TIP ID: 6283 Agency ID: PM0A4A Title: <b>Managed Lanes</b>									Total Cost: <b>\$21,309</b>	
Facility: Rochambeau Bridge, I-395, SW/SE Freeway	NHPP	80/20/0	5,000 a	380 a	5,309 a					5,689
From:										
To:									<b>Total Funds:</b>	<b>5,689</b>

Description: The project is to perform a high level feasibility review to identify any potential flaws or major obstacles to completing the project as a public-private partnership (P3) and lay out the critical path to moving the project forward. Phase I: to include NEPA, design, and construction for Rochambeau Bridge. Phase II: to include NEPA, design, and construction for the SE/SW Freeway. Phase III: to include NEPA, design, and construction of I-295.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Traffic Signal LED Replacement</b>										
TIP ID: 6420 Agency ID:		Title: Thomas Circle Tunnel Lights Conversion to LED Lights						Total Cost:		
Facility: Thomas Circle Tunnel	STP	80/20/0	200 a						1,500	
From:			1,300 c							
To:										
									<b>Total Funds: 1,500</b>	

Description: The objective of this project is to upgrade the existing condition of the tunnel lights and controller under the Thomas Circle Tunnel. The project includes replacing the existing lights with new LED lights, installing the new conduit system, and cables. This will be the first tunnel LED lighting conversion project.

TIP ID: 6115 Agency ID: CI040A		Title: Traffic Signal LED Replacement						Total Cost:		<b>\$8,400</b>
Facility:	NHPP	80/20/0	600 c	540 c	540 c	540 c	540 c	540 c	540 c	3,240
From:										
To:	STP	80/20/0	600 c	540 c	540 c	540 c	540 c	540 c	540 c	3,240
									<b>Total Funds: 6,480</b>	

Description: Replace traffic and pedestrian signal LED modules at all signalized intersections on the surface transportation systems.

<b>Other</b>										
<b>Asset Condition Assessment</b>										
TIP ID: 5323 Agency ID: MNT06A, SR09		Title: Condition Assessment						Total Cost:		
Facility: citywide	DC	0/100/0	700 a							
From: citywide										
To:	STP	80/20/0	1,650 a	1,000 a	650 a	1,000 a	650 a	1,000 a	650 a	4,950
									<b>Total Funds: 4,950</b>	

Description: This project will be used to retain a vendor to perform data collection and analysis of DDOT's pavement conditions.

<b>Cleveland Park Study</b>										
TIP ID: 6193 Agency ID: PM0D7A		Title: Cleveland Park Study						Total Cost:		
Facility: Connecticut Ave. NW	NHPP	80/20/0		526 a		2,415 c				2,941
From: Porter Street NW										
To: Macomb Street NW										
									<b>Total Funds: 2,941</b>	

Description: Implementation of Cleveland Park study recommendations including Connecticut Avenue access lane and neighborhood parking supply, streetscape improvements and intersection reconfiguration at Porter/Quebec/Connecticut Ave NW.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>Move DC Implementation</b>									
TIP ID: 6185 Agency ID: ZU029A Title: MoveDC Implementation									Total Cost: \$1,500
Facility: Citywide	STP	80/20/0	1,000 d	500 d					500
From: Citywide									
To: Citywide									<b>Total Funds: 500</b>
Description: Advance studies on Tier 1 prioritized projects based on moveDC recommendations.									

<b>Planning and Management Systems</b>										
TIP ID: 3213 Agency ID: CAL16C, PM30 Title: Planning and Management Systems									Total Cost: \$49,033	
Facility: Citywide	CMAQ	80/20/0	595 a	185 a	144 a	149 a	153 a	198 a	157 a	986
From:										
To:	HSIP	80/20/0		359 a	370 a	381 a	392 a	404 a	416 a	2,322
	SPR	80/20/0	5,800 a	6,800 a	7,000 a	6,500 a	7,000 a	6,500 a	7,000 a	40,800
	STP	80/20/0	3,653 a	3,205 a	2,980 a	3,080 a	2,280 a	2,380 a	2,130 a	16,055
									<b>Total Funds: 60,163</b>	

- Description:
- a. ADA Ramps
  - b. Asset Inventory and ADA Compliance
  - c. Civil Rights/EEO Compliance Monitoring Program
  - d. Climate Change and Air Quality
  - e. Constructability and Work Zone Safety Review
  - f. DBE Support Services
  - g. District STIP Development
  - h. Environmental Management System
  - i. Metropolitan Planning
  - j. State Planning and Research Program
  - k. Boundary Stones
  - l. Research Development and Technology
  - m. Audit and Compliance

TIP ID: 5322 Agency ID: CM085A Title: Preventive Maintenance and Repair of Stormwater Pumping Stations									Total Cost: \$3,336	
Facility:	CMAQ	80/20/0		500 a	550 a	600 a	650 a	700 a	750 a	3,750
From:										
To:	DC	0/100/0	303 a	266 a	274 a	282 a	336 a			1,158
									<b>Total Funds: 4,908</b>	

Description: Maintain DDOT's environmental management system and update, as necessary, the DDOT Environmental Policy and Process manual. This project will also enable the review and processing of environmental documentation.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>TIP ID: 3355 Agency ID: PM086A Title: Professional Capacity-Building Strategy</b>									<b>Total Cost: \$7,000</b>

Facility: Citywide	STP	80/20/0	2,000 a	1,000 a	1,000 a	1,000 a	1,000 a	1,000 a	1,000 a	6,000
From:										
To:										
									<b>Total Funds: 6,000</b>	

Description: This project provides training and educational experiences to build the technical capability and functional knowledge of DDOT employees to be a high-performing DDOT organization that will enhance community involvement and improve management's capacity.

**Rehabilitation of Anacostia Freeway Bridges over South Capitol Street (Bridge No. 1016 & 1017)**

<b>TIP ID: 6097 Agency ID: MRR14A Title: Rehabilitation of Anacostia Freeway Bridges over South Capitol Street (Bridge No. 1016 &amp; 1017)</b>									<b>Total Cost: \$21,000</b>
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Facility: Anacostia Freeway over South Capitol Street	NHPP	80/20/0	1,000 a				20,000 c			20,000
From:										
To:										
									<b>Total Funds: 20,000</b>	

Description: Rehabilitation or replacement of subject bridges to eliminate all structural deficiencies and to make the facilities safe for the traveling public. The bridges are structurally deficient and must be rehabilitated under the requirements of MAP21.

