



TRANSPORTATION PLANNING BOARD

Wednesday, March 17, 2021
12:00 - 2:00 P.M.

VIRTUAL MEETING ONLY

AGENDA

- 12:00 P.M.** **1. VIRTUAL PARTICIPATION PROCEDURES, MEMBER ROLL CALL, AND VIRTUAL PUBLIC COMMENT OPPORTUNITY**
Charles Allen, TPB Chair
- For any member of the public who wishes to address the board on the day of the meeting, they may do so by emailing a short statement (no more than 375 words) to TPBcomment@mwkog.org. These statements must be received by staff no later than 9 A.M. on March 17, 2021 to be relayed to the board at the meeting.
- 12:15 P.M.** **2. APPROVAL OF THE FEBRUARY 17, 2021 MEETING MINUTES**
Charles Allen, TPB Chair
- 12:20 P.M.** **3. TECHNICAL COMMITTEE REPORT**
Jason Groth, TPB Technical Committee Chair
- 12:25 P.M.** **4. COMMUNITY ADVISORY COMMITTEE REPORT**
Elisa Walton, CAC Chair
- 12:35 P.M.** **5. STEERING COMMITTEE ACTIONS AND REPORT OF THE DIRECTOR**
Kanti Srikanth, TPB Staff Director
- This agenda item includes Steering Committee actions, letters sent/received, and announcements and updates.
- 12:45 P.M.** **6. CHAIRMAN'S REMARKS**
Charles Allen, TPB Chair

ACTION ITEMS

12:50 P.M. 7. AN AMENDMENT TO THE FY 2021 UPWP, AND FY 2021 CARRYOVER FUNDING TO FY 2022

Lyn Erickson, TPB Plan Development and Coordination Program Director

The Unified Planning Work Program (UPWP) is an annual work statement that identifies planning priorities and activities to be carried out within a metropolitan planning area. It serves as the TPB staff's work scope for the year. Certain projects and budgets in the current FY 2021 UPWP have been identified to be removed from the FY 2021 UPWP and carried over to FY 2022. The board will be briefed on the enclosed amendment to the FY 2021 UPWP and associated FY 2021 carryover funding to FY 2022.

Action: Adopt Resolutions R13-2021 and R14-2021 to approve the amendment to the FY 2021 UPWP and the FY 2021 carryover funding to FY 2022.

12:55 P.M. 8. THE FY 2022 UNIFIED PLANNING WORK PROGRAM

Lyn Erickson, TPB Plan Development and Coordination Program Director

At the February 17 meeting, the board was briefed on the draft FY 2022 UPWP. The board will be briefed on the final draft of the FY 2022 UPWP and will be asked to approve it.

Action: Adopt Resolution R15-2021 to approve the FY 2022 UPWP.

1:00 P.M. 9. THE FY 2022 COMMUTER CONNECTIONS WORK PROGRAM (CCWP)

Nicholas Ramfos, TPB Transportation Operations Programs Director

At the February 17 meeting, the board was briefed on the draft FY 2022 CCWP. The CCWP is an annual work statement that identifies alternative commute program projects and services designed to help improve traffic congestion and meet regional air quality goals. The board will be briefed on the final draft of the FY 2022 CCWP and will be asked to approve it.

Action: Adopt Resolution R16-2021 to approve the FY 2022 CCWP.

INFORMATION ITEMS

1:10 P.M. 10. PRIORITY AIRPORT GROUND ACCESS PROJECTS

Arianna Koudounas, TPB Transportation Planner

The board will be briefed on the priority projects included in Visualize 2045 that support airport ground access. These projects were recommended by the Aviation Technical Subcommittee as part of TPB's Continuous Airport Systems Planning Program and are important because of their potential to improve access to the region's three major commercial airports: BWI, DCA, and IAD.

1:20 P.M. 11. REGIONAL TRAVEL SURVEY: CHANGE IN OBSERVED TRIPS SINCE 2007/08
Kenneth Joh, TPB Transportation Planner

As the culminating presentation on the findings from the 2017-2018 Regional Travel Survey, staff will brief the committee on the change in reported travel between 2007/08 and 2017/18, focusing on daily weekday trips, mode share of all trips, and commute trips. Staff will also share additional tabulations from 2017/18 on trip length by mode and purpose.

1:50 P.M. 12. TPB CLIMATE CHANGE MITIGATION STUDY OF 2021
Erin Morrow, TPB Transportation Engineer

The goal of this study is to assess the types of transportation-related actions, and their levels of implementation, that would be needed to reduce transportation-sector greenhouse gas (GHG) emissions to meet various GHG reduction goals in the years 2030 and 2050. The study is divided into two phases: Phase 1, conducted by TPB staff, is a summary of past work done in this area by TPB and COG. Phase 2 will be a scenario study conducted by a consultant. At today's meeting, TPB staff will summarize the findings of the Phase 1 memo/report, which was presented to the Technical Committee in draft form last month and will be used as input to the Phase 2 portion of the study.

2:00 P.M. 13. ADJOURN

The next meeting is scheduled for April 21, 2021.

MEETING VIDEO

Watch and listen to live video of TPB meetings and listen to the recorded video from past meetings at:

www.mwcog.org/TPBmtg



MEMORANDUM

TO: Transportation Planning Board
FROM: Lyn Erikson, Plan Development and Coordination Program Director
SUBJECT: Summary of Public Comment for the March TPB Meeting
DATE: March 17, 2021

For the March TPB meeting, the board received 16 comments. TPB staff has consolidated all of the comments that came via email into this memo. There are also 3 letters that are attached at the end of this memo. This document will be available to the public and all members of the board at the meeting's event page on the TPB website.

COMMENTS SUBMITTED

Monica O'Connor

Create a plan that will meet the carbon neutral targets asap:

The climate crisis is at a pivotal juncture. All the decisions we make today have grave consequences. It's time to be as bold as we are able.

There is no doubt that we can waste no time reaching carbon neutrality - we have lost the opportunity to work toward any measure less than robust. To do this we must reduce driving and its associated green house gas emissions. We need a plan that allows for walkable, bikeable transit-oriented communities. Never ending highway and arterial expansion will only cause us to fall begins our goals.

You must ensure that the draft project list to be adopted this spring will reduce VMT and GHG emissions enough to reach our 2030 climate goals.

Monica O'Connor
WISE

Brian O'Malley

Dear Transportation Planning Board,
As you finalize the draft 2050 Transportation Plan for the greater Washington region I want to urge you to seriously, measurably set a path to achieve the Greenhouse Gas reductions, land use, equity, and housing goals that COG has developed. Now is the time to act. The Vision 2045 plan did not put the region on a course to reduce on-road GHG emissions by enough. Under that plan the region will not achieve its adopted 2030 climate target nor achieve carbon neutrality by 2050. The Voices of the Region Survey and polling in Maryland show strong support for transportation that reduces climate emissions. We have already passed the time to be serious and direct about addressing the

climate crisis and too many people will pay the price with their property, health and lives if we do not begin immediately. A plan that sets the path for where we need to be is the necessary first step.

Ken Notis

Climate change is a crisis facing our planet, which we can act on here in our region, through our transportation choices

The Voices of the Region survey results showed overwhelming support for transportation that reduces climate emissions.

It also showed support for the COG housing goals.

The plan must reflect not only current conditions, but expected increases in TOD and close in housing that will increase demand for transit.

The previous Visualize 2045 plan achieved only a 23 percent reduction in on-road greenhouse gas emissions by 2045 compared to 2005 levels.

This current updated plan has to be different if the region is going to meet its adopted 2030 climate target and reach carbon neutrality by 2050.

TPB can't wait another four years to address the climate crisis when we can make changes now.

We at Liveable Alexandria ask that TPB Board members select projects for public comment that reduce vehicle miles travel and greenhouse gas emissions sufficiently to meet our climate targets and support COG's equity and land use goals.

Ken Notis
Chair
Liveable Alexandria

Jonathan Krall
Member, Steering Committee, Grassroots Alexandria

Dear National Capital Region Transportation Planning Board,

We at Grassroots Alexandria take climate change seriously and keep repeating the message that we need a crash program to build wind, solar, and subways. By "take climate change seriously" we mean that we don't want to see our grandchildren die in a food riot, a war, or some other disaster caused by climate-driven global political instability and/or food system collapse. As a matter of public safety, we ask that you take this seriously as well.

We understand that you have multiple transportation and land use policy options within your control that could significantly reduce greenhouse gas emissions in your current update of the long-range transportation plan. Please do your part by erring on the side of doing too much instead of doing too little.

Glen Besa

Visualize 2045 Plan - Reducing GHGs and VMTs is critical

TO: STATE AND LOCAL GOVERNMENT JURISDICTIONAL
MEMBERS OF THE TRANSPORTATION PLANNING BOARD

It is critical that all our planning efforts seriously address climate change. With mobile sources being the largest contributor to GHG emissions in metro Washington, the TPB must infuse the Visualize 2045 plan with meaningful measures to significantly reduce GHGs including measures to reduce vehicle miles travelled. Not only is this the right thing to do, it is clearly a priority of the Biden Administration. A serious effort at reducing GHGs could eventually make metro Washington eligible for more infrastructure funding from the federal government.

With the Intergovernmental Panel on Climate Change warning us that we need to reduce our GHG emissions by 50% by 2030 to avoid the worst consequences of climate change, the TPB needs to be a leader in innovative transportation measures to address this climate emergency.

Elle De La Cancela

To the Board:

My name is Elle De La Cancela and I am writing to you on behalf of the Chesapeake Climate Action Network, a regional organization in the D.C., Maryland, and Virginia area that is dedicated to fighting climate change on both grassroots and state policy levels. I wanted to let you know that we laud the decision to invest in programs and studies that aim to reduce overall vehicle miles travelled. The reduction in VMT is a benefit to both the environment, in a lowering of overall greenhouse gas emissions, and to our most vulnerable people, in that alternative transportation to personal vehicles provides more equitable access to mobility. I urge you to consider this commitment when developing the spring draft plan for Visual 2045, as well as including the priorities from the Voices of the Region survey and the COG housing goals. Transit oriented development and a focus on bike/walk infrastructure is the only way to ensure a safe, thriving, and livable future for all people. We must act boldly and quickly in order to reach 2030 climate goals and net carbon neutrality by 2050. We have no time to waste -- please consider these in your draft before it is released for public comment.

Thank you for your consideration.

Best,

Elle De La Cancela

Monica O'Connor

Cecilia Plante

Maryland Legislation Coalition

Maryland is already paying dearly for the climate crisis. It's in our power to take actions today that will mitigate some of the worst effects of climate change. The biggest emission of GHG is our transportation sector - therefore, expansions of highways adds gas to the fire.

What we need is investments in walkable cities, bikeable communities and reliable, affordable, accessible transit. Do not make the mistake in thinking that highway expansion in any way helps us deal with the crisis at hand. Make a plan to realistically meet our climate targets by 2030.

Sincerely,

Cecilia Plante
Monica O'Connor
Maryland Legislative Coalition

David Foster
RAIL Solution, Chairman

Electric vehicle proponents are well-intentioned but continually overlook railroad electrification, which is standard, off-the-shelf technology world-wide except in North America, where it is limited to Amtrak's Northeast Corridor.

It makes no sense to plow billions of dollars into researching and equipping delivery vans, trash trucks, and school buses, which all drive limited miles and hours, while ignoring the tens of thousands of miles operated and thousands of locomotives out there every day on the railroads.

If the US is to get serious in addressing emissions from the transportation sector, we need as much surface freight moving by rail as possible, already almost four times more fuel efficient than over-the-road trucking. Electrification of railroad mainlines can double this advantage, curtailing greenhouse gas pollution and impact on climate change.

Paula Posas
Sierra Club

Dear MWCOG,

I am concerned about climate change and the urgent need to act. We need reduced driving and emissions, and walkable, bikeable transit-oriented communities.

Please shape your update of the long-range transportation plan (LRTP) according to the TPB's current greenhouse gas study, the Voices of the Region survey results (which showed overwhelming support for transportation that reduces climate emissions), and the COG housing goals.

Opt for the transportation and land use policy options within your control that could significantly reduce GHG emissions in this current update of the LRTP.

We need more transit. The supersizing of highways and arterial expansion is not appropriate to the needs of today ... or tomorrow.

Please ensure that the draft project list to be adopted this spring will reduce VMT and GHG emissions enough to reach 2030 climate goals and support COG's equity and land use goals. And not just by using weaker accounting methods!

MWCOG already committed to this in an admirable December 2020 vote - please let it guide you.

requiring that members "prioritize investments on projects, programs, and policies to reduce greenhouse gas emissions, prioritize the aspirational strategies, and achieve COG's land use and equity goals."

Many thanks and best wishes,
Paula

Brian Ditzler
Maryland Sierra Club Chair Emeritus
Chapter Transportation Chair

Climate change is happening now, so it's imperative that the update to the Visualize 2045 plan now being written focus on projects, programs and policies that reduce vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions. The TPB Board endorsed this approach in December, which means it should be a top priority now, and not when another plan is written in 4 or 5 years.

Transportation is now the primary contributor to climate-damaging GHG emissions in this region and nationwide. Steps needed to address this problem include having more walkable, bikeable, transit-oriented communities, reducing the need to drive, and having more reliable, fast and frequent mass transit. Highway expansion must be curtailed because it attracts more drivers, increases GHG and toxic tailpipe emissions from the increased number of vehicles, and encourages more sprawl. Each of these changes is important and can make a real difference.

Please ensure the draft project list to be adopted this spring will reduce VMT and GHG enough so our region can meet its 2030 climate goals, and get us ready to reach our 2050 goal of carbon neutrality.

Charles Grymes
Mobility Chair, Prince William Conservation Alliance

"Business as Usual" will not result in meeting the goal to reduce greenhouse gas emissions by 50% of the 2005 levels in 2030.

The greatest single source of greenhouse gas emissions is the transportation sector. Electric Vehicles will not replace gas-fueled vehicles by 2030, so we need to reduce Vehicle Miles Traveled (VMT) in order to reduce emissions.

Paving more lane-miles so cars can go faster just worsens, rather than solves, the climate change problem. We need to invest in trails, and to apply smart transportation and land use planning to reduce VMT. "Business As Usual" planning and road projects won't solve the problem.

We need to plan for mobility beyond just car travel. We need to plan for walkable communities where bike/pedestrian connectivity offers a more-attractive way to get around than a single-occupancy vehicle trip. We need to plan for the coming explosion of electric bike use, with Safe Routes to School, parks, libraries, retail centers, and jobs.

We need to plan for affordable transportation in places where we choose to increase affordable housing, so every worker in a family does not have to buy a car to drive to the jobsite. That will enhance the development of diverse communities with greater equity.

Caitlin Rogger
Interim Executive Director
Greater Greater Washington

Dear Transportation Planning Board,

I am writing on behalf of Greater Greater Washington to express our strong support for a regional transportation plan that reduces greenhouse gas emissions.

We applaud the TPB Board's vote in December 2020 to require that members "prioritize investments on projects, programs, and policies to reduce greenhouse gas emissions, prioritize the aspirational strategies, and achieve COG's land use and equity goals."

The draft plan should be shaped by the TPB's current greenhouse gas study, the Voices of the Region survey results (which showed overwhelming support for transportation that reduces climate emissions), as well as the COG housing goals.

The previous Visualize 2045 plan achieved only a 23 percent reduction in on-road greenhouse gas emissions by 2045 compared to 2005 levels. This current updated plan has to be different if the region is going to meet its adopted 2030 climate target and reach carbon neutrality by 2050.

The Phase 1 climate findings being presented by staff today demonstrate that you have multiple transportation and land use policy options within your control that could significantly reduce greenhouse gas emissions in this current update of the long-range transportation plan.

TPB can't continually wait another four years to address the climate crisis when we can make changes now.

We ask that TPB Board members select projects for public comment that reduce vehicle miles travel and greenhouse gas emissions sufficiently to meet our climate targets and support COG's equity and land use goals.

Chris Leyen

Senior Policy Manager

Virginia League of Conservation Voters

We applaud the TPB Board's vote in December 2020 to require that members "prioritize investments on projects, programs, and policies to reduce greenhouse gas emissions, prioritize the aspirational strategies, and achieve COG's land use and equity goals."

However, TPB staff have been saying that the draft plan to be approved in June for modeling is not being shaped by the TPB's current greenhouse gas study, the Voices of the Region survey results (which showed overwhelming support for transportation that reduces climate emissions), or the COG housing goals.

The previous Visualize 2045 plan achieved only a 23 percent reduction in on-road greenhouse gas emissions by 2045 compared to 2005 levels. This current updated plan has to be different if the region is going to meet its adopted 2030 climate target and reach carbon neutrality by 2050.

The Phase 1 climate findings being presented by staff today demonstrate that you have multiple transportation and land use policy options within your control that could significantly reduce greenhouse gas emissions in this current update of the long-range transportation plan.

TPB can't continually wait another four years to address the climate crisis when we can make changes now.

We ask that TPB Board members select projects for public comment that reduce vehicle miles travel and greenhouse gas emissions sufficiently to meet our climate targets and support COG's equity and land use goals.

March 16, 2021

Hon. Charles Allen
Chair, National Capital Region Transportation Planning Board

Re: **Visualize 2045 conformity inputs must reflect TPB Board commitment to prioritize projects that reduce greenhouse gas emissions**

Chair Allen and Board members:

The Coalition for Smarter Growth applauds the TPB Board's vote to **require** that members *"prioritize investments on projects, programs, and policies to reduce greenhouse gas emissions, prioritize the aspirational strategies, and achieve COG's land use and equity goals."*

We hope to see draft conformity inputs on April 2 that reflect your commitment. This means there must be significant changes from the 2018 adopted plan.

However, TPB staff comments are of great concern to us and suggest that the plan being drafted will not make significant changes reflecting the COG climate plan, COG's adopted housing goals, or the important findings from the Voices of the Region travel survey:

- At the CAC meeting last week, TPB staff said that the Voices of the Region survey won't shape the projects in the current plan update.
 - This survey showed climate was a far greater concern than congestion; that people will telecommute, walk and bike more and would like to drive less; and that growing transit ridership requires placing a priority on both frequency and cleanliness.
- Director Srikanth plans to release the Climate Change Study results at the end of the Visualize 2045 process with the air conformity results, making it too late to shape the plan.
- COG staff are not providing any land use scenario that reflects the housing targets for focusing 75% of new housing in transit-accessible activity centers.

TPB can't continually wait another four years to address the climate crisis and pressing equity concerns when it already knows what needs to be done. We hope the draft conformity inputs reflect our region's policy commitments.

Regards,

Stewart Schwartz
Executive Director

Bill Pugh
Senior Policy Fellow



WABA
WASHINGTON AREA
BICYCLIST ASSOCIATION

March 17, 2021

National Capital Region Transportation Planning Board
777 North Capitol Street NE, Suite 300
Washington, DC 20002-4239

Dear Chair Allen,

Washington Area Bicyclist Association and our 5,000 members applaud the TPB Board's vote in December 2020 to **require** that members "prioritize investments on projects, programs, and policies to reduce greenhouse gas emissions, prioritize the aspirational strategies, and achieve COG's land use and equity goals." We are deeply concerned about climate change and the urgent need to act, and we know that investing in walkable, bikeable, and transit-oriented communities will make a real difference. We ask that TPB Board members select projects for public comment that reduce vehicle miles travel and greenhouse gas emissions sufficiently to meet our climate targets and support COG's equity and land use goals.

The region's update to the long-range transportation plan ("Visualize 2045") is approaching a critical point, and we are concerned that the current plan will be little different than the 2018 plan. The previous Visualize 2045 plan achieved only a 23 percent reduction in on-road greenhouse gas emissions by 2045 compared to 2005 levels. This current updated plan has to be different if the region is going to meet its adopted 2030 climate target and reach carbon neutrality by 2050.

Thank you for your consideration.

Sincerely,
Jeremiah Lowery
Advocacy Director
Washington Area Bicyclist Association



March 16, 2021

To the Members of the Transportation Planning Board:

This comment is submitted on behalf of Ward3Vision, a Washington, DC, grass-roots advocacy group for smart growth. We support programs and projects that help our D.C. neighborhoods to be environmentally and socially responsible, including fostering walkable, bikeable, transit-oriented infrastructure and development.

In line with our mission, we are very concerned about the urgent need to combat climate change and greatly reduce the amount of driving and associated pollution and greenhouse gas emissions. We urge you to ensure that the regional transportation plan being considered in June 2021 and the draft project list for this spring be more aggressive in fighting greenhouse emissions, promoting non-vehicle transportation, and designing walkable/bikeable communities in order to reach the 2030 climate target and reach carbon neutrality by 2050. We strongly support projects that focus investment in new jobs and housing in transit accessible areas.

This is a matter of urgency, and if the Board misses this opportunity, it will have to wait several years. Due to the immanent crisis of global warming, postponing action is unacceptable.

Respectfully submitted,

/s/

Susan Kimmel, Chair
Ward3Vision Steering Committee

Cc: Mary Cheh, Councilperson, Ward 3

**TRANSPORTATION PLANNING BOARD
MEETING MINUTES**

February 17, 2021

VIRTUAL MEETING

MEMBERS AND ALTERNATES PRESENT

Charles Allen, TPB Chair – DC Council
Mark Rawlings – DC DOT
Anna Chamberlin – DC DOT
Kristin Calkins – DC Office of Planning
Brooke Pinto – DC Council
Christina Henderson – DC Council
R. Earl Lewis, Jr. – Maryland DOT
Adrian Boafo – Bowie
Jason Growth – Charles County
Reuben Collins – Charles County
Patrick Wojahn – College Park
Kai Hagen – Frederick County
Mark Mishler – Frederick County
Kelly Russell – City of Frederick
David Edmondson – City of Frederick
Neil Harris – Gaithersburg
Emmet V. Jordan – Greenbelt
Craig Moe – Laurel
Gary Erenrich – Montgomery County Executive
Evan Glass – Montgomery County Legislative
Terry Bellamy – Prince George’s County Executive
Victor Weissberg – Prince George’s County Executive
Deni Taveras – Prince George’s County Legislative
Bridget Donnell Newton – Rockville
Kacy Kostiuk – Takoma Park
Norman Whitaker – Virginia DOT
Maria Sinner – Virginia DOT
Canek Aguirre – Alexandria
Christian Dorsey – Arlington County
Dan Malouff – Arlington county
David Meyer – City of Fairfax
Walter Alcorn – Fairfax County
James Walkinshaw – Fairfax County
Rodney Lusk – Fairfax County
David Snyder – Falls Church
Robert Brown – Loudoun County
Kristen Umstattd – Loudoun County
Pamela J. Sebesky – Manassas
Jeannette Rishell – Manassas Park
Ann B. Wheeler – Prince William County
Victor Angry – Prince William County
Shyam Kannan – WMATA
Mark Phillips – WMATA
Sandra Jackson – FHWA

Dan Koenig – FTA
Tammy Stidham – NPS

MWCOG STAFF AND OTHERS PRESENT

Kanti Srikanth
Chuck Bean
Lyn Erickson
Mark Moran
Tim Canan
Nick Ramfos
Tom Gates
Bryan Hayes
Sergio Ritacco
John Swanson
Abigail Zenner
Deborah Etheridge
Charlene Howard
Dusan Vuksan
Arianna Koudounas
Karen Armendariz
Jen Desimone
Stacy Cook

Elisa Walton – CAC
Ella Hanson – DC Staff for Brook Pinto
Olivia Saucier – ICF
Heather Driscoll – ICF
Randy ZuWallack – ICF

Materials referenced in the minutes can be found here:
mwcog.org/events/2021/2/17/transportation-planning-/board/

1. VIRTUAL PARTICIPATION PROCEDURES, MEMBER ROLL CALL, AND VIRTUAL PUBLIC COMMENT OPPORTUNITY

Vice-Chair Sebesky called the meeting to order and reminded the board that the meeting is being recorded and broadcast. She said the process for asking questions and voting is the same as past meetings. After each item members will be asked to comment or vote by jurisdiction.

Ms. Erickson conducted a roll call. Members that were present are listed on the first page of the minutes.

Vice-Chair Sebesky said that there was no comment from the public.

2. APPROVAL OF THE JANUARY 21, 2021 MEETING MINUTES

Ms. Newton made a motion to approve the minutes from the January TPB meeting.

Ms. Russell seconded the motion.

The motion was approved by the board.

3. TECHNICAL COMMITTEE REPORT

Mr. Groth said that the Technical Committee met on February 5. At the meeting the committee was briefed on and discussed a number of items, including three items on the TPB agenda. He said the committee was briefed on the 2030 Climate and Energy Action plan, the Climate Change Mitigation Study of 2021, and a resiliency study. He said the committee was also briefed on the COVID-19 impacts on TPB Enhanced Mobility grantees. More detail can be found in the Technical Committee Report.

4. CAC AND AFA REPORTS

Ms. Walton said that the Community Advisory Committee met on February 11. She said that this was the first meeting of the 2021-2022 committee. She said committee priorities for the two-year term include equity, safety, sustainability, transportation technology, and advancement of the Aspirational Initiatives. She said that TPB Chair Allen addressed the committee. She said that the committee was also briefed on the Regional Travel Survey. More detail can be found in the CAC Report.

Ms. Kostiuk said she is excited about the joint CAC and AFA Visualize 2045 focus group scheduled for February 25.

Mr. Aguirre said that the Access for All Advisory Committee met on February 12. He said that this is the first meeting he chaired for the committee. He said that the committee was briefed on findings from the Voices of the Region survey. He said that one focus group was conducted in Spanish, but the AFA encourages staff to explore ways to incorporate more input from people who speak other languages and people who represent communities with disabilities. He said the committee was briefed on the COVID-19 impacts on people who use programs funded through the TPB's Enhanced Mobility program. More detail can be found in the AFA report.

5. STEERING COMMITTEE ACTIONS AND DIRECTOR'S REPORT

Mr. Srikanth said that the Steering Committee met on February 5. He said that committee actions are documented on pages 2 to 9 of his report. He said that on page 8 is a letter approved by the committee. This letter from the TPB and the Metropolitan Washington Air Quality Committee formally submitting comments to the U.S. EPA on the agencies proposed review and reevaluation of a 1986 policy related to the use of catalytic converters in automobiles. He said that the TPB is currently soliciting applications for the Transportation Land-Use Connections Program and for technical assistance for roadway safety. Details are on a page 12. He said that this morning a letter was added to the report that was received from the MDOT. The letter provides the board an update of Maryland's I-495/I-270 management project. It specifically notes that on January 27, the Maryland Department of Transportation and Maryland State Highway Administration released a recommended preferred alternative design for the express lanes project. He described the substantive changes relative to the project as reflected in the current edition of Visualize 2045. He noted these changes would be part of the update to Visualize 2045 that the TPB has begun and the board will be asked to review and approve in June. He said MDOT's letter, along with a fact sheet and press release, is posted to the TPB meeting materials website.

Mr. Srikanth said that on February 12 the TPB stopped accepting projects and changes to be included in the air-quality conformity analysis for Visualize 2045. He said that staff is reviewing the paperwork that was submitted. He said the proposed changes will be released for public comment in early April and that the board will be asked to approve these projects at the May board meeting.

More details can be found in the report for this item.

Ms. Kostiuk asked about the review of the project mentioned in the MDOT letter. She asked if the updated MDOT plan would come forward to the board for review and approval as a separate process or as part of the larger set of things that are submitted for updating the long-range plan Visualize 2045.

Mr. Srikanth said that MDOT's updates to the I-495/I-270 Express lanes project would be part of the larger set of updates the board will be asked to review and approve in June. He said that before the updated Visualize 2045 plan can be approved by federal partners, the TPB needs to conduct the air-quality conformity analysis. He said that in June the board will be approving the projects that are included in the air-quality conformity analysis. He said that staff are also conducting a financial analysis to show that the region can afford to pay for projects that will be included in the analyses and the plan.

Ms. Kostiuk asked how the climate impacts of the updated long-range plan will be analyzed differently that in the past.

Mr. Srikanth said that in the past TPB's work on climate change has been separate from its long-range plan document. This time when the board adopts its updated long range plan document in April/May of next year, the findings from the climate mitigation study and the levels of outcomes needed within transportation sector to achieve the region's greenhouse gas reduction goals will all be integrated into and a part of the long-range plan. We are striving to complete the study by end of this year. He said that the focus on mitigating climate change in the forthcoming update to Visualize 2045 will be part of a larger package of policies, which also includes the Aspirational Initiatives and a focus on safety.

Mr. Srikanth also noted that the TPB's focus on climate is not new to this latest plan update. He said that TPB analysis related to climate change began in 2009 and said TPB has received estimates of changes to greenhouse gases every time it updates its long-range plan since at least 2014. He noted that we do see that over the long 25-year period greenhouse gases are forecast to go down, but not at the rate of the region's greenhouse gas reduction targets.

Ms. Kostiuk said that as the board moves forward it is important to think about how it can utilize the information that Mr. Srikanth described as it considers projects whether they really are meeting our goals as well, and if there's more we can do on that.

6. CHAIR'S REMARKS

Chair Allen said that as 2021 progresses, the region will become more active as it recovers from the COVID-19 pandemic. He said that steps taken by local governments in the region will significantly shape what recovery looks like. He said it is important to prioritize a more equitable transportation system across the region. He said that limited mobility during the pandemic highlights opportunities for reducing future congestion and emissions while offering residents more options for moving around. He said that the pandemic has also highlighted areas where the region can do much better in terms of planning to be resilient and meet the travel needs of older adults, individuals with disabilities, while ensuring equitable access to transportation technology and opportunities to telework. He said he counts on the board to stay engaged and find effective ways for the TPB to assist the jurisdictions as they prepare to recover from the pandemic.

INFORMATION ITEMS

7. BRIEFING ON THE DRAFT FY 2022 UNIFIED PLANNING WORK PROGRAM

Ms. Erickson referred to the presentation and materials on the UPWP. She reviewed the budget for the year including revenues and expenditures. She also reviewed the carryover funds from the previous year.

Mr. Snyder suggested that future presentations on the UPWP might be done in a thematic way.

Ms. Erickson explained that because of the nature of MPO work many of these work programs intersect and work together but that she would look into that suggestion for the future.

Mr. Lewis asked about the tables showing revenues. He noted that there were different amounts for Virginia Maryland and the District of Columbia.

Ms. Erickson explained that each state has its own formula to determine its allocation.

Mr. Allen asked in the event that you had to make any mid-year adjustments based on congressional action of funding, is that something that'll be brought back to TPB to do a mid-year adjustment to the budget? Or do you have enough budgetary flexibility, working with partners, to make that change?.

Ms. Erickson said that we have enough budgetary flexibility to make changes. She said that she does not anticipate the TPB getting additional money from major changes to the FHWA PL or FTA 5303 funding.

Mr. Srikanth explained that should a new federal funding program be established as part of federal reauthorization, such as grants for infrastructure projects, we would be able to work with transportation departments to apply for such funds and make adjustments to the work program if needed.

8. BRIEFING ON THE DRAFT FY 2022 COMMUTER CONNECTIONS WORK PROGRAM

Mr. Ramfos referred to the presentation and gave an in-depth overview of the work Commuter Connections does and its budget and work program.

Mr. Lewis thanked Commuter Connections for its great work.

Ms. Taveras asked about some acronyms and specifically GRH.

Mr. Ramfos explained that GRH is Guaranteed Ride Home.

Ms. Kostiuk asked about the impact of COVID-19 on Commuter Connection's outreach activities and changes in behavior.

Mr. Ramfos explained that Commuter Connections is moving into an education campaign to help through the recovery. He explained that the focus will be on educating commuters on transit and carpool options as people begin to go back to offices.

9. VISUALIZE 2045 - "VOICES OF THE REGION" PUBLIC OPINION SURVEY RESULTS

Ms. Armendariz explained that TPB staff began its public engagement efforts for the update to Visualize 2045 with a public opinion research phase. She said that the public opinion research phase is made up of a statistically significant region-wide survey, known as Voices of the Region, and 11 focus groups that will supplement the survey's data and methodology. She said that transportation officials can use the survey results as quantitative support for any projects, plans, or programs that align with the TPB's policy priority areas. She referred to Ms. Saucier from ICF for a briefing of the survey.

Ms. Saucier said that the survey was conducted from September to November 2020. She explained that the 2,407 completed responses exceeded the goal of getting 2,000 completed surveys. She said that the three primary topics of the survey were travel patterns during the COVID-19 pandemic, transportation improvements, and factors that affect transportation such as climate change and equity. She proceeded to share the survey results with the board. More details can be found on the presentation slides for Item 9.

Mr. Walkinshaw asked Ms. Saucier to clarify the category of "emerging technology" from the analysis of the open-ended question at the end of the survey.

Ms. Saucier said that the emerging technology category includes any respondent reference to e-bikes, e-scooters, and drones.

Ms. Kostiuk asked if there had been any cross-tabulations based on race and ethnicity. She also asked how this data can be utilized as TPB members begin to get ready for the update to the long-range plan.

Ms. Saucier referred back to her presentation to show the demographics of the survey relative to census information. She said that cross-tabulation was done by racial and ethnic background, but that there were not a lot of significant findings from these cross-tabulations. She said that there were more

differences based on income status in various questions including the one about system satisfaction.

Mr. Srikanth said that this survey was conducted to provide a regional snapshot of public opinion and expectations, particularly based on their experience during the pandemic. He said that TPB members can refer to the survey as they make decisions on transportation priorities and investments.

Mr. Wojahn said that he would want to see more information about cross-tabulations based on race and income. He asked if the survey asked questions about biking and walking for non-transportation purposes.

Ms. Saucier said that the survey asked information about general travel. It did not ask specific questions about biking or walking for exercise.

Mr. Kannan said that Washington Metropolitan Area Transit Authority (WMATA) is already delivering many of the public transportation services, which respondents specified as needing in order to feel safe while using public transportation during the COVID-19 pandemic and onward. Mr. Kannan said that 50% of the region's workforce cannot work from home. He said that officials need to continue to pay attention to people who continue to commute and those who need to take non-work trips.

10. PRIORITY AIRPORT GROUND ACCESS PROJECTS

This item was postponed to the March TPB meeting.

11. CORONAVIRUS RESPONSE AND RELIEF SUPPLEMENTAL APPROPRIATIONS ACT OF 2021 (CRSAA)

Mr. Ramfos referenced a notice that was distributed to the board providing background information on the \$590,000 that the region was allocated as part of the CRSAA funding. He said that the purpose of the funding is to support eligible Enhanced Mobility recipients for payroll and operational needs. He said that the funds can also be used to transport individuals to and from vaccination sites. He said that the last page of the notice included proposed eligibility criteria. He said that FTA concurs with those criteria.

Mr. Ramfos said that the next step would be a streamlined solicitation and application process. The goal is to get it out as quickly as possible to current and former Enhanced Mobility grantees. He said that the board will be kept informed as this process moves forward. More detail can be found in the notice for this item.

Mr. Bellamy asked if it can be used to transport people to vaccination centers in suburban Maryland.

Mr. Ramfos said that as long as individuals are being transported to and from vaccination sites this funding can be used.

OTHER ITEMS

12. ADJOURN

No other business was brought to the board. The meeting adjourned at 2:09 p.m.

Meeting Highlights TPB Technical Committee – March 5, 2021

The Technical Committee met on Friday, March 5, 2021 in an online-only session. Meeting materials can be found here: <https://www.mwcog.org/events/2021/3/5/tpb-technical-committee/>

The following items were reviewed for inclusion on the TPB's March agenda.

TPB AGENDA ITEMS 7 AND 8 – BRIEFING ON THE DRAFT FY 2022 UNIFIED PLANNING WORK PROGRAM

The committee was briefed on the amendment to the FY 2021 UPWP and associated FY 2021 carryover funding to FY 2022. The board is asked to approve the FY 2022 UPWP at the March 17 meeting.

TPB AGENDA ITEM 9 – BRIEFING ON THE DRAFT FY 2022 COMMUTER CONNECTIONS WORK PROGRAM

The committee was briefed on the Commuter Connections Work Program (CCWP), the annual statement of work that identifies alternative commute program projects and services designed to help improve traffic congestion and meet regional air quality goals in the non-attainment area. The board is asked to approve the FY 2022 CCWP at its March 17 meeting.

The following items were presented for information and discussion:

VISUALIZE 2045 – INPUTS SUBMITTED

The committee was briefed on the air quality conformity inputs and all new projects and project changes received for the 2022 update to Visualize 2045. Staff provided notice about a facilitated TPB work session on project inputs scheduled for April 21.

VISUALIZE 2045 – UPDATE ON THE 2021 FOCUS GROUPS

The committee was briefed on the objectives, recruitment, and framework for the 2021 Focus Groups. Staff discussed next steps for this project including the qualitative data analysis.

VISUALIZE 2045 – TPB POLICY PRIORITIES – TRACKING PROGRESS

The committee was briefed on staff activities to support Visualize 2045 implementation and provide information about new efforts to track progress. Staff requested input from technical members to support this effort.

ROUND 9.2 COOPERATIVE FORECASTS

The committee was briefed on the draft 9.2 Cooperative Forecasts that the TPB staff use in the constrained element of Visualize 2045 and the Air Quality Conformity Analysis. Staff summarized forecasts and discussed next steps in the process.

TRANSIT WITHIN REACH

The committee was briefed on the upcoming launch of the Transit Within Reach program that funds design projects to improve bike and walk connections to Transit Access Focus Areas (TAFAs). Staff provided an overview of the program along with the timeline for the upcoming solicitation period.

REGIONAL ELECTRIC BUS OVERVIEW

The committee was briefed on an overview of national trends in electric buses, recent growth in the region's e-bus procurement, and local agency initiatives towards fleet electrification.

OTHER BUSINESS

- Visualize 2045 – Status Report
- Resiliency Study Update and Outreach Response Reminder
- Coronavirus Response and Relief Supplemental Appropriates Act of 2021
- Bike to Work Day May 21, 2021
- TPB Climate Change Mitigation Study of 2021 – Phase 1
- Transportation Climate Initiative
- Connected and Autonomous Vehicles
- Regional Travel Survey Tabulations and Continued Analysis
- USDOT INFRA Grants
- Staff reports

COMMUNITY ADVISORY COMMITTEE MONTHLY REPORT

March 17, 2021

Elisa Walton, CAC Chair

The Community Advisory Committee (CAC) met on Thursday, March 11 for an online-only meeting. At the meeting the committee was briefed on the “Voices of the Region” survey results and learned about the history of the CAC and its role at the TPB. The committee also broke into small groups to get to know each other and discuss the year ahead.

VISUALIZE 2045 – “VOICES OF THE REGION” SURVEY RESULTS

John Swanson, TPB Transportation Planner, shared the results of the region-wide public opinion survey conducted in the fall of 2020. The survey provides input into a range of TPB planning activities, including the 2022 update to Visualize 2045.

Karen Armendariz, TPB Public Engagement Specialist, described how survey participants responded to three future factors: climate change, autonomous vehicles, and equity. She also described response to an open-ended question about the transportation investments that could be made today that future generations will be thankful for.

This presentation is similar to the one the board received at the February 2021 meeting.

The committee was curious to know how the results of this public opinion survey will inform the creation of Visualize 2045. The committee also asked about survey specifics, including what parts of the region and which demographics received survey responses. The committee wanted assurances that older adults and people with disabilities participated in the study. The committee is hopeful that results from “Voices of the Region” and other public engagement activities can inform future long-range plans and policy priorities at the TPB.

CAC ORIENTATION – ABOUT THE CAC

Bryan Hayes, TPB Transportation Planner, shared a brief history of the CAC. He talked about how the committee began in 1992 when the region was discussing the Woodrow Wilson Bridge and how it changed over the years. He described committee accomplishments from over the years and talked about changes to the committee approved by the TPB in 2020. He explained how the three parts of the committee’s mission describe the CAC’s role at the TPB.

Committee members divided into three small groups. Each group identified two things that they would like to learn about during their two-year term, expectations that committee members have for each other, and finally expectations for staff.

One group highlighted the high cost of housing near transit and wants to learn about how creating more affordable housing in the region may impact transportation. They also want to discuss ways that transportation in the region can decrease its impact on air-quality. Another group wants to encourage the TPB to continue increasing effort and attention put into making the region’s transportation safer, regardless of mode. Given the uncertainty around emerging transportation technologies, this group also wanted to encourage the region to be more flexible when planning infrastructure. The final group was interested in promoting a transportation system in which the

movement of people and services is more balanced in all directions. They also wanted to see more focus on connecting activities with transportation options that don't require a visit to the core.

The groups talked about how to respect the voice of all 24 members by being mindful and making sure there is time for all member who want to weigh in on a topic. There was also agreement that breaking into small groups is a good way to keep people engaged when meeting online. They also talked about the importance of members learning about the demographics and aspects of transportation that are unique to the different parts of the region.

The committee expressed a desire for staff to help balance between depth and breadth when bringing information to the committee. They also enjoyed meeting the TPB chair and requested more opportunities to meet with and learn from members of the board and other TPB committees. Finally, the committee urged staff to be very clear when documenting how public input is incorporated into final products.

OTHER BUSINESS

Lyn Erickson, TPB Plan Development and Coordination Program Director, walked the committee through the February TPB agenda.

ATTENDEES

Members	
Elisa Walton, CAC chair	Lorena Rios
Ashley Hutson	Michael Artson
Dan Papiernik	Nancy Abeles
Delia Houseal	Ra Amin
Eyal Li	Robert Jackson
Jeff Jamawat	Solomon Haile
Judd Isbell	Tracy Duval
Katherine Kortum	
Guests	
Bill Orleans	Malcom Mossman
Jack Koczela	
Staff	
Bryan Hayes	Karen Armendariz
John Swanson	Lyn Erickson



MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Steering Committee Actions and Report of the Director
DATE: March 11, 2021

The attached materials include:

- Steering Committee Actions
- Announcements and Updates



MEMORANDUM

TO: Transportation Planning Board
SUBJECT: Steering Committee Actions
FROM: Kanti Srikanth, TPB Staff Director
DATE: March 11, 2021

At its meeting on March 5, the TPB Steering Committee reviewed and approved resolution SR12-2021, requested by the District Department of Transportation (DDOT), which authorized the transfer of \$216,824 in FY 2021 federal Transportation Alternatives Set-Aside program funds for nine projects in the District of Columbia, which had previously been approved for funding by the TPB. This resolution corrected the amount of funds to be transferred that had previously been approved by the Steering Committee in January 2021 with resolution SR10-2021.

The Steering Committee also approved resolution SR13-2021, to approve TIP Action 21-20, amending the FY 2021-2024 Transportation Improvement Program (TIP), as requested by DDOT. The amendment included a total of \$38.4 million in private developer funding in fiscal years 2021 and 2022 for the 11th Street Bridge Park project; and added a total of \$90 million in District funds in fiscal years 2022 and 2024 for the H Street over Railroad project. These District funds had previously been included in the FY 2021-2024 TIP, but were inadvertently removed due to a clerical error when this project was most recently amended in January 2021 with resolution SR6-2021.

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.”

Attachments

- Approved resolution SR12-2021 to approve the transfer of funds from the federal Transportation Alternatives Set-Aside Program for projects in the District of Columbia
- Approved resolution SR13-2021 to amend the FY 2021-2024 TIP to include funding for the H Street over Railroad and 11th Street Bridge Park projects, as requested by DDOT.

TPB Steering Committee Attendance – March 5, 2021
(only voting members listed)

TPB Chair/ DC rep.:	Charles Allen
TPB Vice Chair/VA rep.:	Pamela Sebesky
DDOT:	Mark Rawlings
MDOT:	Kari Snyder
VDOT:	Norman Whitaker
WMATA:	Mark Phillips
Previous TPB Chair:	Kelly Russell

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

**RESOLUTION TO APPROVE THE TRANSFER OF FUNDS
FROM THE FEDERAL TRANSPORTATION ALTERNATIVES SET ASIDE PROGRAM FOR A
PROJECT IN THE DISTRICT OF COLUMBIA**

WHEREAS, the National Capital Region Transportation Planning Board (TPB), the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of the Fixing American's Surface Transportation Act (FAST Act) for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the FAST Act's Transportation Alternatives Set-Aside (TA Set Aside) Program, which is part of the Surface Transportation Block Grant Program of the Federal Highway Administration (FHWA), provides a portion of funding based on the relative share of the total State population sub-allocated to large urbanized areas, and the MPO is required "to develop a competitive process to allow eligible entities to submit projects for funding ... in consultation with the relevant State"; and

WHEREAS, the TA Set Aside Program provides funding for transportation programs and projects defined as eligible per Section 1109 of the FAST Act; and

WHEREAS, the District of Columbia Department of Transportation (DDOT), the Maryland Department of Transportation (MDOT), and the Virginia Department of Transportation (VDOT) are responsible for determining the total federal funding amount allocated to the TPB, determining project eligibility, project implementation, and project oversight; and

WHEREAS, the TA Set Aside Program provides an opportunity to fund projects that implement regional policies reflected in the Regional Transportation Priorities Plan and in the seven initiatives endorsed by the TPB in December 2017 and January 2018, which include promoting Regional Activity Centers, improving pedestrian and bicycle access to transit, and completing the National Capital Trail; and

WHEREAS, the TA Set Aside is a complementary component of the TPB's Transportation Land-Use Connections (TLC) Program, which supports planning-related projects and events of TPB member jurisdictions; and

WHEREAS, the FY 2021 total for DDOT TA Set-Aside is \$1,169,504, which includes local and federal funds; and

WHEREAS, DDOT has determined the projects listed below, approved by the TPB in FY 2021 and FY 2020, need to be adjusted to include the total project cost in the amount of \$216,824; and

WHEREAS, DDOT has requested that funding be transferred from the TPB’s TA Set-Aside surplus to this project; and

WHEREAS, on July 12, 2019, the TPB approved Resolution SR1-2020 which established a policy for off-cycle fund transfers of TA Set-Aside funding, including the transfer of funds to previously awarded projects from unspent program allocations to the TPB that were not fully awarded to projects; and

WHEREAS, the transfer requested by DDOT is consistent with the policy established through Resolution SR1-2020;

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board approves the following transfer of federal TA Set Aside funds as described in the attached material and as listed below:

C&O Canal Trailhead Project Enhancements	\$10,317
Blair Road Right of Way Analysis and Acquisition	\$36,224
Tactical Urbanism Library	\$26,805
Curb Extensions with Ground Murals	\$14,547
Statue Restoration 16th Street Bridge & Dumbarton Bridge	\$5,485
Union Station Head House Floor Tile Replacement	\$24,157
Union Station West Hall Restoration	\$29,936
Prather’s Alley Safety Improvements	\$36,803
Protected Mobility Lanes on M St, SE	\$32,550
TOTAL	\$216,824

Approved by the TPB Steering Committee at its virtual meeting on March 5, 2021.

Government of the District of Columbia

Department of Transportation



February 26, 2021

The Honorable Charles Allen, 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 Chairperson Allen,

The District of Columbia Department of Transportation (DDOT) is requesting that the TPB Steering Committee approve a transfer of Transportation Alternatives Set-Aside Program (TAP) funds. The transfer will use the remaining funding in the TPB's FY 2021 TAP sub-allocation for the District of Columbia. The transferred funds will be added to projects previously approved by the TPB.

To date, the TPB has approved \$952,678 in TAP project funding for DC for FY 2021. However, these approvals did not fully expend the TPB's FY 2021 sub-allocation of \$1,169,504 (federal and local shares).

Since the TPB approvals, DDOT has determined that an additional \$216,826 is needed to fund projects originally approved in FY 2021 and FY 2020. Those projects are listed on the attachment. DDOT is requesting TPB authorization of the transfer of \$216,826 for TAP funding in FY 2021.

TPB staff have confirmed that this request is allowable under the TAP transfer policy approved by the TPB Steering Committee in July of 2019. That policy, among other potential actions, permits the Steering Committee to transfer funds to previously awarded projects from unspent TAP sub-allocations that were not fully awarded to projects.

For more information about this request, please contact Kelsey Bridges at DDOT (kelsey.bridges@dc.gov).

Sincerely,

A handwritten signature in black ink that reads 'Jonathan D Rogers'.

Jonathan D Rogers
Neighborhood Planning Manager, DDOT
jonathan.rogers2@dc.gov

Project Name	FY of TPB Approval	Funding Previously Approved by TPB (Fed+Local)	Proposed STIP Funding for FY 2021 (Fed+Local)	Additional Funding Above FY 2021 TPB Approvals (Fed+Local)
C&O Canal Trailhead Project Enhancements	FY 2021	37,500	47,817	10,317
Blair Road Right of Way Analysis and Acquisition	FY 2021	300,000	336,224	36,224
Tactical Urbanism Library	FY 2021	42,000	68,805	26,805
Curb Extensions with Ground Murals	FY 2021	64,533	79,080	14,547
Statue Restoration on 16th Street Bridge and Dumbarton Bridge	FY 2021	40,000	45,485	5,485
Union Station Head House Floor Tile Replacement	FY 2021	200,319	224,476	24,157
Union Station West Hall Restoration	FY 2021	268,326	298,264	29,938
Prather's Alley Safety Improvements	FY 2020	169,600	36803*	36803*
Protected Mobility Lanes on M Street, SE	FY 2020	150,000	32550*	32550*
TOTAL			1,169,504	216,826

* These funds were included in the TPB approval in FY 2020, but through administrative error were not programmed in FY 2020.

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

**RESOLUTION ON AN AMENDMENT TO THE FY 2021-2024 TRANSPORTATION
IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY
CONFORMITY REQUIREMENT TO INCLUDE FUNDING FOR THE H STREET
BRIDSGE OVER RAILROAD AND 11TH STREET BRIDGE PARK PROJECTS, AS
REQUESTED BY THE DISTRICT DEPARTMENT OF TRANSPORTATION (DDOT)**

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 the Fixing America's Surface Transportation (FAST) Act 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 March 18, 2020 the TPB adopted the FY 2021-2024 TIP; and

WHEREAS, in the attached letter of March 2, 2021, DDOT has requested an amendment to the FY 2021-2024 TIP to include \$90 million in District of Columbia funding in FY 2022 and FY 2024 for the **H Street over Railroad project, (TIP ID 6039)**; and to include the **11th Street Bridge Park project (TIP ID 11361)** with \$38.4 million in private developer funding in FY 2021 and FY 2022, as described in the attached materials:

WHEREAS, these projects are exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2021-2024 TIP to \$90 million in District of Columbia funding in FY 2022 and FY 2024 for the **H Street over Railroad project, (TIP ID 6039)**; and to include the **11th Street Bridge Park project (TIP ID 11361)** with \$38.4 million in private developer funding in FY 2021 and FY 2022, as described in the attached materials.

TIP Action 21-20: Approved by the TPB Steering Committee at its virtual meeting on March 5, 2021.

Government of the District of Columbia

Department of Transportation



March 2, 2021

The Honorable Charles Allen, 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 Chairperson Allen,

The District Department of Transportation (DDOT) requests that the FY 2021-2024 Transportation Improvement Program (TIP) be amended for two projects as detailed below:

1. **H Street Bridge over Railroad (TIP ID# 6039)**¹
 - a. Increase HSIP funding for construction in FYs 2025 and 2026 by \$5,000,000 respectively.
 - b. Increase State or District funding for construction in fiscal years 2022, 2024, 2025, and 2026 to correct inadvertent removal of this previously published funding. The State or District funding is to be programmed as follows:
 - i. FY 2022: \$30,000,000
 - ii. FY 2024: \$60,000,000
 - iii. FY 2025: \$100,000,000
 - iv. FY 2026: \$22,194,000
2. **11th Street Bridge Park**²
 - a. Add new project
 - b. Increase State or District funding for construction in fiscal year 2026 by \$30,343,000.
 - c. Increase private developer funding for construction by \$18,662,000 in fiscal year 2021 and by \$19,747,000 in fiscal year 2022

The proposed amendments do not add additional capacity for motorized vehicles and do not require conformity analysis or public review and comment. The funding sources have been

¹ The State or District funding presented in bullet 1-b for the H Street Bridge was previously included in the District of Columbia's element of the TIP and was removed on January 4th, 2021 in updating the project record in the new Transportation Planning Board system, the Project Info Trak (PIT). This request would restore the funding to the project as reflected in the District of Columbia FY 2021 – FY 2026 Capital Improvements Plan.

² The 11th Street Bridge Park project has not previously been included in the TIP because federal funding is not part of the project plan. The funding plan shown above was approved in the District of Columbia FY 2021 – FY 2026 Capital Improvements Plan. DDOT would like to add this project to the TIP in anticipation of a planned application for federal grant funds for the project for increased transparency.

identified, and the TIP will remain fiscally constrained. Therefore, DDOT requests that the TPB Steering Committee approve these amendments at its March 5th meeting.

We appreciate your cooperation in this matter. Should you have questions regarding these amendments, please contact Mark Rawlings at (202) 671-2234 or by e-mail at mark.rawlings@dc.gov. Of course, feel free to contact me directly.

Sincerely,

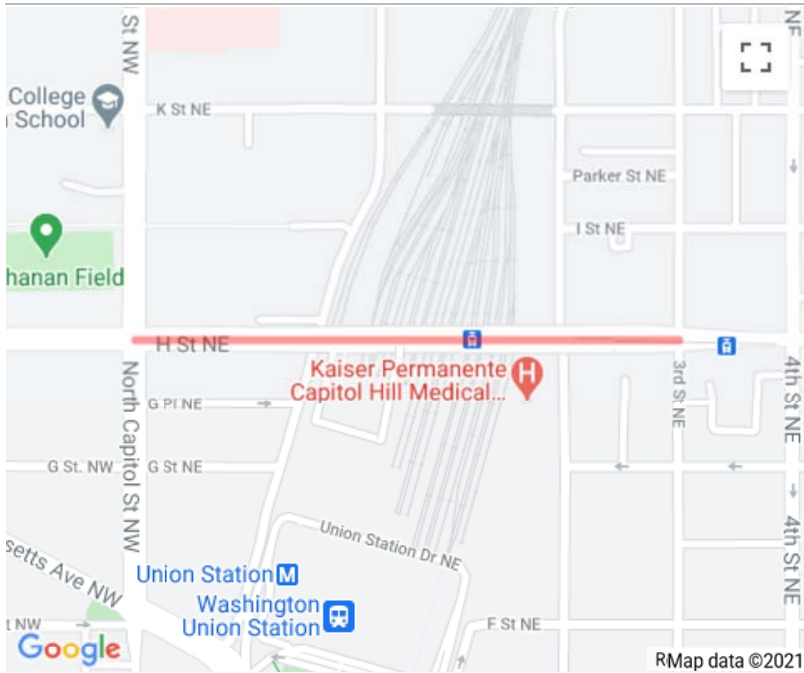
A handwritten signature in black ink, appearing to read "Saesha Carlile". The signature is fluid and cursive, with the first name being more prominent.

Saesha Carlile
Chief Administrative Officer, DDOT
Saesha.carlile@dc.gov

**National Capital Region Transportation Planning Board
 FY 2021-2024 Transportation Improvement Program
 TIP Action 21-20: Formal Amendment
 Approved by TPB Steering Committee on March 5, 20201**

<i>TIP ID</i>	6039	<i>Agency Project ID</i>	CD054A	<i>Total Cost</i>	\$261,444,000
<i>Lead Agency</i>	DDOT	<i>Municipality</i>	District of Columbia	<i>County</i>	
<i>Project Type</i>	Study/Planning/Research	<i>Completion Date</i>		<i>TCM</i>	
<i>Project Name</i>	H Street Bridge over Railroad				
<i>Project Limits</i>	Bridge				
<i>Description</i>	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. The bridge will be reconstructed to accommodate the H/Benning Streetcar Line, allow for Amtrak to increase its capacities in its Union Station rail yard, and allow for development of the air rights above the rail yard.				

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	Future	Total
PE	National Highway Performance Program	\$800,000						\$800,000
PE	State or District Funding	\$9,200,000						\$9,200,000
	<i>Total Preliminary Engineering</i>	\$10,000,000						\$10,000,000
CON	Highway Safety Improvement Program (STP)		\$4,000,000	\$4,000,000	\$4,000,000		\$8,000,000	\$20,000,000
CON	State or District Funding	\$14,250,000	\$31,000,000	\$1,000,000	\$61,000,000		\$124,194,000	\$231,444,000
	<i>Total Construction</i>	\$14,250,000	\$35,000,000	\$5,000,000	\$65,000,000		\$132,194,000	\$251,444,000
	<i>Total Programmed</i>	\$24,250,000	\$35,000,000	\$5,000,000	\$65,000,000		\$132,194,000	\$261,444,000



Version History

<i>TIP Document</i>	<i>MPO Approval</i>	<i>State Approval</i>	<i>FHWA Approval</i>	<i>FTA Approval</i>
21-00 Adoption 2021-2024	03/20/2020	10/01/2020	05/27/2020	05/27/2020
21-15 Amendment 2021-2024	01/08/2021	<i>Pending</i>	<i>Pending</i>	<i>Pending</i>
21-20 Amendment 2021-2024	03/05/2021	<i>Pending</i>	<i>Pending</i>	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s)

Funding Change(s):

Total project cost increased from \$39,250,000 to \$261,444,000

<i>TIP ID</i>	11361	<i>Agency Project ID</i>	<i>Total Cost</i>	\$68,752,000
<i>Lead Agency</i>	DDOT	<i>Municipality</i>	<i>County</i>	Washington
<i>Project Type</i>	Bike/Ped	<i>Completion Date</i>	<i>TCM</i>	
<i>Project Name</i>	11th Street Bridge Park			
<i>Project Limits</i>	Bridge			

Description In partnership with a non-profit organization, DDOT is looking into using the old 11th street Bridge piers foundation to support a new bridge superstructure, deck, land scape and other amenities. The 11th Street Bridge Park Project seeks to reuse the existing pier foundations from the old 11th Street Bridge crossing at the Anacostia River to create an urban destination and park including a pedestrian and bicycle path connecting to trails on both sides of the river. A national competition, led by Building Bridges Across the River and the District Office of Planning (OP), in coordination with DDOT, selected a conceptual design for the bridge park from the winning team. The project goals include: Economic - Serve as an anchor for inclusive economic opportunity Environment - Re-engage residents with the Anacostia River Health - Improve public health; and Social - Reconnect Communities

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	Future	Total
CON	Private Developer	-	\$18,662,000	\$19,747,000	-	-	-	\$38,409,000
CON	State or District Funding	-	-	-	-	-	\$30,343,000	\$30,343,000
	<i>Total Construction</i>	-	\$18,662,000	\$19,747,000	-	-	\$30,343,000	\$68,752,000
	<i>Total Programmed</i>	-	\$18,662,000	\$19,747,000	-	-	\$30,343,000	\$68,752,000

*Map Has Not Been Marked

Version History

<i>TIP Document</i>	<i>MPO Approval</i>	<i>State Approval</i>	<i>FHWA Approval</i>	<i>FTA Approval</i>
21-20 Amendment 2021-2024	03/05/2021	<i>Pending</i>	<i>Pending</i>	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - New project

Change Report for TIP Action 21-20: Formal Amendment
 Approved by the TPB Steering Committee on March 5, 2021

TIP ID	PROJECT TITLE	% CHANGE	COST CHANGE	COST BEFORE	COST AFTER	CHANGE REASON	NARRATIVE DESCRIPTION
11361	11th Street Bridge Park	100	\$68,752,000	\$0	\$68,752,000	New project	PROJECT CHANGES (FROM PREVIOUS VERSION): Private Developer ► Add funds in FFY 21 in CON for \$18,662,000 ► Add funds in FFY 22 in CON for \$19,747,000 <i>Total project cost \$68,752,000</i>
6039	H Street Bridge over Railroad	24	\$50,239,000	\$211,205,000	\$261,444,000	Cost change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): State or District Funding + Increase funds in FFY 22 in CON from \$1,000,000 to \$31,000,000 + Increase funds in FFY 24 in CON from \$1,000,000 to \$61,000,000 <i>Total project cost \$261,444,000</i>



MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Announcements and Updates
DATE: March 11, 2021

The attached documents provide updates on activities that are not included as separate items on the TPB agenda.



MEMORANDUM

TO: Transportation Planning Board
FROM: Nicholas Ramfos, Director, Transportation Operations Programs
SUBJECT: Status of the Federal Transit Administration's Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (CRRSAA) Solicitation
DATE: March 11, 2021

As a follow-up to the Notice of the CRRSAA which was released at the February 17, 2021 TPB meeting, COG/TPB staff have received FTA approval of the plan and proposed selection criteria that was part of the Notice. A streamlined solicitation for implementation through the Foundant grants management system was developed and released on February 24. Existing subrecipients, regardless of current "active" project status, were notified of the opportunity to apply for the funds along with the required parameters. The purpose of the funding is to support expenses eligible under Enhanced Mobility, but recipients are directed to prioritize payroll and operational needs. The net amount of grant funding awarded will be \$532,200 after providing for grant administration (by COG/TPB staff). All suballocations will be reviewed and approved by FTA within TrAMS, per standard award procedure.

The application deadline is March 24, 2021. An internal selection committee will review the applications received and propose which projects will be selected. The TPB's Technical Committee will be briefed on April 2, 2021 on the types of applications received and the amount of funds that have been requested. The TPB will be asked to approve the staff recommended applications on April 21, 2021 and the TIP will then be updated. Upon TPB approval, staff will complete the CRRSAA application in TrAMS in order to receive the funds from FTA and will then contract with the selected subrecipients to manage the award beginning in May.



MEMORANDUM

TO: Transportation Planning Board
FROM: Stacy Cook, TPB Transportation Planner
SUBJECT: April Board Work Session: Facilitated Review of Technical Inputs
DATE: March 11, 2021

BACKGROUND

On December 16, 2020 the TPB solicited inputs from its member agencies to update Visualize 2045, the region's long-range transportation plan (LRTP), the Transportation Improvement Program (TIP) and the air quality conformity analysis of the LRTP and TIP. The TPB will make these proposed updates to Plan, TIP and the scope of work for the air quality conformity analysis available for public comment from April 2, 2021 -- May 3, 2021. To aid in the review of the proposed changes, the TPB will publish, online: (1) a memorandum documenting the new major projects and significant changes to any major projects already in the plan, (2) project description sheets for all new projects, (3) project profiles for new or changed "major" projects, and (4) the list of projects that will be included in the air quality conformity analysis. The TPB will also publish, online, the proposed scope of work for the air quality conformity analysis that documents the methodology that will be used to conduct the regional air quality analysis.

APRIL WORK SESSION: FACILITATED REVIEW OF TECHNICAL INPUTS

On April 21, 2021, prior to the TPB meeting, the TPB staff will hold a virtual work session to facilitate a review of the proposed projects – new and changes to major projects in the current Plan. This session will provide an opportunity for the TPB members and alternates to register comments on these inputs, discuss inputs with other members, and ask the submitting agencies questions about the inputs. The comments /questions will be summarized and provided to the appropriate agency for response. These summarized comments and questions, along with others received during the public comment period, will be documented, along with the responses. While there will be limited time for agencies to respond to questions/comments during the work session, agencies will have time until the May board meeting to respond to all comments and board questions.

During the May 2021 board meeting, the TPB staff will present the complete comment summary to the board, along with draft responses. At the June 2021 board meeting, the TPB will be presented with a finalized summary of the comments and responses and be asked to approve the proposed project and technical inputs to be included in the air quality conformity analysis.

PREPARATION FOR WORK SESSION

TPB members should review the supporting documents made available as part of the public comment materials and be prepared to provide their comments and questions to the TPB or agency staff. The TPB staff have requested member transportation agencies to have a technical staff point

person attend the virtual work session to receive the comments, questions and provide any preliminary responses as they are able. TPB staff will work with submitting agencies to address any outstanding questions not addressed during the work session, during the comment response period.

WORK SESSION AGENDA

The work session will occur on April 21, 2021 and will be held from 10:30 A.M. - 11:55 A.M. prior to the April 2021 meeting. The agenda is as follows:

- 10:30 A.M. 1. Welcome, TPB Director Srikanth
- 10:35 A.M. 2. Purpose of the facilitated session, Chair Allen
- 10:40 A.M. 3. Brief staff summary of comment period materials, TPB Transportation Planner, Ms. Cook

Board Discussion and Questions for Submitting Agencies:

- 10:45 A.M. A. District of Columbia projects
- 11:00 A.M. B. Virginia projects
- 11:20 A.M. C. Maryland projects
- 11:45 A.M. D. Other projects / Technical Inputs
- 11:55 A.M. Adjourn



MEMORANDUM

TO: Transportation Planning Board Technical Committee
FROM: Lyn Erickson, TPB Plan Development and Coordination Program Director
SUBJECT: Grant Opportunities and Tasks - Timelines and Due Dates
DATE: March 11, 2021

TPB staff would like to share a list of the grant opportunities and tasks with the Transportation Planning Board Technical Committee. Please use the table below with these items and their timelines and due dates.

Grant/Task	Date	Contact
Climate Resiliency	Feedback due: March 5, 2021	Leo Pineda lpineda@mwkog.org
Transportation Land Use Connections (TLC) solicitation	Applications due: March 8, 2021	John Swanson jswanson@mwkog.org
FY2021 Regional Safety Program (RSP) solicitation	Applications due: March 22, 2021 Abstracts due: February 12, 2021	Jon Schermann jschermann@mwkog.org
Visualize 2045 TPB Policy Priorities: Tracking Progress	Due: March 25, 2021	Stacy Cook scook@mwkog.org
Regional and Federal Policy questions (23-45) update for all existing projects in Project InfoTrak	Due: April 30, 2021	Stacy Cook scook@mwkog.org
Transit Within Reach	Project Abstracts due: June 2021* Applications due: July 2021*	Nicole McCall nmccall@mwkog.org
Section 5310 - Enhanced Mobility of Seniors & Individuals with Disabilities Program	Solicitation scheduled for July 1, 2021 - September 1, 2021	Lynn Winchell-Mendy lmendy@mwkog.org
Transportation Alternatives Program (TAP)	DC: Solicitation anticipated for Late March through May 2021 Maryland: Application period: April 1-May 17, 2021 Virginia: Mandatory pre-application deadline: July 1, 2021; Full application deadline: October 1, 2021	John Swanson jswanson@mwkog.org
FY2022 Regional Safety Program (RSP) solicitation	TBD	Jon Schermann jschermann@mwkog.org

*Tentative Date



MEMORANDUM

TO: Transportation Planning Board
FROM: John Swanson, Transportation Planner
SUBJECT: Upcoming Solicitations for Applications for the Transportation Alternatives Set-Aside Program
DATE: March 11, 2021

SUMMARY

The federal Transportation Alternatives Set-Aside (TA Set-Aside) Program is used to fund a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, trails, safe routes to school (SRTS) projects, community improvements, historic preservation, and environmental mitigation.

Under federal law, the TPB is responsible for selecting some TA Set-Aside projects using sub-allocated funding for Suburban Maryland, Northern Virginia, and the District of Columbia. The TA Set-Aside Program, which is part of the Surface Transportation Block Grant Program, was previously known as the Transportation Alternatives Program (TAP) and that name is still commonly used.

The next solicitation periods for TA Set-Aside applications have been scheduled as follows:

- District of Columbia
Late March through May 2021
See ddot.dc.gov/page/transportation-alternatives-program.
- Maryland
April 1 - May 17, 2021
See <https://roads.maryland.gov/mdotsha/pages/Index.aspx?PageId=144>
- Virginia
 - Pre-applications: May 17 – July 1, 2021
(Note: Pre-applications are mandatory)
 - Applications: Due October 1, 2021
(Note: Virginia is on a two-year funding cycle)See www.virginiadot.org/business/prenhancegrants.asp.

Past recipients of technical assistance through the TPB's Transportation Land Use Connections (TLC) Program are encouraged to consider seeking funding through the TA Set-Aside Program. The TPB also encourages TA Set-Aside applications that support policies highlighted in Visualize 2045, our region's long-range transportation plan.

BACKGROUND

The federal surface transportation legislation known as MAP-21 first established the Transportation Alternatives Program (TAP) in 2012. The program, however, has its roots in the Transportation Enhancements Program first set up in 1991 under the landmark transportation bill known as ISTEA (Intermodal Surface Transportation Efficiency Act). The FAST Act of 2015 renamed the program as the Transportation Alternatives *Set-Aside* Program, but the key features of the program largely remain the same.

Information on the program is available from FHWA at:
https://www.fhwa.dot.gov/environment/transportation_alternatives/.

The program provides sub-allocated funding for large metropolitan planning organizations (MPOs) like the TPB (those classified as “Transportation Management Areas” or TMAs) to fund local projects. In addition to these sub-allocated funds, a portion of the TA Set-Aside funding is reserved for statewide project selection, which is conducted by the state departments of transportation.

For the National Capital Region, the program offers an opportunity to support and enhance regional planning activities. At the direction of the TPB, our region’s TA Set-Aside is framed as a complementary component of the TPB’s Transportation Land-Use Connections (TLC) Program, which provides technical assistance for small planning studies to TPB member jurisdictions. Past recipients of technical assistance through TLC are encouraged to consider seeking funding assistance through the TA Set-Aside Program.

The TA Set-Aside offers the region the ability to fund projects that support regional priorities and goals. Applicants from the National Capital Region are asked to show how their projects will serve regional criteria when they seek TA Set-Aside funds.

The TPB’s selection criteria, which are expected to be used this year, are rooted in TPB Policies and programs. They include:

- Focus on expanding transportation options;
- Support for Regional Activity Centers;
- Access to high-capacity transit, especially in Transit Access Focus Areas (TAFAs);
- Support for the National Capital Trail Network; Access in Equity Emphasis Areas; and
- Increased access for people with disabilities.

PROJECT SELECTION PROCESS

Since the establishment of the program in 2012, the TPB has combined its solicitations with the state departments of transportation in the District of Columbia, Maryland, and Virginia. In each state, the state DOT conducts the solicitation through its website. Each state application includes a supplementary form requesting information about how projects respond to the TPB’s regional priorities.

The following entities in the TPB’s planning area are eligible to apply: local governments (county, city, or town); regional transportation authorities; transit agencies; natural resource or public land

agencies; school districts and agencies; and any local and governmental entity with oversight of transportation or recreational trails. Nonprofits are eligible to partner with any eligible entity on an application, if state or local requirements permit.

Applications must adhere to all federal requirements for the program, including providing a minimum 20 percent match.

The selection process is conducted separately for each state. Upon receipt of the applications, state staff screen the submissions for eligibility and conduct preliminary assessments of the proposed projects. Once applications are determined eligible, they are forwarded to the TPB for consideration and selection.

Working with the states, TPB staff conducts research on the proposed projects, which may include site visits and interviews with applicants. TPB staff convenes a separate selection panel for each state's applications. The panel members include COG/TPB staff as well as representatives from the state DOTs whose applications are not under consideration. Representatives from the DOTs in the states whose projects are under consideration are invited to participate in the selection process as technical resources.

Panel members individually review and score applications based on each reviewer's professional assessment (50 points) and regional selection criteria (50 points). The regional criteria are rooted in TPB policies and programs, with the understanding that some projects will not meet all criteria.

For each state, the panel's recommendations are forwarded to the TPB for approval. After that, the TPB's decision is forwarded to the DOT to include in the state's capital improvement program.

In addition to the funding allocated by the TPB, each DOT has responsibility for a statewide allocation of TA Set-Aside funding. The statewide funds represent half of the state's total allocation under the program. Project selection using these funds usually occurs after the TPB makes its selections, although a portion of Virginia's statewide funds are reserved for project selection by the district member of the Commonwealth Transportation Board. In recent year, the CTB member's selection process has been conducted in coordination with the TPB's project selection.

CONTACT

For information about program details at the state level, contact:

- District of Columbia: Kelsey Bridges, DDOT, kelsey.bridges@dc.gov.
- Maryland: Christy Bernal, MDOT, CBernal@sha.state.md.us.
- Virginia: Pamela Liston, VDOT, pamela.liston@vdot.virginia.gov.

For more information about the TPB's role in this program, please contact John Swanson at jswanson@mwkog.org or 202-962-3295.



MEMORANDUM

TO: Transportation Planning Board
FROM: Erin Morrow, TPB Transportation Engineer
SUBJECT: Transportation and Climate Initiative (TCI): Draft Model Rule and Public Engagement Planning Update Released
DATE: March 11, 2021

On March 1, 2021, the [Transportation and Climate Initiative](#) (TCI) released two documents: the [draft model rule](#) for the [Transportation and Climate Initiative Program \(TCI-P\)](#) and an [update on public engagement planning](#).

TCI-P is a multi-state cap-and-invest program in the Northeast, Mid-Atlantic, and Southeast to cap carbon dioxide emissions from transportation fuels and invest revenue from the program into programs and policies to further reduce greenhouse gas emissions from on-road vehicles. In December, the District of Columbia and three states¹ signed a [Memorandum of Understanding](#) (MOU) to participate in the TCI-P. Maryland and Virginia are among eight other states² that participated in the development of the draft model rule along with the four Signatory Jurisdictions. TPB received a [memorandum](#) about the MOU under Item 5 at the January 2021 meeting.

The MOU requires the Signatory Jurisdictions to release a coordinated final model rule after providing for a public review and input period on the draft model rule. Additionally, each Signatory Jurisdiction commits to pursue any legal processes within its jurisdiction required to implement its individual program consistent with the model rule. A four-page [summary](#) of the draft model rule provided by TCI is attached. Public comments on the draft model rule, submitted through the [TCI input portal](#), will be most helpful if received on or before April 1, 2021.

TCI's update on public engagement planning is also attached. TCI reiterates its commitment to a "transparent, inclusive, and equitable process" for the TCI-P. The document lists examples of opportunities for public engagement that both TCI and individual TCI jurisdictions may undertake, efforts that TCI intends to undertake to enable meaningful public engagement in the TCI-P, and upcoming program milestones that will be opportunities for public input.

The update on public engagement included an appendix with contact information for state agency officials from each of the TCI jurisdictions. For the TPB region, those contacts are:

District of Columbia

- Jenn Hatch, Climate Analyst, Department of Energy & Environment (DOEE) (jenn.hatch@dc.gov)

¹ Connecticut, Massachusetts, and Rhode Island

² Delaware, New Jersey, New York, North Carolina, Pennsylvania, and Vermont

Maryland

- Devon Dodson, Senior Advisor, Maryland Department of the Environment (devon.dodson1@maryland.gov)
- Chris Hoagland, Climate Change Program Manager, Maryland Department of the Environment (chris.hoagland@maryland.gov)
- Virginia Burke, Transportation Air Quality Program Manager, Maryland Department of Transportation (vburke@mdot.maryland.gov)
- Dorothy Morrison, Director, Office of Environment, Maryland Department of Transportation (dmorrison@mdot.maryland.gov)

Virginia

- Chris Bast, Chief Deputy Director at the Virginia Department of Environmental Quality (chris.bast@deq.virginia.gov)

An overview of the draft model rule and the update on public engagement planning were presented during a webinar on March 1, 2021. The webinar recording is available on the [TCI-P](#) website in both [English](#) and [Spanish](#). The [slides](#) from the webinar are also available.



ANNOUNCEMENT

TRANSPORTATION PLANNING BOARD CONNECTED AND AUTOMATED VEHICLES (CAV) WEBINAR SERIES

WEBINAR #4: CAV PLANNING CONSIDERATIONS – WHITE PAPER FINDINGS AND RECOMMENDATIONS

Thursday, March 25, 2021
1:00 P.M. - 2:30 P.M.

Registration Information:

Registration is free of charge, but advanced registration is required.

Please use this link to register: [CAV Webinar #4 Registration](#)

Please join us for the fourth webinar in the series dealing with Connected and Automated Vehicles' impacts on the Transportation Planning Board's and member agencies' activities. All are welcome, especially TPB member agency and committee personnel involved in or with an interest in the topic.

Featured will be a presentation on the CAV White Paper undertaken in 2020 to look at planning issues that will arise with CAV's as they are introduced to the National Capital Region. Incorporating CAV planning into the TPB's *Visualize 2045* long-range plan update will be discussed as well.

TPB is planning more CAV webinars, stay tuned for announcements on future events.

Please refer any questions or comments to:

Andrew Burke
Transportation Engineer
Department of Transportation Planning
aburke@mwkog.org



MEMORANDUM

TO: Transportation Planning Board
FROM: Michael Farrell, TPB Senior Transportation Planner
SUBJECT: April 23 Vision Zero Arterial Design Webinar
DATE: March 11, 2021

This memorandum announces the April 23, 2021 Vision Zero Arterial Design Webinar.

ANNOUNCEMENT

As part of its ongoing series of professional development workshops, the Bicycle and Pedestrian Subcommittee of the TPB Technical Committee will be hosting a webinar on Vision Zero Arterial Design, on Friday, April 23 from 10 a.m. to 2 p.m. Speakers from the National Association of City Transportation Officials (NACTO), MDOT-SHA, DDOT, VDOT and Montgomery County will present their most recent design guidelines and treatments for pedestrian safety on major arterials, toward meeting Vision Zero goals. Closer to the date a final agenda and other meeting documents and information will be posted to the Subcommittee website.

This webinar will be free and open to the public. All are welcome, especially TPB member agency planners and engineers. No registration will be required.

PURPOSE

Pedestrian and bicyclist fatalities account for nearly one third of the region's transportation fatalities, and our major arterials are often the scene of these crashes. With new national and state design guidelines available, as well as the adoption of Vision Zero by many TPB member jurisdictions, now is a good time to raise awareness of agency staff and the public about these resources.

NEWS RELEASE

Early registration for Bike to Work Day 2021 is now open

Mar 1, 2021



After a year of unprecedented change, [Commuter Connections](#) and the [Washington Area Bicyclist Association](#) (WABA) are excited to announce that registration for the [20th Annual Bike to Work Day](#) (BTWD) event has opened. The event will take place on Friday, May 21, with pit stops in the District of Columbia, Maryland, and Virginia. The first 15,000 people to register and attend will receive a free t-shirt.

The annual BTWD event traditionally celebrates bicycling as a fun, eco-friendly, low-cost commuting option, and it provides both physical and mental health benefits. To make sure even those working from home can participate, Commuter Connections is encouraging telecommuting registrants to bike to a local pit stop early in the day for a free t-shirt and then cycle back home to start the workday.

"We're very grateful to our continuing and new sponsors who help make these events stronger every year – and especially this year," said Nicholas Ramfos, Commuter Connections Director. "We hope this year's Bike to Work Day event will provide the region with an opportunity for all residents — including essential workers and telecommuters— to reconnect with bicycling as a form of commuting, exercise, and as a way to encourage mental well-being."

All pit stop locations will be taking [safety measures](#) in compliance with CDC guidelines to ensure participants and sponsors remain safe on the day of the event. Precautions will include:

- Zero tolerance mask enforcement
- Food & beverage policy with no-contact tables and factory sealed goods
- Pre-selected check-in times for staggered arrival times, with 25–30 bicyclists per half an hour timeslot
- Social distance requirements including six-foot distancing, one-way traffic flow, hand sanitizer stations, and appropriate signage

To find your local participating 2021 pit stops and plan your route, check out the [Find Your Pit Stop](#) map.

This year's event has been made possible by regional sponsors: ICF, Go Alex, and Urban Stems. Silver Sponsors: Marriott International, Bike Arlington, Bicycle Space, and Verra. And Bronze Sponsors: Maryland Department of Transportation, goDCgo, Virginia Department of Transportation, Giant,²⁸

American College of Cardiology, Fair Lakes, Potomac Pedalers, American Association of Highway and Transportation Officials (AASHTO), and Vision Zero Prince Georges.

Follow Commuter Connections on Twitter at [@BikeToWorkDay](#) and use #BTWD2021 or #BTWDC.

It's fast, free, and easy to register for BTWD at www.biketoworkmetrodc.org or by calling (800) 745-RIDE.

Commuter Connections is a program of the National Capital Region Transportation Planning Board at the Metropolitan Washington Council of Governments. Commuter Connections promotes bicycling to work, ridesharing, and other alternatives to drive-alone commuting, provides ride-matching for carpools and vanpools and offers the free Guaranteed Ride Home program. Commuter Connections is funded by the District of Columbia, Maryland, Virginia, and the U.S. Department of Transportation.

The Washington Area Bicyclist Association creates a healthy, more livable region by promoting bicycling for fun, fitness, and affordable transportation; advocating for better bicycling conditions and transportation choices for a healthier environment; and educating children, adults, and motorists about safe bicycling.

CONTACT:

Megan Goodman: mgoodman@mwkog.org, (202) 962-3209

Rachel Adler: radler@asc-pr.com, (914) 821-5100

ITEM 7 – Action

March 17, 2021

An Amendment to the FY 2021 UPWP, and FY 2021 Carryover Funding to FY 2022

Action: Adopt Resolutions R13-2021 and R14-2021 to approve the amendment to the FY 2021 UPWP and the FY 2021 carryover funding to FY 2022.

Background: The Unified Planning Work Program (UPWP) is an annual work statement that identifies planning priorities and activities to be carried out within a metropolitan planning area. It serves as the TPB staff's work scope for the year. Certain projects and budgets in the current FY 2021 UPWP have been identified to be removed from the FY 2021 UPWP and carried over to FY 2022. The board will be briefed on the enclosed amendment to the FY 2021 UPWP and associated FY 2021 carryover funding to FY 2022.

TPB R13-2021
March 17, 2021

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

**RESOLUTION TO AMEND THE FY 2021 UNIFIED PLANNING WORK PROGRAM (UPWP)
TO REVISE THE BUDGET AND WORK ACTIVITIES**

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 Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the Statewide and Metropolitan Transportation Planning rule as published in the May 27, 2016 Federal Register by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) require a Unified Planning Work Program (UPWP) for Transportation Planning; and

WHEREAS, the UPWP is required as a basis and condition for all funding assistance for transportation planning to state, local, and regional agencies by the FHWA and FTA; and

WHEREAS, the FY 2021 UPWP for the Washington Metropolitan Area was approved by the TPB on March 18, 2020; and

WHEREAS, revised work activities and budgets for projects in the FY 2021 UPWP have been developed by staff, the District Department of Transportation (DDOT), the Maryland Department of Transportation (MDOT), the Virginia Department of Transportation (VDOT), and the Washington Metropolitan Area Transit Authority (WMATA) to modify projects and identify funding which will be carried over into FY 2022, as described in the attached materials; and

WHEREAS, at its February 5 and March 5, 2021 meetings, the TPB Technical Committee was briefed on the proposed revised work activities and budgets for projects in the FY 2021 UPWP, and recommended approval of these revisions by the TPB;

NOW, THEREFORE, BE IT RESOLVED THAT the National Capital Region Transportation Planning Board amends the FY 2021 UPWP to include revised work activities and budgets, as described in the attached Memorandum of March 11, 2021 entitled: "FY 2021 Unified Planning Work Program (UPWP) Amendments to Budgets and Work Activities."

TPB R14-2021
March 17, 2021

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

**RESOLUTION TO APPROVE
CARRYOVER FUNDING FROM FY 2021 TO THE
FY 2022 UNIFIED PLANNING WORK PROGRAM (UPWP)**

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 Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the Statewide and Metropolitan Transportation Planning rule as published in the May 27, 2016 Federal Register by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) require a Unified Planning Work Program (UPWP) for Transportation Planning; and

WHEREAS, the UPWP is required as a basis and condition for all funding assistance for transportation planning to state, local, and regional agencies by the FHWA and FTA; and

WHEREAS, the FY 2021 UPWP for the Washington Metropolitan Area was approved by the TPB on March 18, 2020; and

WHEREAS, project work activities and budgets for carryover from FY 2021 to FY 2022 have been developed for the core program and for the Technical Assistance Programs of the District Department of Transportation (DDOT), the Maryland Department of Transportation (MDOT), the Virginia Department of Transportation (VDOT), and the Washington Metropolitan Area Transit Authority (WMATA);

WHEREAS, at its February 5 and March 5, 2021 meetings, the TPB Technical Committee was briefed on the proposed revised work activities and budgets for carryover from FY 2021 to FY 2022, and recommended approval of these revisions by the TPB;

NOW, THEREFORE, BE IT RESOLVED THAT the National Capital Region Transportation Planning Board approves the work activities and budgets for carryover funding from FY 2021 to FY 2022 as described in the attached Memorandum of March 11, 2021 entitled "FY 2021 Unified Planning Work Program (UPWP) Amendments to Budgets and Work Activities."



MEMORANDUM

TO: National Capital Region Transportation Planning Board
FROM: Lyn Erickson, TPB Plan Development and Coordination Program Director
SUBJECT: Draft FY 2021 Unified Planning Work Program (UPWP) Amendments to Budgets and Work Activities, Including “Carryover” Amounts
DATE: March 11, 2021

The Board will be asked to amend the FY 2021 Unified Planning Work Program (UPWP) at its March 17, 2021 meeting, to remove certain work activities and associated funding amounts and to approve “carrying over” this funding into the draft FY 2022 UPWP. This memo was presented at the February meeting and there is one change. This memo now reflects an additional \$14,000 that will be carried over in the Virginia Technical Assistance budget earmarked for Bike/Ped/Scooter Counts.

The amendment to remove work activities and funding reflects staff’s determination that the work activities will not be completed in the remaining months of FY 2021 (between now and June 30, 2021). Two independent actions will occur: 1) the FY 2021 UPWP will be amended to remove funding, and 2) this funding will be “carried over” into the FY 2022 UPWP.

This memorandum identifies the revisions to the specific work activities and changes to the budget amounts in the FY 2021 UPWP that are to be “carried over” into the new FY 2022 UPWP. The proposed amendment and “carry over” funding and activities were reviewed by the state funding and oversight agencies: the District Department of Transportation (DDOT), the Maryland Department of Transportation (MDOT) the Virginia Department of Transportation (VDOT), and the Virginia Department of Rail and Public Transportation (DRPT).

SUMMARY OF BUDGET REVISIONS

Staff recommends that the current FY 2021 UPWP be amended to reduce the total budget for the basic UPWP by \$2,787,377 to reflect work activities that are not anticipated to be completed during the remaining part of fiscal year ending June 30, 2021 OR work activities being deferred. Staff recommends this amount and work activities be “carried over” to the FY 2022 UPWP to support continued work on these activities and other activities planned for FY 2022. The proposed FY 2021 UPWP amendment budget amounts and distribution are listed in Tables 1, 2, and 3 which are attached to this memo.

CHANGES TO FY 2021 UPWP ACTIVITIES AND BUDGETS

The \$2,787,377 recommended reduction in budget would be in the core program’s work activity budget and the combined Technical Assistance program budget. These amounts will be carried over to the FY 2022 UPWP core program and Technical Assistance.

The breakdown of the funds within the core program recommended to be carried over is as follows:

1. Task 3 – Planning Elements: Carry over \$250,000. Of the \$250,000, \$100,000 is from the Congestion Management Program, \$100,000 from Systems Performance, Operations, and Technology (SPOT) Planning, and \$50,000 from Freight Planning activities. The FY 2021 funding was provided to support several activities within Planning Elements now recommended to be modified and/or better accomplished in FY 2022, including the following:
 - The \$100,000 being carried over from the Congestion Management Process activity was intended for the development of jurisdictional and/or corridor-based congestion profiles. This activity is recommended to be deferred on account of the disruption in the travel patterns on account of the COVID-19 pandemic. This funding will be applied in FY 2022 toward the TPB's new Regional Roadway Safety Program.
 - The \$100,000 being carried over from SPOT planning activity is being deferred to FY 2022. \$50,000 of this funding will be applied in FY 2022 toward the TPB's new Regional Roadway Safety Program; and \$50,000 will be for an activity related to Connected/Automated Vehicles (CAV) technology activities. A number of webinars held in FY 2021 will inform the next set of CAV activities in FY 2022.
 - The \$50K being carried over from the regional Freight Planning activity will be applied towards an enhanced update to the Freight Plan, information from which will be incorporated into the 2022 update to Visualize 2045.
2. Task 5 – Travel Forecasting: Carry over \$660,000 in funding budgeted for consultant support services to assist with developing the TPB's next-generation travel demand forecasting model, to be known as the Gen3 Travel Model. This three-year project is scheduled to occur from FY 2020 through FY 2023. \$200,000 will be carried over for a model-development related data purchase that did not occur in FY 2021. Thus, the total amount to be carried over for Travel Forecasting is \$860,000.
3. Task 6 – Mobile Emissions Planning: Carry over \$25,000 from other miscellaneous direct costs that were not used in FY 2021, but which could be allocated in FY 2022 to help fund the TPB Climate Change Mitigation Study (CCMS) of 2021.
4. Task 7 – Travel Monitoring and Data Programs: Carry over \$506,000 in funding budgeted for consultant services and data purchases to initiate geographic-focused travel surveys, enhance the travel trends and monitoring program by developing enhanced visualizations, and to acquire big data products following completion of the Big Data evaluation study. The disruption in travel due to the COVID-19 pandemic was determined to be an inopportune time for additional travel surveys and monitoring activities. The ongoing consultant-assisted examination of the MPO's data needs and assessment of available big data is anticipated to be complete by end of FY 2021, and it will provide a road map for data purchases and analyses tasks in the future.

5. Task 8 – Planning Scenarios and Socioeconomic Forecasting: Carry over \$60,000 in funding budgeted for data purchases and training into various FY 2022 core activities. A consultant contract will be completed in FY 2021 to build organizational awareness and staff training in scenario planning. The cost, if any, of future planning scenario tools that may be acquired is not yet known. Resources will be identified in other program areas to support this acquisition if it is necessary.

6. Task 11 – Technical Assistance: The Technical Assistance program provides funding to the three state Departments of Transportation (DOT) and the region's public transportation agencies to assist in planning studies and travel monitoring activities that support regional planning. Staff and the DOTs have identified a total amount of \$1.086 million to be carried over. This carry over is largely due to budget underruns and insufficient time during the remaining fiscal year to initiate and complete any new activity. The breakdown of the funds within the Technical Assistance program recommended to be carried over is as follows:
 - The District of Columbia's budget will carry over \$222,966 with \$30,000 earmarked for the Regional Safety Program (RSP) and the rest (\$192,966) toward the various core FY 2022 activities.
 - The Maryland Technical Assistance budget will carry over \$477,804 with \$35,000 earmarked for the RSP and the rest (\$442,804) toward the various core FY 2022 activities.
 - The Virginia Technical Assistance budget will carry over \$193,977 with \$14,000 earmarked for Bike/Ped/Scooter Counts, \$35,000 earmarked for the RSP, and the rest (\$144,977) toward the various core FY 2022 activities.
 - The Regional Public Transportation Assistance budget will carry over \$191,630 with \$135,000 earmarked for the Transit Within Reach technical assistance grant program and \$56,630 to develop a regional High-Capacity Transit station map graphic.

Table 1: FY 2020 UPWP Revenues Estimates by Source – As Amended

(July 1, 2020 to June 30, 2021)

	FTA SECT 5303 80% FED & 20% STA/LOC	FHWA PL FUNDS 80% FED & 20% STA/LOC	FAA CASP 90%/ 10% FED / LOC	TOTALS
DDOT ALLOCATIONS				
NEW FY 2021	\$424,649	\$1,919,540		\$2,344,189
PRIOR UNEXPENDED	\$84,842	\$392,674		\$477,516
CARRYOVER FY 2020	\$129,624	\$428,605		\$558,229
SUBTOTAL - DC	\$639,115	\$2,740,818		\$3,379,934
MDOT ALLOCATIONS				
NEW FY 2021	\$1,154,124	\$3,178,133		\$4,332,257
PRIOR UNEXPENDED	\$260,929	\$765,798		\$1,026,727
CARRYOVER FY 2020	\$396,068	\$909,870		\$1,305,938
SUBTOTAL - MD	\$1,811,121	\$4,853,801		\$6,664,922
VDRPT & VDOT ALLOCATIONS				
NEW FY 2021	\$996,234	\$2,728,885		\$3,725,119
PRIOR UNEXPENDED	\$213,790	\$643,600		\$857,390
CARRYOVER FY 2020	\$298,664	\$697,149		\$995,812
SUBTOTAL - VA	\$1,508,687	\$4,069,633		\$5,578,321
TOTAL FHWA/FTA FUNDING ALLOCATIONS				
NEW FY 2021	\$2,575,007	\$7,826,558		\$10,401,565
PRIOR UNEXPENDED	\$559,561	\$1,809,509		\$2,361,633
CARRYOVER FY 2020	\$824,355	\$2,035,624		\$2,859,979
SUB-TOTAL - FHWA-FTA	\$3,958,924	\$11,671,690		\$15,623,177
TOTAL BASIC UPWP	\$3,958,924	\$11,671,690		\$15,623,177
FAA - CASP PROGRAM			\$475,000	\$475,000
GRAND TOTAL UPWP	\$3,958,924	\$11,671,690	\$475,000	\$16,098,177

Breakdown of FY 2021 UPWP

Carryover Amounts	FTA	FHWA	Total
DDOT Allocations	\$113,355	\$486,116	\$599,471
MDDOT Allocations	\$321,223	\$860,878	\$1,182,102
VDRPT & VDOT Allocations	\$267,583	\$738,221	\$1,005,804
	\$702,161	\$2,085,216	\$2,787,377

1. "New FY2021" FTA funding amounts from DDOT are at FY 2020 levels and may be updated.
2. "Prior Unexpended" funding amounts are yet to be confirmed and may change.
3. "Carryover FY 2020 funds" are funds budgeted for Core and Technical Assistance work program activities in FY 2020 UPWP that are not anticipated to be spent in FY 2020. As such these funds will be carried over from FY 2020 to be used to perform Core program and Tech. Assistance activities in FY 2021.
4. As part of the Continuous Air System Planning work we anticipate receiving funds from FAA to support their biennial Air Passenger Survey and assist in Ground Access planning work.

Table 2: FY 2021 UPWP Expenditures – As Amended

WORK ACTIVITY	FY 2021 TOTAL APPROVED	FY 2021 REVISED	Difference
A. CORE PROGRAMS			
1. Long-Range Transportation Planning	\$1,085,010	\$1,085,010	
2. Transportation Improvement Program	\$438,484	\$438,484	
3. Planning Elements	\$2,952,916	\$2,702,916	-\$250,000
4. Public Participation	\$1,018,896	\$1,018,896	
5. Travel Forecasting	\$3,846,492	\$2,986,492	-\$860,000
6. Mobile Emissions Planning	\$1,835,592	\$1,810,592	-\$25,000
7. Travel Monitoring and Data Programs	\$2,164,395	\$1,658,395	-\$506,000
8. Planning Scenarios and Socioeconomic Forecasting	\$1,530,943	\$1,470,943	-\$60,000
9. Mobility and Enhancement Programs	\$624,452	\$624,452	
10. TPB Management and Support	\$858,370	\$858,370	
Sub-total: Core Program	\$16,355,551	\$14,654,551	-\$1,701,000
B. TECHNICAL ASSISTANCE			
A. District of Columbia	\$294,366	\$71,400	-\$222,966
B. Maryland	\$807,804	\$330,000	-\$477,804
C. Virginia	\$578,977	\$385,000	-\$193,977
D. WMATA	\$373,856	\$182,226	-\$191,630
Sub-total: Technical Assistance Program	\$2,055,003	\$968,626	-\$1,806,377
Total - Basic UPWP	\$18,410,554	\$15,623,177	-\$1,086,377
C. AIR SYSTEMS PLANNING			
1. Continuous Airport System Planning (CASP)	\$475,000	\$475,000	
Sub-total: CASP	\$475,000	\$475,000	
GRAND TOTAL UPWP	\$18,885,554	\$16,098,177	-\$2,787,377
Amended amounts in bold font			

TABLE 3 TPB FY 2021 UPWP BUDGET BY WORK PROGRAM ACTIVITY AND EXPENDITURE CATEGORY - AMENDED DRAFT

March 5, 2021

UPWP - Work Activity	COG Labor Cost		Total COG Staff	COG Labor Fringe Cost	Supplemental Labor		Total Labor & Fringe Cost	Total Indirect Cost	Direct Costs (Implementation)			Total Prgrm. Implmntn. Direct Cost	Grand Total Cost
	DTP Staff	Other Staff			Interns	Temps			Sftwre, Data, PC	Consultant Assistance	Other Costs		
CORE PROGRAMS													
1. Long-Range Transportation Planning	\$406,631	\$0	\$406,631	\$102,837	\$0	\$0	\$509,467	\$303,643	\$5,000	\$260,000	\$6,900	\$271,900	\$1,085,010
2. Transportation Improvement Program	\$133,767	\$0	\$133,767	\$33,830	\$0	\$0	\$167,596	\$99,887	\$170,000	\$0	\$1,000	\$171,000	\$438,484
3. Planning Elements	\$1,018,981	\$31,997	\$1,050,978	\$265,792	\$0	\$0	\$1,316,771	\$784,795	\$12,500	\$552,500	\$36,350	\$601,350	\$2,702,916
4. Public Participation	\$408,524	\$0	\$408,524	\$103,316	\$0	\$0	\$511,840	\$305,057	\$2,000	\$0	\$100,000	\$202,000	\$1,018,896
5. Travel Forecasting	\$1,036,439	\$0	\$1,036,439	\$262,115	\$0	\$0	\$1,298,554	\$773,938	\$362,000	\$488,000	\$64,000	\$914,000	\$2,986,492
6. Mobile Emissions Planning	\$712,106	\$91,339	\$803,446	\$203,191	\$0	\$0	\$1,006,637	\$599,956	\$30,000	\$70,000	\$104,000	\$204,000	\$1,810,592
7. Travel Monitoring And Data Programs	\$647,068	\$0	\$647,068	\$163,643	\$0	\$0	\$810,711	\$483,184	\$153,740	\$176,760	\$34,000	\$364,500	\$1,658,395
8. Planning Scenarios And Socio Economic Forecasting	\$212,159	\$243,147	\$455,306	\$115,147	\$0	\$0	\$570,453	\$339,990	\$290,000	\$215,000	\$55,500	\$560,500	\$1,470,943
9. Mobility And Enhancement Programs	\$108,207	\$44,580	\$152,787	\$38,640	\$35,360	\$0	\$226,787	\$135,165	\$1,000	\$260,000	\$1,500	\$262,500	\$624,452
10. TPB Support and Management	\$296,775	\$0	\$296,775	\$75,054	\$0	\$0	\$371,829	\$221,611	\$3,565	\$44,563	\$216,800	\$264,928	\$858,370
UPWP Core Program Total	\$4,980,656	\$411,064	\$5,391,720	\$1,363,566	\$35,360	\$0	\$6,790,646	\$4,047,226	\$1,322,565	\$3,550,063	\$645,050	\$3,816,678	\$14,654,551
TECHNICAL ASSISTANCE													
A. District of Columbia	\$35,707	\$0	\$35,707	\$9,030	\$0	\$0	\$44,737	\$26,663	\$0	\$0	\$0	\$0	\$71,400
B. Maryland	\$51,782	\$0	\$51,782	\$13,096	\$0	\$0	\$64,878	\$38,667	\$0	\$175,000	\$51,455	\$226,455	\$330,000
C. Virginia	\$34,789	\$0	\$34,789	\$8,798	\$0	\$0	\$43,588	\$25,978	\$0	\$150,000	\$165,434	\$315,434	\$385,000
D. WMATA	\$7,311	\$0	\$7,311	\$1,849	\$0	\$0	\$9,160	\$5,459	\$0	\$38,000	\$129,606	\$167,606	\$182,226
Technical Assistance Program Total	\$171,449	\$0	\$171,449	\$43,359	\$0	\$0	\$214,809	\$128,026	\$0	\$502,262	\$1,209,907	\$709,496	\$968,626
Total Basic Program	\$5,152,105	\$411,064	\$5,563,169	\$1,406,925	\$35,360	\$0	\$7,005,455	\$4,175,252	\$1,322,565	\$4,052,325	\$1,854,957	\$4,526,174	\$15,623,177
CONTINUOUS AIRPORT SYSTEM PLANNING	\$172,853	\$0	\$172,853	\$43,715	\$0	\$0	\$216,568	\$129,074	\$0	\$129,358	\$0	\$129,358	\$475,000
GRAND TOTAL	\$5,324,958	\$411,064	\$5,736,022	\$1,450,640	\$35,360	\$0	\$7,222,022	\$4,304,326	\$1,322,565	\$4,181,683	\$1,854,957	\$4,655,532	\$16,098,177

UNIFIED PLANNING WORK PROGRAM (UPWP)

Board Actions

Lyn Erickson
Plan Development and Coordination Program Director

Transportation Planning Board
March 17, 2021



TPB actions March 17, 2021

- **Adopt Resolution R13-2021**
Action to amend the 2021 UPWP to remove funding to be “carried over” to FY 2022
- **Adopt Resolution R14-2021**
Action to approve “carryover” funding from FY 2021 to FY 2022
- **Adopt Resolution R15-2021**
Action to approve FY 2022 UPWP



Carry Over and FY 2021 Amendment

- The total FY 2022 revenue comes from 3 “buckets” of funding through the state DOTs:
 - “New” fiscal year funding (Federal FY 2021)
 - “Old” funding from last year’s UPWP (FY 2020) – obligated to the MPO but not spent (called “unexpended”)
 - “Carryover” funding from current year UPWP (FY 2021) that we anticipate not being able to spend by June 30, 2021
- Carry over \$2,787,377 from Tasks 3, 5, 6, 7, 8, 11
- Total FY 2022 UPWP \$18,035,794



Next steps after TPB action

- Submit FY 2022 UPWP to U.S. Department of Transportation (U.S. DOT)
- U.S. DOT takes 60 days to approve
- Receive funding authorization from DDOT, MDOT, VDOT, and VDRPT
- Start work on July 1!



TPB action

Staff recommends approval:

- **Resolution R13-2021** to amend FY 2021 UPWP to remove funding to be “carried over” to FY 2022
- **Resolution R14-2021** to approve “carryover” funding from FY 2021 to FY 2022
- **Resolution R15-2021** to approve the FY 2022 UPWP



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Metropolitan Washington Council of Governments

777 North Capitol Street NE, Suite 300

Washington, DC 20002



National Capital Region
Transportation Planning Board

ITEM 8 – Action

March 17, 2021

The FY 2022 Unified Planning Work Program

Action: Adopt Resolution R15-2021 to approve the FY 2022 UPWP.

Background: At the February 17 meeting, the board was briefed on the draft FY 2022 UPWP. The board will be briefed on the final draft of the FY 2022 UPWP and will be asked to approve it.

TPB R15-2021
March 17, 2021

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

**RESOLUTION TO APPROVE
THE FY 2022 UNIFIED PLANNING WORK PROGRAM (UPWP)**

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 Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the Statewide and Metropolitan Transportation Planning rule as published in the May 27, 2016 Federal Register by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) require a Unified Planning Work Program (UPWP) for Transportation Planning; and

WHEREAS, the Unified Planning Work Program is required as a basis and condition for all funding assistance for transportation planning to state, local and regional agencies by the FTA and FHWA; and

WHEREAS, the FY 2021 Unified Planning Work Program for Transportation Planning for the Washington Metropolitan Region was approved by the Transportation Planning Board (TPB) on March 18, 2020; and

WHEREAS, on February 11, 2021, the TPB released the draft FY 2021 UPWP for comment; and

WHEREAS, the TPB had the opportunity to review the outline and budget on January 21, 2021 and the draft document on February 17, 2021; and

WHEREAS, the TPB Technical Committee reviewed the outline and budget on January 8, 2021 and the draft document on February 5, 2021, and recommended approval by the TPB of the final draft FY 2022 UPWP at its meeting on March 5, 2021; and

WHEREAS, on March 17, 2021, the TPB adopted resolution R13-2021 which identifies certain work activities and budgets for carryover funding from FY 2021 to FY 2022, and these work activities and budgets are incorporated into the final version of the FY 2022 UPWP;

NOW, THEREFORE, BE IT RESOLVED THAT the National Capital Region Transportation Planning Board approves the FY 2022 Unified Planning Work Program for Transportation Planning for the Metropolitan Washington Region.

UNIFIED PLANNING WORK PROGRAM

DRAFT - FY 2022

Unified Planning Work Program (UPWP) for Transportation Planning for the Washington Metropolitan Region for FY 2022

March 2021



National Capital Region
Transportation Planning Board

UNIFIED PLANNING WORK PROGRAM (UPWP): FY 2022

DRAFT

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.

ABOUT THE TPB

The National Capital Region Transportation Planning Board (TPB) is the federally designated metropolitan planning organization (MPO) for metropolitan Washington. It is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area. Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia and the District of Columbia, 23 local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is staffed by the Department of Transportation Planning at the Metropolitan Washington Council of Governments (COG).

ACCOMMODATIONS POLICY

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I. INTRODUCTION

Purpose

The National Capital Region Transportation Planning Board (TPB) is responsible for the federally required metropolitan transportation 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's responsibilities.

The FY 2022 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, 2021 through June 30, 2022. The UPWP provides a mechanism to coordinate transportation planning activities conducted by the TPB. It 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). The Metropolitan Washington Council of Governments (COG) serves as the administrative agent for the TPB. The TPB is staffed by COG's Department of Transportation Planning. COG provides the administrative functions necessary to meet federal fiduciary and other regulatory requirements to receive FHWA and FTA funds.

This work program describes all transportation planning activities utilizing federal funding, including FHWA metropolitan planning funds (PL Funds) and FTA Section 5303 metropolitan planning funds. The Federal Aviation Administration Continuing Airport System Planning (CASP) program is a separate grant and is included for informational purposes as the TPB is responsible for implementing the grant. 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.