**Roadside Improvements Citywide**

<b>TIP ID: 5792 Agency ID: ED0C2A Title: C Street NE Implementation</b>									<b>Total Cost:</b>
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Facility: C Street/N. Carolina Avenue	STP	80/20/0		500 a			4,000 c			4,500
From: Oklahoma Avenue										
To: 14th Street NE										
									<b>Total Funds: 4,500</b>	

Description: The C Street NE Traffic Calming project will slow traffic on the corridor by reducing at least one vehicular lane of traffic.

<b>TIP ID: 5308 Agency ID: SR070A, ED07 Title: Neighborhood Streetscape Improvements</b>									<b>Total Cost: \$22,253</b>
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Facility:	NHPP	80/20/0		200 a						19,803
From:										
To:										
	NHS	80/20/0	50 b							6,000 c
	STP	80/20/0	450 a	2,650 c						2,650
			1,280 c							
									<b>Total Funds: 22,453</b>	

Description: Improve sidewalks, curbs, gutters, trees, streetlights, traffic signals and trash receptacles. Projects include:

- A. 14th Street Streetscape, Thomas Circle - Florida Ave
- B. U St. NW Florida Ave. to 14th St.
- C. Sheriff Road NE safety improvements from 43rd St. to 51st St.
- D. Missouri Avenue, Kansas Avenue, Kennedy Street Intersection Improvements

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

			Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>TIP ID: 5791</b>			<b>Agency ID: SR085A</b>			<b>Title: 16th Street Corridor Study &amp; Operations Plan</b>						<b>Total Cost: \$3,000</b>
Facility:			NHPP	80/20/0			2,000 a					2,000
From:												
To:			STP	80/20/0	300 a							
					300 d							
												<b>Total Funds: 2,000</b>

Description: This project will evaluate the operations on 16th Street and develop a plan that optimally balances how different modes utilize the corridor. The work will need to assess the feasibility of removing the reversible lane on 16th Street between Florida Avenue and Arkansas Avenue, NW. Alternatives may include a median similar to that north of Arkansas Avenue, and/or a dedicated bus/bicycle lane along the corridor. This project is a follow up to the recommendations made in the Mount Pleasant and Columbia Heights Transportation Studies as well as the WMATA proposal to run express bus in dedicated lanes on 16th Street. The study should also provide design and alternatives for eastbound and westbound turning movements from the median into the Columbia Heights or Mount Pleasant neighborhoods.

<b>Roadway Reconstruction Citywide</b>												
<b>TIP ID: 2965</b>			<b>Agency ID: SR060A MRR1</b>			<b>Title: Roadway Reconstruction Citywide</b>						<b>Total Cost: \$53,900</b>
Facility:	CITYWIDE		HSIP	90/10/0		1,000 a						13,500
From:						12,500 c						
To:			STP	80/20/0	1,760 a	1,300 a	21,100 c			18,000 c		40,400
					8,000 c							
												<b>Total Funds: 53,900</b>

Description: This project reconstructs streets and highways on the Federal-aid highway system and other streets with poor pavement condition, drainage, or other reconstruction needs. Total roadway reconstruction is required when the highway pavement has reached the end of its useful life and can no longer be resurfaced. Streets must be reconstructed once the base deteriorates or the crown becomes too high, creating an undesirable slope from the center line to each curb. The scope of work includes the removal of deteriorated base and pavement, repairing the sub-base, replacing or reconstructing pavement and base within the roadway area and resetting or reconstructing curbs and sidewalks. Additional work includes the installation of wheelchair ramps, bicycle facilities, safety features and landscaping improvements. Projects Include:

- a. Oregon Ave. NW, Military Rd. to Western Ave.
- b. Rehabilitation of Broad Branch NW
- c. Canal Road NW, Chain Bridge to M St.
- d. New Jersey Ave., Mass Ave. to N St.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>Safety Improvements</b>									
TIP ID: 3212 Agency ID: CB0, CIO Title: Safety Improvements Citywide									Total Cost:
Facility: Citywide	HSIP	90/10/0	3,254 a	1,060 a	1,060 a	3,000 a	3,000 a	3,000 a	17,510
From:			1,563 c	565 c	565 c	565 c	565 c	565 c	
To:									
	SPR	80/20/0	220 a						
	STP	80/20/0	1,266 a	375 c	50 a	560 a	560 a	560 a	4,540
			1,542 c		375 c	375 c	375 c	375 c	
<b>Total Funds:</b>									<b>22,050</b>

Description: Safety improvements provide a safe traveling environment for vehicular traffic, pedestrians and bicycle circulation within the District on Federal-aid and local roads. Work includes elimination or relocation of roadside visual obstructions; elimination or relocation of roadside obstacles; skid resistance resurfacing; modifications to traffic channeling; median replacement; traffic signals, signs, and lighting upgrades; installation of pavement markings to eliminate or reduce accidents; and installation of safety fences at overhead structures. Safety improvements are systematically identified through analyses of accident records, inspections, surveys, and citizen requests. The District maintains an inventory of locations with the highest number of reported accidents. Funding identified to be obligated District-wide as projects are identified.

- a. City-Wide Traffic Safety
- b. CW Road Safety Audit Program
- c. Pavement Skid Testing
- d. Traffic Accident Reporting and Analysis System (TARAS)
- f. Traffic Safety Data Center at Howard University
- g. Traffic Safety Design Program - HSIP
- h. Traffic Safety Engineering Support Services
- i. Traffic Sign Inventory Upgrade
- j. Traffic Data Collection and Analysis Service

TIP ID: 6240 Agency ID: MRR01A Title: Safety and Geometric Improvements of I-295									Total Cost: \$11,500
Facility: I-295/DC-295	NHPP	80/20/0	1,500 a	2,000 a			2,500 c	6,500 c	11,000
From:									
To:									
<b>Total Funds:</b>									<b>11,000</b>

Description: Safety improvements and upgrades to SB Entrance and NB left exit ramps at Benning Road; Shoulder widening on DC 295 southbound between Benning Road and East Capitol Street; Safety improvements and upgrades to meet current design standards at southbound exit ramps to River Terrace and East Capitol Street; Safety improvements and upgrades to meet current design standards at the westbound Pennsylvania Avenue entrance and exit ramps.