Planning Requirements

The planning activities outlined in this work program respond to a variety of regulatory requirements. On May 27, 2016, the FHWA and FTA jointly published a final rule on **Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning**. The planning rule updates federal surface transportation regulations with changes adopted in the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act.

MAP-21 introduced and the FAST Act continues implementing performance management requirements through which states and metropolitan planning organizations (MPOs) will "transition to a performance-driven, outcome-based program that provides for a greater level of transparency and accountability, improved project decision-making, and more efficient investment of federal transportation funds." In addition, MAP-21 and the FAST Act included modest modifications to the planning process, policy board composition, participants in the process, and contents of the metropolitan long-range transportation plan. This work program complies with the requirements regarding metropolitan planning.

On March 18, 2020, the TPB approved the 2020 Amendment Visualize 2045, the long-range transportation plan for the National Capital Region, and the FY 2021-2024 Transportation Improvement Program (TIP). On May 27, 2020, FHWA and FTA found that Visualize 2045 and the FY 2021-2024 TIP conform to the region's State Implementation Plans.

On March 18, 2020, the TPB, the District of Columbia Department of Transportation (DDOT), the Maryland Department of Transportation (MDOT), and the Virginia Department of Transportation (VDOT) self-certified that the metropolitan transportation planning process being conducted by the TPB is addressing the major issues in the metropolitan planning area and is being carried out in accordance with all applicable federal metropolitan planning requirements as described under 23 CFR 450.336. The Self-Certification Statement is signed by the three state DOTs and the TPB.

In June 2019, FHWA and FTA jointly certified that the TPB's planning process complies with metropolitan planning regulations and issued a certification report. On April 10-11, 2019, FHWA and FTA conducted a certification review of the metropolitan planning process in the Washington, DC-VA-MD Transportation Management Area (TMA) which is the responsibility of the TPB and the Fredericksburg Area Metropolitan Planning Organization (FAMPO). Improvement and enhancements identified in the report will continue to be integrated into the TPB's ongoing planning process. The next certification review will be conducted in calendar year 2023.

The TPB will continue its rich tradition of coordinating with neighboring MPOs and with those MPOs with which it shares DOTs. The TPB will not only continue to coordinate but will look to enhance all its coordination opportunities. TPB is involved in the statewide MPO planning efforts in both Maryland and Virginia. The TPB participates in the Maryland MPO Roundtable meetings, which occur 4 times a year. The TPB is an active participant and a voting member of the Virginia Association of Metropolitan Planning Organizations (VAMPO). A TPB staff member served as the VAMPO Vice Chair in FY 2021.

THE CLEAN AIR ACT

The Clean Air Act Amendments (CAAA) of 1990 require that the transportation actions and projects in the metropolitan transportation plan (LRTP) and Transportation Improvement Program (TIP) support the attainment of federal health standards for ozone. The LRTP and TIP must meet specific requirements as specified by the Environmental Protection Agency (EPA) regulations first issued on November 24, 1993, and amended several times, most recently in April 2012, regarding criteria and procedures for determining air quality conformity of transportation plans, programs, and projects funded or approved by FHWA and FTA. These conformity requirements are also addressed in this document.

TITLE VI AND ENVIRONMENTAL JUSTICE: ENSURING NON-DISCRIMINATION

It has been the long-standing policy of both COG and TPB to actively ensure nondiscrimination under Title VI of the Civil Rights Act of 1964. Title VI states that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." Executive Order 12898, issued February 11, 1994, requires that the TPB identify and address, as appropriate, disproportionately high or adverse effects of its programs, policies, and

activities on minority populations and low-income populations. While COG, as the TPB's administrative agent, has the primary responsibility for meeting Title VI requirements, ensuring non-discrimination is an underlying tenet that permeates this work program. The TPB has a two-pronged approach to ensuring nondiscrimination: 1) analysis of the long-range plan for disproportionately high and adverse impacts, and 2) engaging traditionally transportation-disadvantaged populations in the planning process. The specific tasks related to Title VI analysis is under Activity 1: Long-Range Transportation Planning. Engaging transportation disadvantaged-populations, primarily through the Access for All Advisory Committee, is found in Activity 4: Public Participation. COG's Title VI Plan and Title VI Program (including the Language Assistance Plan), the Title VI notice to the public, and complaint procedures can be found at <https://www.mwcog.org/documents/titlevi/>.

On July 13, 2018, USDOT issued a determination that the COG Title VI Program satisfies the Title VI program requirements. The next triennial Title VI program update is due to FTA on June 1, 2021. The Maryland Department of Transportation (MDOT) also conducted a site visit and approved the Title VI Plan on January 5, 2017. VDOT and DDOT also conducted Title VI reviews in 2020.

Federal Requirements for Performance-Based Planning and Programming

MAP-21 and the FAST Act call for metropolitan planning organizations, public transportation providers and states **to establish and use a performance-based approach to transportation decision making**. USDOT has established 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.

FHWA and FTA have completed the issuance of final rulemakings for the performance measures, with deadlines set for target setting and periodic updates. TPB has been and will continue to work with the states and public transportation providers to collect data, make forecasts for performance, and update performance targets in support of those measures; and the TPB subsequently has up to 180 days to update performance targets as required, coordinated with those of the states and public transportation providers. 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 is required 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. The approved plan and TIP are compliant with these requirements.

Regional Planning Goals

In 1998, the TPB adopted the TPB Vision, which outlines a set of policy goals that have since served to guide the TPB's planning work program:

- 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.

These goals are broad in scope, and together with the strategies and objectives that are also outlined in the TPB Vision, provide a framework for setting out core principles for regional transportation planning. TPB Vision's policy goals encompass the ten planning factors required under the planning process of MAP-21 and are considered when developing the metropolitan transportation plan. 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 for inclusion in the LRTP. In FY 2017, the Priorities Plan will influence policy actions, funding strategies, and potential projects considered for incorporation into Visualize 2045.

In 2017, the TPB established the Long-Range Plan Task Force, who engaged in a sketch planning effort to identify initiatives that could help the region achieve these goals. At that time, TPB Members had decided that the previous long-range plan did not show satisfactory performance compared to current conditions, nor did it bring us close enough to reach these regional planning goals. In December 2017 and January 2018, the TPB endorsed seven aspirational initiatives recommended

by the Long-Range Plan Task Force which have potential to significantly improve the performance of the region's transportation system compared to current plans and programs. These seven aspirational initiatives are included in Visualize 2045, calling upon member jurisdictions and agencies to plan for and implement these initiatives that will help bring the region closer to reaching its goals.

As approved in Resolution R1-2021, the TPB and its staff commit to being guided by the following statement on equity, and the activities as carried out in the UPWP are intended to reflect this:

The TPB and its staff commit that our work together will be anti-racist and will advance equity including every debate we have, and every decision we make as the region's MPO; and the TPB affirms that equity, as a foundational principle, will be woven throughout TPB's analyses, operations, procurement, programs, and priorities to ensure a more prosperous, accessible, livable, sustainable, and equitable future for all residents; and we recognize past actions that have been exclusionary or had disparate negative impacts on people of color and marginalized communities, including institutionalized policies and practices that continue to have inequitable impacts today, and we commit to act to correct such inequities in all our programs and policies.

Responsibilities for Transportation Planning

The National Capital Region Transportation Planning Board (TPB) is the official metropolitan planning organization (MPO) for the National Capital Region and is responsible for conducting a continuing, cooperative, comprehensive (3-C) metropolitan transportation planning process. The TPB was designated as the region's MPO by the governors of Maryland and Virginia and the mayor of the District of Columbia.

The TPB is composed of representatives from the 24 cities and counties, including the District of Columbia, that are members of the Metropolitan Washington Council of Governments (COG), the three state-level 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 importance are before the TPB, a special voting procedure may be invoked that weights the votes of local jurisdiction members according to population.

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. Figure 1 lists the jurisdictions and organizations represented on the TPB and its technical committees and subcommittees. Figure 2 shows the geographic location of each of the local member jurisdictions and urbanized areas (UZA).

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 state 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 metropolitan 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 metropolitan Washington, 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 regional transportation planning and programming have been established over several years. As required under planning regulations, the TPB, the state DOTs, and the public transportation operators have documented their transportation planning roles and responsibilities in an agreement that was executed by all parties in April 2018. To meet Performance-Based Planning and Programming provisions, the TPB and individual stakeholders have documented their roles in responsibilities in Letters of Agreement (LOAs) that respond to each required performance area: Highway Safety, Highway and Bridge Condition, and System Performance (Congestion, Freight, and CMAQ). The responsibilities for the primary planning and programming activities are indicated in Figure 3.

With regards to coordination with other MPOs near the TPB's planning area, there are two agreements in place that lay out responsibilities for planning, programming, and air quality conformity analysis. Both agreements can be found in the Appendices. In Virginia, the TPB has an agreement with the Fredericksburg Area MPO (FAMPO) from 2004 in which FAMPO assumes responsibility for meeting the transportation management area (TMA) planning and programming requirements within the Washington, DC-VA-MD Urbanized Area portion of Stafford County and producing the required planning documents for the TPB's current planning cycle. This agreement was reviewed in 2012 by both FAMPO and TPB staff, and it was mutually agreed that no changes were necessary. In the 2019 Federal Certification Review, the Federal Team strongly recommended that , within a year, this agreement be updated to reaffirm and validate the mutually agreed upon roles of each MPO and in consideration of the passage of multi-year federal surface transportation legislation to ensure that ongoing roles and responsibilities are consistent with regional, State and Federal expectations. In Maryland, the TPB formalized an agreement between the TPB, the Calvert-St. Mary's Metropolitan Planning Organization (C-SMMPO), and Calvert County, Maryland, regarding the conformity analysis of transportation plans, programs, and projects in Calvert County. Calvert County is in the Washington, DC-MD-VA 8-Hour Ozone Nonattainment area and is also a member of the new Southern Maryland MPO. The agreement between the three parties was signed in January 2016.

A list of transportation planning studies to be conducted within the National Capital Region can be found in Figure 4.

Figure 1: Jurisdictions and Organizations Represented on the TPB and its Technical Committees and Subcommittees

VIRGINIA

Arlington County	City of Manassas Park
Fairfax County	Northern Virginia Transportation Authority
Loudoun County	Northern Virginia Regional Commission
Fauquier County	Northern Virginia Transportation Commission
Prince William County	Virginia Department of Transportation
City of Alexandria	Virginia Department of Rail and Public Transportation
City of Fairfax	Virginia Department of Aviation
City of Falls Church	Virginia General Assembly
City of Manassas	Potomac and Rappahannock Transportation Commission

MARYLAND

Frederick County	City of Greenbelt
Montgomery County	City of Laurel
Prince George's County	City of Rockville
City of Bowie	City of Takoma Park
City of College Park	Maryland-National Capital Park and Planning Commission
City of Frederick	Maryland Department of Transportation
City of Gaithersburg	Maryland General Assembly

DISTRICT OF COLUMBIA

District of Columbia Council
District of Columbia Department of Transportation
District of Columbia 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

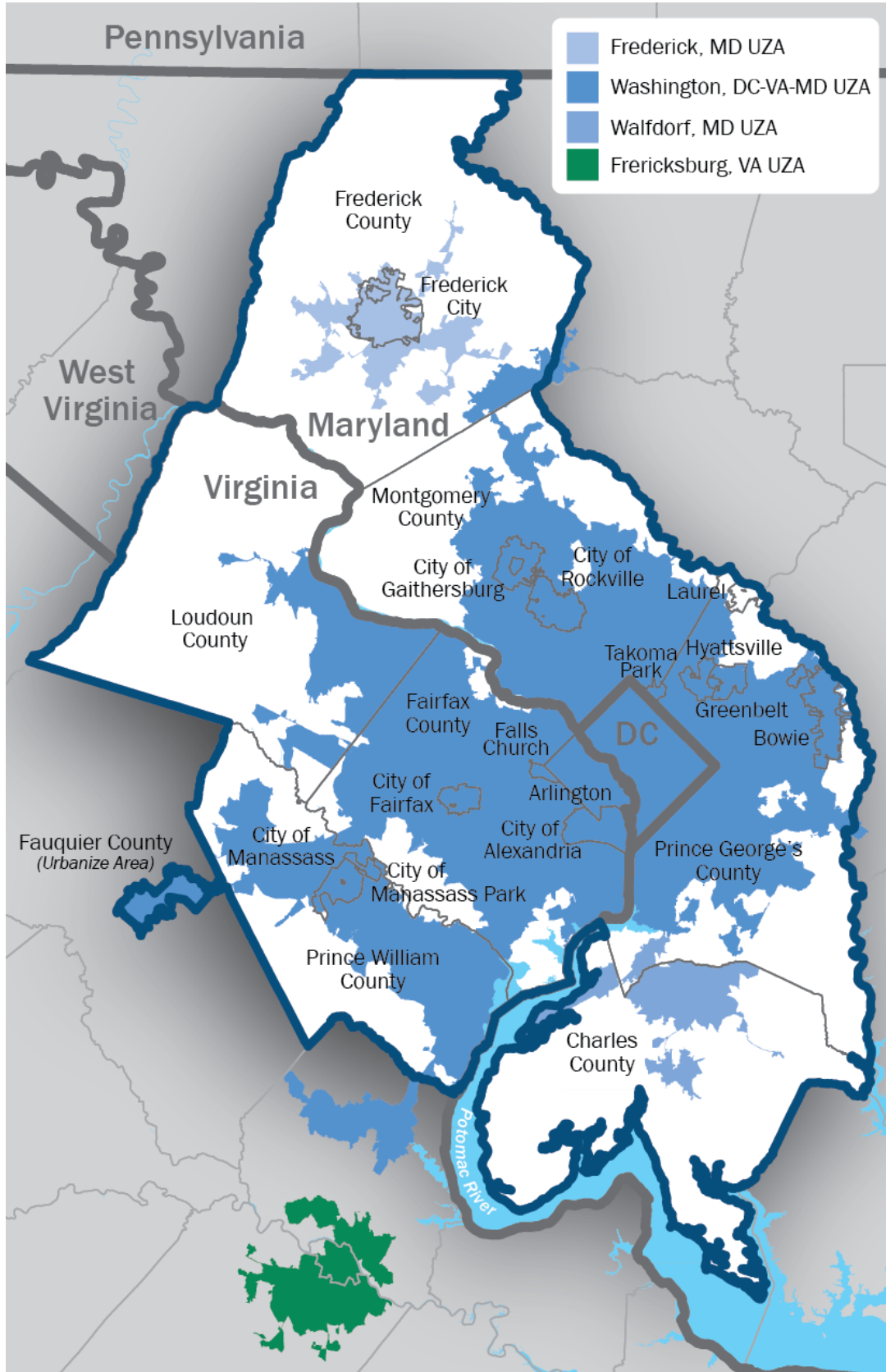


Figure 3: Transportation Planning and Programming Responsibilities

RESPONSIBILITY	AGENCIES
UPWP Development	TPB, DOTs, WMATA, Local Governments
Planning Certification	TPB, DOTs
Performance-Based Planning	TPB, DOTs, WMATA, Public Transportation Providers
Visualize 2045 Development	
Air Quality Conformity	TPB, FAMPO
Congestion Management Process	TPB, DOTs, Local Governments, FAMPO
Environmental Consultation	TPB, DOTs, Local Governments
Financial Element	TPB, DOTs, WMATA, Local Governments
Freight Element	TPB, DOTs, Local Governments
Participation Plan	TPB
Performance Based Planning and Programming	TPB, DOTs, WMATA, Public Transportation Providers
Plan Inputs/Update	DOTs, WMATA, Local Governments, NVTA, PRTC, FAMPO
Project Selection	TPB, DOTs, WMATA, Local Governments
Safety Element	TPB, DOTs, Local Governments
Transportation/Land-Use Planning	TPB, MDPC, Local Governments
TIP Development	
TIP Inputs	DOTs, WMATA, Local Governments, NVTA, PRTC
Air Quality Conformity	TPB, FAMPO
Financial Plan	TPB, DOTs, WMATA, Local Governments, NVTA, PRTC
Human Service Transportation Coordination Planning	TPB, WMATA, Human Service Agencies
Private Enterprise Participation	TPB, WMATA, Local Governments, NVTC, PRTC
Project Selection	TPB, DOTs, WMATA
Projects Federal Funding	TPB, DOTs, WMATA
Public Involvement Plan	TPB
Air Quality 2010 Attainment Plan	MWAQC, TPB, DOTs
CO2 Mobile Emissions Reduction	WMATA, State Air Quality Agencies
Climate Change Mitigation	TPB, DOTs, WMATA, Local Governments
Corridor Studies	DOTs, WMATA, TPB
Travel Demand Forecasting	TPB
Travel Monitoring	TPB, DOTs, WMATA, Local Governments

Figure 4: Transportation Planning Studies within the National Capital Region, 2022

STUDY	PRIMARY AGENCIES	SCHEDULE	PRODUCTS
REGIONAL			
Station Area Plans (multiple stations)	WMATA	Ongoing	Plans
Station Access Studies (multiple stations)	WMATA	Ongoing	Plans
Station Capacity Studies	WMATA	Ongoing	Plans
Annual Bus Line Study	WMATA	Ongoing	Study
Bus Service Evaluation Studies	WMATA	Ongoing	Studies
Shepherd Parkway Study	WMATA	2022-2023	Study
Purple Line/Bus Connections	WMATA	2022	Study
Bus Hazards Identification Study	WMATA	2022-2023	Study
Bus Station Operations Safety Plans	WMATA	Ongoing	Plan
Bus Network Redesign	WMATA	2021-2024	Plan
New Bus Operating Division Feasibility Study – Silver Spring	WMATA	2022-2023	Study
On-Demand Transit Study	WMATA	2023	Study
Blue/Orange/Silver Corridor NEPA/Project Development	WMATA	2022-2024	NEPA
SmarTOD (TOD planning online tool)	WMATA	2022	Model/Data tool
Bicycle and Pedestrian Access Blueprint	WMATA	2021	Plan
Station Mode-of-Access Targets	WMATA	2021-2022	Plan
TOD Strategic Plans	WMATA	2023	Plan
Bus-Oriented Development Study	WMATA	2022	Study

Figure 4: Transportation Planning Studies within the National Capital Region, 2022

STUDY	PRIMARY AGENCIES	SCHEDULE	PRODUCTS
Customer Segmentation Analysis	WMATA	2022	Study
Customer Experience Design Guidelines	WMATA	2023	Plan
Resilience Implementation Strategy	WMATA	2023	Plan
Electric Bus Alternatives Pilot	WMATA	2022-2023	Study, NEP scoping
MARYLAND			
MD 3 Widening/Upgrade Study (US 50 to MD 32)	MDOT SHA	On-hold	DEIS
MD 5 Transportation Study (I-95/I-495 to US 301)	MDOT SHA	On-hold	DEIS
MD 28/MD 198 Corridor Study (MD 97 to I-95)	MDOT SHA	2021	Plan/Report
US 15/US 40 Frederick Freeway Study	MDOT SHA	On-hold	CE
US 301 South Corridor Transportation Study (I-595/US 50 to Potomac River)	MDOT SHA, Charles County	On-hold	TBD
US 301 Waldorf Study (TB to South of Waldorf)	MDOT/SHA, Charles County	On-hold	TBD
TOD Planning for the Purple Line Project	UMD/MDOT MTA	2022	TBD
DISTRICT OF COLUMBIA			
DC Streetcar – Benning Rd Ext Environmental	DDOT, FTA, FHWA	2020	EA
Benning Rd Reconstruction & Streetcar	DDOT	2021	Design
Florida Avenue NE Study	DDOT	2022	Construction
East End Bike Lane Study	DDOT	2020	Design

Figure 4: Transportation Planning Studies within the National Capital Region, 2022

STUDY	PRIMARY AGENCIES	SCHEDULE	PRODUCTS
New York Avenue Streetscape and Trail	DDOT	2021	Study
20 th & 21 st Streets NW Protected Bike Lanes	DDOT	2021	Installation
Pennsylvania Avenue West of the White House	DDOT	2020	Design
K Street Transitway	DDOT	2021	Design
Long Term Safety & Geometric Improvements	DDOT	2021	Study
Decongestion Pricing Study	DCST/DDOT	2021	Study
Connecticut Avenue Multimodal	DDOT	2021	Study
moveDC	DDOT	2021	Plan
Bus Priority Plan	DDOT	2021	Plan
DC Circulator Sustainability Plan	DDOT	2020	Plan
DC Circulator South Capitol Street Facility Improvement	DDOT	2020	Design
DC Circulator Transit Development Plan Update	DDOT	2020	Plan
MLK at Good Hope Road Safety and Connectivity Study	DDOT	2021	Environmental Documentation
Alabama Avenue	DDOT	2021	Design
New York Avenue Streetscape and Reconstruction	DDOT	2021	Environmental Design
Tenleytown Multimodal	DDOT	2021	Design
Van Ness Commercial	DDOT	2021	Design
Connecticut Avenue Reversible Lane and Operations Study	DDOT	2021	Design

Figure 4: Transportation Planning Studies within the National Capital Region, 2022

STUDY	PRIMARY AGENCIES	SCHEDULE	PRODUCTS
VIRGINIA			
Route 28 Corridor Environmental Documentation	Prince William County / VDOT	Ongoing	EA/FONSI
I-495 NEXT Express Lanes Extension to GWMP in vicinity of the American Legion Bridge	VDOT	Ongoing	NEPA Study/EA/FONSI
Arlington Master Transportation Plan Bike Element Update	Arlington County		Plan
Rosslyn Street Network Study	Arlington County		Study
Courthouse Square Shared Streets Study	Arlington County		Study
Wilson Blvd. Road Diet Follow-up Study	Arlington County	On hold	Study
Public Open Spaces Master Plan	Arlington County		Plan
Arlington General Land Use Plan Amendment Study	Arlington County		Study
Four Mile Run Valley Area Study	Arlington County		Study
Lee Highway Corridor Study	Arlington County		Study
Route 28/Dulles Toll Road/Dulles Greenway Traffic Operations & Safety Study	VDOT	Ongoing	Study
I-95 Corridor Improvement Study	VDOT	Ongoing	Study
STARS Route 50 Corridor Improvement Study - From Route 120 (Glebe Road) to Route 6622 (Filmore Street)	VDOT	Ongoing	Report
STARS Route 50 Fairfax County – From Route 2338 (Jaguar Trail) to Route 613 (Wilson Blvd)	VDOT	Ongoing	Report
Shreve Road Safety and Operational Study	VDOT	2021	Report

Figure 4: Transportation Planning Studies within the National Capital Region, 2022

STUDY	PRIMARY AGENCIES	SCHEDULE	PRODUCTS
Route 1/Russell Road Interchange Study	VDOT	2021	Report
Fairfax County Parkway/Franconia – Springfield Parkway – Alternatives Analysis & Long-Term Planning Study	Fairfax County/VDOT	2020	Study
I-495/American Legion Bride Transit/TDM Study	DRPT	2020	Study
Springfield to Quantico Enhanced Public Transportation Feasibility Study	DRPT	2021	Study
STARS Route 123/I-95 Safety and Operational Study	VDOT	Ongoing	Report
STARS Route 123/Old Bridge Road Safety and Operational Study	VDOT	Ongoing	Report
STARS Route 123/U.S. 1 Safety and Operational Study	VDOT	Ongoing	Report
STARS Route 234 from Battleview Pkwy to Godwin Road Safety and Operational Study	VDOT	Ongoing	Report
STARS Route 236 from I-495 to I-395 Safety and Operational Study	VDOT	Ongoing	Report
STARS Route 50 from Route 28 to Stringfellow Road Safety and Operational Study (Phase 2 – Chantilly)	VDOT	Ongoing	Report
STARS Route 7 from Plaza Street to Fort Evans Road Operational Study	VDOT	Ongoing	Report

FY 2021 Accomplishments

In FY 2021, the TPB completed the following activities:

- *FY 2021 UPWP: TPB approval March 18, 2020; USDOT approval June 15, 2020*
- *Initiated 2022 update to Visualize 2045*
- *2020 Public Participation Plan approved in October 2020*
- *Voices of the Region Survey completed October 2020*
- *Focus Groups completed February 2021*
- *Series of infographics and animated videos about TPB and its Aspirational Initiatives*
- *Tested new performance measures for the long-range transportation plan*
- *Transit Access Focus Areas Study completed (Station Access, Resolution R10-2019)*
- *National Capital Regional Trail Network approved (Resolution R10-2019)*
- *Equity Resolution (July)*
- *Climate Goals resolution (October)*
- *TPB Safety Study completed*
- *TPB Safety Policy and New Safety Program (July 2020 resolution; project selection anticipated June 2021)*
- *Resiliency/Adaptation Study underway*
- *2022 Update to the long-range transportation plan, Visualize 2045: project kickoff and updated Technical Inputs Solicitation documentation*
- *Project InfoTrak: Completed transition to Ecointeractive online transportation project information management system*
- *2020 State of Public Transportation Report, anticipated June 2021*
- *Regional Bicycle and Pedestrian Plan update, anticipated June 2021*
- *2020 Congestion Management Technical Report, completed July 2020*
- *Performance Based Planning and Programming*
 - *Highway Safety Targets set December 2020*
 - *Transit Safety Targets set November 2020*
- *Data Processing, survey weighting, documentation, preparation of the public release files, and presentations on the 2017-2018 Regional Travel Survey, January 2021*
- *Draft Round 9.2 Cooperative Forecasts for use in Visualize 2045 update, anticipated February 2021*
- *Travel Monitoring Snapshot monthly report, initiated October 2020*
- *Interactive web map of high-capacity transit in the region, November 2020*
- *Comprehensive Regional Air System Plan Update, December 2020*
- *COVID-19 regional transportation impacts analysis, ongoing throughout FY 2021*
- *Agency consultations on use and application of Big Data in transportation planning, fall 2020*
- *Regional Connected/Autonomous Vehicles Forums, March, May, and June 2020*
- *Regional Micromobility/E-Scooter Forums, December 2019 and June 2020*
- *Network development*
 - *Developed travel demand forecasting model inputs (transportation networks, land use and other input files) for various regional planning studies*
 - *“Year 2017 Jurisdictional Weekday VMT Summaries.” Memorandum, August 29, 2019.*

- *Model development*
 - *Recalibrated the regional travel demand forecasting model to improve the model's treatment of commuter rail travel and the handling of external travel in trip distribution.*
 - *Started three-year consultant assistance project to develop the TPB's next-generation travel demand model, known as the Gen3 Model.*
- *Mobile emissions planning activities*
 - *An Air Quality Conformity (AQC) analysis of the LRTP and TIP is conducted at least every four years when there is a quadrennial update of the LRTP. Similarly, between quadrennial updates, an off-cycle AQC analysis is sometimes conducted, in cases where there is a major update to the LRTP or TIP. In FY 2021, no AQC analysis was conducted, so, the most recent AQC analysis was for the 2020 Amendment to Visualize 2045 and the FY 2021-2024 TIP.¹ In FY 2021, staff began preparing transportation networks that will be used for the 2022 update of Visualize 2045. Staff also began to analyze motor vehicle registration data, also known as vehicle identification number (VIN) data, which will be used as an input for the AQC of the 2022 LRTP.*
 - *Assessed the potential impact of updates to the I-495 NEXT project on the regional air quality conformity analysis of the TPB's current Long-Range Transportation Plan (Aug. 2020).*
 - *Developed Ozone On-Road Mobile Emissions Inventories. Prepared for the 2015 Ozone National Ambient Air Quality Standards (NAAQS) 2017 Base Year for the Washington, DC-MD-VA Non-Attainment Area.*
 - *Greenhouse Gas Emissions Inventories for the 2018 GHG Inventory Update Project.*
 - *Greenhouse Gas Emissions Inventories for the 2030 Climate Action Plan.*
 - *Began, with consultant assistance, the TPB Climate Change Mitigation Study of 2021. The goal of this study is to assess the types of transportation-related actions, and their levels of implementation, that would be needed to reduce transportation-sector greenhouse gas (GHG) emissions to meet various GHG reduction goals in the years 2030 and 2050.*
 - *Estimated the emissions savings from Car Free Day 2020.*
 - *Kept abreast of developments of the Transportation and Climate Initiative (TCI) of the Northeast and Mid-Atlantic States.*
- *Technical assistance to state DOTs and regional transit agencies as part of the UPWP Technical Assistance program.*

¹ Jane Posey, "Air Quality Conformity Analysis of the 2020 Amendment to Visualize 2045," Full Report (Washington, D.C.: National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments, March 18, 2020).

FY 2022 Regional Planning Priorities

In March 2015, USDOT issued **planning emphasis areas** for MPOs to consider in Unified Planning Work Programs. The three areas are 1) MAP-21 implementation: Transition to performance-based planning and programming; 2) Regional coordination of transportation planning beyond traditional boundaries; and 3) Ladders of Opportunity. This section provides a summary of how the work activities in this UPWP addresses these three priority areas. In addition, Table 1 on page 21 provides a crosswalk of how UPWP activities and deliverables support the TPB's policy priorities.

PERFORMANCE-BASED PLANNING AND PROGRAMMING

An overview of performance-based planning and programming was provided earlier in this Introduction. Performance-based planning and programming is an articulated priority of the TPB as demonstrated in Activity 3: Performance-Based Planning and Programming in this UPWP. Ongoing processes have been established to address performance measures and targets in coordination with the three state DOTs, WMATA, and the local government public transportation operators in accordance with the federal planning regulations and performance management requirements for MPOs.

As included in the Metropolitan Planning Agreement (3C Agreement) approved by the Transportation Planning Board on April 18, 2018, in accordance with the latest federal metropolitan planning requirements as adopted in the FAST Act, the TPB's TIP includes a description of how the investments in the TIP make progress toward achievement of the targets in the Plan.

The TIP includes funding under the Highway Safety Improvement Program for priority HSIP projects as programmed by the three states. Examples of HSIP programmed projects include impact attenuators, guardrails, upgrading traffic signal devices, work zone safety reviews, and improved signs and markings. The three states have processes for inclusion of safety-related projects as identified in their Strategic Highway Safety Plans and other state plans and documents. Safety improvements are also included within projects funded with non-HSIP funds and through other state and federal sources, such as the Transportation Alternatives Program Block Grants, including Safe Routes to School grants, and CMAQ and maintenance projects, all of which will provide benefits that contribute to improved safety performance. Thus, the funding and the program of projects in the TIP will enable the TPB to achieve the region's safety performance targets.

The TIP includes funding from multiple FTA sources for projects that support Transit Asset Management. Examples of these projects include rural and urban capital assistance programs; rolling stock acquisition, maintenance, and overhauls; bus fleet rehabilitation and replacement; track and rail yard maintenance and improvements; and maintenance of passenger facilities. Each of the three states and WMATA have adopted Transit Asset management plans which are included in their respective STIPs. Transit Asset Management category projects are also supported by non-FTA sources such as state and local funding, WMATA Insurance Proceeds, and flexible CMAQ and STP funding. The funding and the program of projects in the TIP will enable the TPB to achieve the region's transit asset management performance targets.

SUPPORTING TRANSPORTATION EQUITY IN THE REGION

TPB Resolution R1-2021 established equity as a fundamental value and integral part of all transportation planning board's work activities. The TPB and its staff resolved to commit that our work together will be anti-racist and will advance equity including every debate we have, and every decision we make as the region's MPO; and the TPB affirms that equity, as a foundational principle, will be woven throughout TPB's analyses, operations, procurement, programs, and priorities to ensure a more prosperous, accessible, livable, sustainable, and equitable future for all residents; and we recognize past actions that have been exclusionary or had disparate negative impacts on people of color and marginalized communities, including institutionalized policies and practices that continue to have inequitable impacts today, and we commit to act to correct such inequities in all our programs and policies.

The TPB has identified connectivity gaps in accessing essential services for older adults, people with disabilities, and those with low incomes in its Coordinated Human Service Transportation Plan, adopted by the TPB in December 2018. These unmet transportation needs are used to develop priorities for FTA's Enhanced Mobility of Seniors and Individuals with Disabilities grant program. COG serves as the designated recipient for this program in the Washington DC-VA-MD Urbanized Area and the TPB solicits and selects the projects, which provide key access to essential services such as health care, education, employment, and recreation.

In FY 2016, an expanded analysis of the long-range transportation plan identified potentially vulnerable populations, called Equity Emphasis Areas. The TPB's efforts to develop a list of unfunded regional priority projects includes the consideration of infrastructure needs that improve connectivity to essential services for traditionally disadvantaged populations. The TPB's Bicycle and Pedestrian plan identifies improvements and policies to encourage more walking and biking. The Access for All Advisory Committee provides input to the TPB on projects, programs, and services that are important to low-income individuals, minority communities, and persons with disabilities.

REGIONAL POLICY FRAMEWORK AND PRIORITIES

The TPB's LRTP seeks to respond to both federal requirements and its own adopted set of policy goals and priorities. To a large extent, federal and regional goals intersect. The TPB has worked continually to develop and adopt a set of consensus-based policy goals and priorities to inform local decision making on the types of projects, programs and policies it seeks for its LRTP and TIP. The Vision, adopted in 1998, is the overarching policy document that describes regional goals and objectives as well as strategies to achieve them. This vision informed the 2014 Regional Transportation Priorities Plan. The vision and goals focus on multimodal transportation solutions that give people greater choice in finding the travel mode that works best for them. It emphasizes the important role of land-use, especially strengthening the region's Activity Centers by providing high quality connections between centers and improving non-auto travel options within them. System maintenance is also paramount, recognizing that our existing roadways and transit systems must be in a state of good repair to be safe, efficient, and reliable.

PROMOTE VISUALIZE 2045 ASPIRATIONAL INITIATIVES

In December 2017 and January 2018, the TPB endorsed seven aspirational initiatives recommended by the Long-Range Plan Task Force with the potential to significantly improve the performance of the region's transportation system. These seven aspirational initiatives are included in Visualize 2045 (2018) as the aspirational element, calling upon member jurisdictions and agencies to plan for and implement these initiatives that will help bring the region closer to reaching its goals. To support implementation of these initiatives, TPB staff have met with TPB member jurisdictions and transit agencies to discuss the projects, programs, and policies that the members are advancing that align with the aspirational initiatives, and how TPB can support its members in doing so. TPB staff also worked on follow-up to TPB Resolution R10-2019 which directed staff to conduct activities related to the implementation of three of the aspirational initiatives:

- Improve walk and bike access to transit – Staff developed and refined a network analysis to identify walksheds around high-capacity transit stations. Staff have shared with various committees the online 'walksheds analysis' tool that can be used by anyone in the region. Staff is conducting outreach to technical staff at the local jurisdictions.
- Complete the National Capital Regional Trail Network – Staff implemented a work program for expanding the regional trail network to cover the entire TPB region, as a network.
- Provide more telecommuting and other options for commuting – Commuter Connections Program launched the IncenTrip app on August 28, 2020. Staff also conducted other TDM related activities.

COG staff (who are not explicitly TPB staff) worked on activities to address another of the seven initiatives— "Bring jobs and housing closer together." The Housing Initiative has been underway to identify how to work together as a region to build 100,000 more housing units over the next decade in the region's Activity Centers. Resolution R10-2019 also encouraged regional coordination activities, led by TPB partners, to promote implementation of the initiatives "Expand bus rapid transit (BRT) regionwide," and "Expand the express highway network." COG staff made recommendations to the COG board regarding three regional housing targets. In September, the COG Board voted unanimously to endorse the three housing targets.

SAFETY

TPB Resolution R3-2021, adopted in July of 2020, reaffirmed and codified the board's resolve to dramatically reduce the number of people killed and injured on the Region's roadways. Based on the findings of a regional roadway safety study commissioned by the TPB in 2019, the resolution urges TPB member jurisdictions and agencies to reaffirm road user safety as a top priority and to prioritize the implementation of projects, programs, and policies to reduce the number of fatal and serious injury crashes on the Region's roadways. The resolution also established and funded an ongoing Regional Safety Program at a level of \$250,000 per fiscal year to provide short-term consultant services to member jurisdictions or agencies to assist with planning or preliminary engineering projects that address roadway safety issues.

CLIMATE RESILIENCY

In 2010, the TPB joined MWCOG's action to set greenhouse gas (GHG) reduction targets to mitigate the impact of climate change. Over the last decade the TPB completed two studies to evaluate strategies to address these targets, including the What Would It Take analysis and the Multisector Working Group study that identified the various types of projects, programs and policies that have the greatest potential to reduce GHG in the transportation sector. In October 2020, the TPB endorsed new interim GHG reduction goals and new climate resiliency goals. These include a 2030 interim regional greenhouse gas reduction goal of 50% below 2005 levels by 2030; the region's climate resilience goals of becoming a Climate Ready Region and making significant progress to be a Climate Resilient Region by 2030; and the need to incorporate equity principles and expand education on climate change into CEEPC, COG and TPB members' actions to reach the climate mitigation and resiliency goals. This will require a reduction in vehicle miles traveled and associated emissions in Visualize 2045.

REGIONAL COORDINATION BEYOND TRADITIONAL BOUNDARIES

As a multi-state MPO, the TPB fully embraces the need for regional cooperation and coordination across state and agency boundaries. Each work activity in this UPWP reflects regional coordination between jurisdictions and agencies in Virginia, Maryland, and the District of Columbia, notably in developing performance measures and targets, the unfunded regional priority projects, MATOC, congestion management, safety, public transportation, and freight. The TPB coordinates with MPOs near its planning area, such as FAMPO, the Calvert-St. Mary's Metropolitan Planning Organization (C-SMMPO), and the Baltimore Regional Transportation Board (BRTB). With regards to air quality conformity analysis, transportation projects and land use forecasts from these other MPOs are reflected in the technical analysis. Formal agreements on the coordination and consultation processes for transportation planning exist with FAMPO and C-SMMPO, as described above under "Responsibilities for Transportation Planning."

The TPB is involved in the statewide MPO planning efforts in both Maryland and Virginia. The TPB participates in the Maryland MPO Roundtable meetings, which occur 4 times a year. The Commonwealth of Virginia General Assembly established the Virginia Association of Metropolitan Planning Organizations (VAMPO) effective July 1, 2009, through House Joint Resolution No. 756 to provide education, information and opportunities for cooperation among Virginia's Metropolitan Planning Organizations and among state, federal and community officials. The TPB is an active participant and a voting member of VAMPO. VAMPO's mission is "Moving Virginia forward by enhancing, promoting, and supporting the regional transportation planning process of the Commonwealth's MPOs." A TPB staff member currently serves as the Vice Chairman of VAMPO.

The TPB's Transportation/Land-Use Connections (TLC) program continues to improve the coordination between land use and transportation planning in the region. The Public Transportation Subcommittee plays a key role in fostering cooperation and coordination among the many public transit providers in the region. COG has been designated by the governors of Maryland and Virginia and the mayor of the District of Columbia to coordinate with the state DOTs in the development of an agency to oversee Metrorail safety, as required under MAP-21.

Table 1: Selected FY 2022 UPWP Work Activities and Planning Policy Focus Areas²

No.	UPWP Work Activities	Accessibility / Connectivity	Environment (Air Quality / Climate Change)	Comprehensive Multimodal System	Emerging Mobility and Technology	Resiliency / Sustainability	Equity	Land Use	Mobility/ Reliability	Operational Efficiency	Safety
1	Transportation Land Use Connections Program (Task 9.4)	✓	✓	✓			✓	✓	✓		
2	Transportation Alternatives Set Aside Program (Task 9.3)	✓	✓	✓			✓	✓	✓		
3	Enhanced Mobility Grant Program (Task 9.1)	✓		✓			✓		✓		
4	Regional Roadway Safety Program (Task 9.2)				✓		✓		✓	✓	✓
5	Transit Within Reach Program (Task 11)	✓	✓	✓			✓	✓	✓		
6	Regional Air Quality Conformity Analysis (Task 6.1)		✓			✓	✓				
7	Visualize 2045 Plan Performance Analysis (Task 1.1)	✓	✓	✓		✓	✓	✓	✓		
8	Visualize 2045 Voices of the Region Story Map (Task 4)	✓	✓	✓	✓		✓		✓		✓
9	Visualize 2045 plan production, website, final outreach/comments (Task 1 & 4)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	Equity Whitepaper (Task 1 & 4)						✓				
11	Resiliency - White Paper & Regional Inventory (Task 1 & 3)		✓			✓					
12	State of Public Transportation Report (Task 3.7)	✓		✓	✓	✓	✓		✓	✓	✓
13	National Capital Trail Network Update (Task 3.6)	✓				✓	✓	✓	✓		✓

² Excludes regular committee meetings that provide input and oversight of all the activities of the TPB.

No.	UPWP Work Activities	Accessibility / Connectivity	Environment (Air Quality / Climate Change)	Comprehensive Multimodal System	Emerging Mobility and Technology	Resiliency / Sustainability	Equity	Land Use	Mobility/ Reliability	Operational Efficiency	Safety
14	Climate Change Mitigation Study of 2021 (Task 6.2)		✓	✓		✓	✓	✓	✓	✓	
15	Travel Demand Forecasting: Adopted Model & Developmental Models (Task 5.2)	✓	✓	✓		✓	✓	✓	✓		
16	Mobile Emissions Inventory and Planning (Task 6.2)		✓			✓	✓			✓	
17	Performance-Based Planning and Programming Analysis and Target Setting (Task 3.1) and Congestion Management Process (Task 3.2)		✓	✓	✓	✓			✓	✓	✓
18	Connected and Automated Vehicles Forums and Principles Development (Task 3.3)		✓	✓	✓	✓	✓		✓	✓	✓
19	Regional Intelligent Transportation Systems (ITS) Architecture (Task 3.3)			✓	✓				✓	✓	✓
20	Bicycle and Pedestrian Planning Professional Development/Best Practices Forums (Task 3.6)	✓		✓	✓	✓	✓				✓
21	Freight Plan Update (Task 3.8)	✓		✓	✓	✓	✓	✓	✓	✓	✓
22	Transit Private Providers Forum (Task 3.7)			✓					✓		
23	Travel Surveys and Travel Trends Analysis, Studies and Research (Tasks 7.1 and 7.2)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
24	Coordination of land use and regional transportation planning, including Cooperative Forecasts (Task 8.1)	✓	✓	✓	✓	✓	✓	✓	✓		
25	Technical Assistance Program (Task 11)	✓		✓	✓		✓	✓	✓		✓

Federal Metropolitan Planning Provisions

The **Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Rule** was issued on May 27, 2016. The planning rule updates federal surface transportation regulations with changes adopted in the MAP-21 and the FAST Act. For MPOs, such as the TPB, the most significant change is the performance-based planning and programming requirements which must be adopted by May 27, 2018 and included in all subsequent TIPs and long-range plans. This UPWP will provide for an ongoing review of the metropolitan planning provisions and USDOT guidance with a consideration of what additional work activities may be called for. The TPB must respond to any guidance on how MPOs should implement the provisions. As new USDOT planning regulations or guidance are released, the UPWP will integrate such new work activities. The TPB will work with the state DOTs, public transit providers and other stakeholders to identify any specific changes or amendments that will be necessary to address them.

II. PROPOSED FY 2022 TPB WORK PROGRAM AND BUDGET

Program Structure

The TPB is responsible for the federally required metropolitan transportation 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. The tasks to be completed under each of the 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 identifies the major work products to be developed, the linkages between them, and the TPB entity responsible for oversight of the products. The next several pages provide revenue and expenditure tables, and a series of figures which illustrate the relationship between and among the TPB work activities. The order of the tasks is deliberate with the federal regulatory requirements identified most prominently followed by the subsequent tasks providing support for elements of those requirements.

1. LONG-RANGE TRANSPORTATION PLANNING

The first major activity, **Long-Range Transportation Planning**, includes activities related to the update of Visualize 2045, activities to maintain federal compliance, and activities to implement policy board directed activities. Visualize 2045 identifies all regionally significant transportation investments planned through 2045 and provides detailed analysis to help decision makers and the public “visualize” the region’s future under current plans. Visualize 2045 was approved in October 2018 and amended in March 2020, and strategic implementation including a focus on the aspirational element will continue. Additional analysis to support and enhance plan components and other federal requirements will be undertaken as necessary. The 2022 quadrennial update of the plan will be completed in FY 2022.

2. TRANSPORTATION IMPROVEMENT PROGRAM

The second major activity, the **Transportation Improvement Program (TIP)**, provides support to update, amend, modify, and enhance the TPB’s TIP. In FY 2019, TPB procured a consultant to develop a new iTIP Database, called Project InfoTrak, which provides a complete upgrade and overhaul to the project database information system. In FY 2022, work continues to refine and transition to a new long-range plan, TIP project, and conformity record database, including a GIS database.

3. PLANNING ELEMENTS

The third major element, **Planning Elements**, considers the following aspects of metropolitan transportation planning, and their support of regional long-range transportation plan and program development, in conjunction with federal FAST and MAP-21 requirements:

- Performance-Based Planning and Programming;
- Regional congestion management process (CMP);
- Systems performance, operations, and technology (SPOT) planning;
- Transportation emergency preparedness planning;
- Transportation safety planning;
- Bicycle and pedestrian planning;
- Regional public transportation planning;
- Freight planning; and
- Planning support for the Metropolitan Area Transportation Operations Coordination (MATOC) Program.

A key objective is to provide opportunities for regional consideration, coordination, and collaborative enhancement of planning for each of these elements. Also included for all elements will be outreach to members, stakeholders, and subject matter experts, to gather information to advise future planning and committee activities.

4. PUBLIC PARTICIPATION

The fourth major activity, **Public Participation**, includes all public involvement activities; outreach activities to low-income, older adults, minorities, and persons with disabilities; and communication activities to support of the development of the metropolitan transportation plan, TIP, and all other TPB activities.

5. TRAVEL FORECASTING

The fifth major activity, **Travel Forecasting**, is designed to develop, maintain, support, and improve the TPB's travel demand forecasting methods. Methods can range from tactical models, such as the TPB's regional travel demand forecasting model, to strategic models, such as sketch and scenario planning models. This work activity includes preparing the inputs, such as transportation networks, for the regional travel demand model and also developmental work, both to improve the production-use travel model and also to develop the next-generation travel model, known as the Generation-3, or Gen3, Model, which is to be developed with consultant assistance during a three-year period, from FY 20 through FY 23.

6. MOBILE EMISSIONS PLANNING

The sixth major activity, **Mobile Emissions Planning**, consists of maintaining and applying the adopted, production-use TPB travel demand model and EPA Motor Vehicle Emissions Simulator (MOVES) model to forecast air pollution emitted by on-road motor vehicles. This activity includes the

technical air quality conformity analysis of the long-range transportation plan and TIP as well as related technical work supporting state environmental planning activities.

7. TRAVEL MONITORING AND DATA PROGRAMS

The seventh major activity, **Travel Monitoring and Data Programs**, provides empirical travel research, data, visualizations, and documentation on regional travel trends and behavior. This includes information from traffic counts, high occupancy vehicle (HOV) monitoring, regional travel surveys and other travel trend analysis activities. This activity includes GIS technical support for all planning activities across the department and maintaining the Regional Transportation Data Clearinghouse.

8. REGIONAL LAND USE AND TRANSPORTATION PLANNING COORDINATION

The eighth major activity, **Regional Land Use and Transportation Planning Coordination**, includes coordination of local, state, and federal planning activities, develops population, household, and employment forecasts that are used as input into the TPB travel demand forecasting model, and facilitates the integration of land use and transportation planning in the region.

9. MOBILITY AND ENHANCEMENT PROGRAMS

The TPB solicits and selects projects for three programs. The ninth major activity, **Mobility and Enhancement Programs**, captures the efforts involved in soliciting and selecting projects for the FTA “Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities” program, the Regional Roadway Safety Program, the FHWA Transportation Alternatives Set-Aside Program (TAP), and the TPB’s Transportation Land-Use Connections Program (TLC).

10. TPB MANAGEMENT AND SUPPORT

The tenth major activity, **TPB Management and Support**, includes the staff and administrative management to provide support for the meetings of TPB, its committees and special work groups, and developing and administering the annual UPWP.

11. TECHNICAL ASSISTANCE PROGRAM

The eleventh major activity, **Technical Assistance Program**, 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.

CONTINUOUS AIRPORT SYSTEM PLANNING (CASP)

Finally, **Continuous Airport System Planning (CASP)** utilizes the methods and data work activities for airport and airport-serving facilities in the region.

Work Activity Budgets

Funding for the TPB Basic Work Program is similar to the FY 2021 level. The proposed budget levels for the 11 activities by funding source, which include FTA and FHWA funds together with state and local match, are shown in Table 1 on the next page. The proposed expenditures for each of these 11 tasks are identified in Table 2. A detailed breakdown of staffing, consultant costs, and other budgetary requirements is provided in Table 3. The TPB committee structure is shown in Figure 6. The TPB committee or sub-committee responsible for the activities listed in Figure 5 are shown under the descriptions for each task in Section III. Figure 7 illustrates the relationship between and among the TPB work activities.

Table 2: Revenue - FY 2022 TPB Proposed Funding by Federal, State, and Local Sources
(July 1, 2021 to June 30, 2022)

	FTA SECT 5303	FHWA PL FUNDS	OTHER CASP & SPR	
	80% FED & 20% STATE/ LOCAL	80% FED & 20% STATE/ LOCAL	90% FAA & LOCAL 10% SPR 80% FHWA & LOCAL 20%	TOTALS
DDOT ALLOCATIONS				
NEW FY 2022	\$615,909	\$2,378,018		\$2,993,926
PRIOR UNEXPENDED	\$181,878	\$334,459		\$516,337
CARRYOVER FY 2021	\$113,353	\$486,107		\$599,460
SUBTOTAL - DC	\$911,139	\$3,198,584		\$4,109,723
MDOT ALLOCATIONS				
NEW FY 2022	\$1,400,744	\$3,992,606		\$5,393,350
PRIOR UNEXPENDED	\$158,217	\$470,898		\$629,115
CARRYOVER FY 2021	\$321,218	\$860,863		\$1,182,102
SUBTOTAL - MD	\$1,880,178	\$5,324,367		\$7,204,545
VDRPT & VDOT ALLOCATIONS				
NEW FY 2022	\$1,160,155	\$3,530,706		\$4,690,861
PRIOR UNEXPENDED	\$122,734	\$389,394		\$512,128
CARRYOVER FY 2021	\$267,578	\$738,258		\$1,005,837
SUBTOTAL - VA	\$1,550,467	\$4,658,358		\$6,208,826
TOTAL FHWA/FTA FUNDING ALLOCATIONS				
NEW FY 2022	\$3,176,808	\$9,901,330		\$13,078,138
PRIOR UNEXPENDED	\$462,829	\$1,194,751		\$1,657,580
CARRYOVER FY 2021	\$702,149	\$2,085,228		\$2,787,377
SUB-TOTAL - FHWA-FTA	\$4,341,785	\$13,181,309		\$17,523,094
TOTAL BASIC UPWP	\$4,341,785	\$13,181,309		\$17,523,094
FAA - CASP PROGRAM			\$252,700	\$252,700
State Planning & Research (SPR)			\$260,000	\$260,000
GRAND TOTAL UPWP	\$4,341,785	\$13,181,309	\$512,700	\$18,035,794

1. "New FY2022" funding amounts from DDOT and VDOT are at FY 2021 levels and will be updated.
2. "Prior Unexpended" funding amounts are yet to be confirmed by funding agencies and may change.
3. "Carryover FY2021 funds" are funds budgeted for Core and Technical Assistance work program activities in FY 2021 UPWP, that are not anticipated to be spent in FY 2021. As such these funds will be carried over from FY 2021 to be used to perform Core program and Tech. Assistance activities in FY 2022.

Table 3: FY 2022 UPWP Expenditures

WORK ACTIVITY	FY 2022 TOTAL COST ESTIMATE ¹
CORE PROGRAMS	
1. Long-Range Transportation Planning	\$1,095,434
2. Transportation Improvement Program	\$466,962
3. Planning Elements	\$2,768,270
4. Public Participation	\$994,711
5. Travel Forecasting	\$3,298,337
6. Mobile Emissions Planning	\$2,039,172
7. Travel Monitoring and Data Programs	\$2,141,001
8. Regional Land Use and Transportation Planning Coordination	\$1,190,179
9. Mobility and Enhancement Programs	\$988,671
10. TPB Management and Support	\$963,379
Sub-total: Core Program	\$15,946,115
11. TECHNICAL ASSISTANCE	
A. District of Columbia	\$274,756
B. Maryland	\$483,305
C. Virginia ²	\$436,679
D. Public Transportation ³	\$382,238
Sub-total: Technical Assistance Program	\$1,576,979
Total - Basic UPWP	
	\$17,523,094
AIR SYSTEMS PLANNING	
1. Continuous Airport System Planning (CASP) ⁴	\$252,700
2. State Planning & Research (SPR) ⁵	\$260,000
Sub-total: CASP and SPR	\$512,700
GRAND TOTAL UPWP	
	\$18,035,794
<ol style="list-style-type: none"> 1. Above estimates are based on the work activities outlined in the FY 2022 UPWP Document. 2. Includes \$14,000 in carry over funding from FY 2021 for projects that were obligated in FY 2021 and are being executed in FY 2022 3. Includes \$191,630 in carry over funding from FY 2021 for projects that were obligated in FY 2021 and are being executed in FY 2022 4. CASP work activities are based on anticipated FAA grants to conduct airport ground access planning as part of CASP program. 5. SPR program activities are funded through a separate grant from the District of Columbia's Department of Transportation to assist in DDOT's HPMS program. 	

Table 4: TPB FY 2022 Work Program by Funding Sources

UPWP - Work Activity	COG Labor Cost		Total COG Staff	COG Labor Fringe Cost	Supplemental Labor		Total Labor & Fringe Cost	Total Indirect Cost	Direct Costs (Implementation)			Total Prgrm. (Implmntn.) Direct Cost	Grand Total Cost
	DTP Staff	Other Staff			Interns	Temps			Sftwre, Data, PC	Studies Programs	Other Costs		
CORE PROGRAMS													
1. Long-Range Transportation Planning	\$444,009	\$0	\$444,009	\$108,338	\$0	\$0	\$552,347	\$331,187	\$5,000	\$200,000	\$6,900	\$211,900	\$1,095,434
2. Transportation Improvement Program	\$133,656	\$0	\$133,656	\$32,612	\$0	\$0	\$166,268	\$99,694	\$200,000	\$0	\$1,000	\$201,000	\$466,962
3. Planning Elements	\$976,851	\$32,957	\$1,009,808	\$246,393	\$0	\$0	\$1,256,202	\$753,218	\$12,500	\$590,000	\$156,350	\$758,850	\$2,768,270
4. Public Participation	\$436,057	\$0	\$436,057	\$106,398	\$0	\$0	\$542,455	\$325,256	\$2,000	\$25,000	\$100,000	\$127,000	\$994,711
5. Travel Forecasting	\$1,056,977	\$0	\$1,056,977	\$257,902	\$0	\$0	\$1,314,879	\$788,402	\$421,000	\$703,056	\$71,000	\$1,195,056	\$3,298,337
6. Mobile Emissions Planning	\$820,122	\$94,080	\$914,202	\$223,065	\$0	\$0	\$1,137,267	\$681,905	\$41,000	\$110,000	\$69,000	\$220,000	\$2,039,172
7. Travel Monitoring And Data Programs	\$745,263	\$0	\$745,263	\$181,844	\$0	\$0	\$927,107	\$555,894	\$125,000	\$275,000	\$258,000	\$658,000	\$2,141,001
8. Regional Land Use and Transportation Planning Coordination	\$226,808	\$250,441	\$477,249	\$116,449	\$0	\$0	\$593,698	\$355,981	\$75,000	\$110,000	\$55,500	\$240,500	\$1,190,179
9. Mobility Enhancement Programs	\$117,995	\$45,918	\$163,913	\$39,995	\$0	\$0	\$203,908	\$122,263	\$1,000	\$660,000	\$1,500	\$662,500	\$988,671
10. TPB Support and Management	\$312,315	\$0	\$312,315	\$76,205	\$0	\$0	\$388,520	\$232,957	\$1,500	\$124,101	\$216,300	\$341,901	\$963,379
UPWP Core Program Total	\$5,270,053	\$423,396	\$5,693,448	\$1,389,201	\$0	\$0	\$7,082,650	\$4,246,757	\$884,000	\$2,797,157	\$935,550	\$4,616,707	\$15,946,115
TECHNICAL ASSISTANCE PROGRAM													
A. District of Columbia	\$5,867	\$0	\$5,867	\$1,431	\$0	\$0	\$7,298	\$4,376	\$0	\$30,000	\$233,082	\$263,082	\$274,756
B. Maryland	\$5,867	\$0	\$5,867	\$1,431	\$0	\$0	\$7,298	\$4,376	\$0	\$195,000	\$276,631	\$471,631	\$483,305
C. Virginia	\$5,867	\$0	\$5,867	\$1,431	\$0	\$0	\$7,298	\$4,376	\$0	\$304,000	\$121,006	\$425,006	\$436,679
D. Public Transportation	\$5,867	\$0	\$5,867	\$1,431	\$0	\$0	\$7,298	\$4,376	\$0	\$326,000	\$44,565	\$370,565	\$382,238
Technical Assistance Program Total	\$23,466	\$0	\$23,466	\$5,726	\$0	\$0	\$29,192	\$17,503	\$0	\$855,000	\$675,285	\$1,530,285	\$1,576,979
Total Basic Program	\$5,293,519	\$423,396	\$5,716,914	\$1,394,927	\$0	\$0	\$7,111,841	\$4,264,260	\$884,000	\$3,652,157	\$1,610,835	\$6,146,992	\$17,523,094
OTHER PROGRAMS													
Continuous Air Systems Planning (CASP)	\$124,099	\$0	\$124,099	\$30,280	\$0	\$0	\$154,380	\$92,566	\$0	\$0	\$5,754	\$5,754	\$252,700
State Planning & Research Program (DC)	\$76,513	\$0	\$76,513	\$18,669	\$0	\$0	\$95,182	\$57,071	\$0	\$107,746	\$0	\$107,746	\$260,000
GRAND TOTAL	\$5,417,618	\$423,396	\$5,841,014	\$1,425,207	\$0	\$0	\$7,266,221	\$4,356,826	\$884,000	\$3,652,157	\$1,616,589	\$6,152,746	\$18,035,794

Figure 5: Major Components of UPWP Work Activities

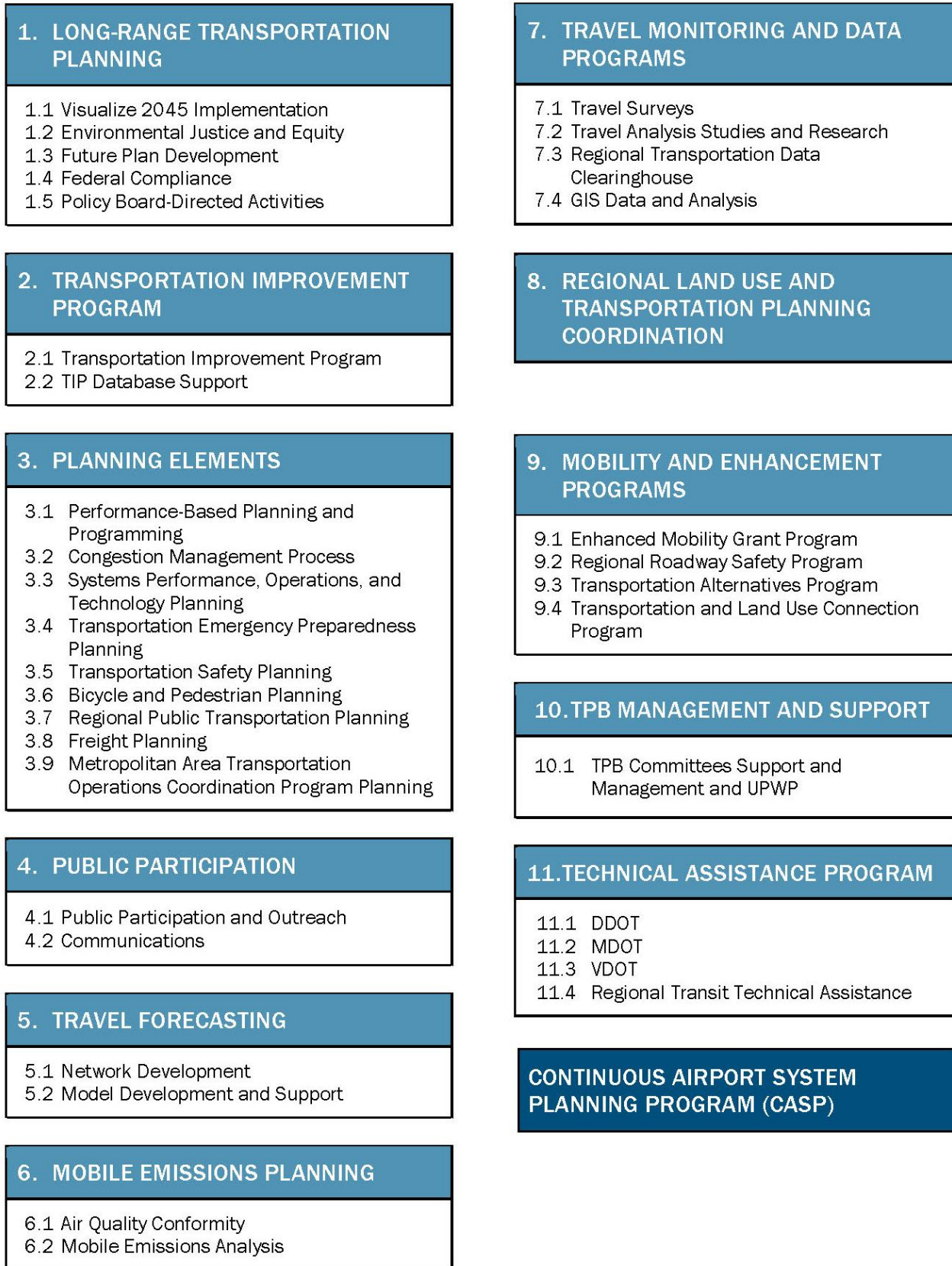


Figure 6: TPB Committee Structure

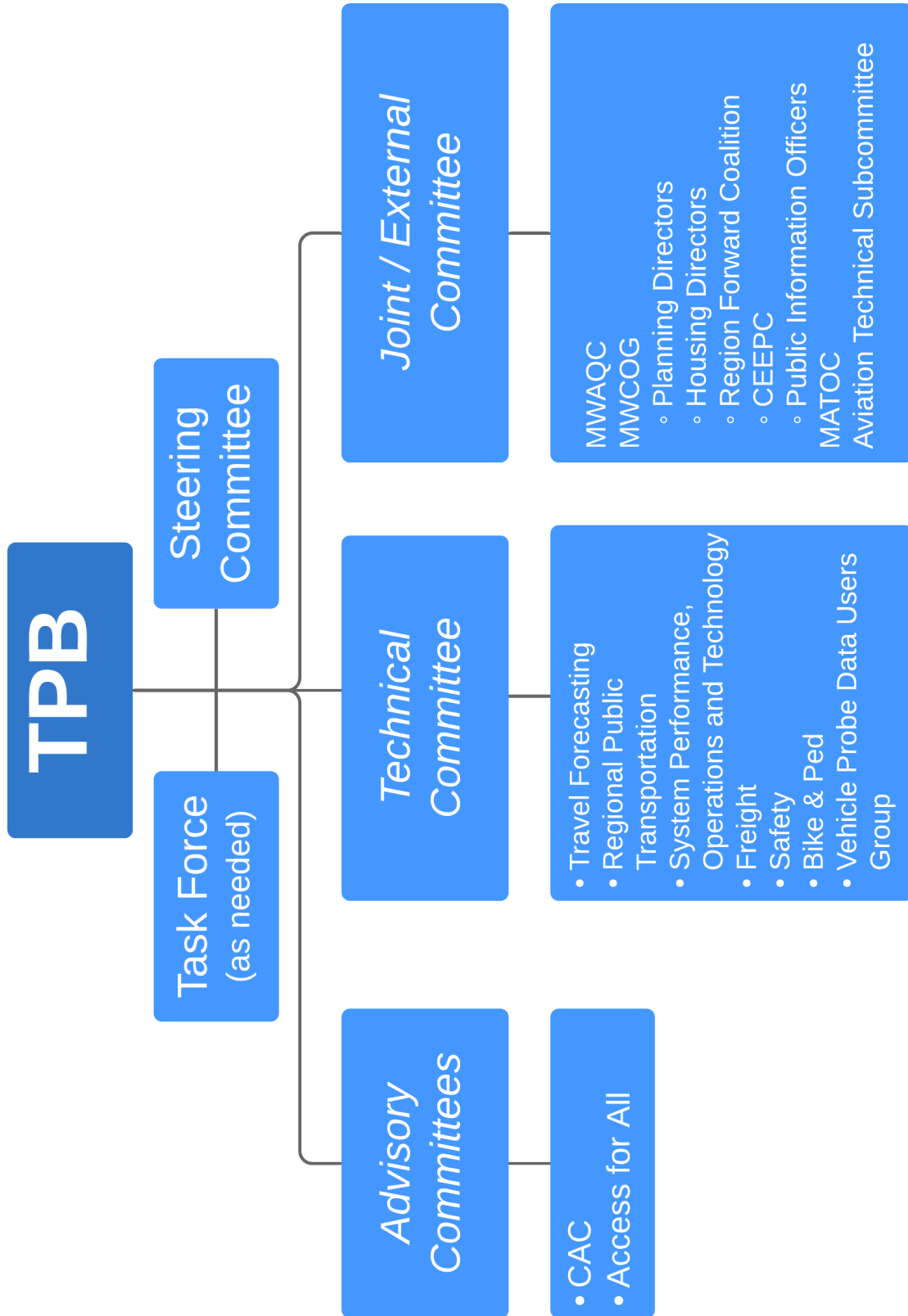
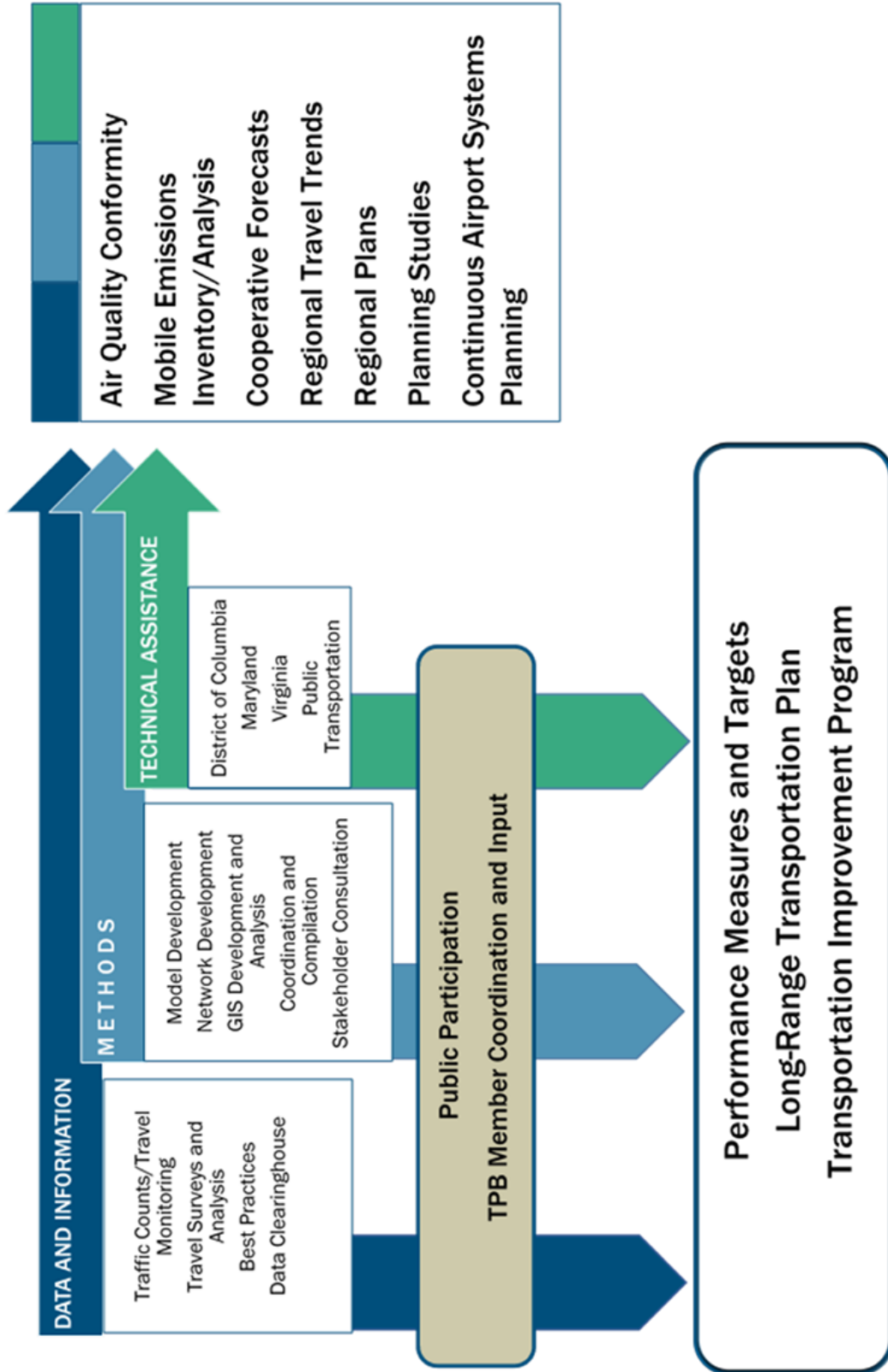


Figure 7: Overview of Planning Products and Supporting Processes



III. MAJOR WORK ACTIVITIES

1. Long-Range Transportation Planning

OVERSIGHT

TPB Technical Committee

MAJOR PRODUCTS

- Complete the next long-range plan update
- Supporting analysis for the plan
- Plan implementation
- Climate Change Adaptation Study Phase 2

TOTAL COST ESTIMATE

\$1,095,434

1.1 VISUALIZE 2045 IMPLEMENTATION

Visualize 2045 (2018) is the federally required long-range transportation plan for the National Capital Region. It identifies all regionally significant transportation investments planned through 2045 and provides detailed analysis to help decision makers and the public “visualize” the region’s future under current plans. The plan was approved in October 2018 and this activity describes work to support implementation and the 2022 Update of Visualize 2045 activities.

- Conduct general coordination and outreach to members to help members understand and implement the plan and the aspirational initiatives.
- Provide opportunities for consideration, coordination, and collaborative enhancement of Visualize 2045.
- Conduct analysis as necessary to support the aspirational initiatives.

1.2 ENVIRONMENTAL JUSTICE AND EQUITY

TPB continues to seek opportunities to understand the needs of all users of the regional transportation system. TPB will conduct outreach and analysis that will improve the region’s understanding of specific needs of and considerations for disadvantage populations in the transportation planning process.

- Coordinate with TPB public participation staff to improve data collection regarding disadvantaged populations.
- Provide analysis and support for other equity-related activities.
- Communicate equity findings from analysis and outreach activities.

1.3 FUTURE PLAN DEVELOPMENT

To support development of the 2022 Update to Visualize 2045, TPB staff will also undertake other activities to advance the development of the next long-range plan.

- Communicate to Board and other stakeholders the key planning activities for the quadrennial transportation plan update that is underway.
- Conduct additional planning analysis and coordination to support plan development.
- Develop the content and produce the update to Visualize 2045, TPB's long-range transportation plan, for board approval in June 2022.
- Produce a selection of new performance measures for the LRTP and develop and approach to communicate performance measures.
- Climate Change Resilience /Adaptation Study Phase 2.
- Initiate the conceptualization and development of LRTP Performance Measure Dashboard.

1.4 FEDERAL COMPLIANCE

The TPB has federal responsibilities and this task supports work to maintain compliance with those requirements.

- Federal Certification was completed in July 2019. Complete tasks as noted in the Federal report to address any issues that have been noted.
- Monitor possible future transportation regulations and/or changes and prepare accordingly.
- Track, research, and respond to all Federal activities that impact the metropolitan transportation planning process.

1.5 POLICY BOARD-DIRECTED ACTIVITIES

The TPB is a policy board that can take action on a variety of transportation planning and policy initiatives. This task will support any activities that the Board directs staff to do.

- Carry out additional activities as directed by the TPB.
- Develop long-range transportation plan and related products through an 'equity lens' as directed by TPB Resolution R1-2021, which requires all TPB activities to be conducted with an equity lens.
- Support planning activities responsive to the TPB resolution R8-2021 endorsing the 2030 regional greenhouse gas reduction goal.

2. Transportation Improvement Program

OVERSIGHT

TPB Technical Committee

MAJOR PRODUCTS

- Maintain and continue to tailor the iTIP Database (Project InfoTrak) to meet the needs of staff and members

TOTAL COST ESTIMATE

\$ 466,962

2.1 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

The Transportation Improvement Program (TIP) is a federal obligation document which describes the planned schedule in the next six years for distributing federal, state, and local funds for state and local transportation projects. This activity will encompass the following work tasks in FY 2022:

TIP Programming

- Prepare, review, and process administrative modifications and amendments to the currently approved TIP.
- Review administrative modifications and amendments for fiscal constraint.
- Develop and produce the FY 2023-2026 TIP.
- Enhance documentation of the TIP with additional analysis as a part of the long-range plan/TIP publications and the Visualize 2045 web site.
- Provide public access to long-range plan and TIP project data through an improved online searchable database with integrated GIS project mapping.
- Prepare an annual listing of projects for which federal funds have been obligated in the preceding fiscal year compared against the federal funding programmed for that year in the TIP of record.

Performance Based Planning and Programming

Federal surface transportation law, as developed in MAP-21 and continued under the FAST Act, calls for MPOs, states, and public transportation providers to establish and use a performance-based approach to transportation decision making. States and MPOs must integrate performance-based plans into their planning process, including goals, objectives, performance measures, and targets, either directly or by reference. USDOT has established performance measures and subsequently states and public transportation providers have established performance targets in support of updated 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, Visualize 2045 and TIP are required to include a description of the performance measures and targets used in assessing the performance of the transportation system. The MPO review targets to track progress towards attainment of critical performance outcomes for the MPO region.

Under the performance provisions, the TIP shall do the following, in coordination with Visualize 2045:

- Contain projects consistent with the metropolitan transportation plan.
- Reflect investment priorities from the metropolitan transportation plan.
- Be designed to make progress toward achieving transportation system performance targets.
- Describe the anticipated effect of the TIP toward achieving the performance targets established in the metropolitan transportation plan.
- Link investment priorities to performance targets.

2.2 TIP DATABASE SUPPORT (PROJECT INFOTRAK)

In FY 2019, TPB procured a consultant to develop a new iTIP Database which provides a complete upgrade and overhaul to the project database information system. This new system will integrate current functionality into one enhanced, unified, user-friendly, customizable system that can be branded with COG and TPB styles. The system will have the ability to add or change fields, forms, queries and reports to respond to data requests or changes to requirements in the future. GIS mapping of projects will be integrated into the system, which will allow for data to be exported and used in other ArcGIS applications. The system will allow the many data input users to provide automated data transfers to the extent possible. Database versioning or some other means will be used to provide access to data in various states of input and approval without duplicating data. The system will include searchable data sets for the public, TPB members, federal approval agencies, and other stakeholders to query and interact with using maps, reports and charts. These are the work activities that will be undertaken to support this task.

- Provide additional customizations to the system's forms, reports, and functionality.
- Provide assistance and guidance during first-time use of Project InfoTrak system for the adoption of Visualize 2045 and the FY 2023-2026 TIP.
- Provide ongoing help desk service for TPB staff and agency users to troubleshoot any technical issues that arise.
- Assist State DOT and other agency users with large-scale data transfer requests for major TIP amendments.
- Provide public access to long-range plan and TIP project data through an online searchable database with integrated GIS project mapping.
- Provide support for the development and maintenance of project data for the TPB's Bicycle and Pedestrian Plan.

3. Planning Elements

OVERSIGHT	Various (see below)
MAJOR PRODUCTS	See program-specific products below
TOTAL COST ESTIMATE	\$ 2,768,270

3.1 PERFORMANCE-BASED PLANNING AND PROGRAMMING

OVERSIGHT	TPB Technical Committee
MAJOR PRODUCTS	<ul style="list-style-type: none">• Performance measures and targets; associated documentation

The Performance-Based Planning and Programming (PBPP) task supports implementation of the performance-based planning framework for metropolitan transportation planning and decision making, including investment priorities, target setting and measuring progress toward those targets.

- Develop data and reports for the TPB's setting and tracking of federally specified PBPP targets, in accordance with Letters of Agreement that have been signed between TPB and partner agencies and as required for long-range transportation planning and the Transportation Improvement Program (TIP).
- Coordinate with the states and public transportation providers on data collection and sharing, targets, and federally required reporting.
- Set annual highway safety targets.
- Set transit asset management targets.
- Set annual regional transit safety targets.
- Begin process (continuing into FY 2023) to update any four-year targets established in 2018 in the areas of pavement and bridge condition and highway system performance (travel time reliability, non-SOV mode, and CMAQ emissions reductions).
- Support TPB as it reviews data and sets required targets.

3.2 CONGESTION MANAGEMENT PROCESS

OVERSIGHT

Systems Performance, Operations, and Technology Subcommittee (SPOTS)

MAJOR PRODUCTS

- 2022 Congestion Management Process Technical Report
- National Capital Region Congestion Report Dashboard
- Vehicle Probe Data Users Group reference materials
- Documentation for FAST Act performance and target reporting requirements

This task develops and maintains the regional Congestion Management Process (CMP), providing information on current congestion on the region's roadways through data analysis, as well as identifying potential multi-modal strategies to manage congestion.

This task includes:

- Compile information and undertake analysis for the development of major CMP components, including application of available or emerging "big data" sources.
- Develop and publish the biennial 2022 CMP Technical Report.
- Produce the National Capital Region Congestion Report, released as a quarterly website "dashboard".
- Provide CMP technical input to the Performance-Based Planning task.
- Continue development (begun in FY 2020) of jurisdictional, subregional, and/or corridor-based congestion profiles, using available data plus additionally procured data. Include related information such as Census and transit use.
- Produce special CMP analyses, such as following a major event, on an as-needed basis.
- Support the Vehicle Probe Data Users Group (VPDUG) in its role to foster technical and methodological coordination in the application of vehicle probe data by member agencies and jurisdictions.

3.3 SYSTEMS PERFORMANCE, OPERATIONS, AND TECHNOLOGY PLANNING

OVERSIGHT

Systems Performance, Operations, and Technology Subcommittee (SPOTS)

MAJOR PRODUCTS

- Regional ITS architecture maintenance
- Regional surveys on traffic signal timing and power back-up systems
- Documentation for FAST Act performance and target reporting requirements

This task addresses requirements for Regional Transportation Systems Management and Operations (RTSMO) and related technology.

This task includes:

- Address FAST Act requirements related to technology and RTSMO; address RTSMO-related aspects of connected and autonomous vehicle technology and shared mobility developments.
- Maintain the Regional Intelligent Transportation Systems (ITS) Architecture.
- Address Traffic Incident Management (TIM) as it relates to metropolitan transportation planning and RTSMO.
- Address planning for connected/autonomous vehicles (CAVs), advised by outcomes of the FY2020 TPB CAV forums and white paper.
- Address resiliency and reliability planning aspects of RTSMO.
- Conduct supporting activities as necessary on the above topics, potentially including in-depth studies, development of reports or white papers, or stakeholder workshops.
- Conduct a regional survey on traffic signal timing and power back-up systems.
- Support the regional Systems Performance, Operations, and Technology Subcommittee (SPOTS) and the Traffic Signals Subcommittee.

3.4 TRANSPORTATION EMERGENCY PREPAREDNESS PLANNING

OVERSIGHT

COG Transportation Emergency Preparedness Committee in coordination with the Systems Performance, Operations, and Technology Subcommittee

MAJOR PRODUCTS

- **Documentation pursuant to DHS and UASI requirements**

This task provides 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 and its public safety programs. This is a component of a much larger regional set of emergency preparedness activities funded primarily outside the UPWP by U.S. Department of Homeland Security (DHS) and COG local funding. The Regional Emergency Support Function #1 (R-ESF 1) Transportation Emergency Preparedness Committee, within the COG public safety committee structure, advises these efforts and coordinates with emergency management agencies, police, fire, and other emergency response committees.

This task includes:

- Undertake transportation emergency coordination and response planning through the emergency management and Homeland Security Urban Area Security Initiative (UASI) processes.
- Address Traffic Incident Management (TIM) as it relates to transportation emergency preparedness planning.
- Support the regional Transportation Emergency Preparedness Committee (R-ESF 1).

3.5 TRANSPORTATION SAFETY PLANNING

OVERSIGHT

TPB Transportation Safety Subcommittee

MAJOR PRODUCTS

- Documentation for FAST Act performance and target reporting requirements
- Workshop(s)

This task addresses planning for safety aspects of the region’s transportation system and coordinating with various state and local safety planning efforts including development and implementation activities associated with Strategic Highway Safety Plans and Vision Zero efforts of the District of Columbia, Maryland, and Virginia, as well as other state, regional, and local safety efforts.

This task includes:

- Support engineering, education, and enforcement strategies to reduce fatalities, serious injuries, and crashes in the National Capital Region.
- Address regional FAST Act traffic safety performance measure requirements, including compilation and analysis of safety data, tracking of regional performance measures for safety, and coordinating with member states on the setting of safety targets.
- Address the recommendations of the FY 2020 – FY 2021 regional safety study.
- Investigate and document regional safety trends and influencing factors and identify strategies to address these factors. This effort will help inform local planning and programming efforts to improve transportation safety and achieve/exceed the region’s PBPP targets.
- Coordinate with the Strategic Highway Safety Plan development and implementation efforts of the District of Columbia, Maryland, and Virginia, as well as other state, regional, and local efforts.
- Coordinate regional transportation safety planning with the Regional Roadway Safety Program undertaken in Task 9.
- Provide technical advice to the “Street Smart” regional pedestrian and bicycle safety public outreach campaign (Street Smart is supported by funding outside the UPWP).
- Conduct one or more workshops, targeting member agency staffs, regarding transportation/roadway safety. Support the Transportation Safety Subcommittee in its coordination and advisory roles.

3.6 BICYCLE AND PEDESTRIAN PLANNING

OVERSIGHT

TPB Regional Bicycle and Pedestrian Subcommittee

MAJOR PRODUCTS

- Updated National Capital Trail Network map
- Regional outreach workshops

This task addresses planning for bicycle and pedestrian aspects of the region’s transportation system and coordinating with related state, regional, and local efforts. This task includes:

- Undertake outreach and follow-up activities regarding the Regional Bicycle and Pedestrian Plan update published in FY 2021.
- Update the National Capital Trail Network map.
- Monitor and update nonmotorized recommendations for the Transportation Improvement Program (TIP); monitor Regional Complete Streets and Green Streets activities.
- Address emerging mobility technologies, such as dockless bikesharing and electric scooters, and their relationship to bicycle and pedestrian planning.
- Provide technical advice to the “Street Smart” regional pedestrian and bicycle safety public outreach campaign (Street Smart is supported by funding outside the UPWP).
- Conduct two or more regional bicycle and pedestrian planning or design training, outreach, or professional development opportunities for member agency staffs.
- Support the Bicycle and Pedestrian Subcommittee in its coordination and advisory roles.

3.7 REGIONAL PUBLIC TRANSPORTATION PLANNING

OVERSIGHT

TPB Regional Public Transportation Subcommittee

MAJOR PRODUCTS

- **Annual report, data compilation, reports on technical issues, and outreach materials**
- **Private Provider involvement documentation**

This task addresses planning for public transportation aspects of the region’s transportation system and coordinating with related state, regional, and local efforts. This task includes:

- Address public transportation-related aspects of metropolitan transportation planning, such as consideration of inter-city buses, commuter buses, rail transit, and commuter rail.
- Continue implementation of federal requirements for performance-based planning, specifically transit safety and transit asset management, including data collection, analysis of the performance measures, forecasting, and setting of targets.
- Address Bus Rapid Transit (BRT) planning and coordination.
- Address TPB-related recommendations from the 2019 regional Bus Transformation Project.
- Produce an annual report on the “State of Public Transportation.”
- Provide support to private providers of transportation in the region, including organizing the annual Private Providers Annual Transit Forum.
- Conduct supporting activities as necessary on the above topics, potentially including in-depth studies, development of reports or white papers, or stakeholder workshops.
- Support the Regional Public Transportation Subcommittee in its coordination and advisory roles.

3.8 FREIGHT PLANNING

OVERSIGHT

TPB Freight Subcommittee

MAJOR PRODUCTS

- Updated Regional Freight Plan
- Documentation as necessary supporting FAST Act requirements of freight planning

This task addresses planning for freight aspects of the region's transportation system and coordinating with related state, regional, and local efforts. The Regional Freight Plan, last updated in FY 2016, will be completely updated in FY 2022, and will provide guidance for continued regional planning activities.

This task includes:

- Develop and publish an updated Regional Freight Plan.
- Compile and analyze data to support regional freight planning.
- Address recommendations of the FY 2020 symposium/workshop on the topic of curbside management in the National Capital Region, across fields of planning for freight, safety, public transportation, and related areas.
- Coordinate with relevant jurisdictions and committees on regional rail issues.
- Address the FAST Act requirements related to regional freight transportation planning, including PBPP measures and targets.
- Conduct supporting activities as necessary on the above topics, potentially including in-depth studies, development of reports or white papers, or stakeholder workshops.
- Support the TPB Freight Subcommittee in its coordination and advisory roles.

3.9 METROPOLITAN AREA TRANSPORTATION OPERATIONS COORDINATION PROGRAM PLANNING

OVERSIGHT

MATOC Steering Committee, in conjunction with the Systems Performance, Operations, and Technology Subcommittee (SPOTS)

MAJOR PRODUCTS

- MATOC Steering Committee Materials

This task is to provide TPB's planning support for the Metropolitan Area Transportation Operations Coordination (MATOC) Program, in conjunction with the MATOC Steering Committee, subcommittees, and partner agencies, as MATOC pursues its function of providing real-time situational awareness of transportation operations in the National Capital Region. TPB is an ex-officio member of MATOC.

This task includes:

- Provide administrative support of the MATOC Steering Committee, including preparation of agendas and summaries and tracking of action items.
- Provide TPB staff input and advice to the MATOC Steering Committee and its subcommittees and working groups.
- Address Traffic Incident Management (TIM) as it relates to MATOC planning.
- Provide briefings to the TPB on MATOC Program progress as requested.

4. Public Participation

OVERSIGHT

Transportation Planning Board

MAJOR PRODUCTS

- Public comment solicited and documented
- Materials and activities for public participation related to the Visualize 2045 update
- CAC and AFA Committee reports
- Conduct the 18th session of the Community Leadership Institute
- Information dissemination through the website, social media, and printed documents
- Communication support for all Tasks

TOTAL COST ESTIMATE

\$ 994,711

4.1 PUBLIC PARTICIPATION AND OUTREACH

Public participation, outreach, and communications are essential to carrying out the continuing, cooperative, and comprehensive (3C) metropolitan transportation planning process. The TPB's 2020 Participation Plan guides all public involvement activities to support the development of the plan, TIP, and all other TPB planning activities. The TPB's Participation Plan emphasizes involving traditionally disadvantaged populations in the planning process, as part of the TPB's commitment to ensuring nondiscrimination in all its programs and activities as required under Title VI and the Environmental Justice Executive Order. This activity will encompass the following work tasks:

- Conduct public involvement as described in the new TPB Participation Plan, which was approved by the TPB in October of 2020. The plan calls upon staff to integrate public engagement, as appropriate, into planning activities throughout the department.
- Develop and conduct public engagement activities with consideration of an equity perspective, as directed by TPB Resolution R1-2021, which called for equity, as a foundational principle, to be woven into all of the TPB's work.
- Provide regular opportunities for comment on TPB activities and products, including public comment sessions at the beginning of TPB meetings and official public comment periods prior to the adoption of key TPB plans and programs.
- Conduct public involvement activities in the summer of 2021 as part of the update to Visualize 2045. These activities may include socially distant outreach such as webinars, virtual townhalls, and virtual popups. This phase of open-invitation outreach will complement public opinion research for Visualize 2045 that was conducted in FY 2021.
- Conduct a final public comment period for Visualize 2045 in the spring of 2022.
- Provide staff support for the TPB Community Advisory Committee (CAC), including organizing monthly meetings and outreach sessions, and drafting written materials for the committee. Staff will ensure that CAC comments are communicated to the TPB regarding transportation plans, projects, programs, and issues that are important to the committee and its members.

- Provide staff support for the TPB Access for All Advisory (AFA) Committee that includes leaders and representatives of low-income communities, minority communities, persons with disabilities, older adults, and those with limited English skills as the TPB's primary strategy for engaging traditionally disadvantaged population groups in the planning process and for providing guidance on Human Service Transportation Program activities. AFA Committee comments will be shared with the TPB on transportation plans, projects, programs, services, and issues that are important to AFA community groups.
- Conduct training activities, as needed, to help community leaders learn how to get more actively involved in transportation decision making in the Washington region (Community Leadership Institute).
- Conduct evaluation activities of the public involvement process.
- Ensure that all public participation is consistent with and meets the Federal Civil Rights Act (Title VI) and Executive Order 12988 Environmental Justice.

4.2 COMMUNICATIONS

This activity will encompass the following work tasks:

- Develop written and visual materials to spread information about regional transportation planning issues, explain how transportation decision-making works, and engage the public.
- Support staff as they develop meeting materials and publications to communicate information developed in other tasks in the UPWP.
- Produce content for the TPB News, Visualize 2045 newsletter, and other digital publications.
- Regularly update information on the TPB's webpages, ensuring the site is timely, thorough, and user-friendly.
- Effectively use social media and other digital tools to engage the public in current TPB activities.

5. Travel Forecasting

OVERSIGHT

TPB Travel Forecasting Subcommittee

MAJOR PRODUCTS

- A series of highway and transit networks reflecting the latest long-range transportation plan (2022 Update to Visualize 2045) and TIP for input to the regional travel demand model, together with technical documentation
- Maintenance, support for and development of currently adopted travel models, including inputs, application files, and documentation
- Continued development, with consultant assistance, of the TPB's next-generation travel demand forecasting model, known as the Gen3 Model, which will occur over a three-year period, from FY 2020 to FY 2023. A developmental model (Gen3, Phase 1) and associated technical documentation

TOTAL COST ESTIMATE

\$ 3,298,337

The Travel Forecasting work activity consists of two sub-activities: Network Development and Model Development and Support. The goal of Network Development is to prepare the primary inputs for the regional travel demand model, especially the transportation networks. The goal of Model Development and Support is to develop, maintain, support, and improve the TPB's regional travel demand forecasting methods for both tactical and strategic planning models.

5.1 NETWORK DEVELOPMENT

Develop, maintain, and improve the transportation networks used as inputs to the TPB's regional travel demand forecasting models, both the production-use and developmental models.

Planned tasks for FY 2022:

- Produce a series of forecast-year transportation networks used as inputs to the regional travel demand forecasting model, in support of transportation planning studies, such as scenario studies, project-planning studies, and air quality conformity (AQC) analyses of the TPB's Long-Range Transportation Plan (LRTP). The quadrennial update of the LRTP occurs in 2022, but, in some cases, TPB staff may be asked to perform an "off-cycle" AQC analysis.
- Maintain and refine both 1) the multi-year transportation network geodatabase used in regional travel demand modeling and 2) the software used to edit and update the geodatabase, known as COGTools.
- Develop transportation networks in formats that support both 1) the production-use travel models, such as the Gen2/Ver. 2.3 and Ver. 2.4 models, which require networks in Cube TRNBUILD format; and 2) developmental travel models, such as the Gen3 Model, which will

likely require networks in Cube Public Transport (PT) format. Support improvements in the unified network database/COGTools to work with transportation networks in both TRNBUILD and PT formats in sync.

- Respond to network-related technical data requests.

5.2 MODEL DEVELOPMENT AND SUPPORT

Develop, maintain, support, and improve the TPB's travel demand forecasting methods. Methods can range from tactical models, such as the TPB's regional travel demand forecasting model, to strategic models, such as sketch and scenario planning models.

This work includes improving the production-use travel model and developing the next-generation travel model, known as the Generation-3, or Gen3, Model, which is to be developed with consultant assistance during a three-year period, from FY 20 through FY 23. This work also involves exploring the use of modeling tools for strategic planning, such as RSPM and VisionEval. This work activity also includes related tasks such as data collection, research, and interfacing with travel demand modeling staff at peer MPOs.

Planned tasks for FY 2022:

- Staff the TPB Travel Forecasting Subcommittee (TFS).
- Support both internal and external users of the TPB's current or future production-use travel demand forecasting models (either the Gen2/Ver. 2.3 Model or the Gen2/Ver. 2.4 Model).
- Develop new versions of the TPB's travel demand forecasting model that provide enhanced modeling capabilities. TPB staff is currently working with a consultant to develop the TPB's next-generation travel demand forecasting model, to be known as the Generation-3, or Gen3, Travel Model. This model is planned to be a disaggregate, activity-based model (ABM), implemented in ActivitySim software. Model development is planned to last three years (FY 2020-2023). Development will occur via two main phases: Gen3 Model, Phase 1 is planned to conclude in September 2021 (early FY 2022). The goal of Phase 1 is to obtain a developmental model that has gone through an initial round of calibration, validation, and sensitivity testing and can be tested by TPB staff. Phase 2 is planned to run from September 2021 through November 2022 (middle of FY 2023). The goal of Phase 2 is to obtain a travel model that is calibrated, validated, and is production ready.
- Identify, and possibly obtain, data needed to support development of the Gen3 Model and its successor model, the Gen4 Model.
- Promote the regional coordination of future transit on-board surveys so that they can better support model development needs. This effort would be coordinated with other DTP teams and with the Regional Public Transportation Subcommittee (see Task #3, "Planning Elements").
- Join the ActivitySim consortium and coordinate with other member MPOs on the maintenance and development of ActivitySim, the underlying software of the Gen3 Travel Model.
- Keep abreast of best practices in travel demand modeling.
- Develop knowledge of and support other DTP staff in the use of strategic planning models, such as sketch and scenario planning models (e.g., VisionEval and RSPM). Coordinate with DTP's Planning Data & Research Team.
- Respond to travel-model related technical data requests from external clients such as

consultants, state/local agencies, academia, and research/governmental agencies, both within and beyond the metropolitan Washington region.

- Maintain software and hardware required to apply the regional travel demand model.
- Coordinate with the COG Office of Information Technology (IT) to help maintain the computers used to run the regional travel demand model. Assist IT with testing related to the planned agency-wide transition into cloud computing.

6. Mobile Emissions Planning

OVERSIGHT

TPB Technical Committee in consultation with MWAQC

MAJOR PRODUCTS

- Air quality conformity analysis of the 2022 Update to Visualize 2045: Conduct runs of the travel model and mobile emissions model and prepare technical documentation
- TPB Climate Change Mitigation Study of 2021, with consultant assistance: Complete the study and prepare a report
- Technical activities, including preparation of mobile inventories and development of mobile budgets, and documentation related to the State Implementation Plans (SIPs) to meet the 2015 ozone NAAQS requirements

TOTAL COST ESTIMATE

\$ 2,039,172

6.1 AIR QUALITY CONFORMITY

The 1990 Clean Air Act Amendments require MPOs to conduct detailed systems-level technical analyses to demonstrate that future mobile source emissions resulting from the region's plans and programs comply with federally approved motor vehicle emissions budgets. This task supports the air quality conformity analyses and other air quality modelling to comply with federal regulations. This activity will encompass the following work tasks in FY 2022:

- Continue technical tasks related to the air quality conformity analysis of the TPB's 2022 Long-Range Transportation Plan quadrennial update. Provide technical travel demand and mobile emissions modeling support and summarize the findings in a report. Transmit the conformity findings to local, state, and federal agencies.
- Provide technical travel demand and mobile emissions modeling support for an off-cycle AQC analysis, if requested by implementing agencies. This task may be funded from Technical Assistance accounts.
- Keep abreast of federal requirements as related to air quality conformity determinations and the new mobile emissions estimation software, MOVES3.
- Continue working to incorporate Performance-Based Planning and Programming (PBPP) requirements pertaining to Congestion Mitigation and Air Quality Improvement Program (CMAQ) into the planning process as it relates to the adopted Plan.
- Maintain communication and consultation among transportation agencies, air agencies, and the public regarding air quality related matters in the region.

6.2 MOBILE EMISSIONS ANALYSIS

The goal of this task is to conduct a wide range of analyses to quantify mobile-source emissions levels of various pollutants in support of air quality planning and Transportation Emissions Reduction Measures (TERMs). TPB staff is also actively involved with State Implementation Plan (SIP) activities that determine how metropolitan areas will attain and maintain national air quality standards. SIP activities include the establishment of mobile emission budgets for criteria pollutants that are analyzed in air quality conformity work. This task also covers climate change mitigation activities, which strive to reduce greenhouse gas (GHG) emissions due to the on-road transportation sector.

- With consultant assistance, conduct a study of approaches to reduce greenhouse gas (GHG) emissions to meet 2030 reduction goals in the Metropolitan Washington 2030 Climate and Energy Action Plan. Prepare a report documenting the study findings. The goal of this study is to assess the types of transportation-related actions, and their levels of implementation, that would be needed to reduce transportation-sector greenhouse gas (GHG) emissions to meet GHG reduction goals associated with 2030 and 2050. The study is divided into two phases: Phase 1, conducted by TPB staff, is a summary of past work done in this area by TPB and COG. Phase 2 will be a scenario study conducted by a consultant. The Phase 1 report was finalized in March 2021. The Phase 2 study is to be completed by December 2021.
- Support State Implementation Plan (SIP) development, if needed, to address requirements of 2015 ozone National Ambient Air Quality Standards (NAAQS). This would include developing inventories of on-road mobile emissions for volatile organic compounds (VOC) and nitrogen oxides (NOx) – two precursors to ground-level ozone – and development of new motor vehicle emissions budgets.
- Revisit opportunities to refresh inputs to the EPA’s Motor Vehicle Emission Simulator (MOVES) software, such as vehicle registration data, referred to as Vehicle Identification Number (VIN) data, in consultation with regional environmental and transportation agency partners.
- Provide technical support to COG/DEP staff with regional climate change/greenhouse gas (GHG) related planning activities.
- Keep abreast of MOVES updates and best practices.
- Conduct sensitivity tests of new MOVES model versions that may be released by EPA, such as the new MOVES3 model.
- Respond to technical requests from COG’s Department of Environmental Programs (DEP) and from TPB member jurisdictions for readily available mobile emissions information.
- Follow established TPB interagency and public consultation procedures and coordinate with COG/DEP staff to involve the MWAQC in the public and interagency consultation process.

7. Travel Monitoring and Data Programs

OVERSIGHT	Various (see below)
MAJOR PRODUCTS	See program-specific products below
TOTAL COST ESTIMATE	\$ 2,141,001

7.1 TRAVEL SURVEYS

OVERSIGHT	TPB Travel Forecasting Subcommittee
MAJOR PRODUCTS	<ul style="list-style-type: none">• Presentations, visualizations, and information reports• Workplan for geographic-focused surveys• Technical Support

Work under this task encompasses conducting surveys designed to collect key information that provide insights and understanding of regional travel trends as well as provide key inputs into the regional travel demand forecasting model; and conducting research and analysis of travel-related surveys conducted in other organizations and programs.

This activity will encompass the following in FY 2022:

- Provide continued briefings to the TPB, TPB Technical Committee, the Travel Forecasting Subcommittee, and other subcommittee and stakeholders, as appropriate, on the findings from the RTS, the 7-day panel survey, and other applicable surveys and data that examine travel behavior.
- Process data from the panel travel survey conducted in fall 2019 and prepare finalized datasets to be used in survey analysis and documentation.
- Conduct analysis of RTS and 2019 panel survey to produce data and findings for consideration and inclusion in the next regional long-range plan update, Visualize 2045.
- Identify and obtain appropriate data on regional travel behavior that occurred during the COVID-19 pandemic period.
- Conduct detailed analysis of the RTS, panel survey, 2019 State of the Commute Survey, 2020 Employer Survey, and applicable data from the pandemic period to analyze build a baseline understanding of how regional travel was changed as a result of the pandemic.
- Respond to inquiries about the survey from state and local government staff, survey participants, and the media.
- Develop visualizations and other innovative means to convey survey results and findings.
- Initiate geographic-focused surveys.

7.2 TRAVEL ANALYSIS STUDIES AND RESEARCH

OVERSIGHT

TPB Travel Forecasting Subcommittee

MAJOR PRODUCTS

- **Travel monitoring datasets to support PBPP and Gen3 modeling requirements**
- **Travel trends and travel visualization dashboard**
- **Technical reports/memoranda**
- **Presentations**

This task conducts travel trends analysis, monitoring studies, and associated research activities to support the regional travel demand forecasting model, performance-based planning and programming (PBPP), and long-range plan development. Individual studies for FY 2022 will be largely determined based on programmatic needs of the regional travel demand forecasting model, PBPP requirements, and long-range planning activities. Expansion of the regional travel trends analysis program will continue, including developing a centralized dashboard of that provides visualizations and analysis of regional travel trends and data that will assist staff and other partner users gain insights on understanding the implications of these trends and data on regional travel. In coordination with the needs of the current as well as the anticipated Gen3 travel demand model, travel monitoring study needs will be identified and performed. Expanded research activities that consider emerging topics of importance in regional transportation will be identified and carried out, including those requiring deploying the use of big data analytics in deciphering and understanding trends in regional travel from large location-based data sets.

During FY 2022, key activities will also include:

- Continuing the enhancement of the regional travel trends analysis program to produce more frequent data products, reports, and presentations on various aspects of regional travel trends. This will include:
 - Developing and maintaining visualization dashboards on travel trends and travel data
 - Developing methodologies to develop more robust, geographic-focused travel trends analysis updates
 - Developing user-friendly information reports/products that combine results of multiple travel trends research activities
 - Making more frequent presentation to the TPB, TPB Technical Committee, and other committees and subcommittees, as appropriate, to provide more frequent and ongoing awareness and understanding of the latest travel trends and their implication for regional transportation planning, including the impact of the COVID-19 pandemic on regional travel.
 - Preparing geographically-focused analyses of travel occurring throughout the region.
- Research and analyze regional travel trends using a variety of data sources, including, among others, the Regional Travel Survey, the 7-day panel survey, Census and other federal transportation-related datasets, and Big Data that will be acquired to support numerous programmatic requirements.

- Perform data collection, research and analysis that support regional transportation planning activities, including, among others, the development of the regional long-range transportation plan update, Visualize 2045, as well as consideration of equity in regional transportation planning. This activity may also entail acquiring large passively collected location-based datasets, or “Big Data,” which can be used to discern anonymized regional travel behavior and trends. These data may also be used to support analyses that may be undertaken in other tasks described elsewhere in this UPWP.
- Providing cross-program research and analysis support for regional transportation planning studies and activities using a variety of analytical tools. These may include supporting the use of scenario planning tools that were evaluated in FY 2022 and intended to support complex “what if” analyses that examine the effects and impacts that could occur under varying future conditions. Scenario planning may be applied to better understand future uncertainties, such as changes in Greenhouse Gas production, the deployment of connected autonomous vehicles, and future alternative land use distribution patterns.
- Continue to increase staff awareness of the use of planning tools in the regional transportation planning practice and build staff technical capabilities to apply scenario planning tools in transportation planning studies and analyses.

7.3 REGIONAL TRANSPORTATION DATA CLEARINGHOUSE

OVERSIGHT

TPB Technical Committee

MAJOR PRODUCTS

- Updated Clearinghouse database and documentation
- Web interface to access Clearinghouse data

Efficient access to a comprehensive source of current and historic data on the characteristics and performance of the region’s transportation system is vitally important for transportation planning, air quality analysis, travel models development, congestion management, travel trends analysis, and project evaluations. Under this activity, staff 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 Clearinghouse with updated highway and transit performance data and other important multi-modal travel data as they become available. These data will also be used to in the development of data visualizations identified in Task 7.2.

This activity will encompass the following in FY 2022:

- 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.
- Develop, maintain, and provide data at varying geographic levels of specificity, including parcel-level data, when needed, to support the development of the Gen 3 regional travel demand model.
- Update freeway and arterial road speed and level of service data, when available.

- Update Clearinghouse highway network bridge and pavement condition data from most current National Bridge Inventory and Highway Performance Management System databases.
- Add updated Cooperative Forecasting data by TAZ to the Regional Transportation Clearinghouse Data.
- Support efforts to develop and maintain a web-based regional travel trends dashboard described in the previous task.
- Distribute Regional Transportation Clearinghouse Data to TPB participating agencies via a GIS web-based application.
- Ensure functionality of the RTDC with ongoing system administration and updates and promote the availability and use of the RTDC to local, state, and transit agency partners.
- Add and maintain data to support analysis of transportation impacts of the COVID-19 pandemic period and their implications for long-range regional transportation planning.