<b>Streetscape</b>									
TIP ID: 2922 Agency ID: ED064A Title: Great Streets - Minnesota Ave, NE									Total Cost: \$15,000
Facility: Minnesota Ave	STP	80/20/0	700 a	1,000 a		14,000 c			15,000
From: A Street, NE									
To: Sheriff Road, NE									
<b>Total Funds:</b>									<b>15,000</b>

Description: Reconstruction of Minnesota Avenue from A St., SE to Sheriff Rd., NE including LIDs, streetscape. Schedule is impacted by Benning Streetcar study. Project will be phased to mitigate impacts. Phase 1 will construct from A St. to just south of Benning Road; Phase 2 will follow when streetcar study produces direction as to track route.



**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>TIP ID: 2743 Agency ID: ED0B1A Title: Great Streets - Pennsylvania Ave, SE</b>									<b>Total Cost:</b>
Facility: Pennsylvania Ave. SE	NHPP	80/20/0	4,000 a	2,000 a					2,000
From: Sousa Bridge									
To: 27th St. SE (west of)									<b>Total Funds: 2,000</b>
Description: Conduct traffic assessments and provide public review and comment of proposed streetscape design elements. Conduct environmental assessments. Prepare concept designs, design plans and specifications; construct improvements to sidewalks, curbs, gutters, streets, and tree boxes; replace street trees; and install other streetscape elements. Construct facilities to improve reliability and safety of transit services, including transit lanes; provide bicycle lanes; and improve pedestrian circulation. Phase II will include work on Pennsylvania Ave. SE from the Sousa Bridge to west of 27th St. SE.									

**Traffic Congestion Mitigation**

<b>TIP ID: 2945 Agency ID: CM074A Title: District TDM (goDCgo)</b>									<b>Total Cost: \$7,000</b>
Facility: citywide	CMAQ	80/20/0	2,000 a	1,200 a	1,000 a	1,000 a	1,000 a	1,000 a	6,200
From:									
To:									<b>Total Funds: 6,200</b>
Description: Identify neighborhoods affected by traffic congestion impacts; determine the causes of traffic congestion; and identify alternative construction projects, traffic management strategies, and other transportation improvement strategies to reduce traffic congestion. Also, environmental studies will assess how the proposed construction projects or traffic management studies will impact air and water quality in the District of Columbia. Outreach to residents, employees and visitors about alternative transportation options to special events and attractions. Provide a multi-modal transportation information resource website (www.goDCgo.com). Create a commuter store that sells fare media and provides trip planning assistance. The project includes an annual District program and annual allocations.									

a. District TDM/goDCgo: Encourage sustainable travel by District residents, workers and visitors primarily through goDCgo brand. Includes employer outreach, bikeshare and circulator marketing, special events.

**Traffic Signal Maintenance**

<b>TIP ID: 6423 Agency ID: Title: Security Audit for Traffic Signals and ITS Communication</b>									<b>Total Cost: \$150</b>
Facility: Citywide	HSIP	90/10/0		150 a					150
From:									
To:									<b>Total Funds: 150</b>
Description: The project aim to make an inventory of the currebt traffic and networking infrastructure in DDOT taking into account the proposed upgrades to the system. Additionally this project will measure the impact of remote attackers into the system and recommend security measures to mitigate risk. The project aims to develop required measures ti secure newly proposed fiber optic systems and develop SOP in case of threats.									

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>TIP ID: 5347 Agency ID: CI046A, CI047 Title: Traffic Signal Maintenance NHPP-STP</b>									<b>Total Cost:</b>	<b>\$59,000</b>
Facility: Citywide	HSIP	90/10/0	1,240 c	500 c	500 c	500 c	1,000 c	1,000 c	1,000 c	4,500
From: Citywide	NHPP	80/20/0	1,164 c	2,349 c	2,390 c	2,420 c	2,450 c	2,480 c	2,510 c	14,599
To: Citywide	NHS	80/20/0	3,121 c							
	STP	80/20/0	3,950 a	1,250 a	1,250 a	1,250 a	1,750 a	1,750 a	1,750 a	42,900
			13,619 c	6,150 c	6,150 c	5,650 c	5,650 c	5,150 c	5,150 c	
<b>Total Funds:</b>										<b>61,999</b>

Description: Provide effective and efficient maintenance services for the traffic signal systems throughout the District of Columbia.

Support the Traffic Signal Group of DDOT TOA in providing traffic engineering studies and signal system analysis and management for the city's roadway system. This projects mission is to perform signal warrants. Projects include:

- a. Citywide Traffic Signal Construction Contract
- b. Citywide Traffic Signal Construction Contract (National Highway System Routes)
- c. Traffic Signal Consultant Design
- d. Traffic Signal Optimization
- e. Traffic Signal Uninterruptible Power Supply
- f. Traffic Signal Maintenance - NHPP
- g. Traffic Signal Maintenance - STP
- h. Asset Inventory, Preliminary Design and RFP Development for Improved Signal System and Communication Network
- i. Traffic Signal Systems Analysis

**Urban Forestry Program**

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>TIP ID: 5313 Agency ID: CG311, CG312, Title: Urban Forestry Program</b>									<b>Total Cost:</b>	<b>\$10,800</b>
Facility: Citywide	NHPP	80/20/0				1,512 c		1,512 c		3,024
From:	NHS	80/20/0	1,500 c							
To:	STP	80/20/0	4,200 c			2,088 c		2,088 c		4,176
<b>Total Funds:</b>										<b>7,200</b>

Description: Plant new trees, remove dead and diseased trees, treat diseased trees, replace trees, and landscape along local and Federal roads.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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**TERMs**

**Transportation Emissions Reduction Measures**

TIP ID: 3219	Agency ID: ZU022A	Title: Commuter Connections Program	Total Cost:						<b>\$4,900</b>
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Facility:	CMAQ	80/20/0	1,400 a	700 a	700 a	700 a	700 a	700 a	700 a	4,200
From:										
To:	<b>Total Funds: 4,200</b>									

Description: The purpose of the Commuter Connections Program is to reduce mobile source emission through the reduction in the number of VMT, and support of other Transportation Control Measures. This project provides funding for Commuter Operations Center, Guaranteed Ride, Home, Marketing, Monitoring and Evaluation, Employer Outreach, and DC Kiosk.