7.4 GIS DATA AND ANALYSIS

OVERSIGHT

TPB Technical Committee

MAJOR PRODUCTS

- **Updated GIS software, databases, online web map applications, user documentation, and support and coordination of COG/TPB GIS activities**

This work activity provides cross-program geospatial and data support throughout the Department of Transportation Planning to support all UPWP program activities. This includes providing data and technical support to staff using GIS for development and distribution of data and information developed for TPB planning activities, including geospatial analysis support for Visualize 2045, the TIP, travel trends analysis, Congestion Monitoring and Analysis, Cooperative Forecasting, Regional Transportation Data Clearinghouse, Network and Models Development, Equity, Safety, and Freight, Bike and Pedestrian Planning activities, among others.

This activity will encompass the following work activities in FY 2022:

- Provide data and technical support to staff using GIS for development and distribution of data and information developed for TPB planning activities.
- Provide technical guidance and develop GIS-based products (web maps and applications, visualization, etc.) for TPB planning activities.
- Respond to requests for TPB GIS metadata, databases, and applications.
- Coordinate regional GIS activities with state DOTs, WMATA, and the local governments through COG's GIS Committee and subcommittees.
- Maintain and update GIS-related hardware and software used by staff for regional transportation planning activities.

8. Regional Land Use and Transportation Planning Coordination

OVERSIGHT	TPB Technical Committee
MAJOR PRODUCTS	<ul style="list-style-type: none">• See program-specific products
TOTAL COST ESTIMATE	\$ 1,190,179

This task coordinates local, state, and federal planning activities and supports development of socioeconomic forecasts (Cooperative Forecasts) of population, households, and employment, which reflect technical and policy assumptions of future land use in the region’s jurisdictions and are essential inputs into the region’s travel demand model and forecasting tools.

8.1 SOCIOECONOMIC FORECASTING

OVERSIGHT	TPB Technical Committee
MAJOR PRODUCTS	<ul style="list-style-type: none">• Updated Cooperative Forecasting land activity forecasts and documentation• Analysis of Activity Center and High Capacity Transit Station area forecasts• Information reports and products• Technical support• Annual Baseline Employment Guidance

Staff will continue to coordinate land use and regional transportation planning in the region. Central to this activity will be supporting initial activities in the development of the Round 10 Cooperative Forecasts. Activities required to coordinate the development of the Cooperative Forecasts and regional transportation planning will include:

- Support initiatives of COG Board of Directors and the TPB on matters related to the coordination and analysis of regional transportation and land use planning to support important regional policy discussions and decisions. This may entail analyzing the relationship between regional land use and transportation using a variety of analytical tools. These may include the use of scenario planning tools that were evaluated in FY 2021 and intended to support complex “what if” analyses that examine the effects and impacts that could occur under varying future land use and transportation conditions.
- Conduct analysis related to regional land use and transportation in support of the development of the regional long-range transportation plan update, Visualize 2045, as well as the consideration of equity in regional land use and transportation planning.
- Support the PDTAC in the coordination of local, state, and federal planning activities and the integration of land use and transportation planning in the region.

- Develop annual Baseline Employment Guidance update to support local governments preparing employment forecast estimates.
- Develop Travel Model Employment Definition Adjustment Factors, which are applied to develop a set of employment forecasts based on a consistent set of employment definitions and used in the regional travel demand model.
- Analyze changes in regional economic, demographic, and housing trends drawing on the results from the U.S. Census American Communities Survey, the Census Transportation Planning Products (CTPP) program, and from other available federal, state, and local data sources.
- Provide continued support for the Transportation Analysis Zone (TAZ) system used in the regional travel demand forecasting model and the Cooperative Forecasting process, including any activities that may be necessary to make TAZ adjustments to support future model development processes.
- Work with members of the Cooperative Forecasting and Data Subcommittee to enhance and improve the quality of small area (TAZ-level) employment, population, and employment data.
- Work with the Cooperative Forecasting and Data Subcommittee and the PDTAC to assess the effects of significant transportation system changes on the Cooperative Forecasting land activity forecasts.
- Work with the Cooperative Forecasting Subcommittee and the region's Planning Directors to develop updated growth forecasts at the regional and Transportation Analysis Zone (TAZ) level.
- Conduct initial activities to commence the next major Cooperative Forecasting update (Round 10). Activities may include evaluating econometric databases that could be used to help identify base year estimates and examining regional, national, and global demographic and market trends that will inform underlying regional growth assumptions, among others.
- Document key land use and transportation assumptions used in making updates to the Cooperative Forecasting land activity forecasts.
- Update and maintain Cooperative Forecasting land activity databases of TAZ-level population, household, and employment forecasts that are used as input into TPB travel demand-forecasting model.
- Map and analyze updated Cooperative Forecasting growth forecasts in relation to COG Activity Centers, high-capacity transit locations, and Equity Emphasis Areas.
- Respond to public and stakeholder comments on the Cooperative Forecasts and the Cooperative Forecasting process.
- Work with the Cooperative Forecasting Subcommittee to analyze results of the 2020 Census for use in developing future updates to the Cooperative Forecasts. Continue to provide regular seminars and trainings on accessing and analyzing Census data to support local demographic analysis and small-area forecasting.
- Develop and publish useful economic, demographic and housing-related information products including the Regional Economic Monitoring Reports (REMS), the annual "Commercial Development Indicators," the "Multi-family Rental Housing Construction" report, and economic and demographic data tables to be included in the Region Forward work program.
- Use TPB transportation planning data to update information for the approved COG Region Forward Targets and Indicators.

9. Mobility and Enhancement Programs

OVERSIGHT

TPB Technical Committee

MAJOR PRODUCTS

- Solicit and select projects for FTA Section 5310 funding
- TAP Coordination and project selection for DC, MD
- TLC Technical Assistance including final reports, provided by consultant teams to localities
- Updated website
- Regional Peer Exchange Network Activities
- Regional Roadway Safety Program Assistance, including final reports, provided by consultant teams

TOTAL COST ESTIMATE

\$ 988,671

The TPB solicits and selects projects for the following three programs. This activity will encompass the following work tasks in FY 2022:

9.1 ENHANCED MOBILITY GRANT PROGRAM

COG is the designated recipient for the FTA “Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities” program. This task includes:

- Continue the solicitation and select projects for FTA Section 5310 Enhanced Mobility funding (Summer/Fall 2021).
- Support the implementation of the Coordinated Plan by furthering the goals and strategies in the plan provide an array of transportation services and options to older adults and people with disabilities.
- Initiate the next required update of the Coordinated Plan, which will take approximately 8 months and will be approved in calendar year 2022.
- The UPWP does not provide financial support to implement the projects and oversee the grants that have been awarded. These activities are funded by the FTA Section 5310 Program.

9.2 REGIONAL ROADWAY SAFETY PROGRAM

TPB Resolution R3-2021, adopted in July 2020, established the Regional Roadway Safety Program to assist its member jurisdictions and the region to develop and/or implement projects, programs, or policies to equitably improve safety outcomes for all roadway users. Specifically, the Regional Roadway Safety Program provides short-term consultant services to member jurisdictions or agencies to assist with planning or preliminary engineering projects that address roadway safety issues.

- Develop and execute a regional program that provides short-term consultant services to member jurisdictions or agencies to assist with planning or preliminary engineering projects that address roadway safety issues, including studies, planning, or design projects that will improve roadway safety and lead to a reduction in fatal and serious injury crashes on the jurisdiction's roadways.
- Fund approximately three to eight technical assistance planning projects, or project design efforts at a level between \$30,000 and \$80,000 each, supported by UPWP core funding plus portions of the DDOT, MDOT, and VDOT Technical Assistance Programs, as well as if and when additional funding may be provided by state or local agencies.
- Develop tools and activities to facilitate regional learning about roadway safety issues among TPB member jurisdictions through regional peer exchange.
- Provide staff support for project proposal solicitation, review, and conduct.

9.3 TRANSPORTATION ALTERNATIVES SET-ASIDE PROGRAM

Coordinate and conduct the selection process for small capital improvement projects that will be awarded funding sub-allocated to the Washington metropolitan region through the state DOTs from the federal Transportation Alternatives Set-Aside Program (TAP). The TPB approves the final selection of projects and submits them to the states for implementation. TPB will promote TAP funding for projects that seek to complete the National Capital Trail Network (NCTN) or promote pedestrian and bicycle access in Transit Access Focus Areas (TAFAs). The TPB approved the NCTN and TAFAs concepts and maps in July 2020.

9.4 TRANSPORTATION LAND USE CONNECTION PROGRAM

The TLC Program offers short term consultant technical assistance to local jurisdictions to advance planning activities that strengthen the connection between local land use and transportation planning. This activity will encompass the following work tasks in FY 2022:

- Fund at least six technical assistance planning projects at a level between \$30,000 and \$60,000 each.
- Fund at least one project for between \$80,000 and \$100,000 to perform project design to achieve 30% completion.
- 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.
- Provide staff support for TLC Technical Assistance Projects to be conducted as part of the MDOT and VDOT Technical Assistance Programs and for other projects where additional funding is provided by state or local agencies.
- Promote TLC funding for projects that seek to complete the National Capital Trail Network (NCTN) or promote pedestrian and bicycle access in Transit Access Focus Areas (TAFAs). The TPB approved the NCTN and TAFAs concepts and maps in July 2020.

10. TPB Management and Support

OVERSIGHT

Transportation Planning Board

MAJOR PRODUCTS

- Materials for the meetings of the TPB, Steering Committee, Technical Committee, and State Technical Working Group
- Responses to information requests from elected officials, federal agencies, and media
- Participation in external meetings related to the TPB work program
- FY 2023 UPWP

TOTAL COST ESTIMATE

\$ 963,379

10.1 TRANSPORTATION PLANNING BOARD COMMITTEE SUPPORT AND MANAGEMENT AND UNIFIED PLANNING WORK PROGRAM

This activity includes support for the Transportation Planning Board (TPB), management activities not attributable to specific tasks in the work program, committee coordination and support, and development of the Unified Planning Work Program (UPWP).

TPB Committee Support

- Make all administrative arrangements and provide staff support for TPB, the TPB Steering Committee, the State Technical Working Group, the TPB Technical Committee, and special TPB work groups meetings.
- Maintain TPB Committee membership rosters and distribution lists and prepare meeting materials for TPB Committee meetings.
- Prepare the monthly Director's Report.
- Respond to periodic requests from TPB members, federal agencies, Congressional offices, media, and others for information or data of a general transportation nature.
- Meet with TPB Board members and participating agency staff to discuss current and emerging regional transportation planning issues.
- Respond to TPB correspondence and draft correspondence requested by the Board.
- Participate in meetings of other agencies whose programs and activities relate to and impact the TPB work program.
- Draft Memoranda of Understanding with other agencies for the TPB's review and approval.
- Participate in the Association of Metropolitan Planning Organizations (AMPO) and meetings.
- Coordinate TPB Planning Activities with Program Directors.
- Day-to-day management of and allocation of staff and financial resources.
- Monitor all work program activities and expenditures.

Unified Planning Work Program (UPWP)

The UPWP for the Metropolitan Washington Region describes all transportation planning activities utilizing federal funding, including FHWA Planning (PL) funds, FTA Section 5303 funds, and (FAA) 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.

This task includes:

- Develop a Unified Planning Work Program (UPWP) that complies with anticipated metropolitan planning requirements in the Fixing America's Surface Transportation (FAST) Act.
- Supervise the preparation, negotiation, and approval of the annual work program and budget involving the State Transportation Agencies, the TPB Technical Committee, the TPB Technical Committee, the Steering Committee, and the TPB.
- Prepare monthly UPWP progress reports for each of the state agencies administering planning funding and prepare all necessary federal grant applications submissions.
- Review all monthly UPWP invoices going to each of the state agencies administering planning funding.
- Prepare the FY 2023 UPWP.

11. Technical Assistance

This TPB work program activity responds to requests for technical assistance from the state and local governments and transit operating agencies. This activity takes the form of technical work tasks in which TPB-developed tools, techniques, data, and capabilities are used to support DDOT, MDOT, VDOT, and regional transit agencies' sub-area planning, travel monitoring, travel modeling, and data collection efforts related to regional transportation planning priorities. The funding level allocated to technical assistance is an agreed upon percentage of the total new FY 2022 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 regional transit 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 regional transit agency representatives and TPB staff. Specific technical assistance projects and work activities falling within the broad categories identified in this section are identified and coordinated through consultation with state departments of transportation and regional transit agencies throughout the fiscal year.

11.A. DISTRICT DEPARTMENT OF TRANSPORTATION

MAJOR PRODUCTS See program-specific products below

TOTAL COST ESTIMATE \$ 274,756

1. Program Development, Data Requests and Miscellaneous Services

MAJOR PRODUCT Specific scopes of work, on-going activity

TOTAL COST ESTIMATE \$ TBD

This work activity supports staff time spent in developing scopes of work for requested projects and in administering the DC Technical Assistance 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.

2. Regional Safety Program

MAJOR PRODUCTS

- Work products in support of Regional Safety Program described in Task 9.2
To be completed by June 2022

TOTAL COST ESTIMATE \$ TBD

The Regional Safety Program is an effort to provide short-term consultant services to individual member jurisdictions to assist with planning or preliminary engineering projects that address roadway safety issues. Examples include studies, planning, or design projects that will improve roadway safety and lead to a reduction in fatal and serious crashes on the jurisdiction's roadways. The program was established by TPB in 2020. District of Columbia Technical Assistance funds provide additional technical assistance funding for the Regional Safety Program.

3. Other Tasks to Be Defined

TOTAL COST ESTIMATE \$ TBD

This work element is established to respond to requests by DDOT for anticipated technical assistance work tasks that are not yet defined. These work tasks will be performed upon further specific authorization received from DDOT in FY 2022.

11.B. MARYLAND DEPARTMENT OF TRANSPORTATION

MAJOR PRODUCTS See program-specific products below

TOTAL COST ESTIMATE \$ 483,305

1. Program Development, Data Requests and Miscellaneous Services

MAJOR PRODUCT • Specific scopes of work, on-going activity

TOTAL COST ESTIMATE \$ TBD

This work activity supports staff time spent administering the Maryland 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.

2. Project Planning Studies

MAJOR PRODUCT • Specific scopes of work, on-going activity

TOTAL COST ESTIMATE \$ TBD

This work task supports staff time associated with the development of scopes of work, interagency coordination, and technical analyses associated with travel demand modeling, evaluation of alternatives and coordination with other governmental entities and consultants. This work element also anticipates technical work on new planning studies administered by MDOT, MD SHA and other agencies.

3. Feasibility/Special Studies

MAJOR PRODUCT • Specific scopes of work, on-going activity

TOTAL COST ESTIMATE \$ TBD

This work task will provide funding to support technical support on feasibility/special studies as requested by MDOT, SHA and other agencies in Maryland. Work may include but is not limited to technical support in ongoing corridor/subarea studies, initiating new studies ranging from major new corridor analyses to the development of travel demand forecasts for individual facilities and scenario analyses. Project authorizations may occur throughout the fiscal year as priorities dictate to address transportation planning initiatives and strategic goals of MDOT, SHA and other agencies.

4. Travel Monitoring/Transportation Performance Measures

MAJOR PRODUCT • Specific scopes of work, on-going activity

TOTAL COST ESTIMATE \$ TBD

This work task will provide funding for data collection and analysis to support the assessment of system performance on major freeway and arterial roadway segments of the region's transportation network in Maryland. Computation and analysis of various travel time, congestion level, system reliability and freight performance metrics will be performed as part of this work task.

5. Miscellaneous Technical Support:

MAJOR PRODUCT • Specific scopes of work, on-going activity

TOTAL COST ESTIMATE \$ TBD

This work task will support technical work associated with several pursuits of MDOT and MD SHA that do not fit into other Technical Assistance work tasks. Work activities could include Transit Oriented Development (TOD) studies, statewide model support, GIS applications, scenario studies, SHRP2 Capacity and Reliability Product Implementation assessments, and possibly freight/special generator studies may be conducted as part of this work task.

6. Transportation / Land Use Connections Program

MAJOR PRODUCTS • TLC Technical Assistance awards, technical reports from contractors,
To be completed by June 2022

TOTAL COST ESTIMATE \$ TBD

The Transportation / Land Use Connections (TLC) program is an effort to provide technical assistance to local governments in the Washington region to facilitate integrating land use and transportation planning at the community level. Begun as a six-month regional pilot program in January 2007, this project has been very well received. MDOT supplements this regional effort by allocating a portion of its Technical Assistance funds to provide additional TLC technical assistance funding for Maryland jurisdictions.

7. Regional Safety Program

MAJOR PRODUCTS • Work products in support of Regional Safety Program described in Task 9.2,
To be completed by June 2022

TOTAL COST ESTIMATE \$ TBD

The Regional Safety Program is an effort to provide short-term consultant services to individual member jurisdictions to assist with planning or preliminary engineering projects that address roadway safety issues. Examples include studies, planning, or design projects that will improve roadway safety and lead to a reduction in fatal and serious crashes on the jurisdiction's roadways. The program was established by TPB in 2020. Maryland Technical Assistance funds provide additional technical assistance funding for the Regional Safety Program.

8. Other Tasks yet to be defined

TOTAL COST ESTIMATE **\$ TBD**

This work element is established to respond to requests by MDOT and SHA for anticipated technical assistance work tasks that are not yet defined. These work tasks will be performed upon further specific authorization from MDOT and MDSHA in FY 2021.

11.C. VIRGINIA DEPARTMENT OF TRANSPORTATION

MAJOR PRODUCTS See program-specific products below

TOTAL COST ESTIMATE \$ 436,679

1. Program Development, Data Requests, and Miscellaneous Services

MAJOR PRODUCT • Specific scopes of work, on-going activity

TOTAL COST ESTIMATE \$ TBD

This work activity supports staff time spent administering the VA Technical Assistance work program throughout the year. Work activities include 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 received from local jurisdictions in Northern Virginia as advised by VDOT throughout the year.

2. Travel Monitoring and Survey

MAJOR PRODUCT • Program management plan, data and analysis, technical memorandum – on-going activity

TOTAL COST ESTIMATE \$ TBD

This work activity supports an ongoing continuous program to monitor travel and system performance on major commuting routes in Northern Virginia, with a goal to collect travel monitoring data for each major route on a 2 to 3-year cycle. Collected data and system performance analysis will include volume and occupancy data, travel time data, and other information. This travel monitoring program will also include collection of bicycle and pedestrian data at various locations throughout Northern Virginia, as identified by VDOT.

3. Travel Demand Modeling

MAJOR PRODUCT • Model output, technical memoranda, on-going activity

TOTAL COST ESTIMATE \$ TBD

This work activity is designed to assist VDOT with the use of results from the regional transportation travel demand model to support various transportation planning efforts and studies in Northern Virginia. Specific tasks undertaken will be identified throughout the year and are likely to include: developing forecasts and/or extracting specific information from the regional model forecasts for specific scenarios/options evolving out of ongoing studies and/or project planning efforts; and assistance with documentation, training and customization of the regional travel demand forecasting model for the Northern Virginia sub-area per VDOT's requirements.

4. Regional and Sub-Regional Studies

This work activity is designed to provide technical analysis and TPB staff support for various regional and sub-regional planning studies throughout the year as identified and requested VDOT and/or VDRPT. Work may include but not be limited to technical support for ongoing corridor/subarea studies and initiation of new studies ranging from major new corridor analyses to the development of travel demand forecasts for individual facilities. Staff may also assist VDOT in its work on a system-wide evaluation designed to provide information relating to the effectiveness of ongoing and planned projects and programs aimed at addressing the congestion and mobility challenges in Northern Virginia.

MAJOR PRODUCT

- **Technical analysis and support for Northern Virginia regional and sub-regional planning studies, on-going activity**

TOTAL COST ESTIMATE

\$ TBD

5. Transportation / Land Use Connections Program

MAJOR PRODUCTS

- **TLC Technical Assistance awards, technical reports from contractors, To be completed by June 2022**

TOTAL COST ESTIMATE

\$ TBD

The Transportation / Land Use Connections (TLC) program is an effort to provide technical assistance to local governments in the Washington region to facilitate integrating land use and transportation planning at the community level. Begun as a six-month regional pilot program in January 2007, this project has been very well received. VDOT supplements this regional effort by allocating a portion of its Technical Assistance funds to provide additional TLC technical assistance funding for Virginia jurisdictions.

6. Regional Safety Program

MAJOR PRODUCTS

- **Work products in support of Regional Safety Program described in Task 9.2, To be completed by June 2022**

TOTAL COST ESTIMATE

\$ TBD

The Regional Safety Program is an effort to provide short-term consultant services to individual member jurisdictions to assist with planning or preliminary engineering projects that address roadway safety issues. Examples include studies, planning, or design projects that will improve roadway safety and lead to a reduction in fatal and serious crashes on the jurisdiction's roadways. The program was established by TPB in 2020. Virginia Technical Assistance funds provide additional technical assistance funding for the Regional Safety Program.

7. Other Tasks to be Defined

TOTAL COST ESTIMATE \$ TBD

This work element is established to respond to requests by VDOT and VDRPT for anticipated technical assistance work tasks that are not yet defined. These work tasks will be performed upon further specific authorization from VDOT and VDRPT in FY 2022.

11.D. REGIONAL TRANSIT TECHNICAL ASSISTANCE

MAJOR PRODUCTS See program-specific products below

TOTAL COST ESTIMATE \$ 382,238

1. Program Development, Data Requests and Miscellaneous Services

MAJOR PRODUCT • Specific scopes of work, on-going activity

TOTAL COST ESTIMATE \$ TBD

This work activity supports staff time spent in developing the scopes for requested work tasks and administering the Regional Transit Technical Assistance work program throughout the year. Work activities include meeting with regional transit agency 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 regional transit agencies.

2. Transportation / Land Use Connections Program

MAJOR PRODUCTS • TLC Technical Assistance awards, technical reports from contractors,
To be completed by June 2022

TOTAL COST ESTIMATE \$ TBD

The Transportation / Land Use Connections (TLC) program is an effort to provide technical assistance to local governments in the Washington region to facilitate integrating land use and transportation planning at the community level. Begun as a six-month regional pilot program in January 2007, this project has been very well received. Regional Transit Technical Assistance funding supplements this regional effort to provide additional TLC technical assistance funding for design projects that would improve bicycle and pedestrian access to high-capacity transit in support of TPB regional transit goals.

3. Transit Within Reach Program

MAJOR PRODUCTS • Technical Assistance awards, technical reports from contractors,
To be completed by June 2022

TOTAL COST ESTIMATE \$ TBD

The Transit within Reach program will offer short-term consultant technical assistance to advance design projects to improve bike and walk connections to TPB Transit Access Focus Areas. The program will feature a competitive solicitation process to select qualifying projects to be funded.

4. High-Capacity Transit Map

MAJOR PRODUCTS

- High-capacity Transit Map graphic,
To be completed by June 2022

TOTAL COST ESTIMATE

\$ TBD

An aesthetically pleasing regional high-capacity transit (HCT) map that is mode specific and operator neutral will be developed for the TPB Planning Region. This project will include developing regional consensus on project inputs, including transit lines and a project definition for bus rapid transit, and using a consultant to develop a quality graphic design of an easily legible/understood schematic map. The final map, a high-resolution image, will be distributed to TPB members and stakeholders to share with the public.

5. Tasks to be Defined

TOTAL COST ESTIMATE

\$ TBD

This work element is established to respond to requests by regional transit agencies for anticipated technical assistance work tasks that are not yet defined. These work tasks will be performed upon further specific consultation with regional transit agencies in FY 2022.

Continuous Airport System Planning Program

OVERSIGHT

TPB Aviation Technical Subcommittee

MAJOR PRODUCTS

- Process 2021 Regional Air Passenger Survey, Phase 1
- Ground Access Travel Time Update
- Ground Access Forecast and Ground Access Element Update

TOTAL COST ESTIMATE

\$ 252,700 (Not funded with federal UPWP funding)

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. The major elements of the CASP program have now been consolidated into a reoccurring two-year cycle based on available and anticipated FAA funding. The CASP work program elements for the for FY 2022 UPWP cycle are as follows:

Air Cargo Element Update

The purpose of this project is to update the Ground Access/Air Cargo Element of the Regional Airport System Plan to examine ground accessibility for both air passengers and cargo. Maintaining ground access to the region's airports by both passengers and cargo provides significant benefits to the region's economy. However, ground access and landside congestion problems are expected to increase in the future. These ground access problems could adversely impact airport use in the Washington-Baltimore region. This update will provide an analysis of current and forecast ground access problems at Ronald Reagan Washington National, Washington Dulles International, and Baltimore-Washington International Thurgood Marshall Airports. It will analyze how current and future traffic congestion affects access to the airports by passengers and cargo. It will also look at overall conditions and demand for air cargo facilities in the region. Further, this plan element will integrate airport system ground access and facility planning into the overall regional transportation planning process for the National Capital Region and include recommendations for improving ground access to the region's airports.

Ground Access Travel Time Study Update

A critical and often overlooked component of the region's airport system is the transportation linkage between the airports and the surrounding communities. Travel time, quality of service and costs associated with the ground journey to the airport have been shown to affect the choice of airport and even the decision to travel by air. This study will permit analysis of travel time trends to the three commercial airports, as well as analysis of any new transportation improvements.

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 peak-period delay 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.

Ground Access Forecast and Ground Access Element Update

The update of forecasts of ground access trips to the region's three commercial airports is an important step in the airport systems planning process. This project will use the results of the most recent regional air passenger survey together with the latest available airport terminal area forecasts and land activity forecasts of future growth in the Washington-Baltimore region to update forecasts of ground access trips from local area Aviation Analysis Zones (AAZ) to each of the region's three commercial airports.

As part of this project, the Ground Access Element of the Regional Airport System Plan will be updated using the results of the most recent Regional Air Passenger Surveys and the latest Updated Ground Access Forecasts. Ground access and landside congestion problems are expected to increase in the future. In turn, these ground access problems could adversely impact airport use in the Washington-Baltimore region. This update will provide an analysis of current and forecast ground access problems at Ronald Reagan Washington National, Washington Dulles International, and Baltimore-Washington International airports. This plan element will also integrate airport system ground access and facility planning into the overall regional transportation planning process for the National Capital Region and include recommendations for improving ground access to the region's airports.

IV. PROPOSED FY 2022 STATE TRANSPORTATION AGENCY STATE PLANNING AND RESEARCH PROGRAMS (SPR)

District of Columbia Department of Transportation (DDOT)

The following presents the types of activities that DDOT uses Statewide Planning and Research Program (SPR) funding to implement.

STATE AND REGIONAL PLANNING

Develop and implement the annual State Planning and Research Program (SPR) that describes state planning activities as required under 23 CFR Part 420 Subpart A. Coordinate and manage Long-Range Transportation Planning activities related to Visualize 2045; and provide support to update, amend, modify, and enhance the TPB's Transportation Improvement (TIP) and the District's Statewide Transportation Improvement Program (STIP).

ARTS AND ACTIVATION

Review transportation zoning plans for environmental and transportation policy compliance. Provide oversight and direction for neighborhood planning efforts including development review and public space, and evaluate the impact of travel conditions on the District's multimodal transportation network.

PROJECT PLANNING

Plan and lead major capital projects to ensure project goals are met to support DDOT's long range objectives. Manage projects from feasibility and conceptual analysis to preliminary design and coordinate the implementation of ongoing transportation planning through the development of joint planning projects.

ACTIVE AND SUSTAINABLE TRANSPORTATION

Promote safe and convenient bicycling, walking, and public transit to reduce the number of motor vehicular injuries and fatalities in crashes; and ensure the safety of motor carrier operations through enforcement, regulations, and improving safety information systems and commercial motor vehicle technologies by increasing safety awareness.

PROJECT DEVELOPMENT AND ENVIRONMENT

Provide environmental oversight for all environmental and project development processes and ensure project compliance with Section 106 that meet National Environmental Policy ACT (NEPA) requirements.

DATA COLLECTION AND ANALYSIS

Maintain citywide roadway condition and asset inventory data base and ensure accurate and timely data is collected to assess pavement conditions. Collect and analyze data in support of the Highway Performance Monitoring System (HPMS).

TRAFFIC SAFETY DATA COLLECTION

Manage the I-295 and New York Avenue Weigh-in-Motion (WIM) site.

METROPOLITAN PLANNING

Describes regional transportation planning and special technical assistance projects proposed to be undertaken July 1, 2021, through June 30, 2022, by COG/TPB staff in cooperation with state and local agencies and WMATA.

PROGRAM FUNDING

The FY 2021 SPR Program funding is under development. The FY 2020 budget is \$3,280,554 (Federal = \$2,624,443.20 and District = \$656,110.80).

Maryland Department of Transportation State Highway Administration (MDOT SHA)

SYSTEMS AND PROGRAMMING

- Preparation and development of the six-year Consolidated Transportation Program (CTP) and preparation of the Annual Statewide Transportation Improvement Program (STIP)
 - Develop the FY 2022-2027 CTP.
 - Coordinate with appropriate state and local planning staffs, MPOs, and state, county, and municipal elected officials.
 - Prepare presentation materials for the Annual CTP Tour consultation with local elected officials.
 - Prepare and submit an annual program for use of available federal funds in accordance with Title 23 U.S.C. and the FAST Act (and/or successor federal authorizing act).
 - Coordinate the STIP with the regional TIPs, CTP, and local jurisdictions' highway improvement programs.
- Regional Planning
 - Coordinate between all levels of federal, state, and local governments to ensure that transportation plans are compatible.
 - Review agency and local programs/plans via the state Clearinghouse process.
 - Coordinate and review county and municipal master plans.
 - Assess transportation impacts of proposed major development projects.
 - Work with the MPOs in modifying and adhering to their planning process.
 - Work with the MPOs in the development of the UPWPs, CLRPs, TIPs, air quality conformity determinations, and management systems.
 - Update the Highway Needs Inventory (HNI).
 - Evaluate long-term highway needs and investment levels for various program categories and sub-categories.
 - Review and provide input on updates to the statewide long-range plan.
 - Develop the 2022 Annual Attainment Report on Transportation System Performance.

TRAFFIC

Traffic Monitoring Program

- Monitor the characteristics of highway traffic.
- Enhance procedures to collect, process, and disseminate traffic data.
- Ensure that the traffic monitoring system meets state needs and the requirements and guidelines set forth by FHWA and AASHTO.
- Study and, as appropriate, implement methods to improve the efficiency and effectiveness of traffic monitoring through statistical analysis.
- Improve the monitoring of traffic on freeways, particularly in urban areas.
- Ensure the collection of traffic volume, classification and weight data on SHRP monitoring sites.

Highway Statistics

- Mileage – Federal-Aid System
 - Develop new Federal Functional Classification and NHS maps and mileage tables for approval and distribution.
 - Update and maintain statistical records summary tables.
- State and Local Highway, Data Collection, Analysis and Distribution
 - Solicit, receive, and process reports from local jurisdictions regarding road improvements, mileage, etc.
 - Collect, update, and maintain data used for the Universe portion of the HPMS submission.
 - Update and maintain the highway information databases to meet on-going state and federal requirements.
 - Provide data used for the update of MDOT SHA’s highway maps.

Highway Performance and Monitoring System (HPMS)

- Update the HPMS database including revisions to any data elements, maintain sample size requirements to accurately reflect system-wide conditions, and submit an updated HPMS data file and related reports and data files.

Special Studies – Preliminary Studies

- Prepare engineering and feasibility studies.
- Develop preliminary purpose and need statements.
- Develop access control plans for selected primary highway corridors.
- Prepare interstate access point approval requests.

MDOT State Highway Administration Estimated FY 2022 State Planning & Research Program Elements Supporting the Washington Area Work Program	
ITEM	AMOUNT
Systems & Programming	
CTP	\$ 271,479
Regional Planning	\$ 354,249
Traffic Monitoring Program	\$ 769,056
Highway Statistics	\$ 1,615,124
Highway Performance Monitoring System	\$ 44,454
Special Studies	\$ 332,998
TOTAL	\$ 3,387,360

Virginia Department of Transportation (VDOT)

SPR FUNDS FOR DISTRICT PLANNING ANNUAL ACTIVITIES

Metropolitan Planning Support Activities

This element represents the various activities undertaken by Northern Virginia District Planning and Investment Management staff (with support from the VDOT Central Office staff as needed) in the development and implementation of the various elements/work tasks in the MPO's FY 2020 Unified Planning Work Program (UPWP) and the annual work program of the Metropolitan Washington Air Quality Committee and the regional Climate, Energy, Environment Policy Committee. Planned work items, to be conducted mostly by in-house staff, include:

The Department's participation in all work activities associated with the work programs of the: (a) Transportation Planning Board (TPB), (b) Metropolitan Washington Air Quality Committee (MWAQC); (c) Climate Energy, Environment Policy Committee (CEEPC); and Multi-Sector Working Group on Greenhouse Gas Emissions.

Oversight of the TPB/MWCOG activities such as: development/update of the long-range plan, TIP, regional air quality conformity analysis, regional Freight Plan, Congestion Management Program report, Commuter Connections program, and other regional studies undertaken by the MPO (e.g., Household Travel Survey, State of the Commute Survey, Modeling).

Regional air quality planning related activities undertaken by MWAQC and CEEPC, including: development of PM2.5 Maintenance Plan, Ground-Level Ozone NAAQS Attainment SIP, Clean Air Partners program, voluntary action to help reduce regional greenhouse gases.

Statewide Planning Support Activities

This element of the SPR work program provides for staffing within the Northern Virginia District Planning section to participate in and provide assistance to Transportation and Mobility Planning Division and other sections within the Department and the local agencies in a variety of tasks including:

Corridor and sub-area studies to identify either multi-modal or mode specific improvements to the transportation system addressing specific congestion/mobility challenges in the near-, mid-, or long-term. Examples of such studies currently underway in FY 2020 include: Assist NVTA in evaluation of significant transportation projects pursuant to HB 599; validate NVTA ratings; Fairfax County Parkway corridor Improvements; STARS Program Corridor Improvement studies; Smart Scale performance-based project prioritization and funding process.

Ongoing planning functions supported by SPR funding include:

Provide inputs and review of the findings and recommendations for the State LRP (VTRANS); assist with development and implementation of the Smart Scale Project Prioritization process;

Regular and ongoing update of the Statewide Planning System inventory and traffic forecasts;

Provide a dedicated full time Bicycle and Pedestrian Coordinator;

Provide input and review of federal functional classification updates; and

Provide assistance with General Assembly legislative impact statements and studies.

Project Development Support Activities

This element of the SPR work program represents the District Planning section staff working to:

Prepare and/or review traffic forecasts for project design (LD-104) and environmental documents (Project level conformity analysis for Noise, Air and other pollutants for NEPA documents).

Conduct and/or assist in the conduct of transportation planning studies initiated by VDOT and/or localities such as Comprehensive Plan updates, Transit Development Plan studies, corridor and sub area studies. etc.

Participate in the development and/or review of the traffic forecasts for IMR and IJR as developed for/by the VDOT PE and/or L&D sections of the District.

Review and comment on various Environmental Impact Reports received by the District as part of VDOT's role in Inter-agency consultation process.

Assist the Transportation and Land Use directors in the review and planning of project activities such as location and design of Park-and-Ride lots.

Local Planning Activities

This element outlines activities undertaken by the District Planning section staff to assist the planning activities at the locality level.

Locally prepared transportation studies: Participate in discussions on the scope of work for the conduct of Traffic Impact Analysis (TIA) reports by localities in response to proposed Comprehensive Plan/Master Plan amendment/Small Area Plans; review and comment on TIAs and/or CTIAs submitted by the localities to VDOT in part complying with the requirements of VA Code chapter 870.

Assist in the development of the transportation portion of local comprehensive/master plans as needed.

Provide transportation technical assistance to localities including in the development of travel demand models; applying travel demand model for project and/or locality planning levels.

SPR FUNDS FOR SPECIAL STUDIES TO BE CONDUCTED BY CONSULTANTS OR ENTITIES OTHER THAN DISTRICT STAFF (LIST EACH STUDY INDIVIDUALLY)

In addition to supporting staff planning activities, SPR funding is used to fund special plans and studies requiring outside consultants. This takes two different forms, depending on the size, complexity and budget of the project.

Major SPR Special Projects: These are projects that require major funding (generally over \$500,000) and time commitments and procurement of consultants. There are no current or anticipated Major SPR projects.

On-Call Consultant Plans and Studies: VDOT uses SPR funds to support routine planning projects, generally with budgets under \$500,000 and requiring consultants. VDOT procures on-call consultants for 2-year contracts and assigns the appropriate consultant team to work on District-level projects as needed. VDOT also conducts Strategically Targeted and Affordable Roadway Solutions (STARS) studies using SPR funds. STARS studies evaluate existing conditions data and

traffic forecasts and develop project alternatives to address identified needs prior to a project being submitted for implementation funding. STARS studies that will be underway in FY 22 include:

- Route 7 (East Market Street) from Plaza Street to Fort Evans Road – Leesburg, VA
- Route 50 (Lee Jackson Memorial Highway) from Route 28 to Stringfellow Road, Phase 2 – Chantilly, VA
- Route 234 (Sudley Road) from Godwin Drive to Battleview Parkway – Prince William County
- Route 236 (Little River Road) from I-495 to I-395 – Fairfax County

V. APPENDIX

Additional Tables

- Table A: Revenue - Detailed FY 2021 TPB Proposed Funding by Federal, State, and Local Sources (July 1, 2020 to June 30, 2021)

Memoranda of Understanding

- Fredericksburg Area Metropolitan Planning Organization (FAMPO)
- Calvert-St. Mary's Metropolitan Planning Organization (C-SMMPO)

Table A: Revenue - Detailed FY 2022 TPB Proposed Funding by Federal, State, and Local Sources (July 1, 2021 to June 30, 2022)

	FTA			FHWA			FED	LOCAL	
	SECT 5303 80%	State 10%	Local 10%	PL FUNDS 80%	State 10%	Local 10%	CASP (FAA 90%) SPR (FHWA 80%)	CASP (10%) SPR (20%)	Totals
DDOT ALLOCATIONS									
NEW FY 2022	\$ 492,727	\$ 61,591	\$ 61,591	\$ 1,902,414	\$ 237,802	\$ 237,802			\$ 2,993,926
PRIOR UNEXPENDED	\$ 145,502	\$ 18,188	\$ 18,188	\$ 267,567	\$ 33,446	\$ 33,446			\$ 516,337
CARRYOVER FY 2021	\$ 90,682	\$ 11,335	\$ 11,335	\$ 388,886	\$ 48,611	\$ 48,611			\$ 599,460
SUBTOTAL - DC	\$ 728,911	\$ 91,114	\$ 91,114	\$ 2,558,867	\$ 319,858	\$ 319,858			\$ 4,109,723
MDOT ALLOCATIONS									
NEW FY 2022	\$ 1,120,595	\$ 140,074	\$ 140,074	\$ 3,194,085	\$ 399,261	\$ 399,261			\$ 5,393,350
PRIOR UNEXPENDED	\$ 126,574	\$ 15,822	\$ 15,822	\$ 376,718	\$ 47,090	\$ 47,090			\$ 629,115
CARRYOVER FY 2021	\$ 256,974	\$ 32,122	\$ 32,122	\$ 688,690	\$ 86,086	\$ 86,086			\$ 1,182,080
SUBTOTAL - MD	\$ 1,504,143	\$ 188,018	\$ 188,018	\$ 4,259,494	\$ 532,437	\$ 532,437			\$ 7,204,545
VDRPT & VDOT ALLOCATIONS									
NEW FY 2021	\$ 928,124	\$ 116,016	\$ 116,016	\$ 2,824,565	\$ 353,071	\$ 353,071			\$ 4,690,861
PRIOR UNEXPENDED	\$ 98,187	\$ 12,273	\$ 12,273	\$ 311,515	\$ 38,939	\$ 38,939			\$ 512,128
CARRYOVER FY 2021	\$ 214,063	\$ 26,758	\$ 26,758	\$ 590,606	\$ 73,826	\$ 73,826			\$ 1,005,837
SUBTOTAL - VA	\$ 1,240,374	\$ 155,047	\$ 155,047	\$ 3,726,687	\$ 465,836	\$ 465,836			\$ 6,208,826
TOTAL FHWA/FTA FUNDING ALLOCATIONS									
NEW FY 2022	\$ 2,541,446	\$ 317,681	\$ 317,681	\$ 7,921,064	\$ 990,133	\$ 990,133			\$ 13,078,138
PRIOR UNEXPENDED	\$ 370,263	\$ 46,283	\$ 46,283	\$ 955,801	\$ 119,475	\$ 119,475			\$ 1,657,580
CARRYOVER FY 2021	\$ 561,719	\$ 70,215	\$ 70,215	\$ 1,668,183	\$ 208,523	\$ 208,523			\$ 2,787,377
SUB-TOTAL - FHWA-FTA	\$ 3,473,428	\$ 434,178	\$ 434,178	\$ 10,545,047	\$ 1,318,131	\$ 1,318,131			\$ 17,523,094
TOTAL BASIC UPWP	\$ 3,473,428	\$ 434,178	\$ 434,178	\$ 10,545,047	\$ 1,318,131	\$ 1,318,131			\$ 17,523,094
CASP PROGRAM							\$ 227,430	\$ 25,270	\$ 252,700
SPR PROGRAM							\$ 208,000	\$ 52,000	\$ 260,000
GRAND TOTAL UPWP	\$ 3,473,428	\$ 434,178	\$ 434,178	\$ 10,545,047	\$ 1,318,131	\$ 1,318,131	\$ 435,430	\$ 77,270	\$ 18,035,794

**AN AGREEMENT FOR COOPERATIVELY CONDUCTING THE
METROPOLITAN TRANSPORTATION PLANNING AND PROGRAMMING PROCESS
IN THE PORTION OF
THE METROPOLITAN WASHINGTON URBANIZED AREA
WITHIN THE FREDERICKSBURG AREA METROPOLITAN PLANNING
ORGANIZATION'S BOUNDARIES**

THIS AGREEMENT, made and entered into as of this 17 day of November, 2004 by and between the FREDERICKSBURG AREA METROPOLITAN PLANNING ORGANIZATION, hereinafter referred to as FAMPO and the NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD, which is the metropolitan planning organization for Northern Virginia (the jurisdictions contained in Virginia Planning District 8), Washington, D. C. and the suburban Maryland jurisdictions, and hereinafter referred to as the TPB, for the purpose of identifying the roles and responsibilities for cooperatively conducting the metropolitan transportation planning and programming process in the FAMPO portion of the Metropolitan Washington Urbanized Area..

NOW, THEREFORE, FAMPO and TPB do hereby agree as follows:

**ARTICLE I-FAMPO AREA TRANSPORTATION PLANNING AND PROGRAMMING
PROCESS**

A. Transportation Management Area: Under federal regulations where an urbanized area has a population greater than 200,000 and is therefore designated a Transportation Management Area (TMA) by the U.S. Secretary of Transportation, the designated TMA is responsible for meeting additional transportation planning requirements beyond those of Metropolitan Planning Organizations (MPO's) having an urbanized area under 200,000 in population. The Metropolitan Washington Urbanized Area exceeds 200,000 in population and the Washington, DC-MD-VA area has been designated a TMA. Because of the action of the U.S. Bureau of the Census in its determinations for the 2000 Census of Population, the Metropolitan Washington Urbanized Area was extended into the northern portion of Stafford County - a member of FAMPO. The Stafford County Board of Supervisors has determined that it is in the best interest of Stafford County that all metropolitan transportation planning and programming functions for Stafford County be conducted by FAMPO. The FAMPO Policy Committee has agreed to continue to provide metropolitan transportation planning and programming functions as well as to perform those additional planning responsibilities required for the portion of Stafford County that is determined to be within the Metropolitan Washington Urbanized Area.

B. TMA responsibilities and process: FAMPO commits to be responsible for meeting the TMA responsibilities for transportation planning and programming requirements within the Metropolitan Washington Urbanized Area of Stafford County.

C. Organization and Policy Committee membership: FAMPO as an organization maintains a structure that grants voting membership on its Policy Committee to local governing body elected representatives, officials of agencies that operate or administer major modes of transportation and appropriate State transportation officials. FAMPO's Policy Committee commits to maintain such a structure in the future as well.

D. 3C planning process: FAMPO has developed and will maintain a continuing, cooperative, and comprehensive transportation planning and programming process as provided for by the Transportation Equity Act for the 21st Century (1998); Section 134 of Title 23 of the United States Code; 49 USC 5303; 23 CFR Part 450, Subpart C; 49 CFR Part 613, Subpart A; and in accordance with the constitution and regulations of the Commonwealth of Virginia. This process will continue to result in transportation plans and programs that consider all transportation modes and support community development goals in the FAMPO area. These plans and programs will continue to lead to the development and operation of an integrated, intermodal transportation system that facilitates the efficient and economic movement of people and goods. Such plans and programs include the development of a long-range transportation plan and a transportation improvement program (TIP) that provide compliance with the public participation components of federal law and regulation, meet the requirements of the Americans With Disabilities Act, and the Civil Rights Act, and provide an opportunity for at least one formal public meeting annually to review planning assumptions and the plan development process and an opportunity for at least one formal meeting during the TIP development process.

E. Congestion Management System: FAMPO will develop a Congestion Management System (CMS) which will provide a systematic process for identifying transportation system performance, usage, and efficiency, and proposed strategies to alleviate congestion, and for the effective management of new and existing transportation facilities through the use of travel demand reduction and operational management as well as other strategies. Such a CMS will be developed for the portion of Northern Stafford County that is included in the Washington DC UZA. The process will be in place prior to January 1, 2005 and will be coordinated with the TPB.

F. Unified Planning Work Program: FAMPO will continue to provide and maintain a Unified Planning Work Program (UPWP), developed in cooperation with the State and operators of publicly owned transit that meets the requirements of 23 CFR part 420, subpart A. The UPWP will provide sufficient detail to identify who will perform the work, the schedule for completing it, the products that will be developed and the documented planning activities performed utilizing funds provided under title 23, U. S. C., and the Federal Transit Act. FAMPO will coordinate with the TPB in the development of the UPWP.

G. Planning certification: FAMPO acknowledges that a formal certification procedure by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) is required to be performed in review of the transportation planning process which

covers part of an urbanized area subject to the TMA regulations. FAMPO will cooperate and participate in the formal review process in accordance with the FHWA and FTA regulations and procedures to assure conformity of plans and programs as identified in 40 CFR part 51. FHWA and FTA will coordinate such reviews to coincide with TPB's triennial certification review.

H. Air quality responsibilities (one-hour standard): Stafford County was identified as part of the Washington Metropolitan Statistical Area (MSA) following the 1990 Census of Population and as a consequence it was determined to part of the Metropolitan Washington Ozone Nonattainment Area for the one hour standard. Stafford County participates with the Metropolitan Washington Air Quality Committee (MWAQ) for the one-hour standard (which is anticipated to be phased out by mid 2005). FAMPO shall continue to coordinate its transportation planning and programming air quality responsibilities, for the one hour standard, with TPB to ensure that a transportation plan is developed that conforms to air quality standards for the area and the State Implementation Plan, as outlined in the agreement dated December 12, 1994 (attached to this document), as long as that standard remains applicable under federal regulations.

I. Air quality responsibilities (eight-hour standard): In 2004, regulations for the eight-hour air quality standard were released by the U S Environmental Protection Agency. Spotsylvania County, Stafford County, and the City of Fredericksburg were determined to constitute a separate non-attainment area under the eight-hour standard. FAMPO assumes the responsibilities for the transportation planning and programming process under the eight-hour air quality standard for the entire FAMPO region, including Stafford County.

J. Implementation of the functions, responsibilities, and duties identified in this agreement: Implementation shall be as described specifically in the annual unified planning work program for FAMPO and the TPB.

K. FAMPO transportation planning area: The transportation planning area boundary for the FAMPO transportation planning process shall include the City of Fredericksburg, and Spotsylvania and Stafford Counties in their entirety (current boundary), unless a boundary modification is approved by FAMPO and the Governor.

ARTICLE II- COORDINATION OF PLANNING ACTIVITIES

TPB and FAMPO will maintain coordinated, cooperative and continuing planning processes. TPB and FAMPO shall coordinate their planning processes and produce required planning documents on the same cycle, as determined by TPB's current planning cycle.

ARTICLE III-TIME FRAME OF THE PROCESS

V. APPENDIX

ARTICLE III-TIME FRAME OF THE PROCESS

The metropolitan transportation planning and programming process shall be established as a continuing procedure effective the date of the execution of this AGREEMENT by all participants.

ARTICLE IV-TERMINATION

This AGREEMENT shall be terminated upon the occurrence of any of the following:


The provisions of this agreement maybe repealed by the mutual agreement of the FAMPO and the TPB with not less than ninety (90) days written notice to the other party and to the FHWA and FTA.

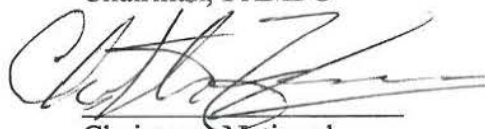
ARTICLE V-AMENDMENTS


Amendments to this AGREEMENT, as mutually agreed to, may only be made by written agreement between the parties of this AGREEMENT and subject to a formal review by FHWA and FTA.

IN WITNESS WHEREOF, all concerned parties have executed this AGREEMENT on the day and year first written above.


Chairman, FAMPO

WITNESSED BY 
DATE 11-17-2004


Chairman, National
Capitol Region
Transportation Planning Board

WITNESSED BY 
DATE 11-17-2004

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

**RESOLUTION ON AGREEMENT BETWEEN THE NATIONAL CAPITAL REGION TRANSPORTATION
PLANNING BOARD AND THE CALVERT-ST. MARY'S METROPOLITAN PLANNING
ORGANIZATION AND CALVERT COUNTY, MARYLAND**

WHEREAS, the National Capital Region Transportation Planning Board (TPB) is the officially designated Metropolitan Planning Organization (MPO) for the Metropolitan Washington area; and

WHEREAS, the TPB's planning area is part of the Washington, DC-MD-VA 8-Hour Ozone Nonattainment area, as shown on the map in Attachment A, and as such, is subject to regional air quality conformity analysis of its Transportation Plans and Transportation Improvement Programs (TIPs); and

WHEREAS, the Washington, DC-MD-VA 8-Hour Ozone Nonattainment area also includes Calvert County, and transportation projects within Calvert County have been included in TPB's regional air quality conformity analysis as appropriate; and

WHEREAS, the Calvert-St. Mary's Metropolitan Planning Organization (C-SMMPO) is the newly officially designated MPO for Southern Maryland, whose planning area includes Calvert County, as shown on the map in Attachment B; and

WHEREAS, under federal surface transportation legislation (23 U.S.C. § 134 and 49 U.S.C. § 5303) related to MPO Consultation in Plan and TIP Coordination for Nonattainment areas, "If more than one metropolitan planning organization has authority within a metropolitan area or an area which is designated as a nonattainment area for ozone or carbon monoxide under the Clean Air Act (42 U.S.C. § 7401 et seq.), each metropolitan planning organization shall consult with the other metropolitan planning organizations designated for such area and the State in the coordination of plans and TIPs" and

WHEREAS, the TPB and the C-SMMPO have agreed to consult with the Maryland Department of Transportation (MDOT) in the coordination of their respective plans and TIPS; and

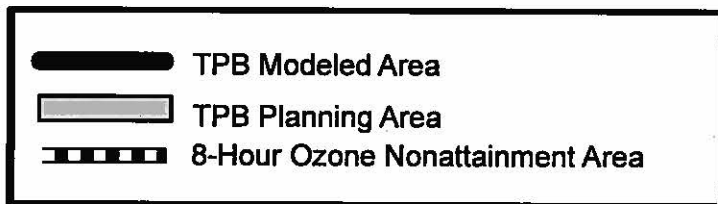
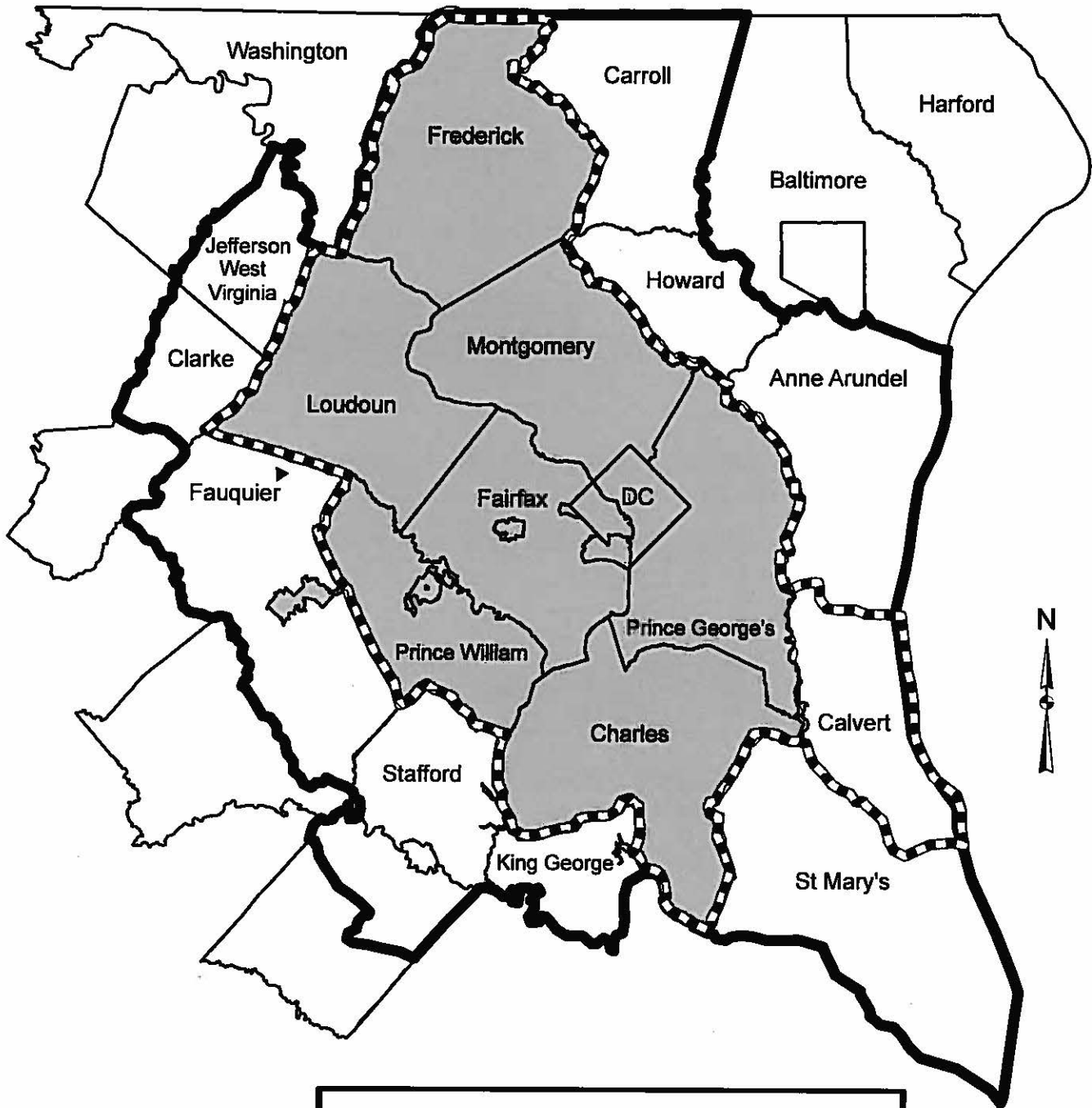
WHEREAS, the TPB, the C-SMMPO, and Calvert County have agreed to a process where C-SMMPO will develop Plans and TIPs to include Calvert County projects, and the TPB will continue to include these Calvert County projects in its regional air quality conformity analysis;

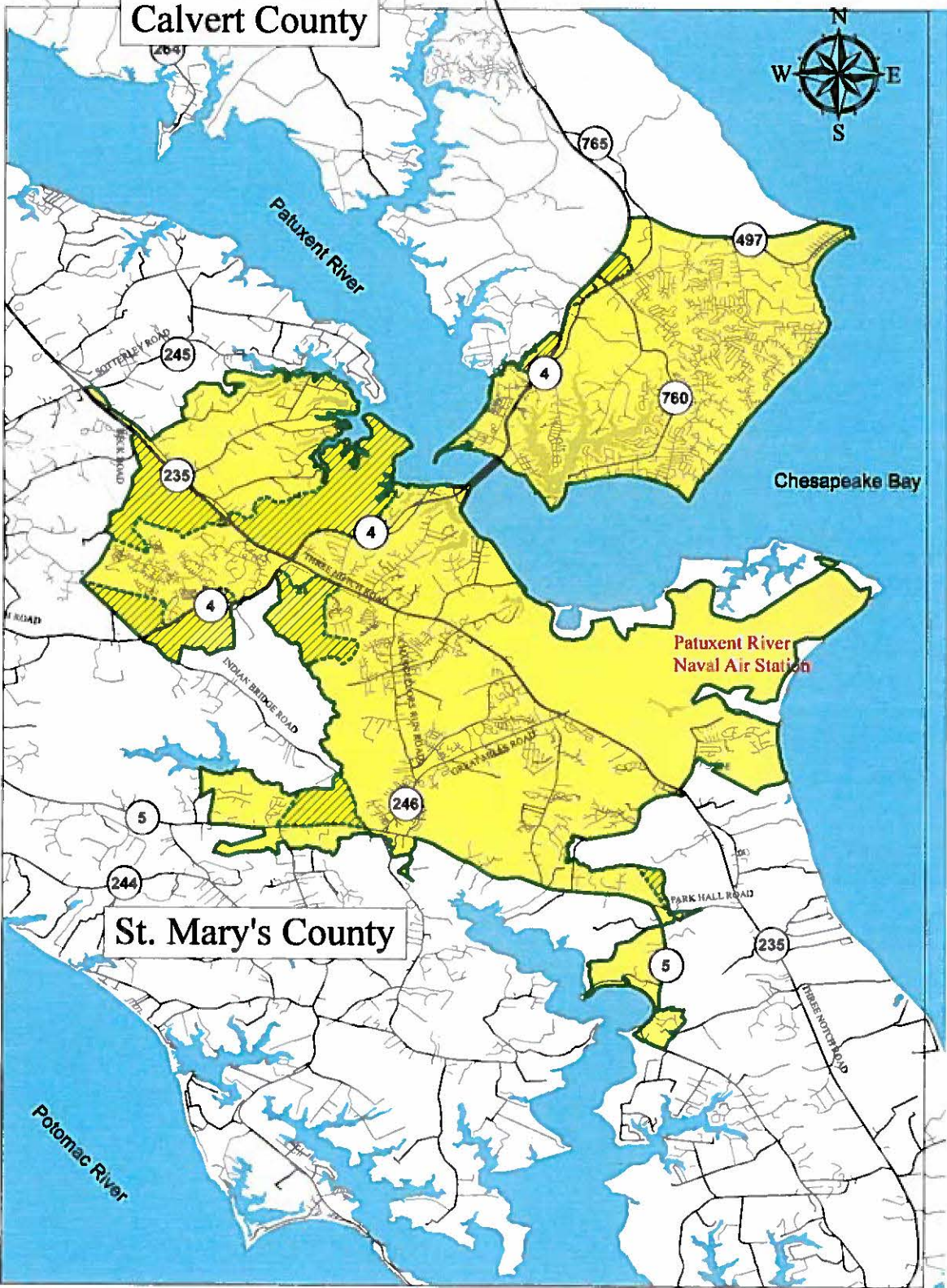
NOW, THEREFORE, BE IT RESOLVED THAT THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD approves execution, by its Chairman, of the attached *Agreement between the National Capital Region Transportation Planning Board (TPB) and the Calvert-St. Mary's*

Metropolitan Planning Organization (C-SMMPO) and Calvert County, Maryland on the conformity analysis and determination of transportation plans, programs, and projects in Calvert County, Maryland document to ensure that transportation plans, programs, and projects in Calvert County are assessed for regional air quality conformity as is required in the Clean Air Act Amendments of 1990 (with subsequent amendments).





Adopted by the Transportation Planning Board at its regular meeting on January 20, 2016

ATTACHMENT A
TPB Transportation Planning Area and
Washington, DC-MD-VA 8-Hour Ozone Nonattainment Area





Legend

-  Boundary Line
-  Urbanized Area Boundary Incorporated into Adjusted Urbanized Area
-  Adjusted Urbanized Area
-  Metropolitan Planning Area

**Calvert - St. Mary's
Metropolitan Planning
Organization
Adjusted Urbanized Area
and
Metropolitan Planning Area**



Agreement between the National Capital Region Transportation Planning Board (TPB) and the Calvert-St. Mary's Metropolitan Planning Organization (C-SMMPO) and Calvert County, Maryland on the conformity analysis and determination of transportation plans, programs, and projects in Calvert County, Maryland

Recognizing that Calvert County, Maryland, is a member of the C-SMMPO and is included in the Washington DC-MD-VA 8-hour Ozone Nonattainment area, TPB and C-SMMPO and Calvert County agree upon the following procedures for ensuring that transportation plans, programs, and projects in Calvert County are assessed for regional air quality conformity as is required in the Clean Air Act Amendments of 1990 (with subsequent amendments):

1. Transportation plans, programs, and projects in the C-SMMPO Metropolitan Planning Area (MPA) of Calvert County will be included in the Long Range Transportation Plan and Transportation Improvement Program developed by the C-SMMPO.
2. The C-SMMPO and Calvert County, in consultation with the Maryland Department of Transportation (MDOT), will submit the plan, program, and project inputs for Calvert and for the C-SMMPO MPA to the TPB for inclusion in each update of the TPB's regional air quality conformity analysis and determination for the Washington, DC-MD-VA 8-Hour Ozone Nonattainment area.
3. The timeframe for analysis and coordination will be outlined by the schedule in the TPB's *Call For Projects* document for each cycle.
4. The TPB's *Air Quality Conformity Scope of Work* will provide details regarding the steps taken to ensure compliance with the Federal Transportation Conformity Rule (40 CFR 51 and 93). For example, the TPB will coordinate with Calvert County and the State of Maryland to obtain all necessary analysis inputs and latest planning assumptions (e.g., land activity, vehicle registration data, etc.).
5. Project level conformity analyses will continue to be performed by the State, and assessed through the interagency consultation process, as is currently done for all state projects.
6. Calvert County will be involved in all aspects of the TPB's air quality conformity analysis and determination including its interagency consultation process:
 - Formal involvement for Calvert County on the TPB will be provided through MDOT, and through Calvert County's membership on the

Metropolitan Washington Air Quality Committee (MWAQC) and on the MWAQC Technical Advisory Committee.

- Informal involvement by Calvert County will be provided through participation by representatives of Calvert County in TPB committees and processes concerned with regional air quality conformity, including receipt of all materials and participation in all meetings, discussions, and reviews.

7. The TPB will provide copies of the conformity report to C-SMMPO and Calvert County at the completion of each conformity cycle. As relevant, portions of the TPB conformity report will be included in the C-SMMPO Plan and TIP documentation to demonstrate conformity.

This agreement will remain in effect for the 2008 Ozone National Ambient Air Quality Standards (NAAQS) and all future NAAQS applicable to Calvert County.

Executed by the undersigned this _____ day of _____ 2016:



Tim Lovain, Chair
National Capital Region Transportation
Planning Board



Steven R. Weems, Chairperson
Calvert - St. Mary's Metropolitan
Planning Organization



Evan K. Slaughenhaupt Jr, President
Board of County Commissioners
Calvert County, Maryland

Approved for legal sufficiency

on January 27, 2016 by



County Attorney



Department of Community Planning and Building
INTEROFFICE MEMORANDUM

TO: Board of County Commissioners
VIA: Terry Shannon, County Administrator TLS
VIA: Thomas Barnett, Director of Community Planning and Building
FROM: Patricia Haddon, Principal Planner PH
DATE: January 27, 2016
SUBJECT: Agreement between the National Capital Region Transportation Planning Board and the Calvert-St. Mary's Metropolitan Planning Organization and Calvert County, Maryland on the conformity analysis and determination to transportation plans, programs, and projects in Calvert County, Maryland

Background:

In their letter of July 24, 2015, to Dr. Kwame Arhin, Planning & Program Manager of the Federal Highway Administration, Maryland Division, the Calvert-St. Mary's Metropolitan Planning Organization (C-SMMPO) advised that they were coordinating the required air quality conformity analysis with the MPO for the National Capital Region, Transportation Planning Board (TPB), as Calvert County's portion of the C-SMMPO was within the non-attainment area for the 2008 8-Hour Ozone area within the National Capital Region.

Transportation plans, programs and projects in Calvert County must be included in the conformity analysis and determination carried out by the TPB for the Washington Metropolitan Statistical Area, as per a Proposal for Satisfying Federal Metropolitan Planning Requirements for Charles and Calvert Counties (Attachment A) and TPBs current resolution, adopted in 1993 (Attachment B.)

The TPB resolution (R23-93, Resolution Responding to Governor Schaefer's Letter Concerning the Metropolitan Planning Boundary in Maryland) which includes Calvert county in the TPB's air quality conformity analysis was the result of coordination between the State transportation air agencies and the Federal Highway Administration (FHA) and the Federal Transit Administration (FTA), in response to requirements in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

Discussion

Since the establishment and inclusion of Calvert County in the C-SMMPO, the TPB staff has initiated discussions with the Maryland Department of Transportation to review and update the 1993 resolution. Updates have resulted in the attached agreement between TPB, the C-SMMPO, and Calvert County to address analysis issues related to inclusion of C-SMMPO and Calvert County transportation plans, projects and programs in TPB's regional air quality conformity analysis. The agreement has been reviewed by the TPB, MDOT, the C-SMMPO, FHA and FTA, and the County Attorney, John Norris. The agreement requires BOCC approval and signature.

Conclusion/Recommendation:

Staff requests the BOCC review and authorize signature of the attached agreement by the President of the County Commissioners, Evan Slaughenhoupt.

Attachments: 3

ATTACHMENT A

Proposal for Satisfying Federal Metropolitan Planning Requirements for Charles and Calvert Counties

The TPB proposes the conformity procedures defined in parts 1-4 below. These procedures affirm the practices that have been used for the past two years for the Metropolitan Washington Region non-attainment area as a means for assuring conformity in Charles and Calvert Counties.

1. The TPB agrees with Governor Schaefer that Charles and Calvert Counties not be a part of the planning area covered by the TPB.
2. Transportation plans, programs and projects in Charles and Calvert Counties will be excluded from the TPB's Long-Range Transportation Plan and six-year Transportation Improvement Program (TIP), and included in the statewide Long-Range Transportation Plan and state-wide Transportation Improvement Program (STIP) developed by the State of Maryland.
3. Transportation plans, programs and projects in Charles and Calvert Counties will be included in the conformity analysis and determination carried out by the TPB for the Washington Metropolitan Statistical Area (MSA). Conformity determinations concerning proposed added projects will be based on a system level analysis for the non-attainment area.
4. Charles and Calvert Counties will be involved in all aspects of the conformity analysis and determinations.
 - Formal involvement for Charles and Calvert Counties will be provided through the Maryland Department of Transportation on the TPB, and through Charles and Calvert Counties' membership on MWAQC and its Technical Staff Coordination Committee (TSCC).
 - Informal involvement by Charles and Calvert Counties will be provided through participation by their representatives in COG and TPB committees and processes concerned with conformity, including receipt of all materials and participation in all meetings, discussions, and reviews.

These procedures are subject to amendment should they be found in conflict with the final rule on conformity promulgated by the U.S. Environmental Protection Agency.

TPB R23-93
December 16, 1993

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D. C. 20002

RESOLUTION RESPONDING TO GOVERNOR SCHAEFER'S
LETTER CONCERNING THE METROPOLITAN PLANNING
BOUNDARY IN MARYLAND

WHEREAS, the National Capital Region Transportation Planning Board (TPB) is the officially designated Metropolitan Planning Organization (MPO) for the Metropolitan Washington area; and

WHEREAS, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 requires MPO boundaries to "at least include the boundaries of the non-attainment area, except as otherwise provided by agreement between the metropolitan planning organization and the Governor;" and

WHEREAS, in a letter of April 16, 1992, the Governor of Maryland presented a proposal to the TPB under which "the Washington area MPO boundaries should not be expanded to encompass Charles and Calvert Counties;" and

WHEREAS, on September 16, 1992, the Transportation Planning Board (TPB) requested that the Metropolitan Washington Air Quality Committee (MWAQC) consider and provide comments to the TPB on the implications of Governor Schaefer's request for air quality planning and conformity findings in the Metropolitan Washington Area; and

WHEREAS, there has been extensive coordination with the State Transportation Agencies and the State Air Quality Agencies, who are members of MWAQC, and with Federal Highway Administration (FHWA) and Federal Transit Administration (FTA); and

WHEREAS, on December 9, 1992, the MWAQC adopted a set of recommendations to the TPB on responding to Governor Schaefer's request; and has transmitted those recommendations to the TPB; and

WHEREAS, the "Interim Guidance on the ISTEA Metropolitan Planning Requirements" issued by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) of April 6, 1992, contains the following guidance on Metropolitan boundaries:

"In non attainment areas, if the MPO and the Governor agree to exclude a portion of the nonattainment area, they must be able to demonstrate how conformity will be ensured in the excluded portion. Such proposals should be coordinated with FHWA, FTA, EPA, the state transportation agency and the state air quality agency before a final decision is made".

NOW, THEREFORE, BE IT RESOLVED THAT: The National Capital Region Transportation Planning Board endorses the MWAQC recommendations as defined in Attachment A, agrees to respond favorably to the April 16, 1992 request of the Governor of Maryland, and also to transmit copies to the Federal Highway Administration, the Federal Transit Administration, and the Environmental Protection Agency.

Adopted by the Transportation Planning Board at its regular meeting on December 16, 1992.

TPB R12-2020
March 18, 2020

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

**RESOLUTION TO APPROVE
THE FY 2021 UNIFIED PLANNING WORK PROGRAM (UPWP)**

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 Fixing America's Surface Transportation (FAST) Act for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the Statewide and Metropolitan Transportation Planning rule as published in the May 27, 2016 Federal Register by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) require a Unified Planning Work Program (UPWP) for Transportation Planning; and

WHEREAS, the Unified Planning Work Program is required as a basis and condition for all funding assistance for transportation planning to state, local and regional agencies by the FTA and FHWA; and

WHEREAS, the FY 2020 Unified Planning Work Program for Transportation Planning for the Washington Metropolitan Region was approved by the Transportation Planning Board (TPB) on March 18, 2020; and

WHEREAS, on February 13, 2019, the TPB released the draft FY 2020 UPWP for public comment; and

WHEREAS, the TPB had the opportunity to review the outline and budget on January 22, 2020 and the draft document on February 19, 2020; and

WHEREAS, the TPB Technical Committee reviewed the outline and budget on January 10, 2020 and the draft document on February 7, 2020, and recommended approval by the TPB of the final draft FY 2021 UPWP at its meeting on March 6, 2020; and

WHEREAS, on March 18, 2020, the TPB adopted resolution R11-2020 which identifies certain work activities and budgets for carryover funding from FY 2020 to FY 2021, and these work activities and budgets are incorporated into the final version of the FY 2021 UPWP;

NOW, THEREFORE, BE IT RESOLVED THAT the National Capital Region Transportation Planning Board approves the FY 2021 Unified Planning Work Program for Transportation Planning for the Metropolitan Washington Region.

Adopted by the Transportation Planning Board at its regular meeting on March 18, 2020

ITEM 9 – Action

March 17, 2021

The FY 2022 Commuter Connections Work Program (CCWP)

Action: Adopt Resolution R16-2021 to approve the FY 2022 CCWP.

Background: At the February 17 meeting, the board was briefed on the draft FY 2022 CCWP. The CCWP is an annual work statement that identifies alternative commute program projects and services designed to help improve traffic congestion and meet regional air quality goals. The board will be briefed on the final draft of the FY 2022 CCWP and will be asked to approve it.

TPB R16-2021
March 17, 2021

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

**RESOLUTION APPROVING
THE FY 2022 COMMUTER CONNECTIONS WORK PROGRAM**

WHEREAS, the National Capital Region Transportation Planning Board (TPB) has been designated by the Governors of Maryland and Virginia and the Mayor of the District of Columbia as the Metropolitan Planning Organization (MPO) for the Washington Metropolitan Area; and

WHEREAS, the FY 2021 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; and

WHEREAS, 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, and Commuter Connections constitutes the major demand management component of the congestion management process to be approved by the TPB, and Commuter Connections also supports regional air quality goals; and

WHEREAS, on March 18, 2020, the TPB approved the FY 2021 CCWP; and

WHEREAS, the draft FY 2022 CCWP was reviewed by the Commuter Connections Subcommittee of the TPB Technical Committee on January 19, 2021; and

WHEREAS, comments and suggestions on the work activities in the draft FY 2022 CCWP were reviewed by District of Columbia Department of Transportation (DDOT), the Maryland Department of Transportation (MDOT), and the Virginia Department of Transportation (VDOT) and incorporated into the final version; and

WHEREAS, the Draft FY 2022 CCWP was released for comment on February 11, 2021; and

WHEREAS, the TPB Technical Committee reviewed the work program at its meetings on February 5, 2021 and March 5, 2021;

NOW, THEREFORE, BE IT RESOLVED THAT the National Capital Region Transportation Planning Board approves the FY 2022 Commuter Connections Work Program for the Metropolitan Washington Region.

**FY 2022 WORK PROGRAM FOR THE
COMMUTER CONNECTIONS PROGRAM
FOR THE GREATER WASHINGTON
METROPOLITAN REGION**

D R A F T

March 17, 2021



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.

**FY 2022 WORK PROGRAM FOR THE
COMMUTER CONNECTIONS PROGRAM
FOR THE GREATER WASHINGTON
METROPOLITAN REGION**

March 17, 2021

**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 2022 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, Maryland Transit Administration, 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 on will be conducted regionally, and that the costs are allocated to the participating funding agencies per 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. Commuter Connections program services have also been incorporated into larger construction projects such as the Transform 66 Express Lanes construction projects in Northern Virginia.

The FY 2022 Commuter Connections program elements are classified as follows:

REGIONAL PROGRAMS	JURISDICTIONAL PROGRAMS
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 2022 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. Table 1 in this document shows the budget and work program expenditures for FY 2022 for each work activity. Table 2 shows the total FY2022 funding shares each of the state funding agencies will be contributing to the program for each of the program elements. Each of the project areas in the work program also show the overall cost estimate as well as associated consultant costs and any substantive direct costs.

Planning Process Requirements

The National Capital Region Transportation Planning Board (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 travel demand management component of the congestion management process to be approved by the TPB. Initially, Commuter Connections provided transportation emission reduction measure benefits for inclusion in the air quality conformity determination, which was approved by the TPB as part of the annual update of the Long Range Plan and Transportation Improvement Program. However, for the past decade the TPB has not required the use of the program's air quality impacts in the conformity analyses. In addition, Commuter Connections transportation impacts from its various programs may be needed to meet Performance Based Planning and Programming (PBPP) regional targets.

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 updated Master Agreement was fully signed in FY 2020 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. 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 reviews all RFPs and RFQs 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, 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 implementation issues, such as the development of regional TDM marketing campaigns and the Employer Recognition Awards. A Strategic Plan, adopted in November 2007 but updated most recently in January 2020, serves as a framework regarding the roles and responsibilities of the Commuter Connections stakeholders. The Strategic Plan can be accessed at 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 2022 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 web site, and support to commuter assistance programs operated by local jurisdiction, transportation management associations, and employer-based commuter assistance programs. Work will also help support a regional Advanced Transportation and Congestion Management Technologies Deployment Program (ATCMTD) grant to expand the incenTrip program.
- 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 or by Metrorail 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, incentive programs, 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. The CarpoolNow mobile app will allow for the provision of a cash incentive to drivers who offer dynamic carpool rides to passengers during weekday peak hour commuting periods. The Flextime Rewards program will allow commuters using designated corridors in the region to be notified of unusual traffic delays and receive a cash incentive in exchange for delaying or eliminating their normal commuting trip during weekday peak hour commuting times. 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. The incenTrip mobile application will allow commuters to avoid both day-to-day congestion and traffic jams caused by traffic accidents, work zones, special events and adverse weather conditions. App users also earn reward points while receiving recommendations on the best travel mode, departure time and/or route recommendation and can exchange their points for a cash incentive. Work on incenTrip will also be leveraged with an Advanced Transportation and Congestion Management Technologies Deployment Program (ATCMTD) USDOT grant.

- Monitoring and Evaluation includes data collection and analysis activities as well as program tracking and monitoring reports for each program area. The regional TDM Evaluation Framework Methodology document will be updated, the 2022 State of the Commute survey will be conducted, and a Technical Report will be issued. The 2022 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 the budget for the carpool incentive was revised to match demand; the Flextime Rewards program was introduced based on feedback received from the State of the Commute survey; 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, 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 aids employers to hold bicycling seminars for employees, maintaining an up-to-date regional Bicycling Guide, and offering car-sharing and bike-sharing information to lower employers' fleet management costs. Resources will also be provided 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. A GRH Baltimore region and St. Mary’s County Applicant Survey will be conducted in FY 2022. Marketing and advertising activities will continue to be developed and implemented in the Baltimore region.

Figure 1 of this document illustrates that the Commuter Connections service area is much larger than the designated 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 plus 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. The TERMS 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 adopted into the regional Transportation Improvement Program (TIP) by the Transportation Planning Board (TPB) and 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 2020 to be:

	<u>Daily Impacts</u>
VT Reductions:	137,000
VMT Reductions:	2,648,000
NOx Reductions (Tons):	0.5
VOC Reductions (Tons):	0.4
	<u>Annual Impacts</u>
PM 2.5 Reductions (Tons)	8
PM 2.5 Precursor NOx Reductions (Tons)	177
CO2 Reductions (Tons)	258,000

Extensive monitoring and evaluation have been carried out for the Commuter Connections Program over the past two decades, 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 2018 – 2020 TDM 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 2018 – 2020 TDM Analysis Report that was released on November 17, 2020:

	<u>Daily Impacts</u>
Cost per VT reduced:	\$0.18
Cost per VMT reduced:	\$0.01
Cost per ton of NOx reduced:	\$48,000
Cost per ton of VOC reduced:	\$63,000
	<u>Annual Impacts</u>
Cost Per ton of PM 2.5 Reduced	\$712,000
Cost per ton of PM 2.5 Precursor NOx Reduced	\$ 36,000
Cost per ton of CO2 Reduced	\$ 24

The Regional TDM programs offer other benefits to residents and commuters of the Washington metropolitan region, in societal objectives such as greater mobility, improved health/safety, and enhanced livability/quality of life. One benefit area that is particularly increasing in importance is transportation system performance, as new performance measurement requirements are established by the region. In the FY2018 – FY2020 regional TDM program evaluation analysis,

estimates of regional cost savings generated for selected societal benefits of the Commuter Connections travel and emissions impacts include:

- Air pollution/emissions reductions (reductions in NO_x, VOC, PM 2.5 pollutants)
- Global climate change mitigation (reduction in Greenhouse gases / CO₂)
- Reduction in congestion (reduced hours of peak period travel delay)
- Reduction in fuel consumption (gasoline cost saving)
- Improved health/safety (accidents reduced per 1 million VMT)
- Noise pollution reduction (reduced motor vehicle noise)

The analysis showed that program impacts generate about \$686,000 of daily cost savings across the societal benefits included in the calculation. The largest share of the cost saving is in reduction of excess fuel used; this benefit is valued at over \$401,500 per day, or about 59% of the total daily benefits. Reduction in hours of travel delay accounts for about 21% of the total daily benefit (\$142,913). Noise pollution reduction generates about 9% and the air pollution/Greenhouse gas reduction combined benefits and road safety accident reduction benefits each are responsible for about 6% of the total cost saving.

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

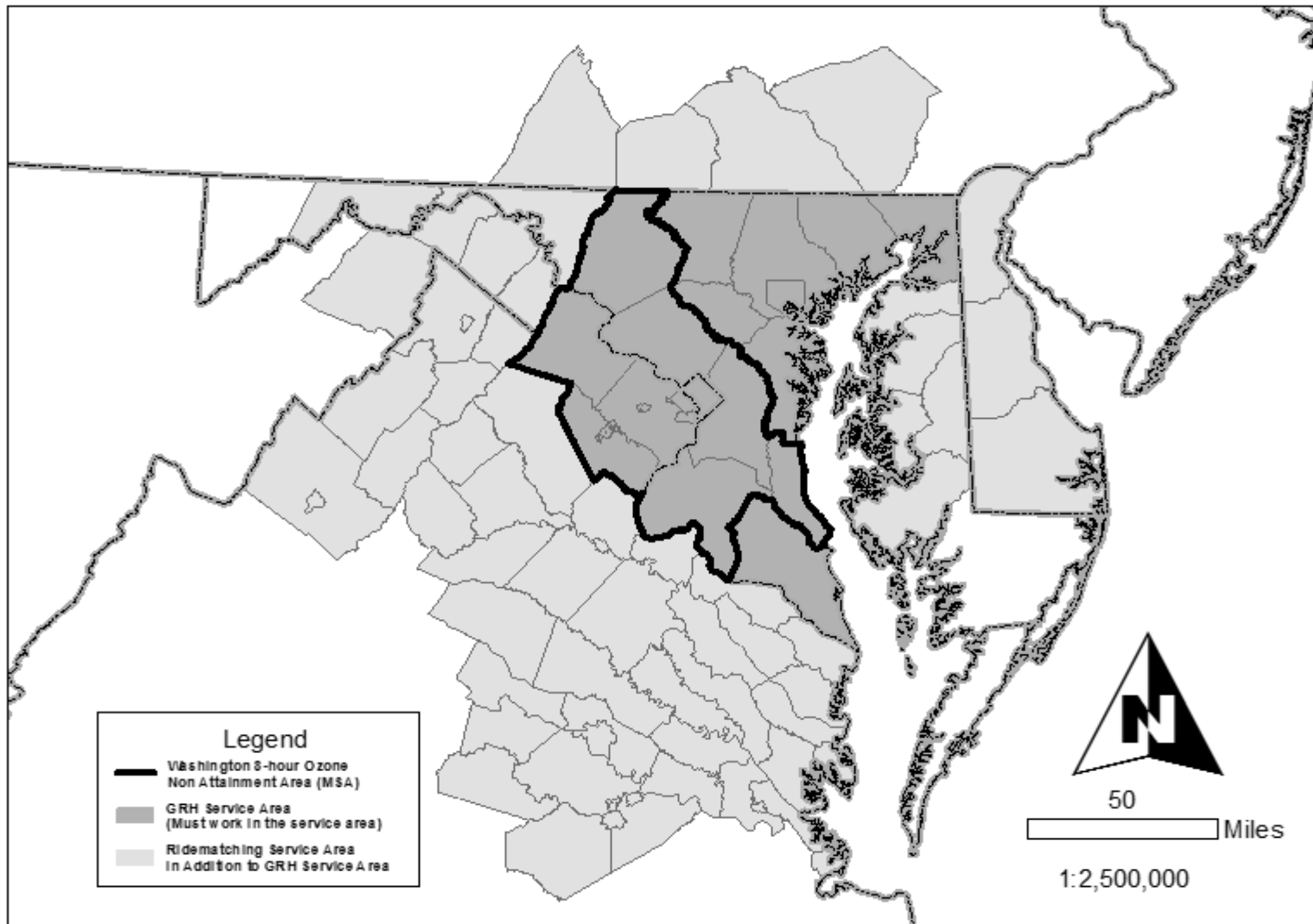
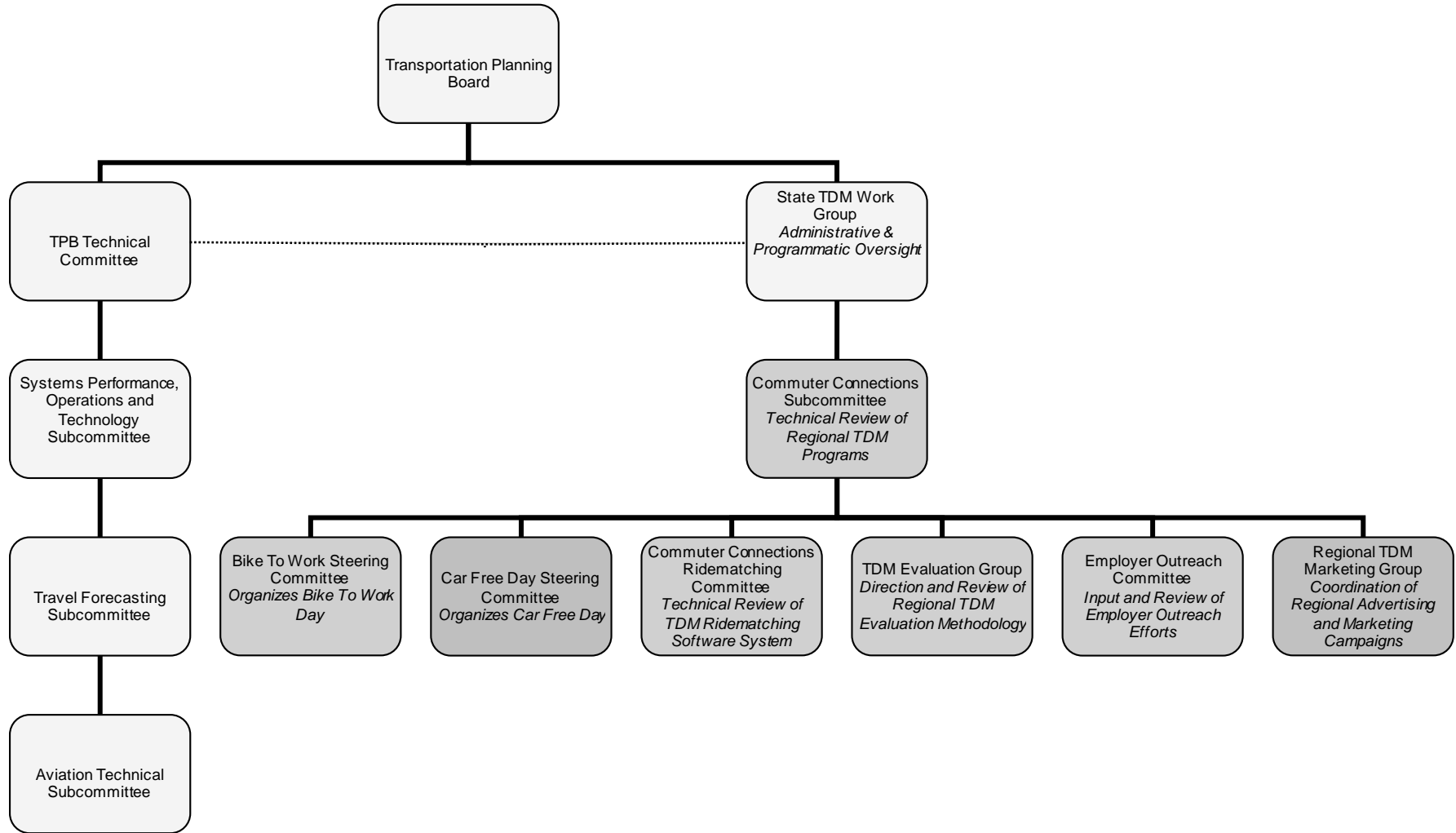


FIGURE 2: COMMUTER CONNECTIONS STRUCTURE



**Table 1
FY 2022 COMMUTER CONNECTIONS BUDGET AND WORK PROGRAM EXPENDITURES**

WORK ACTIVITY	DIRECT LABOR EXPENSE				INDIRECT	NON-LABOR DIRECT EXPENSE			TOTAL
	SALARIES (includes Leave)	FRINGE BENEFITS 24.40%	INTERNS	OTHER STAFFING	MGMT & ADMIN 59.96%	DATA & PC COSTS	CONTRACT SERVICS	OTHER	
Commuter Operations Center	227,343	55,472	-	-	169,576	107,684	95,000	26,725	681,799
Guaranteed Ride Home	195,132	47,612	-	-	145,549	6,741	195,000	327,128	917,163
Marketing	352,856	86,097	6,120	-	266,865	4,175	749,000	1,988,992	3,454,105
Monitoring and Evaluation	172,406	42,067	-	-	128,598	5,145	518,500	39,659	906,375
Employer Outreach	86,785	21,175	-	-	64,733	13,150	-	613,808	799,651
GRH Baltimore	28,992	7,074	-	-	21,625	-	62,250	100,059	220,000
TOTAL	1,063,513	259,497	6,120	-	796,946	136,895	1,619,750	3,096,371	6,979,092

**Table 2
 COMMUTER CONNECTIONS FISCAL YEAR 2022 BUDGET
 BY STATE FUNDING AGENCY AND PROGRAM ELEMENT**

FUNDS SOURCE	Commuter Operations Center	Guaranteed Ride Home (GRH)	Marketing	Monitoring & Evaluation	Employer Outreach*	GRH Baltimore	TOTALS
District of Columbia (DDOT)	\$73,172	\$107,308	\$401,205	\$106,046	\$22,172	\$0	\$709,903
State of Maryland (MDOT)	\$280,804	\$411,806	\$1,539,668	\$406,962	\$694,011	\$170,000	\$3,503,251
State of Maryland (MTA)	\$0	\$0	\$0	\$0	\$0	\$50,000	\$50,000
Commonwealth of Virginia	\$271,423	\$398,049	\$1,513,231	\$393,367	\$83,468	\$0	\$2,659,538
Other**	\$56,400						\$56,400
TOTAL	\$681,799	\$917,163	\$3,454,104	\$906,375	\$799,651	\$220,000	\$6,979,092

* Virginia and the District of Columbia have allocated \$1,416,126 pending available funds to local jurisdictions and contractors to implement the TERM. DDOT has allocated \$304,892, VDOT has allocated \$711,234, and VDRPT has allocated \$400,000.

**Software User Fees - \$56,400

Detailed Task Descriptions and Cost Estimates for the FY 2022 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 related mobile applications; and
- data updates to the software system.

The program is comprised of the four project areas listed below. The total annual budget for the Commuter Operations Center regional program is \$681,799.

A. RIDEMATCHING COORDINATION, TECHNICAL ASSISTANCE AND ADMINISTRATIVE SUPPORT

Each month, COG receives several hundred applications for ridematching information. Nearly 100% of these applications are received through the Commuter Connections web site. COG/TPB staff reviews and processes all applications received through its web site. Matchlists for carpool and vanpool information are sent daily by email or mail (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 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	Anne Arundel County	City of Alexandria
	Baltimore City	Arlington County-COG/TPB

District of Columbia	Maryland	Virginia
	Baltimore Metropolitan Council	Department of Defense
	Bethesda Transportation Solutions	Dulles Area Transportation Association
	Food and Drug Administration	Fairfax County
	Frederick County	George Washington Regional Commission
	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.

During FY 2022, 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. In addition, staff will be providing administrative support for the Advanced Transportation and Congestion Management Technologies Deployment Program (ATCMTD) Federal Highway Administration (FHWA) grant to expand the incenTrip program in the DMV mega region. 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. Staff will monitor current events and regional trends to determine whether TDM-oriented work groups need to be

organized and facilitated. 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 2023. The CCWP Master Agreement between COG and the state funding agencies will continue be reviewed and updated as needed.

COG/TPB staff will also continue 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 the use of the Commuter Challenge module.

Cost Estimate: \$196,386

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 2023 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, as
well as any other specially formed work groups
(COG/TPB Staff)

Work with state funding agencies to review and
update CCWP Master Agreement (COG/TPB staff in
conjunction with State Funding Agencies)

Schedule: July 1, 2021 - June 30, 2022

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 2023 CCWP
- Provide input and feedback on all programs and projects in CCWP

STDM Work Group

- Provide input and comments to FY 2023 CCWP
- Provide input, feedback and approval on all programs and projects in CCWP
- Review and provides updates, if needed, to CCWP Master Agreement

B. TRANSPORTATION INFORMATION SERVICES

COG has provided transportation information services for nearly 50 years in the

Washington metropolitan region. The Commuter Operations Center provides basic carpool/vanpool, park-and-ride lot, 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, CarpoolNow, Flextime Rewards, incenTrip, SchoolPool, and Special Events as well as 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 and Arlington County, Virginia. 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 2022, 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 also provide information on Commuter Connections' incentive programs such as CarpoolNow, Flextime Rewards, and incenTrip. The incenTrip program information will also be provided to commuters in the DMV mega region which includes Baltimore, MD and Richmond, VA through the ATCMTD grant project. 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: \$95,603

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 and email. *(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, 2021 - June 30, 2022

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 as well as all mobile applications. 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 servers, 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 and software as needed.

This project will also include ongoing software code upgrades to the web-based TDM system and associated mobile applications. 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 and iPhone and tablets. Access to specific system modules will be provided through mobile applications such as Commuter Connections, CarpoolNow, and incenTrip. COG/TPB staff will continue to examine ways in which its existing service applications and programs can be enhanced and streamlined to integrate the gamification and rewards aspects including the incenTrip mobile application. Support will also be provided to the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant program to expand the incenTrip mobile app software functionality.

Cost Estimate:	\$321,673
Consultant Costs as Part of Estimate:	\$ 95,000

(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, mobile applications, and web hosting. *(COG/TPB staff in consultation with contractor).*
- Schedule:** July 1, 2021- June 30, 2022
- 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, carpool pick-up points, and bicycling information as part of the ridematching functionality.

During FY 2022, COG/TPB staff will continue integration activities of new transit, telework/co-working centers, park and ride lots, and bicycle route data into the TDM system server. Staff will also continue to obtain updated transit data primarily via GTFS feed, 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/co-working 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/co-working center, park-and-ride lots, and bicycle lanes/paths records. The bicycle routing module will also be maintained and updated to reflect any new and/or expanded bicycle paths and/or trails.

- Cost Estimate:** \$68,137
- Services:** Update local and regional information for transit, co-working and 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, 2021 - June 30, 2022

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 use of 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 components outlined below is \$917,163.

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. 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. 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 2022, 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 along with corporate rewards coupons, 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.

Cost Estimate: \$275,251

Direct Costs (Telephone, Copies, etc.) as Part of Estimate: \$30,302

Products: GRH new and re-registration ID cards who corporate rewards coupons 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, 2021 - June 30, 2022

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 Transportation Network Company (TNC), and a rental car company all under contract with COG as well as Metrorail. Commuters make their GRH trip request through a menu option provided on COG’s Commuter Connections 800 telephone number or through the Commuter Connections web site. The telephone menu option transfers all calls for GRH trips directly to an operations contractor and the email request produces and sends a notification to the contractor. The 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 2022, 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; 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 as needed.

Cost Estimate: \$641,912

Consultant/Contractor Costs as Part of Estimate:

<i>(Daily Operations)</i>	<i>\$195,000</i>
<i>(Cab, TNC, and Car Rental Companies)</i>	<i>\$297,406</i>

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 seven cab, car rental, and TNC 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 and contractor)*

Provide GRH Rides *(Cab, TNC, and Car Rental)*

Companies)

Schedule: July 1, 2021 - June 30, 2022

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 eight project areas listed below. The total annual project cost for the program tasks is \$3,454,104.

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.

Outreach for 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, social media, web banner, bus and rail, and specials event advertisements, and keyword search engine sponsorships. 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 and overall Commuter Connections 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. Campaigns will also include the strategic development of a DMV mega region outreach campaign as part of the

ATCMTD grant to expand the incenTrip program including an earned media strategy. 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 the 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.

COG/TPB staff will update and implement a public relations earned media 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 doccomments@mwcoq.org for communications on reports and other work program products that require feedback by Commuter Connections committee groups. COG/TPB staff will maintain the primary Commuter Connections web site and associated social media sites.

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: \$2,535,941

Consultant/Contractor Costs as Part of Estimate:

<i>(Advertising and Marketing Contractor)</i>	\$ 535,000
<i>(Media Buy)</i>	\$1,199,723
<i>(Postage/Printing)</i>	\$ 219,220

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 and social media page 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)*

2021 Strategic Marketing Plan and Resource Guide. *(COG/TPB staff in conjunction with consultant)*

Services:

Placement of advertisements including, but not limited to: Web site advertisement through banner ads and social media sites, placement of keyword search engine sponsorships, radio, print, and television, and value-added spots, 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, internet and social media 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, 2021 - June 30, 2022

Marketing Communications Plan and Schedule: September 2021

2021 Strategic Marketing Plan and Resource Guide: December 2021

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

website, and assistance at the various “pit stops” through new pit stop manager training and 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 and commuters. 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: \$195,914

Consultant/Contractor Costs as Part of Estimate:

<i>(Advertising and Marketing Contractor)</i>	\$ 80,000
<i>(Media Buy)</i>	\$ 64,000
<i>(State Funding Agency Sponsorships)</i>	\$ 3,600
<i>(Postage/Printing)</i>	\$ 12,597

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 and pit stop managers for Bike to Work Day event in May 2022. *(COG/TPB staff)*

Coordination and management of event web site *(COG/TPB staff in conjunction with WABA staff and consultant)*

Bike to Work Day web site and social media page updates *(COG/TPB staff in conjunction with 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 social media, 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, 2021 - June 30, 2022

Oversight: Bike To Work Day Steering Committee

- 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 in FY 2010. An Employer Recognition Awards work group will continue to provide input to the collateral material developed for the awards program.

Coordination activities will include developing and distributing an awards nomination

packet and soliciting nominations from employers through local jurisdictions, Chambers of Commerce and directly from the employers. 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 any clarification needed from nominees. The marketing contractor will facilitate the selection committee process and tally the voting ballots for each nominee. Once the selection committee makes its recommendations, the award winners will be notified. 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 Communications along with the marketing contractor will identify media opportunities to highlight the winners.

Cost Estimate:	\$120,961
<i>Consultant/Contractor Costs as Part of Estimate:</i>	
<i>(Advertising and Marketing Contractor)</i>	\$65,000
<i>(Media Buy)</i>	\$ 7,500
<i>(Postage/Printing/Video)</i>	\$24,000

- Products:**
- Awards nomination printed packet and on-line form. *(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. *(Consultant in conjunction with COG/TPB staff)*

Services: Coordinate placement of program information on the

Commuter Connections website *(COG/TPB staff)*

Coordinate award submissions with local jurisdictions.
(COG/TPB staff)

Coordinate logistics for awards selection committee.
(COG/TPB staff in conjunction with consultant)

Facilitate selection committee meeting *(Consultant)*

Identify and coordinate earned media opportunities.
(COG/TPB staff in conjunction with consultant)

Placement of print ad. *(Consultant)*

Process media placement invoices. *(COG/TPB staff)*

Coordinate event logistics including recruitment of speakers, writing speaker remarks, securing event venue, and staffing the event. *(COG/TPB staff)*

Management and oversight of marketing contract.
(COG/TPB staff)

Schedule: July 1, 2021 - June 30, 2022

Oversight: Commuter Connections Subcommittee

- Provide input and feedback on project and recommendations made by Employer Recognition Awards work group.

D. POOL REWARDS

The purpose of the 'Pool Rewards carpool incentive project is to recruit and retain commuters in a carpool through a cash incentive. 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 \$270 per month under the IRS Qualified Transportation Fringe benefit provisions. Carpoolers are not eligible to participate. Carpool incentive programs have 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.

The 'Pool Rewards program began in FY2011 after results were reviewed from a pilot program conducted in FY2010. 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. Pool Rewards participants registered during the FY 2015-2017 and FY2018 – 2020 evaluation periods, were surveyed in FY 2017 and FY 2020 to explore retention in alternative modes. The survey found that 87% of participants were still using an alternative mode and 13% had returned to driving alone to work. These results were used to derive the long-term retention placement factors: 87% continued placement and 13% temporary placement. 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 2017 survey along with program participation rates in both the carpool and vanpool incentive programs were used to adjust the program budget.

The current carpool incentive allows each one-time new 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 are 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 vanpool incentive program, Vanpool Alliance.

The I-66 Express Lanes project is a public-private partnership between the Virginia Department of Transportation (VDOT), the Department of Rail and Public Transportation (DRPT), and private partner, I-66 Express Mobility Partners, delivering \$3.7 billion of transportation improvements in the I-66 corridor. The Express Lanes are scheduled to open in December 2022. The Commuter Connections 'Pool Rewards program will allow for the formation of new carpools in and around the I-66 corridor outside of the Beltway prior, during, and after the peak construction time of the project. Each participant that joins a new carpool will be eligible for an additional \$100 during a 90-day reporting period which will be funded through VDOT's approved Transform 66 Transportation Management Plan. The additional \$100 for the I-66 Express Lanes project will be above and beyond the current \$130 that is available through the regional 'Pool Rewards program. The purpose of the program is to provide an added incentive for commuters to alter their driving behavior prior, during, and after the project construction period. Marketing and advertising for the I-66 Express Lanes 'Pool Rewards incentive will be separate for this activity.

Those participants receiving payouts from 'Pool Rewards and participate in other

Commuter Connections incentive programs would have the amounts received from 'Pool Rewards included in the \$600 total Commuter Connections incentive amount allowed each calendar year.

In FY 2022, advertising materials will be updated along with on-line advertising to entice additional project participants.

Cost Estimate: \$110,195

Consultant/Incentive Costs as Part of Estimate:

<i>(Advertising and Marketing Contractor)</i>	\$ 6,000
<i>(Media Buy)</i>	\$16,000
<i>('Pool Rewards Incentive Payments)</i>	\$ 5,000 (carpools)
	\$25,000 (Virginia I-66)
	\$30,000 (vanpools)

Products: Marketing materials. *(COG/TPB staff in conjunction with consultant)*

Services: Operation of 'Pool Rewards program which includes registering and verifying participants, monitoring trip logs, supervisor verification, and payments to program participants. *(COG/TPB staff)*

Administer program surveys and obtain supervisor verifications *(COG/TPB staff)*

Media Placements on radio, television, web. Social media, and value-added spots, as needed *(Consultant)*

Process media placement invoices. *(COG/TPB staff)*

Management and oversight of marketing contract. *(COG/TPB staff)*

Report vanpool data to the FTA's National Transit Database *(COG/TPB staff)*

Update program terms and conditions, and participation guidelines as needed *(COG/TPB staff)*

Design and distribute collateral materials for distribution to employers and the general public *(COG/TPB staff)*

Schedule: July 1, 2021 - June 30, 2022

Oversight:

Commuter Connections Subcommittee

- Provide input and feedback on project recommendations for program continuation and/or expansion.

E. CAR-FREE DAY

During FY 2022, 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. Following the 2019 event, Commuter Connections conducted a brief survey of event registrants to examine their use of car-free and car-lite) travel options during the Car Free Day event and their subsequent continued use of these options for commute travel. The analysis only captured impacts for commuting travel. The survey found that 86% of all respondents had used a car-free or car-lite option for a commute trip on Car Free Day. For 16% of these respondents, the Car Free Day option was a different mode than they usually would have used, and 76% who changed mode would have driven alone or carpooled/vanpooled. Participants had an average commute distance of 14.9 miles one-way. These results were used to calculate the “event day” trip reduction impact.

The survey further indicated that 11% of employed respondents had increased their regular average frequency of car-free/car-lite options, with an average weekly trip reduction of 3.32 trips, equating to a daily trip reduction of 0.66. These factors were applied to the participant population to estimate the on-going Car Free Day impacts which are highlighted in the FY2018 – FY2020 regional TDM Analysis Report.

This event will be held on September 22nd each year in tandem with World Car Free Day. Evaluation results of the project will include participation and transportation and emission impacts which will be used to make improvements to the annual event. A marketing campaign along with public outreach efforts will be developed to coincide with this worldwide celebrated event.

Cost Estimate:	\$113,188
<i>Consultant/Contractor Costs as Part of Estimate:</i>	
<i>(Advertising and Marketing Contractor)</i>	\$ 32,000
<i>(Media Buy)</i>	\$ 45,000
<i>(Postage/Printing)</i>	\$ 19,011

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, internet, and social media 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 website and social media pages. *(COG/TPB staff in conjunction with consultant)*

Services:

Implement regional Car Free Day(s) event on September 22, 2021 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, 2021 - June 30, 2022

Oversight:

Car Free Day Steering Committee

- Provide input and feedback on marketing collateral materials, radio advertisements and event logistics.

F. CARPOOLNOW MOBILE APPLICATION

During FY 2017, COG/TPB staff launched CarpoolNow, a new rideshare mobile application that gives commuters in the Washington metropolitan region the ability to carpool on-demand and in real-time. The app immediately connects users who are offering a ride with those seeking a ride. It also displays routes, estimates pickup times, and confirms pick-up and drop-off locations.

During FY2018, COG coordinated with Howard County, Maryland on a marketing initiative to support the CarpoolNow app. The marketing initiative was used to encourage

commuters to download and use the app and consisted of producing creative materials to be used on traditional and digital media outlets. A driver incentive was also designed, examined and tested. Results from this project were used to expand the marketing of the CarpoolNow mobile app and a \$10 per trip driver incentive to the Washington metropolitan region in FY2019. Drivers receiving the incentive can receive up to \$600 per calendar year. The \$600 total would also be inclusive of any other Commuter Connections incentive program payments.