**Maintenance**

**Bloomingtondale/LeDroit Park Medium Term Flood Mitigation Project**

TIP ID: 6190	Agency ID: FLD01	Title: Bloomingtondale/LeDroit Park Medium Term Flood Mitigation Project	Total Cost:						<b>\$10,000</b>
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Facility: Bloomingtondale/LeDroit Park	DC	0/100/0	500 a	500 a	500 a	500 a	500 a	500 a	8,000
From:									
To:									
<b>Total Funds: 8,000</b>									

Description: The exact street locations are not known at this time but the work is confined to the Bloomingtondale and LeDroit Park communities, per the Mayor's Task force on Bloomingtondale/LeDroit Flood Mitigation Report.

**Bridge Replacement/Rehabilitation Program**

TIP ID: 6428	Agency ID:	Title: Rehabilitation of Anacostia Avenue, NE Bridge over Anacostia River Outlet	Total Cost:						<b>\$8,900</b>
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Facility: Anacostia Ave NE Bridge over Anacostia Riv	NHPP	80/20/0		700 a					700
From:									
To:	<b>Total Funds: 700</b>								

Description: The proposed project is in Ward 7. The existing bridge needs total rehabilitation to become efficient and structurally sound as part of the roadway network and enhancing traffic movement through the corridor. The rehabilitation include total replacement of the deck, the compression joint seals over both abutments and the pier.

TIP ID: 6427	Agency ID:	Title: Kenilworth Terrace Bridge over Watts Branch	Total Cost:						<b>\$3,125</b>
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Facility: Kenilworth Terrace Bridge over Watts Branc	STP	80/20/0		250 a					250
From:									
To:	<b>Total Funds: 250</b>								

Description: Project scope include applying waterproof seal to the entire timber structure, repair the reinforced concrete roadway curb, rehabilitation of deck structure of both approach abutments.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>TIP ID: 5298 Agency ID: AF067A Title: Emergency Transportation Project</b>									<b>Total Cost: \$175</b>

Facility: C ITYWIDE	STP	80/20/0	25 c	25 c	25 c	25 c	25 c	25 c	150
From:									
To:									
									<b>Total Funds: 150</b>

Description: The purpose of this project is to provide a vehicle that allows the Department to respond to emergencies or other unforeseen events that are not budgeted or planned. It is always to plan for emergency work such as major pavement failures, such as sinkholes, falling steel and concrete from bridges and other urgent needs. The project will enable the Department to quickly respond to any emergency without delay.

<b>TIP ID: 5346 Agency ID: CD026 Title: Theodore Roosevelt Bridge Rehabilitation</b>									<b>Total Cost: \$28,500</b>
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Facility:	NHPP	80/20/0	1,464 a	1,500 a						1,500
From:										
To:										
									<b>Total Funds: 1,500</b>	

Description: Work includes inspection, sampling and material testing; repairing bridge superstructure and substructure; cleaning and painting all steel members; retrofitting pin and hanger assembly; improving pedestrian and bicycle access; and repairing bridge drainage.

<b>TIP ID: 3202 Agency ID: CD032C, MNT0 Title: Bridge Design Consultant Services</b>									<b>Total Cost: \$4,075</b>
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Facility: CITYWIDE	NHPP	80/20/0	300 a	900 a	900 a	1,550 a	300 a	625 a	650 a	4,925
From:										
To:	STP	80/20/0	200 a	200 a	200 a	200 a	200 a			800
									<b>Total Funds: 5,725</b>	

Description: Provide engineering services for bridges and structures design, geotechnical or other investigations, surveying, including constructability review.

FY2013 Citywide Open End Bridge Design Consultant Services under this contract, the consultant will investigate structural deficiencies encountered during bridge inspections and from observation of DDOT staff. They will propose and design solutions for temporary shoring, structural repair and retrofit, perform structural analyses and rating of bridges, prepare plans, details, special provisions, cost estimates and work orders for construction by the DDOT preventive maintenance contractor.

<b>TIP ID: 5342 Agency ID: CD046A Title: Approach Bridges to 14th Street Bridge</b>									<b>Total Cost:</b>
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Facility: 14th Street Bridge northbound over the Poto	NHPP	80/20/0	750 a				18,000 c			18,000
From:										
To:										
									<b>Total Funds: 18,000</b>	

Description: The approach bridges to be rehabilitated are over Maine Ave. (bridge 171-1), over the Outlet Channel (bridge 171-2) and over Haines Point Park (bridge 171-3).

<b>TIP ID: 5432 Agency ID: CD049A Title: Pennsylvania Ave. NW Bridge over Rock Creek (Br. # 118)</b>									<b>Total Cost:</b>
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Facility: Pennsylvania Ave. NW over Rock Creek	BR	80/20/0	50 b							
From:										
To:	NHPP	80/20/0				6,000 c				6,000
									<b>Total Funds: 6,000</b>	

Description: Rehabilitation of Bridge # 118, Pennsylvania Ave. NW over Rock Creek

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>TIP ID: 5337 Agency ID: CD051A Title: Replacement of Pedestrian Bridges over Kenilworth Ave</b>										<b>Total Cost: \$16,500</b>
Facility: Kenilworth	STP	80/20/0	1,000 a	1,000 a			9,000 c			12,500
From:				2,500 b						
To:										
										<b>Total Funds: 12,500</b>

Description: This project will fund the replacement of the deck, approach slabs, bearing joints; and repair the substructure and repaint steel.

<b>TIP ID: 5334 Agency ID: CD052A Title: Safety Improvements of Benning Road Bridges over Kenilworth Ave</b>										<b>Total Cost: \$23,000</b>
Facility: Benning Road over Kenilworth	NHPP	80/20/0			3,000 a	20,000 c				23,000
From:										
To:										
										<b>Total Funds: 23,000</b>

Description: Structural design of three bridge alternatives. The project scope includes infrastructure improvements within vicinity of the bridges, including construction of handicap ramps according to ADA guidelines.

<b>TIP ID: 3243 Agency ID: CD062A Title: Citywide Consultant Bridge Inspection</b>										<b>Total Cost: \$13,150</b>
Facility:	NHPP	80/20/0	2,650 a	3,650 a		1,850 a	1,850 a	3,750 a		11,100
From:										
To:										
										<b>Total Funds: 11,100</b>

Description: Consultant inspection of the District's bridges. Work under this contract consist of performing detailed condition inspections and evaluations of all highway and pedestrian bridges, and tunnels and underpasses, under the ownership of the District of Columbia in accordance with the prescribed inspections schedule, the DDOT Bridge Inspection Manual of Procedures and the National Bridge Inspection Standards (NBS). Safety inspection of railroad owned bridges crossing District streets shall also be performed. Selected inspections of culverts and overhead sign structures shall be performed as needed. FY2014 obligation includes Phase II of the overhead sign structure effort.

<b>TIP ID: 5316 Agency ID: CD062A Title: Impact Attenuators and Guiderails</b>										<b>Total Cost:</b>
Facility: Citywide	HSIP	90/10/0	1,600 c	125 a	3,350 c		1,675 c	1,700 c	1,700 c	11,300
From:				2,750 c						
To:										
										<b>Total Funds: 11,300</b>

Description: This project repairs, replaces and upgrades safety appurtenances on and off the Federal-aid Highway System that have been damaged by errant vehicles, and replaces units that do not meet the requirements of NCHRP (National Cooperative Highway Research Program) Report 350. Work also includes construction of guiderails and attenuators at new locations and removal of units in locations where they are no longer needed.

<b>TIP ID: 3181 Agency ID: CD066A Title: Replacement of 31st Bridge, NW over C&amp;O Canal</b>										<b>Total Cost: \$6,200</b>
Facility: 31st Street NW Bridge over C&O Canal	NHPP	80/20/0			6,200 c					6,200
From:										
To:										
										<b>Total Funds: 6,200</b>

Description: Removal and replacement of deteriorated deck, repair and painting of structural steel, and substructure repairs. Lighting, signing, drainage and safety features will be upgraded.

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CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>TIP ID: 5804 Agency ID: MRR04A Title: East Capitol St. Bridge over Anacostia River, Br. # 233</b>									<b>Total Cost: \$16,000</b>	
Facility: Anacostia Freeway Bridge over Anacostia Ri	NHPP	80/20/0							16,000 a	16,000
From:										
To:										<b>Total Funds: 16,000</b>
Description: Rehabilitation of subject bridge to eliminate all deficiencies and ensure the safety of the traveling public. This bridge is structurally deficient and must be rehabilitated in accordance with the requirements of MAP21. Deficiencies include deteriorating overlay, efflorescence and map cracking in soffit, expanded bearings, deteriorated superstructure steel under fender dams, peeling paint, rotation of substructure units.										

<b>TIP ID: 5433 Agency ID: PM094A, CD05 Title: Bridge management Project/AASHTOWARE</b>									<b>Total Cost: \$2,125</b>	
Facility: Citywide	NHPP	80/20/0	275 a	275 a	300 a	300 a	325 a	325 a	325 a	1,850
From: Citywide										
To:	STP	80/20/0	300 e	300 e	300 e	300 e	300 e	310 e	310 e	1,820
										<b>Total Funds: 3,670</b>

Description: This project provide funds to support the Bridge Management Program and to pay the annual Points license fee.

**Maintenance of Stormwater management / Best Management Ponds**

<b>TIP ID: 3242 Agency ID: CA303C, MNT0 Title: Citywide Culverts</b>									<b>Total Cost: \$3,215</b>	
Facility: CITYWIDE	STP	80/20/0	250 a	250 a	300 a		350 a			2,950
From:			750 c	600 c	700 c		750 c			
To:										<b>Total Funds: 2,950</b>

Description: The purpose of this project is to replace/rehab existing culverts. On a bi-annual occurrence the culvert will be inspected. On an annual occurrence, culverts will be rehabilitated or replaced based on their condition.

**Resurfacing Streets and Freeways Citywide**

<b>TIP ID: 5339 Agency ID: SR037A Title: FY2012 Pavement Restoration - NHPP Streets</b>									<b>Total Cost: \$29,350</b>	
Facility:	NHPP	80/20/0	6,000 c	6,000 c	6,000 c	150 a	5,200 c			23,350
From:						6,000 c				
To:										<b>Total Funds: 23,350</b>

Description: Resurfacing of selected roadway segments on the National Highway System (NHPP), repair-replacement of curbs, gutters and sidewalks, driveways, base pavements, perimeter fencing, furnishing sewer-water manhole frames, catch basin tope and removal of roadway and roadside debris.

<b>TIP ID: 3215 Agency ID: SR092A Title: Resurfacing Streets and Freeways Citywide</b>									<b>Total Cost: \$65,100</b>	
Facility: Citywide	STP	80/20/0	9,300 c	9,300 c	9,300 c	9,300 c	9,300 c	9,300 c	9,300 c	55,800
From:										
To:										<b>Total Funds: 55,800</b>

Description: Citywide pavement and resurfacing/restoration, upgrading of sidewalk, curb and gutter, and wheelchair ramps.

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TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Streetlight Asset Mgmt &amp; Streetlight Construction - Federal</b>										
TIP ID: 5439 Agency ID: AD017A Title: Citywide streetlight construction			Total Cost:							
Facility: citywide	STP	80/20/0	450 a	250 a	250 a	100 a	100 a	100 a	100 a	7,430
From: citywide				1,415 c	1,515 c	900 c	900 c	900 c	900 c	
To:										
										<b>Total Funds: 7,430</b>

Description: This project will provide installation/construction of the District's aging streetlight systems to provide safe operations. Work includes upgrading of lighting in tunnels, freeway air rights, overhead signs structures, and obsolete navigational lights on bridges.