Cost Estimate:	\$67,014
<i>Consultant/Contractor Costs as Part of Estimate:</i>	
<i>(Advertising and Marketing Contractor)</i>	\$ 6,000
<i>(Media Buy)</i>	\$ 15,000
<i>(Commuter Incentives)</i>	\$ 34,889

Products: Development and production of creative and marketing services including, but not limited to: radio, internet, newsprint, educational video, SEO blog posts, venue, mobile, social media and text ads. *(COG/TPB staff in conjunction with consultant)*

Update of web site and social media pages to reflect promotional activities and incentives. *(COG/TPB staff in conjunction with consultant)*

Services: Promote mobile app to the general public, employers and to the media. *(COG/TPB staff in conjunction with consultant).*

Operation of CarpoolNow driver incentive program which includes registering and verifying participants, monitoring trip logs, supervisor verification, and payments to program participants. *(COG/TPB staff)*

Media placements, including the negotiation of value-added placements. *(Consultant)*

Process media placement invoices. *(COG/TPB staff)*

Management and oversight of marketing contract. *(COG/TPB staff)*

Schedule: July 1, 2021 - June 30, 2022

Oversight: Commuter Connections Subcommittee

- Provide input and feedback on project

recommendations for program continuation and/or expansion.

G. FLEXTIME REWARDS

During FY 2017, COG/TPB staff researched and wrote a Flextime Incentives “White Paper” which was endorsed for release in FY 2018. The White Paper provides speculation on the positive impacts of implementing a flextime incentive program for the Washington D.C. metropolitan region. Research on the subject was examined and flextime impacts within major metropolitan areas of the United States and abroad are examined. This document selects corridors in the Washington D.C. region that may benefit from an incentive program and details the beneficial impacts of implementing a flextime-incentive pilot program.

Based on responses with regards to the likelihood of using a flextime incentive from the 2016 State of the Commute survey, analysis of the region’s top-10 traffic bottlenecks, and to allow for a variety of roadway segments on a regional scale, a pilot program was launched in FY2018 for commuters traveling on the following four corridors:

- The Beltway near the I-270 spur and American Legion Bridge.
- The Beltway between I-95 and MD-193
- I-66 heading eastbound at VA-267
- DC-295 heading southbound at Benning Road.

During FY2017 and FY2018, COG coordinated with the University of Maryland to develop the algorithm using a variety of verification techniques to confirm the legitimacy of a user’s trip. This includes the mandatory use of location services to verify departure and arrival times, as well as verify the route the individual has traveled. This verification helps confirm participants traveling to their registered workplace, particularly for those receiving a cash incentive. It also helps verify that the participant is truly flexing their time and rerouting the trip. Verification techniques used in FY2018 simply included self-reporting by the commuter for inclusion in a monthly or quarterly prize/gift drawings.

Part of the program’s implementation is determining the severity of an incident along a corridor that would require a notification to be sent to registered users. Levels of service during the peak period on all the corridors of interest are already consistently rated “E” – “F” without the presence of an incident. The University of Maryland’s predictive travel model assists in determining which incidents warrant a notification. This model calculates the estimated time of arrival while traveling along corridors in the region and recalculates every time an incident is detected. This will give insight into the severity of an incident that has recently occurred and allow notifications to be pushed appropriately.

Commuters using these four corridors register to participate in the incentive program through an electronic application. In FY2019 it was determined that an \$8 cash incentive would be paid to a commuter each time they received a traffic notification and elected to delay their trip during peak hour travel times in the a.m. and/or the p.m. This cash amount determination was made on previous literature review regarding incentive programs from the Flextime White paper issued by COG/TPB staff. Commuters participating in Flextime Rewards can receive up

to \$600 per calendar year. The \$600 total would also be inclusive of any other Commuter Connections incentive program payments.

The applications received from individuals traveling along select corridors are reviewed and either approved or denied by COG/TPB staff. Careful attention is given during this process to determine eligibility associated with implementing an incentive program of this type. Depending on eligibility requirements, existing Commuter Connections account holders may be able to simply opt in to the program and use the Commuter Connections mobile app to participate in the program.

Given that the pilot project focused on four top bottleneck corridors in the region, it is reasonably expected that 35 flextime notifications would be sent during a typical year involving the selected corridors resulting in the following annual incentive costs; however the costs associated with 35 notifications will be dependent on the number of participating individuals choosing to delay or avoid their trip during peak of the peak hour commuting periods in the a.m.(7 to 8 a.m.) and in the afternoon (5 to 6 p.m.).

The corridors selected for observation were purposely chosen for pilot program implementation in FY2018. Corridors not included as a corridor of interest may still benefit from an incentive program and can still be a candidate for future expansion of the program given overall participation and survey results.

Cost Estimate:	\$107,589
<i>Consultant/Contractor Costs as Part of Estimate:</i>	
<i>(Advertising and Marketing Contractor)</i>	\$ 12,000
<i>(Media Buy)</i>	\$ 15,000
<i>(Commuter Incentives)</i>	\$ 60,332

Products:	Development and production of creative and marketing services including, but not limited to: radio, internet, newsprint, educational video, SEO blog posts, venue, mobile, social media and text ads. <i>(COG/TPB staff in conjunction with consultant)</i>
	Update of web site and social media pages to reflect promotional activities and incentives. <i>(COG/TPB staff in conjunction with consultant)</i>
Services:	Operation of Flextime Rewards program which includes registering and verifying participants, monitoring trip logs, supervisor verification, and payments to program participants. <i>(COG/TPB staff)</i>
	Administer program surveys and obtain supervisor verifications as needed <i>(COG/TPB staff)</i>

Promote Flextime Rewards program 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)*

Management and oversight of marketing contract. *(COG/TPB staff)*

Schedule:

July 1, 2021 - June 30, 2022

Oversight:

Commuter Connections Subcommittee

- Provide input and feedback on project recommendations for program continuation and/or expansion.

H. INCENTRIP MOBILE APPLICATION

During FY 2019, COG/TPB staff in collaboration with the University of Maryland, soft-launched incenTrip, a new mobile application that gives commuters in the Washington metropolitan region the ability to avoid both day-to-day congestion and traffic jams caused by traffic accidents, work zones, special events and adverse weather conditions. App users also earn reward points while receiving recommendations on the best travel mode, departure time and/or route recommendations. The app was formally launched in August 2019 at a launch event hosted and conducted by the TPB's officer's and UMD senior project leadership.

The app allows users to earn reward points every time a trip is planned through incenTrip and users can take advantage of multimodal travel options, outsmart traffic jams, and invite their friends to join. With a single click, users can exchange their points for an incentive.

By supporting incenTrip and providing incentives to travelers, Commuter Connections can address congestion, reduce energy use, and emissions. The key innovation of incenTrip is the development of personalized and dynamic incentives that vary based on individual preferences and real-time traffic conditions, which significantly improves the cost-effectiveness of traveler incentives. incenTrip performance can be monitored daily via a customized dashboard. The goal of the incenTrip eco-system is to improve multimodal transportation system performance along congested corridors.

During FY2020, COG fully launched the incentive portion of the incenTrip app following its testing period during FY2019. A Commuter Connections work group helped develop the points and awards structure for the app. A marketing initiative accompanied the launch of the incentive to encourage commuters to download and use the app and included the production of creative materials to be used to market the product through traditional and digital media outlets. Marketing of the app to both commuters and employers will continue. Support will also be provided to the Advanced Transportation and Congestion

Management Technologies Deployment (ATCMTD) grant program to expand the incenTrip mobile app functionality and to process the incentive payments and implement marketing campaign activities including a media plan and placement of advertisements.

Cost Estimate:	\$203,302
Consultant/Contractor Costs as Part of Estimate:	
(Advertising and Marketing Contractor)	\$ 13,000
(Media Buy)	\$ 40,000
(Commuter Incentives)	\$125,000

Products: Development and production of creative and marketing services including, but not limited to: radio, internet, newsprint, educational video, SEO blog posts, venue, mobile, social media and text ads. *(COG/TPB staff in conjunction with consultant)*

Update of web site and social media pages to reflect promotional activities and incentives. *(COG/TPB staff in conjunction with consultant)*

Services: Operation of incenTrip rewards program which includes registering and verifying participants, monitoring trip logs, supervisor verification, and payments to program participants. *(COG/TPB staff)*

Promote mobile app 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)*

Management and oversight of marketing contract. *(COG/TPB staff)*

Schedule: July 1, 2021 - June 30, 2022

Oversight: Commuter Connections Subcommittee

- Provide input and feedback on project recommendations for program continuation and/or expansion.

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 Commuter Connections Transportation Demand Management (TDM) program elements that were originally adopted as Transportation Emission Reduction Measures (TERMS). One project will solely focus on those activities directly related to data collection and analysis for the TDM program elements. Data collection and analysis for the Commuter Connections program elements occur over a three-year period. Results from this project will directly impact the FY 2021 – FY 2023 Regional TDM Program Analysis report for Commuter Connections. 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 TDM program elements 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 \$906,375.

A. REGIONAL TDM DATA COLLECTION AND ANALYSIS

Data collection analysis for the Commuter Connections TERMS occurs over a three-year period. The current cycle began in fiscal year FY 2021 (July 1, 2021) and will conclude in FY 2023 (June 30, 2023).

During FY 2021, the previous data collection cycle's Regional TDM Program Analysis Report was finalized and published and the Placement Rate Study for the new data collection period was completed. In FY 2022, the Framework Methodology Document will be updated and published, and data collection activities will occur for the 2022 State of the Commute Report and 2022 GRH Applicant Survey. Draft Technical reports will be produced for both data collection activities.

During FY 2023, 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 2021–2023 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 2022 program participants will be conducted, and the 2022 State of the Commute Survey Technical Report will be finalized, and a general public report will be prepared for printing. The 2022 Guaranteed Ride Home Applicant Survey Report will

be finalized. The draft FY 2023 TERM Analysis report will also be prepared.

Retention rate surveys will also be conducted for Commuter Connections applicants and Guaranteed Ride Home applicants, but not until FY2026. Results from this survey will be used in the FY2026 data collection cycle.

During FY 2022, COG/TPB staff will work to update the FY 2021–FY 2023 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 TDM Evaluation cycle and 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 program elements relevant to recent impact and cost effectiveness data released in the FY 2018-FY2020 Regional TDM Program (TERM) Analysis report.

The 2022 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, air quality and other societal 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 2021–2023 Regional TDM Program Analysis 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 2021–FY 2023 Regional TDM Program Analysis Report. A draft survey report will be prepared and released by June 2022.

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.

During FY 2022, 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.

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.

Cost Estimate: \$647,907
Consultant Costs as Part of Estimate:
(TDM Evaluation Project Consultant) \$488,500

Products: FY 2021- FY 2023 TDM Evaluation Framework Methodology Document. (COG/TPB staff in conjunction with consultant).

 2022 State of the Commute Survey design and data collection activities. (COG/TPB staff in conjunction with consultant).

 2022 State of the Commute Draft Technical Report. (COG/TPB staff in conjunction with consultant).

 2022 GRH In-Depth Applicant Survey and draft report. (COG/TPB staff in conjunction with consultant).

 Review of Employer Database Records and Classification into Levels of Participation in ACT! Database (COG/TPB staff)

Services: Fulfillment of data requests. *(COG TPB Staff)*

 Collect monthly Employer Outreach data from ten local sales territories. *(COG TPB Staff)*

 Employer Site Survey Coordination (COG TPB Staff)

 Management and oversight of TDM Evaluation contract. *(COG/TPB staff)*

Schedule: July 1, 2021 - June 30, 2022

 FY 2021 – FY 2023 TDM Evaluation Framework Methodology Document: December 2021

 2022 State of the Commute Survey Draft Technical Report: June 2022

 2022 In-Depth GRH Applicant Draft Survey Report: June 2022

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 2021 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. Local jurisdiction contract performance monitoring for Employer Outreach goals will also be a part of this activity. 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. Quarterly Employer Outreach level of effort verification statements will be produced and distributed by COG/TPB staff. An annual detailed snapshot of overall progress will be provided to appropriate state funding agencies for their respective jurisdictions.

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. Campaign summary documents will be produced that will outline campaign specifics such as direct mail distribution points (i.e. zip codes), radio stations, internet and social media advertising outlets used, etc. Event summary reports will also be produced for the FY 2021 regional Bike to Work Day and Car Free Day events.

Monthly program statistics will be collected, and quarterly progress reports will be provided for all program areas in the FY 2022 CCWP and an annual progress report for FY 2021 will be produced.

Cost Estimate:	\$258,468
Consultant Costs as Part of Estimate: <i>(Employer Survey Project Consultant)</i>	\$ 30,000

Products: 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. *(COG/TPB staff)*

Produce FY 2021 annual progress report. *(COG/TPB staff)*

Collect and analyze data from monthly GRH customer satisfaction survey for FY 2021 program users, and produce a report showing results. *(COG/TPB staff)*

Quarterly Employer Outreach sales contact data and level of effort verification statement *(COG/TPB staff)*

Annual Employer Outreach Snapshot Analysis and Project Recommendations *(COG TPB Staff)*

FY 2021 Bike to Work Day Event Report *(COG/TPB staff)*

FY2021 Car Free Day Event Report *(COG/TPB staff)*

Survey reports to Employer Outreach representatives from Employer Commute Survey results. *(COG/TPB staff)*

1st Half of the Fiscal Year Regional TDM Marketing Campaign Summary and Lead Analysis Document. *(COG/TPB staff in conjunction with consultant)*

2nd Half of the Fiscal Year Regional TDM Marketing Campaign Summary and Lead Analysis Document. *(COG/TPB staff in conjunction with consultant)*

Services: Updating and Maintaining Employer Commute Survey

archived database. (COG/TPB staff)

Management and oversight of Employer Survey contract. (COG/TPB staff)

Data documentation from monthly Employer Outreach Activity Reports from ten local sales territories. (COG/TPB staff)

Staff the TDM Evaluation Group (COG/TPB staff)

Schedule:

July 1, 2021 - June 30, 2022

FY 2021 Car Free Day Event Report: July 2021

FY 2021 4th Quarterly Progress Report: July 2021

FY 2021 Annual Progress Report: September 2021

FY 2022 1st Quarter Progress Report: October 2021

FY 2021 2nd Half of the Fiscal Year Regional TDM Marketing Campaign Summary Document: December 2021

FY 2022 2nd Quarter Progress Report: January 2022

FY 2021 Bike to Work Day Event Report: January 2022

2021 GRH Customer Satisfaction Survey Report: March 2022

FY 2022 3rd Quarter Progress Report: April 2022

Employer Outreach Snapshot Analysis: May 2022

FY 2022 1st Half of the Fiscal Year Regional TDM Marketing Campaign Summary Document: June 2022

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 statement 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, help reduce traffic congestion, improve air quality and other societal benefits, 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 program 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 program 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) and develop a process through which TPB member jurisdictions work collaboratively with WMATA to undertake a targeted outreach to employers to increase participation in WMATA's SmartBenefits program.
- 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 portfolios, employer case studies, Alternative Work Schedule, 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 \$98,409.

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 \$701,242.

Regional Component Project Tasks

A. **REGIONAL EMPLOYER DATABASE MANAGEMENT AND TRAINING**

During FY 2022, 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 2018. In addition, COG/TPB staff will coordinate training and provide technical assistance to local sales jurisdictions upon request.

COG/TPB staff will continue to monitor the process through which TPB member jurisdictions work collaboratively with WMATA to undertake a targeted outreach to employers to increase participation in WMATA's SmartBenefits program.

Cost Estimate: \$83,409

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, 2021 - June 30, 2022

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). WABA’s Web site 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. In FY 2016, a presentation entitled “Walk Wise” was developed to incorporate safe practices for employers to promote both bicycling and walking to the worksite.

COG/TPB staff also provides support and facilitation for other bike-to-work outreach activities including lunch time seminars, association meetings and strategic mailings as needed.

Cost Estimate: \$15,000

Printing as Part of Estimate \$6,305

Products: Regional Bicycling to Work Guide updates.
(COG/TPB staff)

Services: Employer assistance and seminars. (COG/TPB staff)

Schedule: July 1, 2021 - June 30, 2022

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:	\$483,196
Telework component of pass-thru:		\$81,063
	Total Project Budget:	\$564,259

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, 2021 - June 30, 2022

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.

COG/TPB staff will also work to promote policy templates and information for small and mid-size employers to adopt and implement Flextime and Telework programs at their work places as a resource.

Cost Estimate: \$136,983

Products:

Electronic and printed updates of customized sales portfolio materials, employer specific regional marketing materials (General Commuter Connections brochure, Alternative Work Schedules brochure, and Emergency Commute Preparedness brochure), telework policy templates and brochure for small and mid-size employers, 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, 2021 - June 30, 2022

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 helps 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 \$220,000.

A. GENERAL OPERATIONS AND MAINTENANCE

Commuter Connections staff at the Metropolitan Washington Council of Governments (COG) will process all GRH applications received by mail and through 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. 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, corporate rewards coupons, 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 2022, 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 2021 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 draft survey report will be prepared and released by June 2022.

During FY 2022, COG/TPB staff and its contractor will continue the implementation of a marketing and advertising media campaign to promote the GRH Baltimore program which will be targeted to commuters working in the Baltimore metropolitan region. The media advertising campaign materials developed for the Washington DC region will be adapted for the Baltimore metropolitan region and is funded through the Maryland Transit Administration.

Cost Estimate: **\$116,002**

Consultant Costs as Part of Estimate:

(Advertising) \$1,250

(FY2022 In-Depth GRH
Baltimore Survey) \$18,500

Direct Costs as part of Estimate:

(Media Buy) \$50,000

(Telephone/Copies, etc.) \$ 4,778

Products: GRH new and re-registration ID cards, registration letters, and corporate rewards coupons *(COG/TPB staff)*

GRH Participation Guidelines *(COG/TPB Staff)*

Final 2021 GRH Customer Satisfaction Survey Report. *(COG/TPB staff)*.

Creative materials for regional TDM marketing campaigns. *(COG/TPB staff in conjunction with consultant)*

2022 GRH Baltimore and St. Mary's County 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, 2021 – June 30, 2022

2021 GRH Customer Satisfaction Survey Report: March 2022

2019 In-Depth GRH Baltimore Applicant Survey Impact Analysis: January 2021

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 through contracts with COG by several taxi companies, a Transportation Network Company (TNC), a rental car company, and Baltimore's Metro. Commuters make their GRH trip request through a menu option provided on COG's Commuter Connections 800 telephone number or through the Commuter Connections web site. The telephone menu option transfers all calls for GRH trips directly to an operations contractor and the email request produces and sends a notification to the contractor. The 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. If a trip request is denied, the commuter is offered an arranged trip at their own expense.

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 as needed.

Cost Estimate: **\$103,998**

Consultant/ Contractor Costs as Part of Estimate:

(Daily Operations): \$42,500

(Cab, TNC, and Car Rental Companies) \$45,281

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 four cab, car rental, and TNC 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, TNC, and Car Rental Companies)*

Customer service training for GRH call center agents. *(COG/TPB staff and contractor)*

Schedule: July 1, 2021 – June 30, 2022

Oversight: Commuter Connections Subcommittee

- Provide input and feedback on GRH program participation guidelines and policies.

ITEM 10 – Information

March 17, 2021

Priority Airport Ground Access Projects

Background:

The board will be briefed on the priority projects included in Visualize 2045 that support airport ground access. These projects were recommended by the Aviation Technical Subcommittee as part of TPB's Continuous Airport Systems Planning Program and are important because of their potential to improve access to the region's three major commercial airports: BWI, DCA, and IAD.



MEMORANDUM

TO: National Capital Region Transportation Planning Board
FROM: Arianna Koudounas, TPB Transportation Planner
SUBJECT: Priority Airport Ground Access Projects
DATE: March 11, 2021

BACKGROUND

The Metropolitan Washington Council of Governments (COG), in cooperation with the Federal Aviation Administration (FAA), the Maryland Aviation Administration (MAA), the Virginia Department of Aviation (VDOA), the District of Columbia Office of Planning (DCOP), the District Department of Transportation (DDOT) and the Metropolitan Washington Airports Authority (MWAA), has conducted a metropolitan airport system planning process for more than forty years. The Continuous Airport System Planning (CASP) program provides a regional process that supports the planning, development and operation of airport and airport-serving facilities in a systematic framework for the Washington-Baltimore Region. As part of this process, TPB staff, in consultation with the Aviation Technical Subcommittee, prepares ground access planning studies, including ground access forecast updates, travel time studies, and an assessment of priority projects, programs, and policies that support airport ground access. This memo contains a list of the priority projects included in Visualize 2045 that support airport ground access. The full Regional Air System Plan document that this memo references can be found here: <https://www.mwcog.org/transportation/planning-areas/airports/casp-elements/regional-air-system-plan/>

PRIORITY ACCESS PROJECTS

The attachment to this memo identifies the projects contained in Visualize 2045 that the Aviation Technical Subcommittee identified to be important because of their potential to improve access to the region's three major commercial airports: Baltimore/Washington International Thurgood Marshall Airport (BWI), Washington Dulles International Airport (IAD), and Ronald Reagan Washington National Airport (DCA). Given how critically important the region's three major commercial airports are to the economic vitality of the Washington-Baltimore region, The Subcommittee recommends that these projects be given priority consideration for implementation. TPB staff will present an overview of these projects to the TPB at its March 17, 2021 meeting.

NEXT STEPS

To ensure regional aviation ground access needs and goals are addressed in the regional transportation planning process, the CASP planning cycle is synchronized with the regional Long-Range Transportation Plan (LRTP) update process. In general, the airport system planning process consists of a continuous cycle that begins with a regional air passenger survey, as shown in the

figure below. This survey is followed by forecasts of future air passenger travel and ground travel of these air passengers to and from the region's three commercial airports. These forecasts in turn lead to the development of a revised ground access plan for the region. The RASP Update is the synchronizing mechanism that links airport ground access needs to regional transportation planning. It is also the final and concluding step in the planning cycle. The next Washington-Baltimore Regional Air Passenger Survey will be the starting point of the next cycle. The precise timing of future RASP Updates will be based on need as well as aligning with each airport's strategic and master planning processes.

ATTACHMENT

Attachment 1

Visualize 2045 Project Recommendations

MDOT Interstate Roadway Projects

The following recommendations will help improve access from Virginia to Maryland.

- **Construct/Widen I-270 Toll Lanes**
 - From I-495 to I-270Y
 - From 4 + 2 HOV lanes to 4 + 2 HOV + 4 ETL
 - Completion date: 2025

- **Construct/Widen I-270 Toll Lanes**
 - From I-270Y to I-370
 - From 10 + 2 HOV lanes to 10 + 2 HOV + 4 ETL
 - Completion date: 2025

- **Construct/Widen I-495 Toll Lanes**
 - From Virginia State line / Potomac River (including American Legion Bridge) to I-270Y
 - From 8/10 lanes to 8/10 + 4 ETL
 - Completion date: 2025

- **Construct/Widen I-495 Toll Lanes**
 - From I-270Y to MD 355
 - From 6 lanes to 6 + 4 ETL
 - Completion date: 2025

- **Construct/Widen I-495 Toll Lanes**
 - From MD 355 to I-95
 - From 8 lanes to 8 + 4 ETL
 - Completion date: 2025

- **Construct/Widen I-495 Toll Lanes**
 - From I-95 to Baltimore Washington Parkway
 - From 8 lanes to 8 + 4 ETL
 - Completion date: 2025

- **Construct/Widen I-495 Toll Lanes**
 - From I-95 to Baltimore Washington Parkway
 - From 8 lanes to 8 + 4 ETL
 - Completion date: 2025

- **Construct/Widen I-495 Toll Lanes**
 - From Baltimore Washington Parkway to Glenarden Parkway
 - From 8 lanes to 8 + 4 ETL
 - Completion date: 2025

Anne Arundel County Primary Roadway Projects

The following recommendations will reduce congestion in Anne Arundel County surrounding BWI.

- **Widen I-295**
 - From I-195 to MD 100
 - From 4 lanes to 6
 - Completion date: 2035

- **Widen MD 713**
 - From MD 175 to Stoney Run Drive
 - From 2 lanes to 4
 - Completion date: 2040

Howard County Primary Roadway Projects

The following recommendations will reduce congestion in Howard County surrounding BWI.

- **Widen I-95 peak period shoulder use**
 - From MD 32 to MD 100
 - From 4 lanes to 4 + 1
 - Completion date: 2035

- **Widen MD 100**
 - From I-95 to Anne Arundel/Howard County line, River Road
 - From 2 lanes to 4
 - Completion date: 2035

Transit Airport Ground Access Project

The following recommendation will help improve multimodal connectivity to BWI.

- **Implement Penn Line Service Improvements**
 - Completion date: 2029

VDOT Interstate Roadway Projects

The following recommendations will help reduce congestion along I-66.

- **Widen/Revise Operations of I-66**
 - From I-495 to US 50
 - From 3 general purpose in each direction + 1 HOV in peak direction during peak period to 3 general purpose + 1 Auxiliary + 2 HOT each direction
 - Completion date: 2021

- **Widen/Revise Operations of I-66**
 - From US 50 to US 29 Centreville
 - From 4 general purpose lanes in each direction off-peak, 3 general purpose + 1 HOV in peak direction during peak period to 3 general purpose lanes + 1 Auxiliary + 2 HOT lanes in each direction (2 Aux per direction between VA 286 & VA 28 only)
 - Completion date: 2021

- **Widen/Revise Operations of I-66**
 - From US 29 Centreville to University Boulevard Ramps (which is a new interchange for HOT-only)
 - From 4 general purpose lanes in each direction off-peak, 3 general purpose + 1 HOV in peak direction during peak period to 3 general purpose + 2 HOT in each direction
 - Completion date: 2021

- **Widen/Revise Operations of I-66**
 - From VA 234 Bypass to University Boulevard
 - From 4 general purpose in each direction off-peak, 3 general purpose + 1 HOV in peak direction during peak period to 3 general purpose + 2 HOT in each direction (+1 Auxiliary each direction between US 29 and VA 234 Bypass only)
 - Completion date: 2021

- **Widen/Revise Operations of I-66**
 - From University Blvd Ramps (new interchange; HOT-only) to US 15 (1.2 miles west of)
 - From 4 general purpose in each direction off-peak, 3 general purpose + 1 HOV in peak direction during peak period to 3 general purpose + 2 HOT in each direction +1 Auxiliary each direction between US 29 and VA 234 Bypass only
 - Completion date: 2040

- **Widen/Revise Operations of I-66**
 - From I-495 to US 29 near Rosslyn
 - From HOT 2 in peak direction during peak period to HOT 3
 - Completion date: 2021

- **Revise Operations of I-66**
 - From I-495 to US 29 near Rosslyn
 - From HOT 3 in peak direction during peak period to HOT lanes 3 in both directions
 - Completion date: 2040

- **Construct/Widen I-66 Eastbound**
 - From VA 267 Dulles Toll Road to Washington Boulevard Off-Ramp
 - 3 lanes to 4 lanes
 - Completion date: 2020
- **Construct/Widen I-66 Eastbound**
 - From Washington Boulevard Off-Ramp to North Fairfax Drive
 - 2 lanes to 3 lanes
 - Completion date: 2020
- **Construct/Widen I-66 Westbound**
 - From Sycamore Street to Washington Blvd On-Ramp
 - 2 lanes to 3 lanes
 - Completion date: 2040

The following recommendations will help reduce congestion along the I-495 Capital Beltway.

- **Widen I-495 Capital Beltway SB Auxiliary Lane**
 - From VA 193 On-Ramp to VA 267 Off-Ramp
 - From 4+2 lanes to 5+2 lanes
 - Completion date: 2030
- **Construct I-495 Express Lanes On-Ramp**
 - From Dulles Connector Road Westbound to I-495 Express Lanes Northbound
 - From 0 lanes to 1 lane
 - Completion date: 2025
- **Construct I-495 Capital Beltway HOT Lanes**
 - From American Legion Bridge to George Washington Parkway (south of)
 - From 8 to 8+4 lanes
 - Completion date: 2025
- **Construct I-495 Capital Beltway HOT Lanes**
 - From George Washington Parkway (south of) to Old Dominion Drive (south of)
 - From 8 to 8+4 lanes
 - Completion date: 2025
- **Construct I-495 Capital Beltway Interchange (Phase IV)**
 - Provide Southbound HOT lanes to Eastbound HOV & Eastbound Dulles Toll Road to Northbound HOT movement at VA 267 Dulles Toll Road
 - Completion date: 2030
- **Widen I-495 Capital Beltway Interchange Ramp (Phase III Dulles Toll Road)**
 - Widen Eastbound Dulles Toll Road ramp to 2 Northbound lanes
 - From 1 to 2 lanes
 - Completion date: 2030

The following recommendation will help reduce congestion along the Dulles Airport Access Road.

- **Widen Dulles Airport Access Road**
 - From Dulles Airport to VA 123
 - From 4 to 6 lanes
 - Completion date: 2030

VDOT Primary Roadway Projects

The following recommendations will help reduce congestion along VA 28.

- **Widen VA 28 from I-66 to Westfields Boulevard**
 - From I-66 to Westfields Boulevard, as part of VA 28 PPTA Phase II
 - From 6 lanes to 8+ 2 aux lanes
 - Completion date: 2021
- **Widen VA 28 from Westfields Boulevard to US 50**
 - From Westfields Boulevard to US 50, as part of VA 28 PPTA Phase II
 - From 6 lanes to 8 lanes
 - Completion date: 2025
- **Widen VA 28 from US 50 to Sterling Boulevard**
 - From US 50 to Sterling Boulevard, as part of VA 28 PPTA Phase II
 - From 6 lanes to 8 lanes
 - Completion date: 2025
- **Widen VA 28 from Sterling Boulevard to VA 7**
 - From Sterling Boulevard to VA 7, as part of VA 28 PPTA Phase II
 - From 6 lanes to 8 lanes
 - Completion date: 2025

PRIORITY AIRPORT GROUND ACCESS PROJECTS

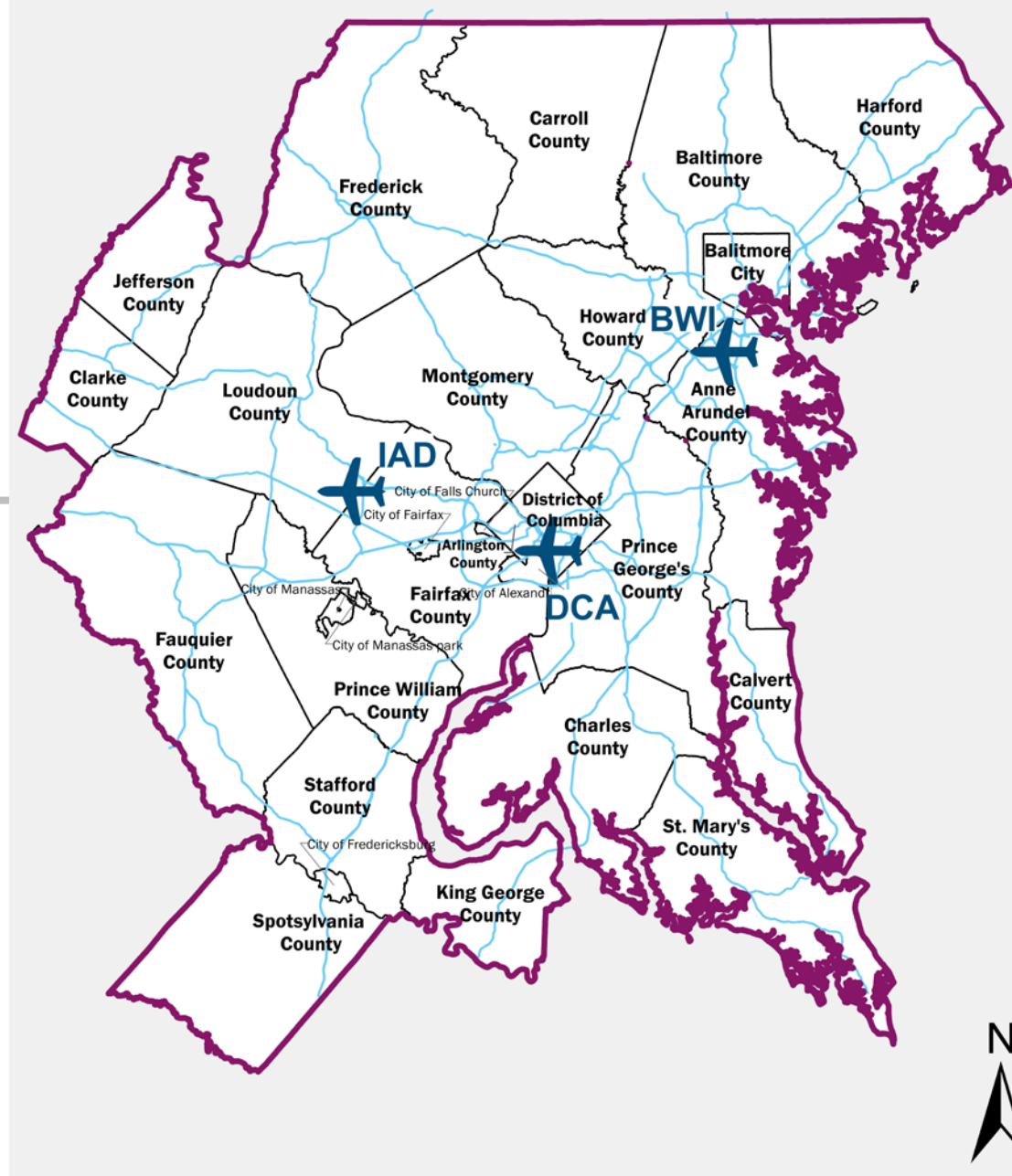
Arianna Koudounas, AICP, CPM
Transportation Planner

Transportation Planning Board
March 17, 2021



Washington-Baltimore Air Systems Region at a Glance

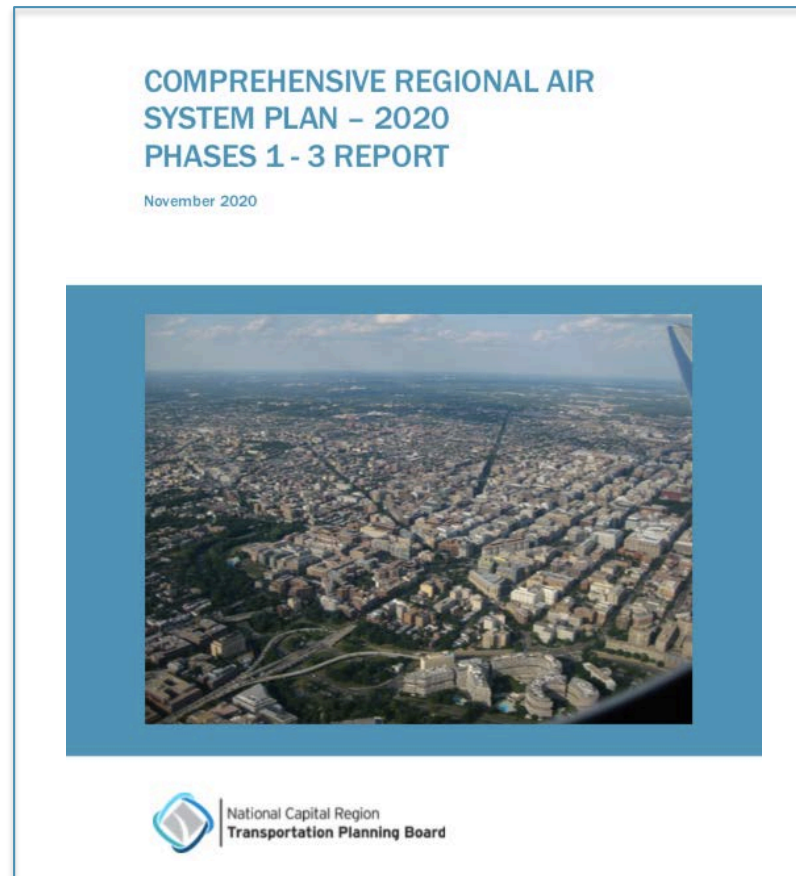
The Washington-Baltimore Air System Planning Region (ASPR) stretches from Harford County, MD to the north, to Spotsylvania County, VA to the south and from the Chesapeake Bay in the east to the foothills of the Appalachian Mountains to the west. It includes both the Washington and Baltimore regions.



About CASP Program

- Continuous Airport System Planning (CASP) program
- Funded by FAA, MWAA, and MAA
- Supports planning, development, and operation of airport facilities and associated transportation facilities
- A continuous cycle:
 - Biennial regional air passenger survey
 - Air passenger origin/destination forecast update
 - Air passenger ground access forecast update
 - Ground access plan update
- Developed, implemented, and monitored by Aviation Technical Subcommittee (ATS), including MAA and MWAA

Background Reading



The RASP Report can be found online in the link below. A memo highlighting the priority airport ground access projects has been included in the mailout.

<https://www.mwcog.org/transportation/planning-areas/airports/casp-elements/regional-air-system-plan/>



RECOMMENDATIONS

Federal Planning Factors

- Increase accessibility and mobility of people and freight.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Enhance travel and tourism.

TPB Policy Framework

BMC Policy Framework

Long-Range Transportation Plan (LRTP) Projects to Prioritize



TPB Policy Framework

Aspirational Initiatives

The express travel network would provide several benefits for airport ground access connectivity, including reducing congestion and incentivizing travelers to either carpool or travel by transit vehicle. Expanding Metrorail capacity would increase logistical ease and comfort for those traveling by Metrorail to and from airports.

Regional Transportation Priorities Plan (RTPP) Goals

- Provide a comprehensive range of transportation options.
- Support inter-regional and international travel and commerce.



Visualize 2045 Priority Projects

- **Overall**
 - Highway: **33** & Transit: **1**
- **MDOT Interstate Roadway Projects**
 - To improve access from Virginia to Maryland
 - I-270: **2** & I-495: **6**
- **Anne Arundel County Primary Roadway Projects**
 - To reduce congestion in Anne Arundel County surrounding BWI
 - I-295: **1** & MD 713: **1**
- **Howard County Primary Roadway Projects**
 - To reduce congestion in Howard County surrounding BWI
 - I-95: **1** & MD 100: **1**

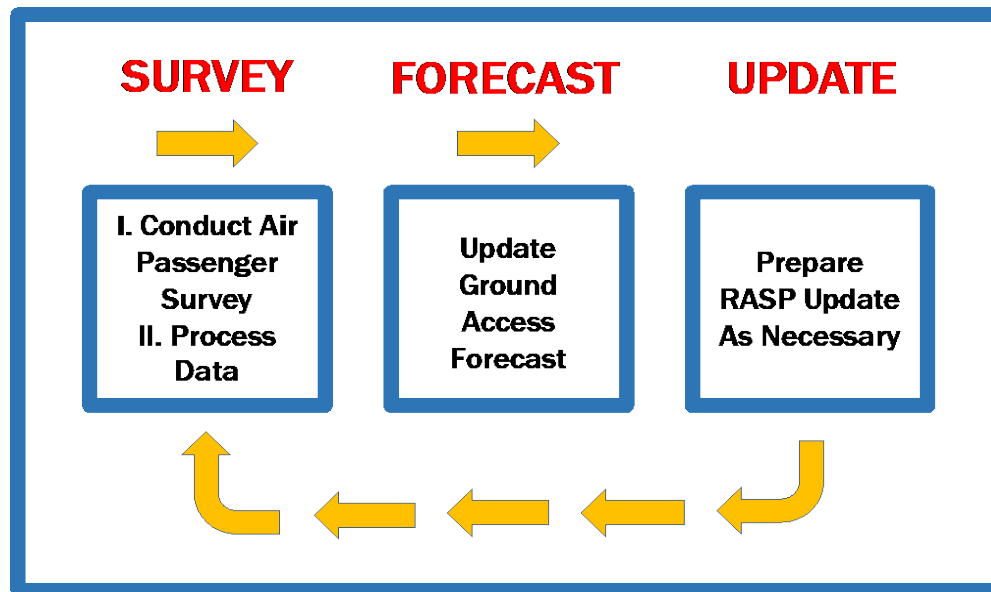
Visualize 2045 Priority Projects

- **Transit Airport Ground Access Project**
 - To improve multimodal connectivity to BWI
 - MARC Penn Line: **1**
- **VDOT Interstate Roadway Projects**
 - To reduce congestion along I-66
 - I-66: **10**
 - To reduce congestion along the I-495 Capital Beltway
 - I-495: **6**
 - To reduce congestion along the Dulles Airport Access Road
 - Dulles Airport Access Road: **1**
 - To reduce congestion along VA 28
 - VA 28: **4**



NEXT STEPS

- CASP planning cycle will continue to be synchronized with the regional LRTP update process. The precise timing of future RASP Updates will be based on need, available funding, as well as aligning with each airport's strategic and master planning processes.



Arianna Koudounas, AICP, CPM

Transportation Planner

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Metropolitan Washington Council of Governments

777 North Capitol Street NE, Suite 300

Washington, DC 20002



ITEM 11 – Information

March 17, 2021

Regional Travel Survey: Change in Observed Trips Since 2007/08

Background:

As the culminating presentation on the findings from the 2017-2018 Regional Travel Survey, staff will brief the committee on the change in reported travel between 2007/08 and 2017/18, focusing on daily weekday trips, mode share of all trips, and commute trips. Staff will also share additional tabulations from 2017/18 on trip length by mode and purpose.



MEMORANDUM

TO: Transportation Planning Board
FROM: Kenneth Joh, TPB Transportation Planner
SUBJECT: 2017-2018 Regional Travel Survey Briefing: Change in Observed Trips Since 2007/08
DATE: March 11, 2021

BACKGROUND

TPB has conducted a regional household travel survey approximately every ten years since 1968. The survey, which collects demographic and travel information from a randomly selected representative sample of households in the TPB region and adjacent areas, is the primary source of observed data used to estimate, calibrate, and validate the regional travel demand model. The model in turn is used for the travel forecasting and air quality conformity analysis of the region's long-range transportation plan as well as to support other key program activities. The survey data are also used by staff to analyze regional travel trends, and by TPB member jurisdictions and agencies to inform regional and sub-regional transportation studies and to conduct their own analysis for their areas of interest. The purpose of the survey is to better understand the characteristics of the households and persons in the region and to better understand daily travel and activities: how we travel, why we travel, where we go, how long it takes us, and what we do when we arrive. The survey seeks to obtain a complete picture of travel patterns in the region. As a result, the regional household travel survey is a critical and essential element of the TPB work program.

PROGRESS TO DATE

The 2017-2018 Regional Travel Survey (RTS) consisted of two key parts: Part 1 featured a recruitment questionnaire, which was completed by households who were invited and agreed to participate in the survey. These households completed the Part 1 questionnaire, which captured information on household, person, and vehicle characteristics as well as new questions on the use of alternative travel options. Approximately 23,000 households completed the recruitment questionnaire for Part 1. Part 2 consisted of a one-day travel diary, which survey participants completed to record details of every trip that household members took on their assigned travel day. Data collected in Part 2 constitutes actual observed trip information that will provide critical input for developing the regional travel demand model. Approximately 16,000 households completed both parts of the survey, well exceeding the survey goal of a representative sample of 15,000 households. Additionally, the RTS collected over 120,000 trip records from these households.

Since the fall of 2019, TPB staff has delivered a series of presentations based on key findings from the RTS to the TPB. The initial presentation in November 2019 focused on travel options that reduce single-occupancy vehicle (SOV) travel and capture recent trends since the 2007/2008 Household Travel Survey (HTS). These questions focused on typical weekday non-SOV travel and delivery services to home such as package and food deliveries. The last presentation in October 2020 focused on detailed observed trip information collected from the travel diary portion of the survey.

This presentation provided a cross-sectional snapshot of observed travel in the TPB region by sub-area, activity centers, and equity emphasis areas.

DESCRIPTION OF FILES

Data collection for the RTS concluded on December 31, 2018. TPB staff performed the data editing, processing, and weighting of the raw data provided by the survey contractor. Compared with the 2007/2008 HTS, the raw data was “messier” and required more extensive data processing. Editing the travel day diary information, which contained detailed trip records for each household member, was particularly labor-intensive because trip records needed to be reviewed and validated for logical consistency with other survey responses.

The RTS consists of four key data files that will be used in future analyses:

1. Household File: characteristics of households, including, among others, household size, income, number of licensed drivers, housing type, and number of vehicles and bicycles.
2. Person File: characteristics of individual persons, including, among others, demographic information, employment status, work location, and usual commute mode.
3. Vehicle File: characteristics of household vehicles, including make, model, year, fuel type, and automatic toll payment transponder information.
4. Trip File: recorded trip details, including origin/destination, start/end times, mode of travel, trip purpose, and transit access and egress.

CHANGE IN OBSERVED TRIPS SINCE 2007/08

As the culminating RTS presentation, this briefing provides a longitudinal comparison of observed travel from 2007/08 – 2017/18 for daily weekday trips, mode share of all trips, and commute trips. Additional tabulations from the 2017/18 RTS focusing on trip length by mode and purpose are also presented. Revised person and trip weights were applied to the RTS to adjust for the Census American Community Survey commuter distribution and 2018 Metrorail ridership estimates.

Survey findings for changes in weekday household and person trip rates are highlighted below:

- Households in the TPB region are taking fewer trips in 2017/18 compared with 2007/08. The decrease in trips per household is across all sub-regional areas, but more so in the inner and outer suburbs. This reflects the national trend in declining household trip rates over the past decade.
- The decrease in household trips is larger for 3 or more person households than 1 and 2 person households.
- The change in household trip rates varies by vehicle availability. Compared with 2007/08, households with no vehicles take more trips per household, while households with two or more vehicles take fewer trips per household.
- The decrease in weekday person trips is larger for younger age groups, especially persons under 35.

Survey findings for changes in mode share of weekday trips are summarized below:

- The share of all bicycle trips dramatically increased throughout the TPB region, doubling since 2007/08. Bicycle trip rates increased three-fold in the regional core.
- The share of rail transit trips declined across the TPB region, especially for non-commute trips.
- The share of bus transit, walk, bicycle, and taxi/ride-hail commute trips significantly increased in the region.
- In the regional core, the share of automobile commutes significantly decreased and the share of rail transit commutes significantly increased.

Overall, the highest shares of bus transit, rail transit, walk, bicycle, and taxi/ride-hail trips are in the core, while the outer suburbs have the highest shares of automobile trips. Since 2007/08, automobile commutes (drive alone, drive others, and auto passenger) have decreased in the TPB region; non-automobile commutes have increased with the exception of rail transit. Among all travel modes, the share of bicycle trips increased most significantly.

TPB staff also performed additional tabulations from the 2017/18 RTS for trip length by mode and purpose. The purpose of these tabulations is to compare the distribution of trip lengths by travel mode and demographic characteristics. Survey findings for trip length distributions are summarized below, based on median trip distances:

- For commute trips, drive alone and rail transit trips have the longest trip lengths. For non-commute trips, trip lengths are longest for rail transit.
- Trip length increases from the core to the outer suburbs. Commute trips are longer than non-commute trips across all sub-regions.
- Household with higher incomes tend to have further commutes with the longest trip lengths among households earning more than \$150,000.
- African Americans have further commutes than other racial/ethnic groups.
- Trip lengths increase with vehicle availability; households with more vehicles take longer trips.
- Life stage influences the length of trips with persons between 35 to 74 having the furthest commutes.
- Trip length varies by gender; males have longer commute distances than females.
- Households with children have longer commute distances than households without children.
- For trip length by purpose, commute trips (i.e., trips to work) are longer than other trip purposes.

RTS PUBLIC FILE RELEASE

In addition to preparing the RTS data files for the regional travel demand model, TPB staff has prepared a public version of the RTS data files. The RTS data files are now available for public use by practitioners, researchers, and other stakeholders. The data files include household, person, vehicle, and trip information for the TPB model region, which includes the TPB planning region and adjacent counties. In addition to these files, the public file release will include technical documentation that focuses on survey data processing and survey expansion, and provides an overview of the data files.

The public file release will protect the confidentiality of survey participants by excluding census block groups and XY coordinates for home, school, and work locations, in addition to trip origins and destinations. The public use dataset can be requested from the RTS website (<https://www.mwcog.org/transportation/data-and-tools/household-travel-survey/>).

RTDC RTS TABULATIONS

TPB staff has also released a new resource to access data from the RTS, the Regional Transportation Data Clearinghouse (RTDC) RTS Tabulations. This resource provides descriptive summaries of variables in the RTS household, person, vehicle, and trip files. These are first level tabulations of the RTS dataset that can be quickly pulled from “off-the-shelf” when needed. The RTDC RTS Tabulations include tabulations for the entire RTS universe, which includes TPB member jurisdictions and neighboring jurisdictions in the TPB model region; tabulations were also prepared for Jurisdictions (County or Independent City), Subregional Areas (Core/Inner Suburb/Outer Suburb), Activity Centers (inside/outside), and Equity Emphasis Areas (inside/outside). This resource is available on the RTDC RTS website (<https://rtdc-mwcog.opendata.arcgis.com/datasets/regional-travel-survey-rts-tabulations>).

CONCLUSION

While the RTS provides the most recent and comprehensive picture of travel in the Washington metropolitan region, it reflects the region before the COVID-19 pandemic. However, it will provide a useful point of comparison with the “new normal” after the pandemic subsides. In addition, the RTS will help address questions about transportation equity by providing critical insights on access and opportunities for low income and communities of color.