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Streetlight Asset Mgmt - Federal</b>										
TIP ID: 5385 Agency ID: AD020A Title: Streetlight Asset Mgmt - Federal			Total Cost:							
Facility: Citywide	NHPP	80/20/0	606 c	3,384 c	3,384 c	3,384 c	3,384 c	3,384 c	3,384 c	20,304
From:	NHS	80/20/0	3,000 c							
To:	STP	80/20/0	964 c	5,383 c	5,383 c	5,383 c	5,383 c	5,383 c	5,383 c	32,298
										<b>Total Funds: 52,602</b>

Description: This project will provide maintenance for the District's aging lighting system to provide safe operations. Work includes upgrade of lights in tunnels and underpasses, bridges, highways, overhead guide sign lighting, obsolete incandescent and mercury vapor lights as well as navigation lights on bridges and waterways. Projects include:

- a) Street Light Replacement
- b) Streetlight Design Services
- c) Streetlight System Upgrade
- d) Streetlight Conversion
- e) Electrical Upgrade
- f) CW painting of street light and traffic signal poles
- g) CW Street and Bridge Light Maintenance
- h) Multiple Circuit Conversion
- i) Streetlight Asset Management
- j) Highway Lighting
- k) Emergency Response to Knockdowns

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Streetlight Asset Mgmt &amp; Streetlight Construction - Local</b>										
TIP ID: 5350 Agency ID: AD304 Title: Streetlight Asset Mgmt & Streetlight Construction - Local			Total Cost: \$10,500							
Facility: Citywide	DC	0/100/0	4,236 a	300 a	300 a	300 a	300 a	300 a	300 a	52,200
From:			43,989 c	8,400 c	8,400 c	8,400 c	8,400 c	8,400 c	8,400 c	
To:										
										<b>Total Funds: 52,200</b>

Description: This project will provide maintenance of streetlights, alley lights, alley tree trimming for blockage of alley lighting, knockdowns, and asset inventory for lighting on non-federally-funded streets.

**DISTRICT OF COLUMBIA  
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CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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**Streetlight Upgrade**

<b>TIP ID: 6421</b>	<b>Agency ID:</b>	<b>Title: Streetlight Upgrade on Massachusetts Ave from 19th St SE to 6th St NE</b>						<b>Total Cost:</b>	<b>\$2,900</b>
Facility: Massachusetts Ave	STP	80/20/0	2,900 c						2,900
From: 19th St SE									
To: 6th St NE									
Description:									
								<b>Total Funds:</b>	<b>2,900</b>

<b>TIP ID: 6422</b>	<b>Agency ID:</b>	<b>Title: Mount Pleasant Street Lighting Upgrade</b>						<b>Total Cost:</b>	<b>\$2,000</b>
Facility: Mount Pleasant Street NW	STP	80/20/0	300 a						2,000
From:			1,700 c						
To:									
Description: Lighting Upgrade with complete system including manhole, conduit LED lights and Historic Washington Globe Pole/Fixture									
								<b>Total Funds:</b>	<b>2,000</b>

**Systems Maintenance**

<b>TIP ID: 2699</b>	<b>Agency ID: CD018A, CD01</b>	<b>Title: Asset Preservation of Tunnels in the District of Columbia</b>						<b>Total Cost:</b>	<b>\$41,275</b>	
Facility: Citywide Asset Management of Tunnel	NHPP	80/20/0	650 a	175 a	175 a	1,000 a	175 a	175 a	175 a	40,025
From:			600 c	600 c	7,750 c	7,600 c	7,600 c	14,600 c		
To:										
Description: This initiative provides technical support for this performance based contract that enables sustained preventive maintenance, rehabilitation and preservation of all tunnel assets in DDOT inventory system. This principal objectives relative to public safety are the maintenance of automated or natural ventilation system for the explosion of harmful carbon monoxide gas from all tunnels and the provision of an adequate lighting system within each tunnel.										
									<b>Total Funds:</b>	<b>40,025</b>

<b>TIP ID: 2927</b>	<b>Agency ID: CD036A, CD04</b>	<b>Title: Citywide FA Preventive Maintenance</b>						<b>Total Cost:</b>	<b>\$44,100</b>
Facility:	NHPP	80/20/0	9,600 c	4,800 c	4,800 c	10,720 c		5,360 c	25,680
From:									
To:	STP	80/20/0	2,400 c	1,200 c	1,200 c	2,680 c		1,340 c	6,420
Description: This project provides a two-year base contract with two option years for the performance of preventive maintenance activities and initiating emergency repairs on highway structures on an as needed basis. The work includes concrete deck repair, replacement of expansion joints, repair or replacement of beams, girders and other structural steel, maintenance painting, application of low slump concrete overlays on bridge decks, concrete repair, underpinning and shoring of deficient bridge elements, jacking beams and restoring bearings, repair or replacement of bridge railings, guiderails and fencing, cleaning bridge scuppers and drain pipes, graffiti removal and other miscellaneous repair work on various highway structures.									
								<b>Total Funds:</b>	<b>32,100</b>



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CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Transit</b>										
<b>5303/5304 FTA Program</b>										
TIP ID: 6102 Agency ID:		Title: 5303/5304 FTA Program						Total Cost:		<b>\$2,874</b>
Facility: Citywide	Sect. 5303	80/20/0	760 a	415 a	415 a	415 a	415 a	415 a	415 a	2,490
From:										
To:	Sect. 5304	80/20/0	198 a	110 a	110 a	110 a	110 a	110 a	110 a	660
<b>Total Funds:</b>									<b>3,150</b>	

Description: DDOT receives an annual FTA grant appropriation to support metropolitan planning activities (5303) and Statewide/DC based Planning Activities (5304).

<b>DC Circulator New Buses for Replacement and Expansion</b>										
TIP ID: 6105 Agency ID:		Title: DC Circulator New Buses for Replacement and Expansion						Total Cost:		<b>\$8,925</b>
Facility:	DC	0/100/0	21,539 e	7,702 e	17,012 e	17,600 e		7,100 e		49,414
From:										
To:										
<b>Total Funds:</b>									<b>49,414</b>	

Description: Additional Circulator buses must be purchased in order to expand service to additional routes.

<b>DC Circulator Expansion - Phase I</b>										
TIP ID: 6103 Agency ID:		Title: DC Circulator Expansion - Phase I						Total Cost:		<b>\$3,750</b>
Facility:	DC	0/100/0	1,576 e		750 e	750 e	750 e	750 e	750 e	3,750
From:										
To:										
<b>Total Funds:</b>									<b>3,750</b>	

Description: Implement the Phase I DC Circulator routes as identified in the DC Circulator 10-Year Transit Development Plan

<b>M Street SE/SW Premium Transit Environmental Work</b>										
TIP ID: 6112 Agency ID: Temp02		Title: M Street SE/SW Streetcar						Total Cost:		<b>\$128,250</b>
Facility:	DC	0/100/0	2,500 a	6,100 a						6,100
From:										
To:										
<b>Total Funds:</b>									<b>6,100</b>	

Description: This funding will implement the environmental study work for the M Street SE/SW corridor

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CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total	
<b>Streetcar</b>										
TIP ID: 5754 Agency ID: CM080A		Title: Benning Road Extension						Total Cost:		\$82,750
Facility: Streetcar Line	CMAQ	80/20/0	3,200 a							
From:										
To:	DC	0/100/0	2,000 a	1,600 a	8,597 a	23,614 c	27,363 c	21,644 e	102,414	
							19,596 e			
									<b>Total Funds: 102,414</b>	

Description: The Benning Road Streetcar Extension is a 1.95-mile surface fixed guide way transit line that includes electrically powered streetcar vehicles operating along tracks located within the existing street and travel lanes. The NEPA study will address potential impacts of the project, as well as, preliminary engineering (conceptual) for the line.

TIP ID: 5753 Agency ID: CM081A		Title: Anacostia Streetcar Extension						Total Cost:		\$82,852
Facility: MLK Jr Ave SE	DC	0/100/0	250 c	16,000 b	23,613 c	25,239 c			82,852	
From: Howard Rd SE				8,000 e	10,000 e					
To: Good Hope Rd SE										
									<b>Total Funds: 82,852</b>	

Description: The Anacostia Streetcar Extension is .61 mile surface fixed guideway transit line that includes electrically powered streetcar vehicles operating along tracks located within the existing street and travel lanes. The NEPA study currently underway will address potential impacts of the project, as well as, preliminary engineering (conceptual 30%) for the line.

TIP ID: 5755 Agency ID: STC12A		Title: Union Station to Georgetown Premium Transit; K Street Transit						Total Cost:		\$76,290
Facility: Premium Transit	CMAQ	80/20/0	1,500 d							
From:										
To:	DC	0/100/0	4,250 a	3,000 c	4,000 c			24,280 c	45,014 c	
	NHPP	80/20/0				7,500 a	31,500 c	34,875 c	73,875	
									<b>Total Funds: 150,169</b>	

Description: DDOT received an alternatives analysis grant from the Federal Transit Administration to study premium transit options from the Union Station to Georgetown. Premium transit is high quality transit that offered improved liability and speed. The purpose of the AA study is to provide premium transit between Union Station and Georgetown. The Nepa document will select a preferred alternative to move to design and construction for premium transit. Also included in this project is an extension study to continue the transit Northwest. This project also includes K Street Transit Streetscape construction funding.

TIP ID: 6031 Agency ID: STC13A		Title: North-South Corridor Study						Total Cost:		\$110,250
Facility: Streetcar Line	DC	0/100/0	5,000 a	4,500 a	3,000 a				7,500	
From:			2,000 c							
To:										
									<b>Total Funds: 7,500</b>	

Description: Study on a North to South 9 miles surface fixed guideway transit line.

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
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**Freight**

**Diesel Idle Reduction Program**

TIP ID: 6424	Agency ID:	Title: Diesel Idle Reduction Program							Total Cost:	\$1,200
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Facility:	CMAQ	80/20/0	1,200 a						1,200
From:									
To:									<b>Total Funds: 1,200</b>

Description: The Diesel Idle Reduction Program identifies and implement projects that reduce Particulate Matter (PM) 2.5 emissions in the District of Columbia

**District Freight Plan**

TIP ID: 5922	Agency ID: AF081A	Title: District Freight Plan							Total Cost:	\$300
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Facility: Citywide	STP	80/20/0	450 a	150 a	150 a	150 a	150 a	450	
From:									
To:									<b>Total Funds: 450</b>

Description: Development of a District freight plan to enhance the safety and efficiency of goods movement

**Off-Hours Freight Delivery Pilot Project**

TIP ID: 6408	Agency ID:	Title: Off-Hours Freight Delivery Pilot Project							Total Cost:	\$300
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Facility:	HRDP	50/50/0	80 a	80 a	140 a			300	
From:									
To:									<b>Total Funds: 300</b>

Description: The DDOT Off-Hours Freight Delivery Pilot Project will focus on improving the management of curbside loading zones in the city by incentivizing businesses to shift to off-hour deliveries. The District has a constrained infrastructure with multiple modes competing for use of the same space and DDOT believes that a focus on encouraging off-hour deliveries would contribute significantly to reducing congestion.

**Planning and Systems Enhancement for Weight Stations**

TIP ID: 2633	Agency ID: CI029A, CI053	Title: Size and Weight Enforcement Program							Total Cost:	\$11,280
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Facility: Citywide	STP	80/20/0	450 a	450 a	4,250 c	250 c	450 c	450 c	250 c	6,340
From:										
To:										

**Total Funds: 6,340**

Description: This project provides trained personnel to enforce size and weight regulations, as well as increase the number of portable scales at Weigh in Motion sites on and off the Federal-aid System. This project will facilitate reducing weight violations and preventing premature deterioration of pavements and structures in the District, and in turn provide a safe driving environment.

- a. Weigh in Motion Maintenance
- b. Truck Size and Weight Program

**DISTRICT OF COLUMBIA  
TRANSPORTATION IMPROVEMENT PROGRAM  
CAPITAL COSTS (in \$1,000)**

	Source	Fed/St/Loc	Previous Funding	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Source Total
<b>Virginia Avenue Tunnel Project</b>										
TIP ID: 5959		Agency ID: MRR16A		Title: Virginia Avenue Tunnel Project					Total Cost: \$201,300	
Facility: Virginia Ave. SE	PRIV	0/0/0	200,500 c	1,200 c	1,200 c	1,200 c	1,200 c	1,200 c		4,800
From:										
To:										<b>Total Funds: 4,800</b>

Description: The existing railway tunnel is owned and operated by CSX Transportation, Inc. (CSXT) and has long been identified as one of the most significant freight bottlenecks on the East Coast. CSXT proposes to improve freight transportation reliability and capacity through the District by replacing the existing 106 year old 4,000 foot-long tunnel. The proposal includes the restoration of a second track within the tunnel and increasing the tunnel height to a minimum 20 foot clearance to accommodate intermodal trains transporting double-stacked standard cargo containers.

**Table 1A - Funding by Source**  
**DISTRICT OF COLUMBIA**  
**FY 2015-2020 TRANSPORTATION IMPROVEMENT PROGRAM**  
**Financial Summary (in \$Millions)**

Source	2015		2016		2017-2018		2019-2020		2015-2020	
	Federal	Total	Federal	Total	Federal	Total	Federal	Total	Total	
<b>Title I - FHWA</b>										
Congestion Mitigation and Air Quality Improvement	5.76	7.20	10.73	13.41	14.18	17.72	4.43	5.54	43.87	
Demonstration	36.04	45.05	6.08	7.60	0.00	0.00	0.00	0.00	52.65	
National Highway Performance Program	61.03	76.29	64.52	80.66	222.03	277.54	244.48	305.61	740.08	
Safe Routes to School Program	1.15	1.15	1.15	1.15	2.30	2.30	2.30	2.30	6.91	
State Planning & Research Program	5.44	6.80	5.60	7.00	10.80	13.50	10.80	13.50	40.80	
Surface Transportation Program	63.71	79.63	66.93	83.67	99.80	124.74	88.98	111.22	399.27	
Highway Safety Improvement Program (STP)	17.87	20.01	9.02	10.60	9.89	11.08	11.93	13.35	55.03	
<b>Title I - FHWA Total:</b>	<b>191.00</b>	<b>236.13</b>	<b>164.04</b>	<b>204.08</b>	<b>359.00</b>	<b>446.88</b>	<b>362.93</b>	<b>451.52</b>	<b>1,338.61</b>	
<b>Title III - FTA</b>										
Highway Research and Development Program	0.04	0.08	0.04	0.08	0.07	0.14			0.30	
5303 - Planning Program	0.33	0.42	0.33	0.42	0.66	0.83	0.66	0.83	2.49	
5304 - State & Planning Research Program	0.09	0.11	0.09	0.11	0.18	0.22	0.18	0.22	0.66	
ARRA/TIGER	5.00	5.00			0.00	0.00	0.00	0.00	5.00	
<b>Title III - FTA Total:</b>	<b>5.46</b>	<b>5.61</b>	<b>0.46</b>	<b>0.61</b>	<b>0.91</b>	<b>1.19</b>	<b>0.84</b>	<b>1.05</b>	<b>8.45</b>	
<b>State/Local</b>										
State or District Funding		57.87		129.38		175.64		141.24	504.14	
<b>State/Local Total:</b>	<b>0.00</b>	<b>57.87</b>	<b>0.00</b>	<b>129.38</b>	<b>0.00</b>	<b>175.64</b>	<b>0.00</b>	<b>141.24</b>	<b>504.14</b>	
<b>Other</b>										
Grant Anticipation Revenue Vehicles (Bonds)					106.37	132.96	61.06	76.33	209.29	
GSA Earmark	5.14	6.42	37.07	46.34	44.98	56.22	0.00	0.00	108.98	
National Recreational Trails Funding Program	0.44	0.55	2.88	3.60	0.48	0.60	0.48	0.60	5.35	
Private Developer	0.00	51.20	0.00	51.20	0.00	2.40	0.00	0.00	104.80	
<b>Other Total:</b>	<b>5.58</b>	<b>58.17</b>	<b>39.95</b>	<b>101.14</b>	<b>151.82</b>	<b>192.18</b>	<b>61.54</b>	<b>76.93</b>	<b>428.42</b>	
<b>Grand Total:</b>	<b>202.04</b>	<b>357.77</b>	<b>204.45</b>	<b>435.21</b>	<b>511.73</b>	<b>815.90</b>	<b>425.31</b>	<b>670.74</b>	<b>2,279.61</b>	

**Table 1B - Funding by Project Type**  
**DISTRICT OF COLUMBIA**  
**FY 2015-2020 TRANSPORTATION IMPROVEMENT PROGRAM**  
**Financial Summary (in \$Millions)**

Project Type	2015		2016		2017-2018		2019-2020		2015-2020	
	Federal	Total	Federal	Total	Federal	Total	Federal	Total	Federal	Total
Interstate	15.01	68.77	13.42	66.77	19.64	24.55	53.63	67.04	101.70	227.13
Primary	46.62	58.27	52.95	117.63	214.72	307.11	134.82	192.83	449.11	675.85
Secondary	8.24	10.30			7.84	9.80	6.00	7.50	22.08	27.60
Bridge	7.08	7.60	20.48	25.60	7.80	9.75	36.16	45.20	71.52	88.15
<b>Surface Transportation</b>	<b>76.95</b>	<b>144.94</b>	<b>86.85</b>	<b>210.00</b>	<b>250.00</b>	<b>351.21</b>	<b>230.62</b>	<b>312.58</b>	<b>644.41</b>	<b>1,018.72</b>
Transit	0.42	47.43	0.42	67.50	32.04	154.96	28.74	135.46	61.62	405.35
<b>Transit</b>	<b>0.42</b>	<b>47.43</b>	<b>0.42</b>	<b>67.50</b>	<b>32.04</b>	<b>154.96</b>	<b>28.74</b>	<b>135.46</b>	<b>61.62</b>	<b>405.35</b>
Bike/Ped	13.72	16.87	12.84	15.77	13.00	15.67	5.69	6.53	45.25	54.84
<b>Bike/Ped</b>	<b>13.72</b>	<b>16.87</b>	<b>12.84</b>	<b>15.77</b>	<b>13.00</b>	<b>15.67</b>	<b>5.69</b>	<b>6.53</b>	<b>45.25</b>	<b>54.84</b>
Enhancement	0.92	1.15	0.92	1.15	1.84	2.30	1.84	2.30	5.52	6.90
ITS	10.20	12.75	12.98	16.23	17.73	22.16	17.61	22.01	58.52	73.15
Other	55.92	68.19	41.52	51.91	81.28	101.14	70.25	86.68	248.97	307.91
TERMs	0.56	0.70	0.56	0.70	1.12	1.40	1.12	1.40	3.36	4.20
Maintenance	41.67	62.43	44.92	66.43	113.97	163.66	68.76	102.93	269.33	395.45
Freight	1.67	3.32	3.44	5.53	0.75	3.39	0.68	0.85	6.54	13.09
<b>Other</b>	<b>110.94</b>	<b>148.54</b>	<b>104.34</b>	<b>141.95</b>	<b>216.69</b>	<b>294.05</b>	<b>160.27</b>	<b>216.17</b>	<b>592.25</b>	<b>800.71</b>
<b>Total Funds:</b>	<b>202.04</b>	<b>357.77</b>	<b>204.45</b>	<b>435.21</b>	<b>511.73</b>	<b>815.90</b>	<b>425.31</b>	<b>670.74</b>	<b>1,343.53</b>	<b>2,279.61</b>