2017-2018 REGIONAL TRAVEL SURVEY BRIEFING: CHANGE IN OBSERVED TRIPS SINCE 2007/08

Kenneth Joh, Ph.D., AICP
TPB Transportation Planner

Transportation Planning Board
March 17, 2021



National Capital Region
Transportation Planning Board

Overview of Regional Travel Survey Information

Recruitment Survey

Household

Household

- Size
- Income
- Number of licensed drivers
- Number of workers
- Number of students

Housing

- Type
- Tenure

Vehicles and Bicycles

- Number of vehicles
- Number of bicycles

Person

Demographics

- Race/Ethnicity
- Age
- Gender
- Number of jobs
- Work from home

Typical Commute

- Usual mode
- Frequency of telework
- Work location
- Employer incentives

All Weekday Travel (including work trips)

- Frequency of travel option
- Use of other modes
- Delivery services

Vehicle

Vehicle Characteristics

- Make and model
- Year
- Fuel type
- Type of toll transponder

Travel Diary

Trip

Trip Details

- Origin and destination
- Start and end times
- Mode of travel
- Purpose/activities
- Transit access and egress



Taking a Deeper Dive into the Travel Diary

- The last briefing provided a **cross-sectional snapshot** of observed travel in the TPB region by sub-area, activity centers, and equity emphasis areas
 - Differences in household/person trip rates by demographic characteristics
 - Differences in commute/non-commute trip share
- Today's briefing will provide a **longitudinal comparison** of observed travel from 2007/08 – 2017/18



REGIONAL TRAVEL SURVEY



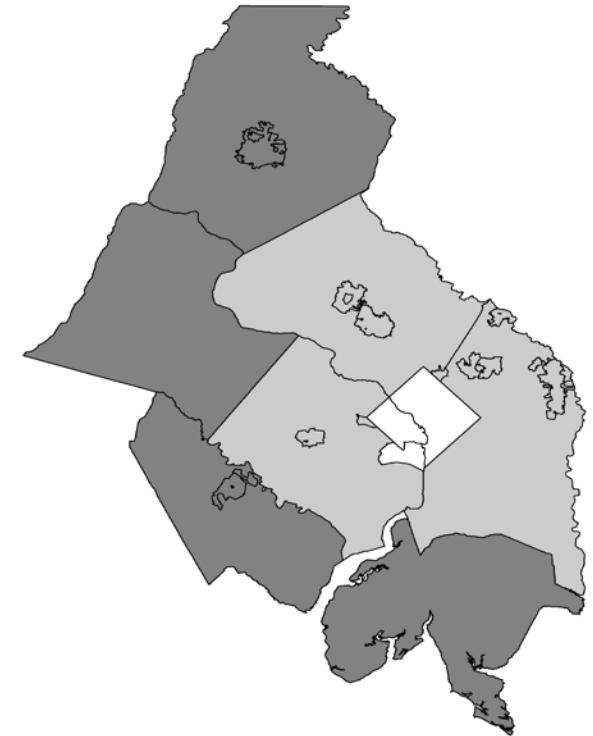
Planning Our Future Together

- Change in reported travel between 2007/08 and 2017/18
 - Daily weekday trips
 - Mode share of all trips
 - Commute trips
- Additional 2017/2018 RTS tabulations
 - Trip length by mode
 - Trip length by purpose
- Revised person and trip weights applied to adjust for ACS commuter distribution and 2018 Metrorail ridership estimates



Sub-Regional Areas

Sub-Area	Jurisdiction
Core	District of Columbia
	Arlington County
	City of Alexandria
Inner Suburb	Montgomery County
	Prince George's County
	Fairfax County, including City of Fairfax and City of Falls Church
Outer Suburb	Charles County
	Frederick County
	Loudoun County
	Prince William County, City of Manassas, and City of Manassas Park



Households in the Region



Image Credit: Kenneth Joh

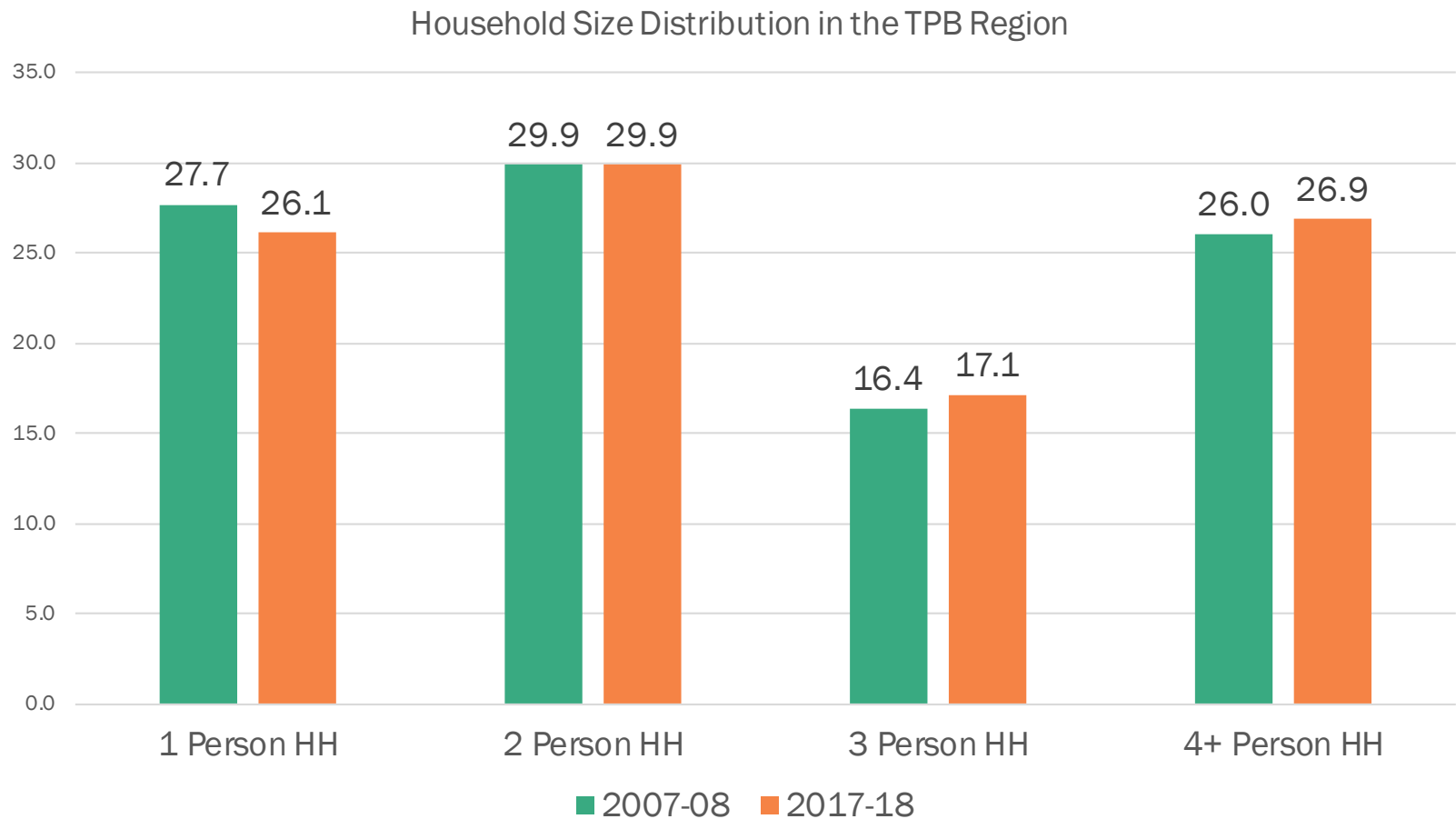
The TPB region
increased by
300,000 households
since 2007/08

The region has added
new transportation
infrastructure

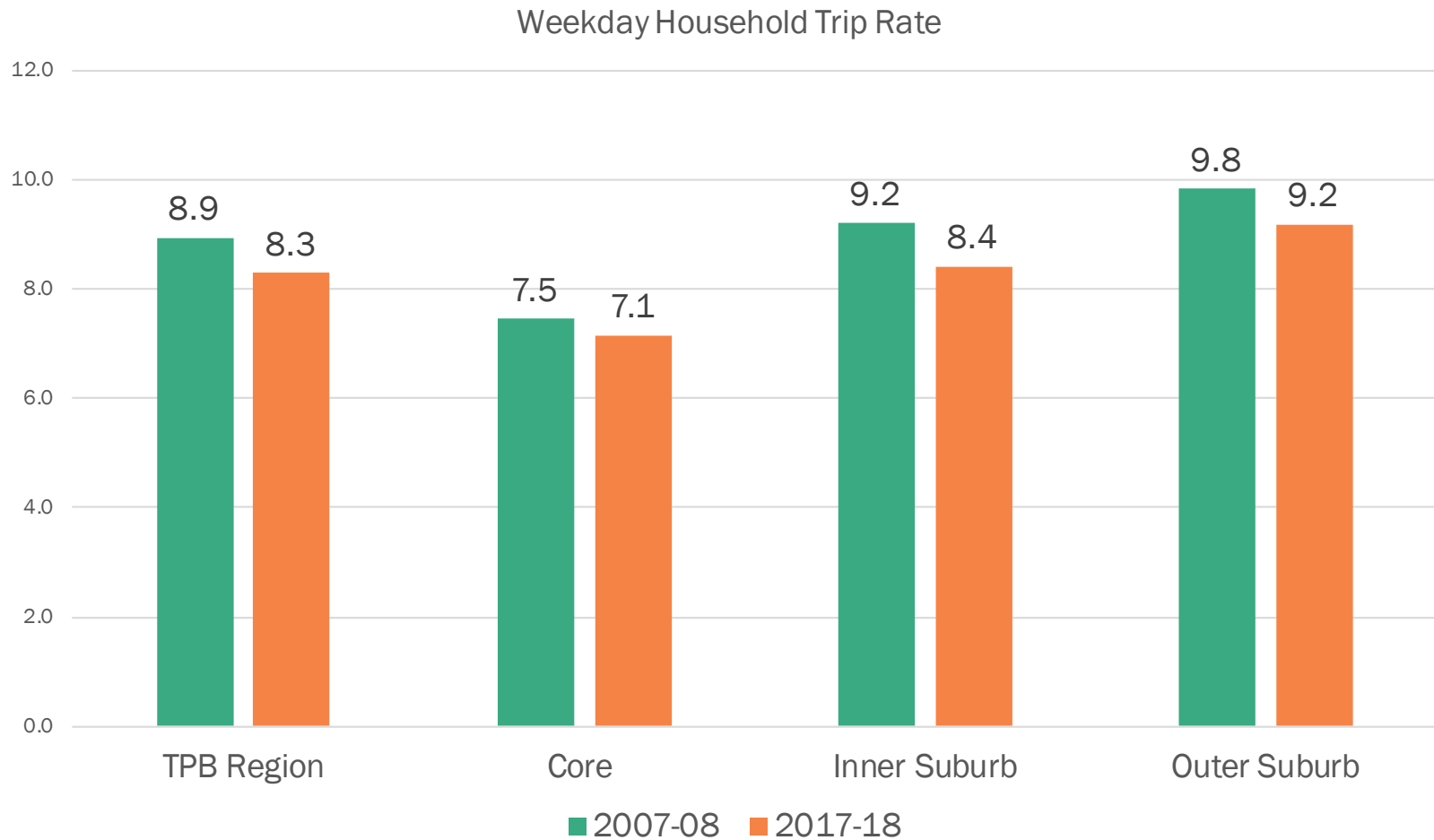


Image Credit: Washington Post

Household Sizes Have Slightly Increased



Households are Taking Fewer Trips in 2017/18

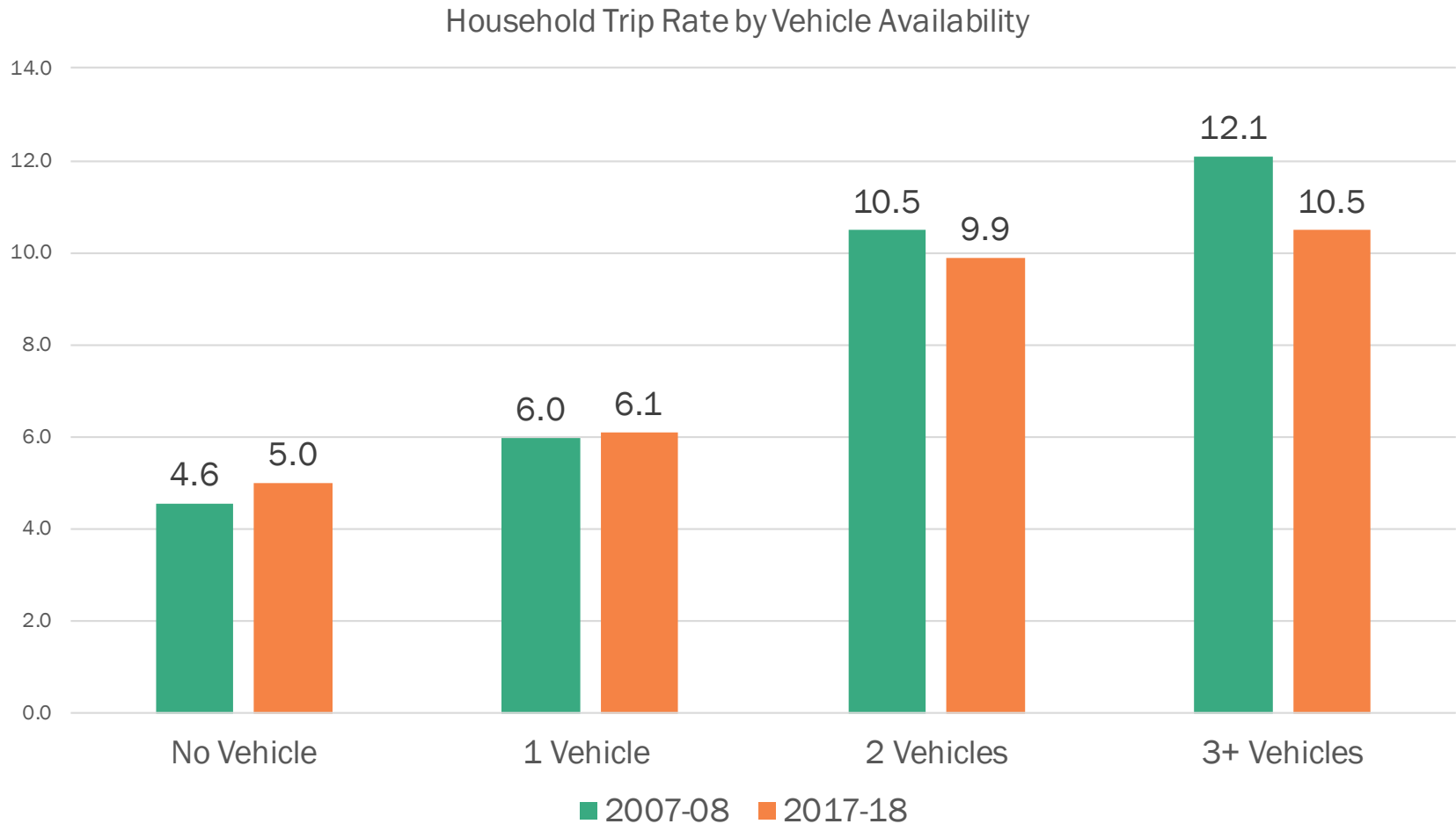


Larger Decrease in Household Trips for Larger Households

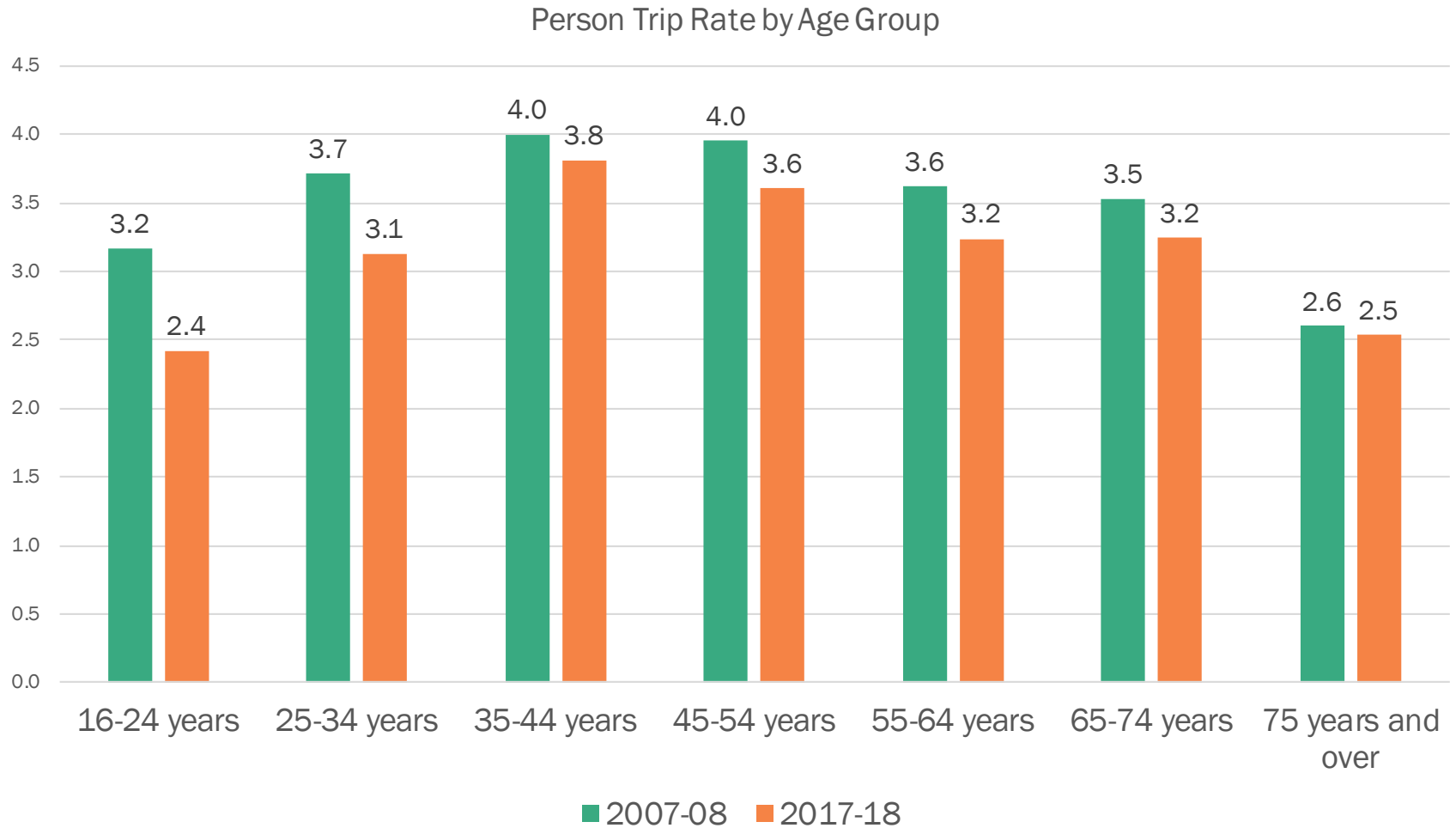
Weekday Household Trip Rate by Household Size



Change in Household Trip Rate Varies by Vehicle Availability



Largest Decrease in Trips for Persons Under 35



Summary of Changes in Weekday Household/ Person Trip Rates

- Households in the TPB region are taking fewer trips in 2017/18 compared with 2007/08
- Larger decrease in daily weekday trips for households with 3 or more persons
- Decrease in daily weekday trips for households with 2 or more vehicles
- Larger decrease in daily weekday trips for persons under 35



Change in Mode Share of All Weekday Trips by Region and Sub-Area

Travel Mode	TPB Region 2007/08	TPB Region 2017/18	Core 2007/08	Core 2017/18	Inner Suburb 2007/08	Inner Suburb 2017/18	Outer Suburb 2007/08	Outer Suburb 2017/18
Drive Alone	41.2	41.0	33.1	27.9	42.7	43.7	44.0	45.6
Drive Others and Auto Passenger	38.6	38.0	26.2	25.5	40.2	39.7	44.9	44.5
Rail Transit	4.5	3.6	9.9	8.3	4.0	3.2	1.2	0.8
Bus Transit	1.8	2.0	5.2	5.1	1.2	1.4	0.4	0.5
Walk	9.1	9.3	21.9	24.6	6.9	6.3	4.0	3.4
Bicycle	0.6	1.3	1.3	3.8	0.5	0.9	0.2	0.3
Taxi/Ride-Hail	0.3	1.0	0.8	2.8	0.2	0.6	0.1	0.1
School Bus	3.8	3.5	1.2	1.2	4.1	3.8	4.9	4.6
Other	0.3	0.4	0.4	0.7	0.2	0.4	0.4	0.2

Note: Highlighted data points indicate differences (negative = yellow; positive = green) at the 95% confidence level



Change in Mode Share of Commute Trips by Region and Sub-Area

Commute Mode	TPB Region 2007/08	TPB Region 2017/18	Core 2007/08	Core 2017/18	Inner Suburb 2007/08	Inner Suburb 2017/18	Outer Suburb 2007/08	Outer Suburb 2017/18
Drive Alone	66.7	64.9	46.9	34.6	69.1	70.1	78.3	82.3
Drive Others and Auto Passenger	11.4	7.4	7.8	4.1	11.9	7.4	13.2	11.0
Rail Transit	14.2	15.5	25.0	29.8	13.9	14.6	4.9	3.2
Bus Transit	3.3	4.3	7.7	9.1	2.4	3.2	1.7	2.2
Walk	2.7	3.8	8.5	10.8	1.3	2.3	1.0	0.5
Bicycle	1.1	2.5	2.9	7.6	0.8	1.3	0.3	0.4
Taxi/Ride-Hail	0.3	1.3	0.7	3.4	0.3	1.0	0.0	0.1
Other	0.4	0.3	0.5	0.7	0.2	0.2	0.7	0.2

Note: Highlighted data points indicate differences (negative = yellow; positive = green) at the 95% confidence level



Summary of Changes in Mode Share

- Dramatic increase in bicycle trips throughout the region
- Decline in rail transit trips across the region, especially for non-commute trips
- Significant increases in bus transit, walk, bicycle, and taxi/ride-hail commute trips in the region
- In the regional core, a significant decrease in automobile commutes and an increase in rail transit commutes



Trip Length Distribution by Mode in Miles – All Trips (2017/2018)

Travel Mode	25 th Percentile	Median	75 th Percentile	90 th Percentile
Drive Alone	1.7	4.3	10.2	19.4
Drive Others and Auto Passenger	1.3	3.1	6.4	13.4
Rail Transit	4.9	8.6	14.9	23.2
Bus Transit	1.8	3.3	6.0	12.8
Walk	0.1	0.3	0.5	1.0
Bike	0.8	1.6	2.9	5.6
Taxi/Ride-Hail	1.9	3.6	6.8	10.6



Trip Length Distribution by Mode in Miles – Commute Trips (2017/2018)

Commute Mode	25 th Percentile	Median	75 th Percentile	90 th Percentile
Drive Alone	4.8	9.3	17.0	26.3
Drive Others and Auto Passenger	3.5	7.8	15.2	27.7
Rail Transit	5.6	9.3	15.9	23.2
Bus Transit	2.4	4.5	10.0	26.5
Walk	0.4	0.7	1.3	1.9
Bike	1.9	3.0	5.5	8.5
Taxi/Ride-Hail	2.5	4.6	6.6	10.4

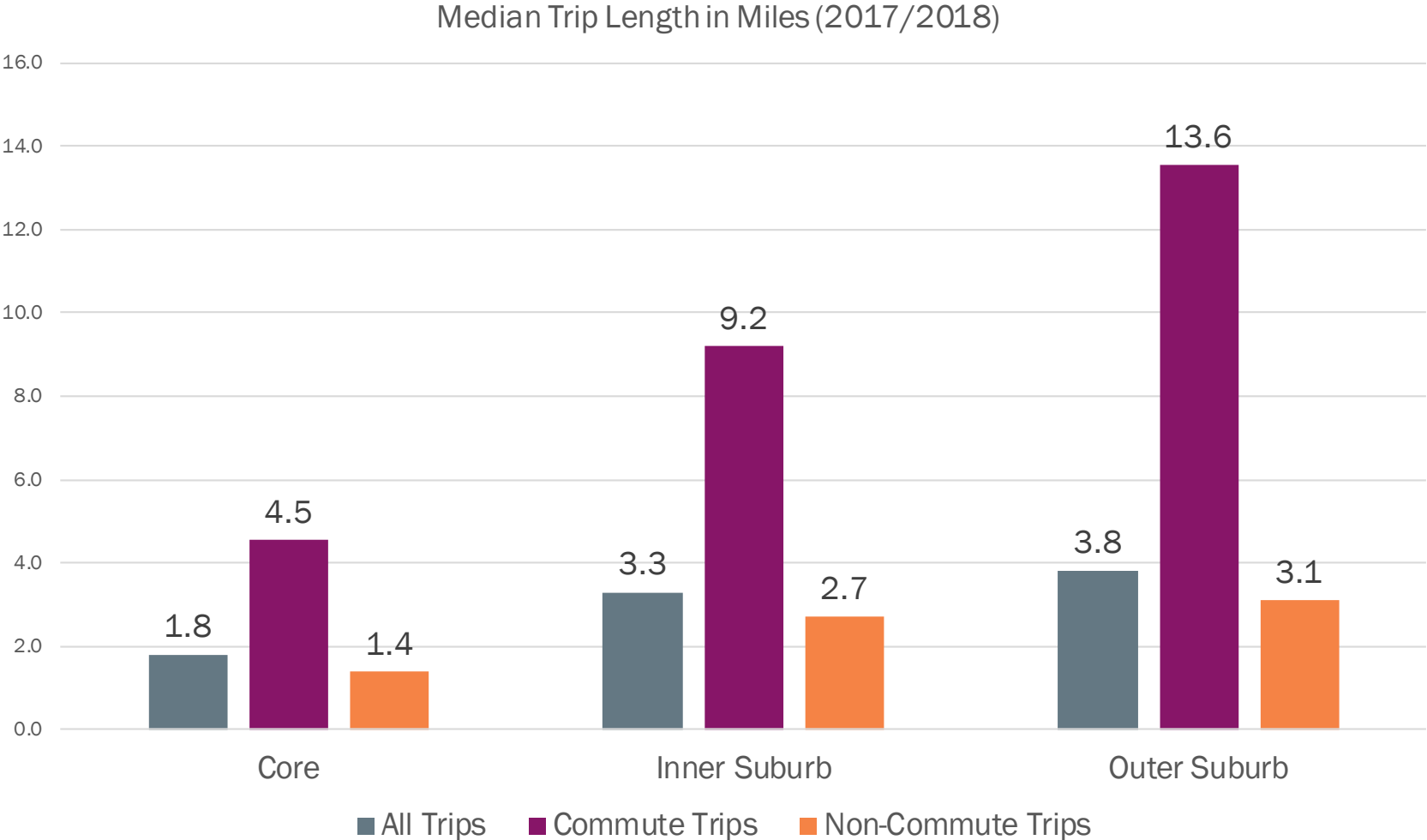


Trip Length Distribution by Mode in Miles – Non-Commute Trips (2017/2018)

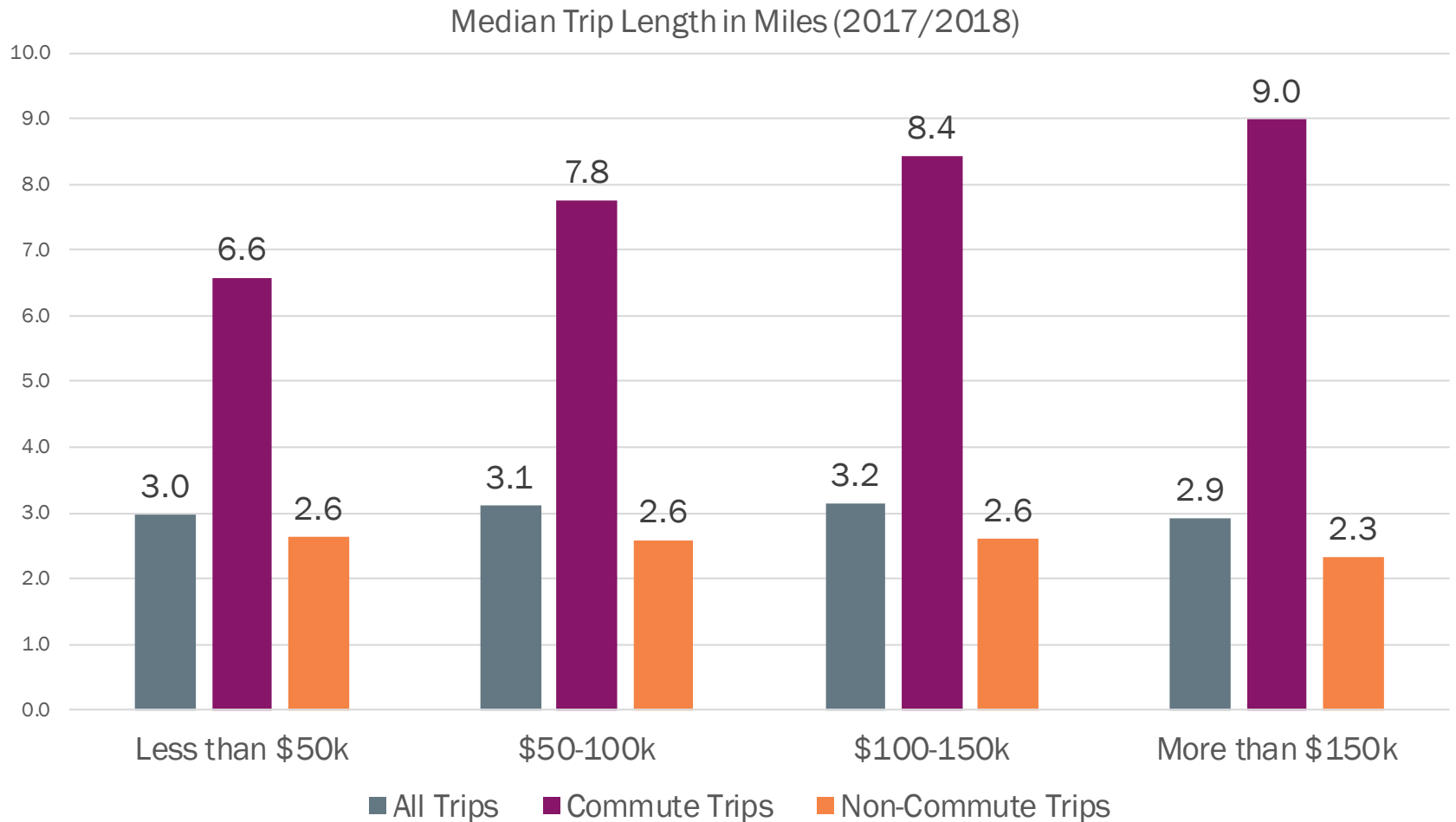
Travel Mode	25 th Percentile	Median	75 th Percentile	90 th Percentile
Drive Alone	1.3	3.1	7.5	15.0
Drive Others and Auto Passenger	1.3	3.0	6.3	12.6
Rail Transit	3.6	6.9	12.4	23.2
Bus Transit	1.6	2.9	4.9	8.5
Walk	0.1	0.3	0.5	0.9
Bike	0.6	1.0	2.3	3.3
Taxi/Ride-Hail	1.8	3.3	6.8	10.6



Trip Length Increases from Core to Suburbs

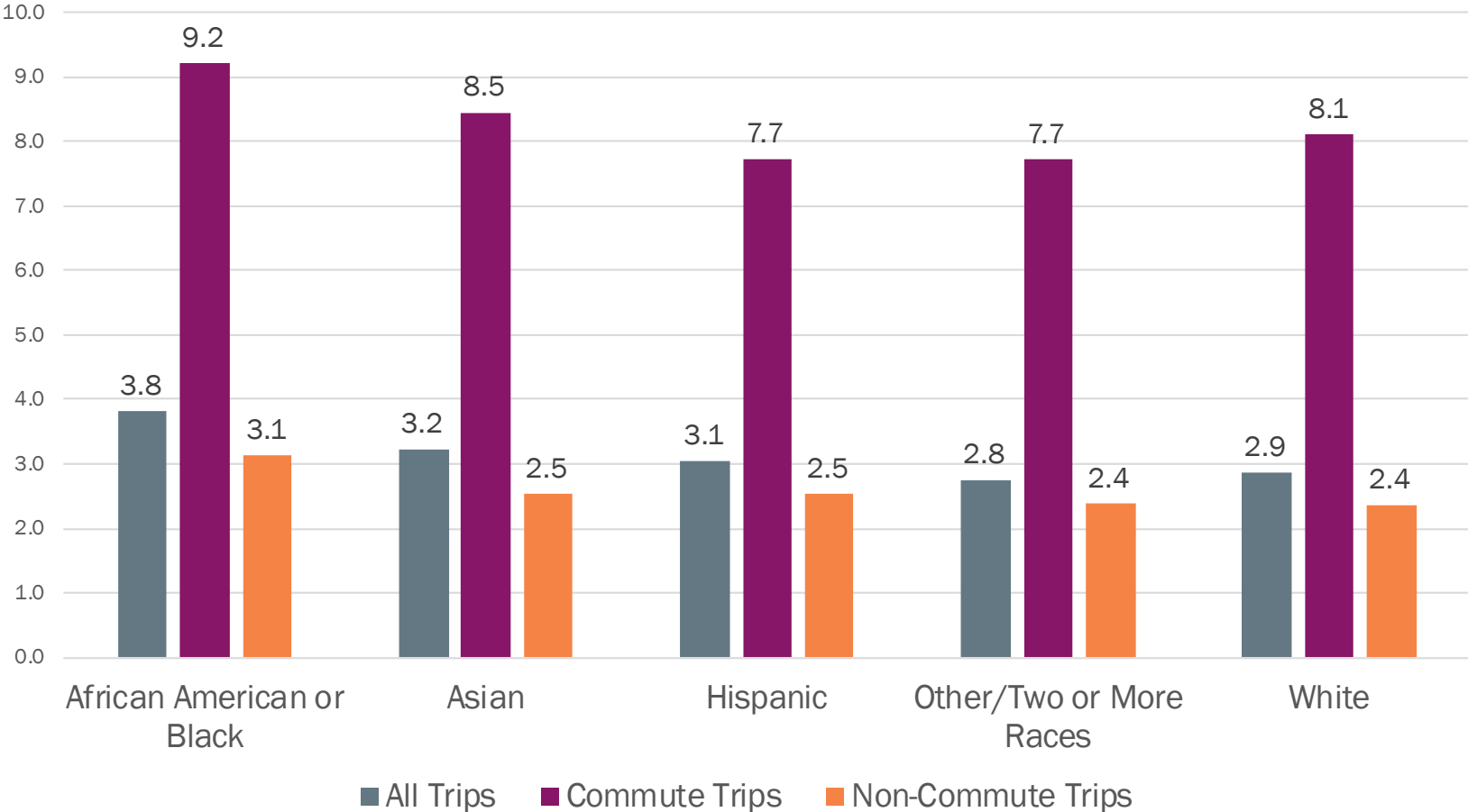


Commute Trip Lengths Increase with Income

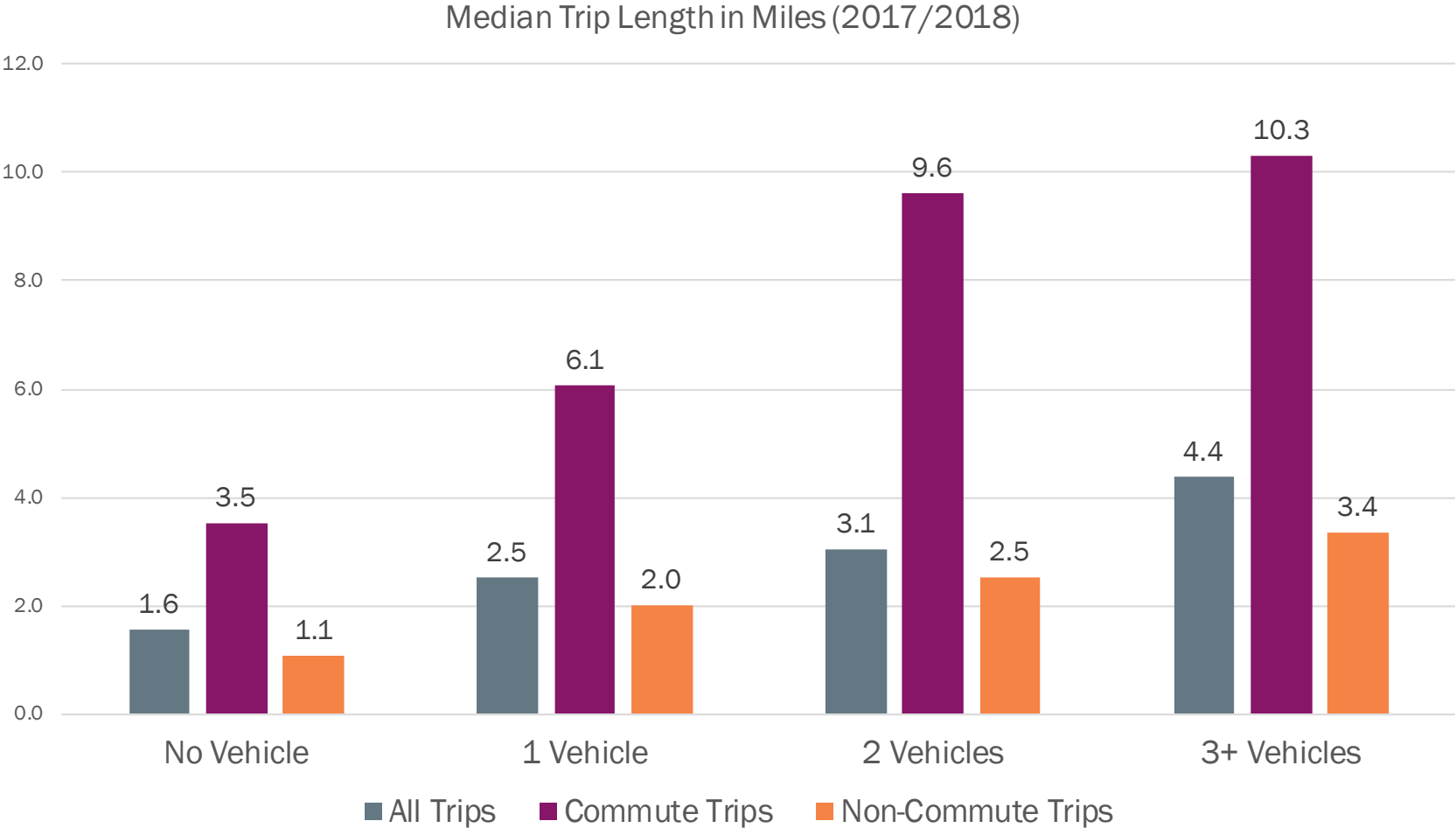


Trip Length Varies by Race/Ethnicity

Median Trip Length in Miles (2017/2018)

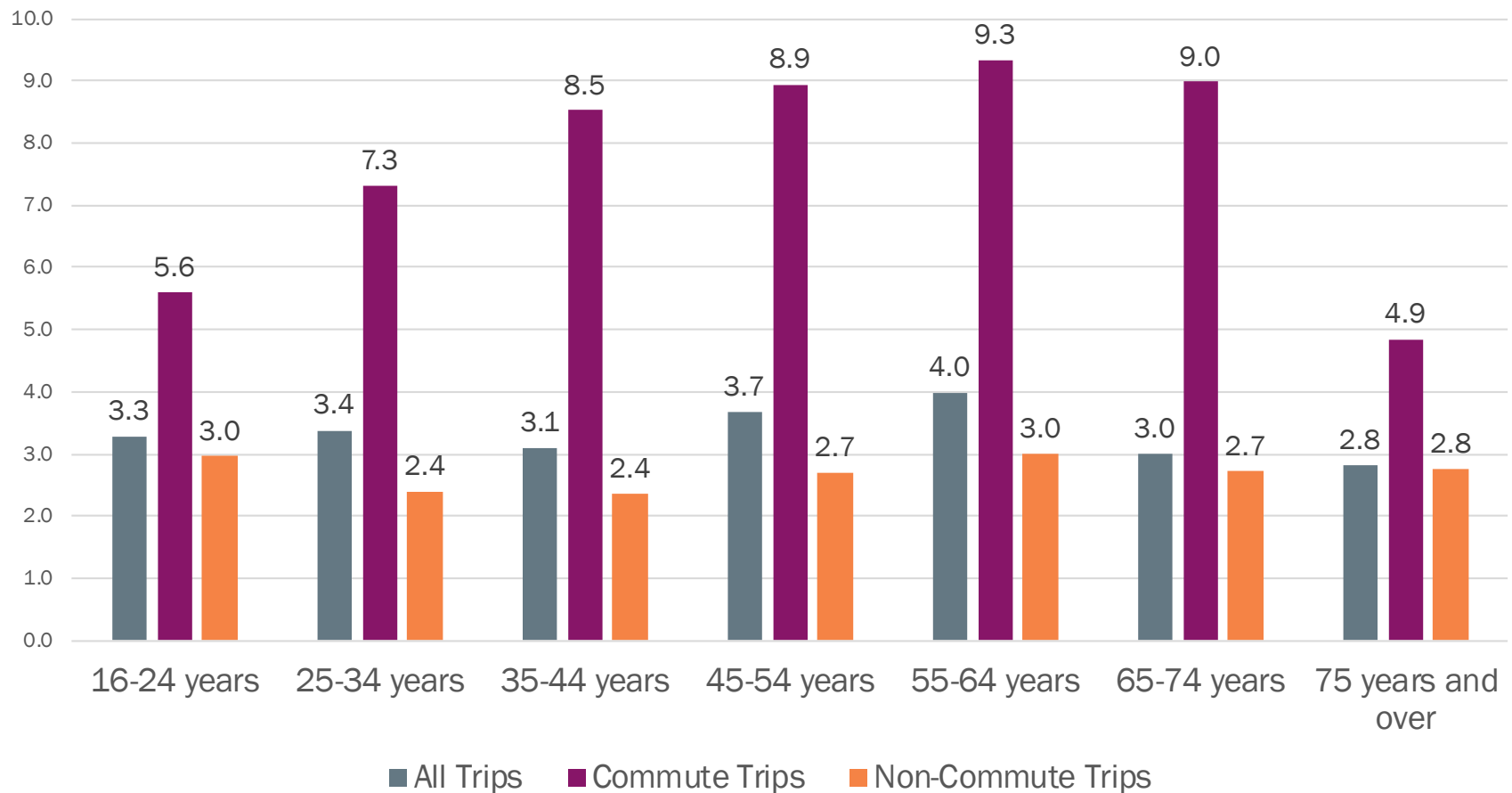


Trip Lengths Increase with Vehicle Availability

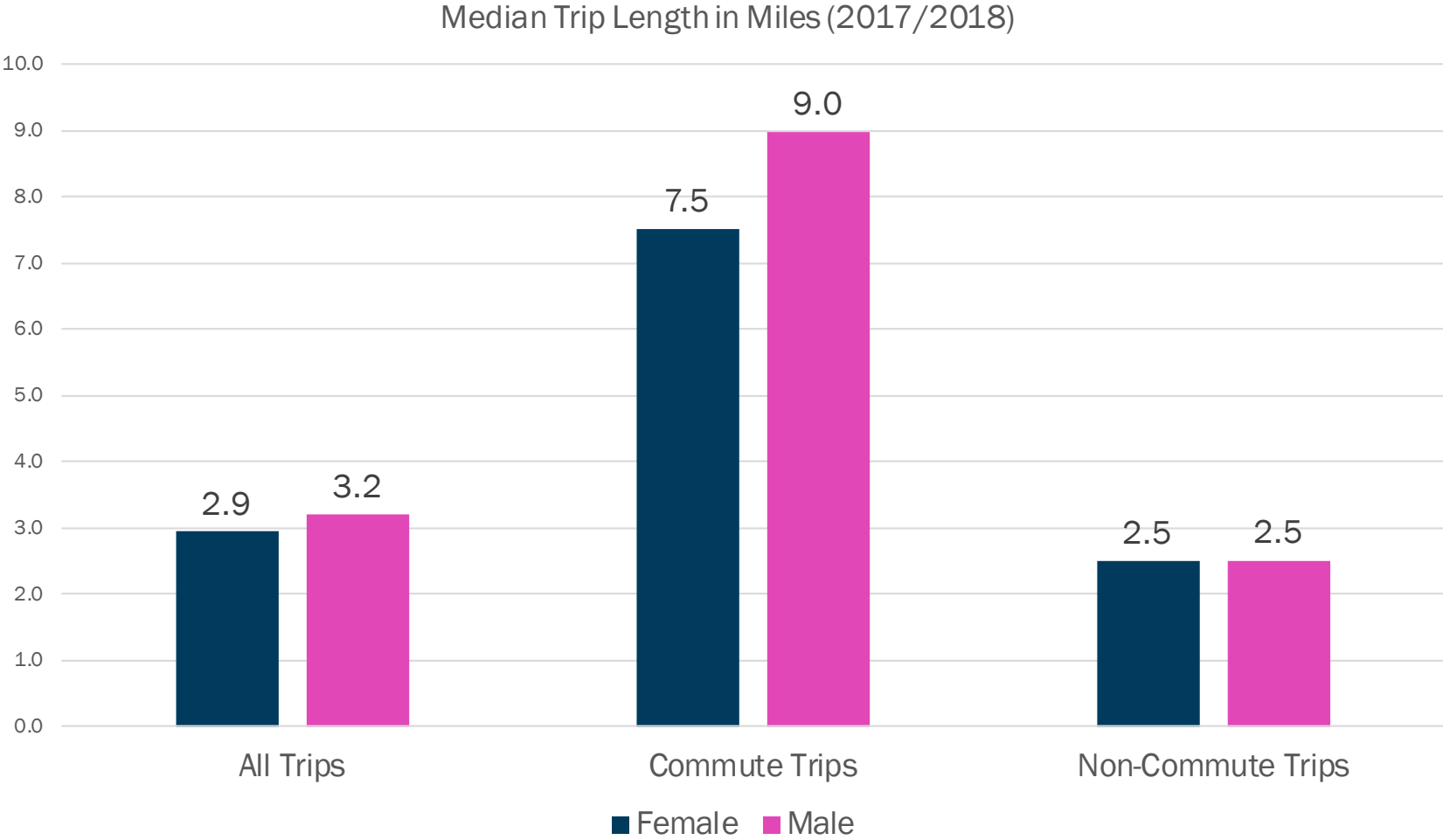


Life Stage Influences Trip Length

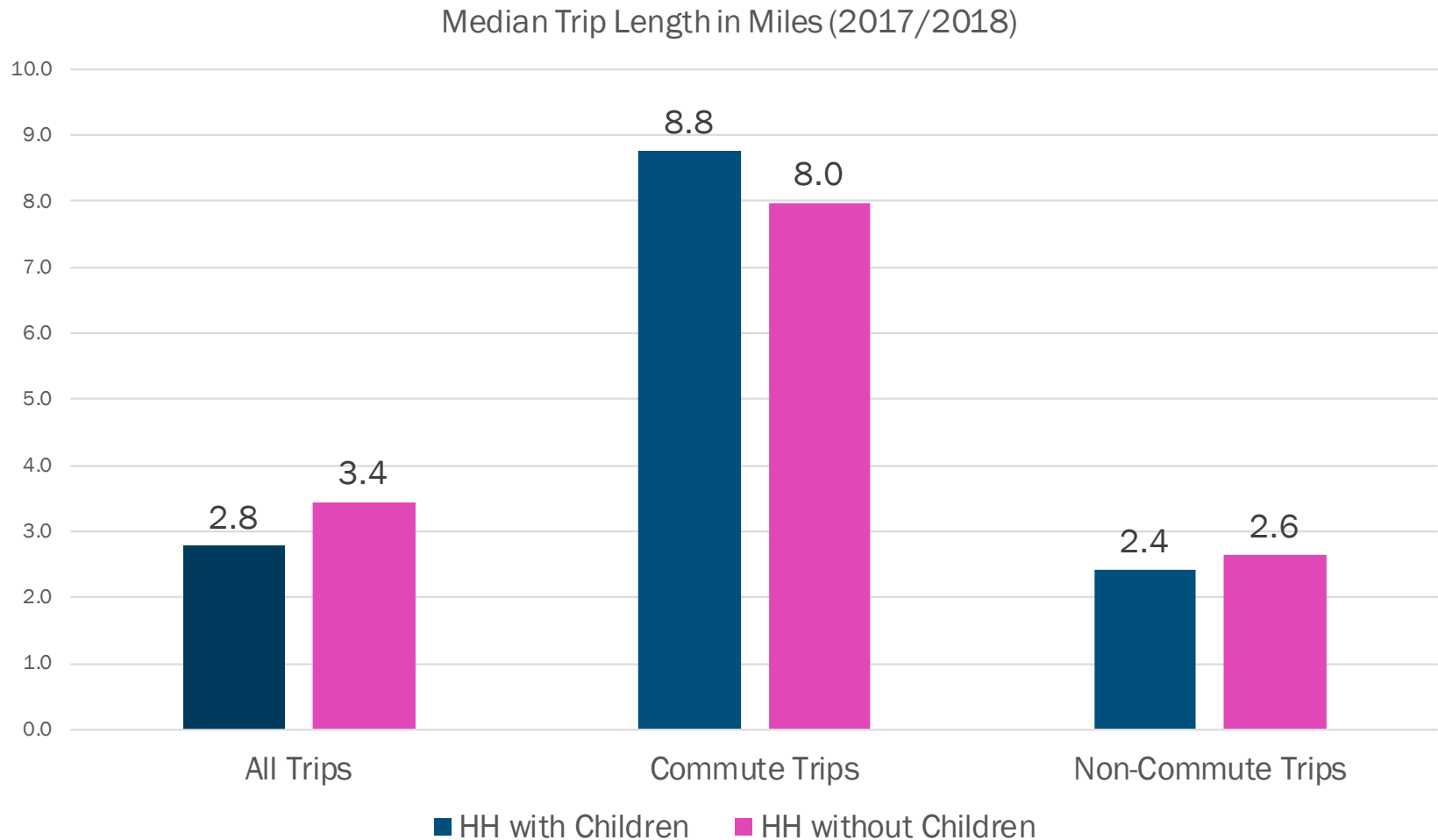
Median Trip Length in Miles (2017/2018)



Trip Length Varies by Gender



Households with Children Travel Further to Work



Trip Length by Purpose – All Trips (2017/2018)

Trip Purpose	25 th Percentile	Median	75 th Percentile	90 th Percentile
Commute	2.3	6.7	13.7	23.2
Work-Related	1.4	4.1	10.5	21.9
Drop Off/Pick Up	0.9	2.4	5.7	10.6
School	0.9	2.0	4.7	9.6
Personal Business	1.1	2.8	6.8	13.9
Shop/Meal	0.7	2.1	4.9	10.5
Social/Recreation	1.1	2.9	7.0	14.4



Summary of Trip Length Distributions

- Longest commutes for drive alone and rail transit trips
- Trip length increases from the core to the outer suburbs
- Higher income households have further commutes
- African Americans have further commutes than other racial/ethnic groups
- Households with more vehicles take longer trips
- Persons between 35 and 74 have the furthest commutes
- Males have longer commute distances than females
- Households with children travel further to work

RTS Public File Release

- The RTS data files are now available for public use by practitioners, researchers, and other stakeholders
- The data files include household, person, vehicle, and trip information for the TPB model region
- The public file release will include technical documentation that provides an overview of the data files
- The public file release will protect the confidentiality of survey participants
- For more information about the RTS and to request data, go to: <https://www.mwcog.org/transportation/data-and-tools/household-travel-survey/>

RTDC RTS Tabulations

- The Regional Transportation Data Clearinghouse (RTDC) RTS Tabulations provide descriptive summaries of variables in the RTS household, person, vehicle, and trip files
- These are first level tabulations of the RTS data that can be quickly pulled from “off-the-shelf”
- Tabulations for the entire RTS universe, as well as county-level jurisdictions, subregional areas, activity centers, and equity emphasis areas are included
- This resource is available on the RTDC: <https://rtdc-mwcog.opendata.arcgis.com/datasets/regional-travel-survey-rts-tabulations>

Some Final Thoughts about the RTS

- The RTS provides the most recent and comprehensive picture of travel in the Washington metropolitan region before the COVID-19 pandemic
- It will be a baseline to compare with a post-COVID “new normal”
- The RTS will help address questions about transportation equity by providing critical insights on access and opportunities for low income and communities of color

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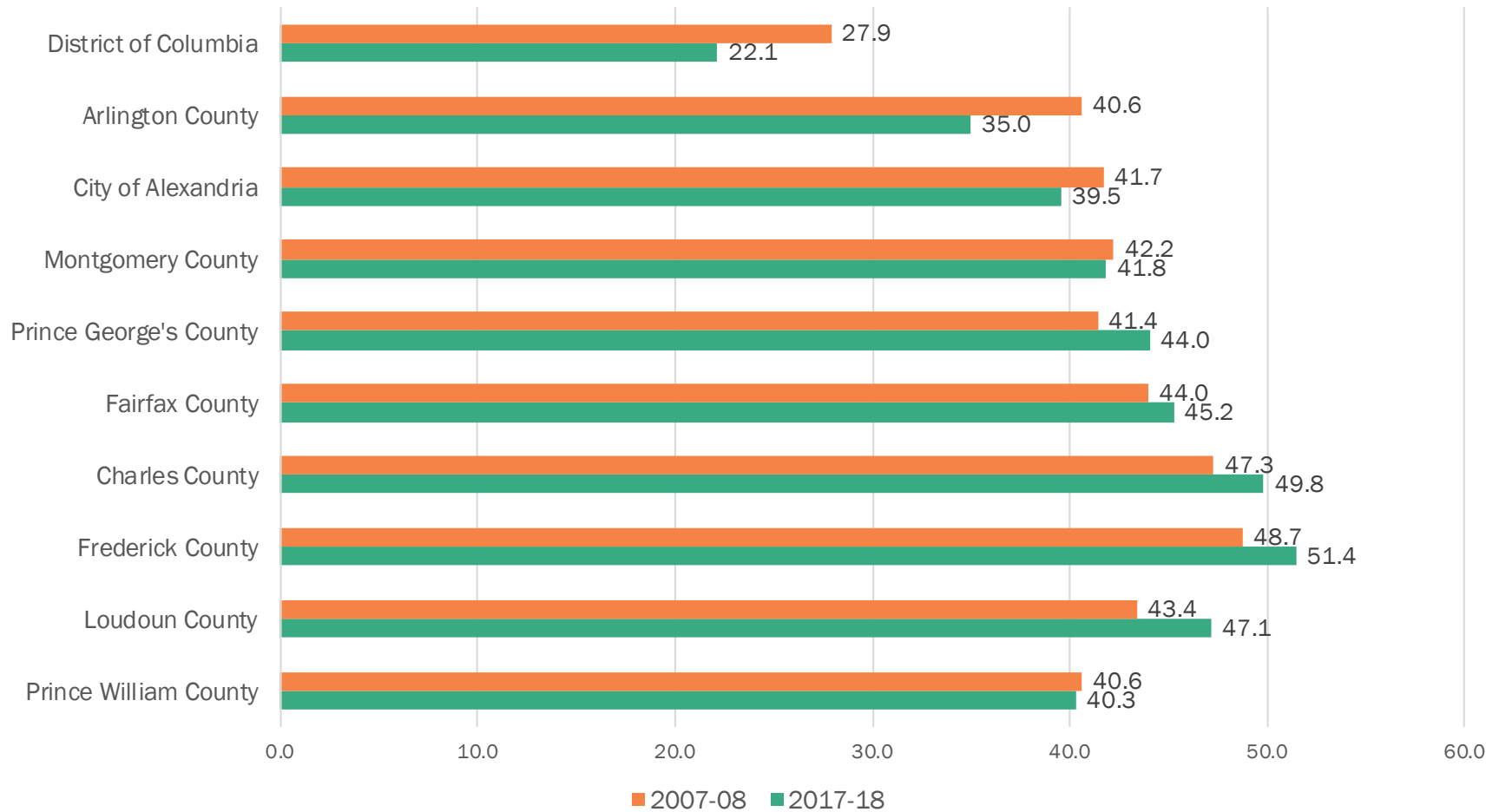
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REGIONAL
TRAVEL SURVEY

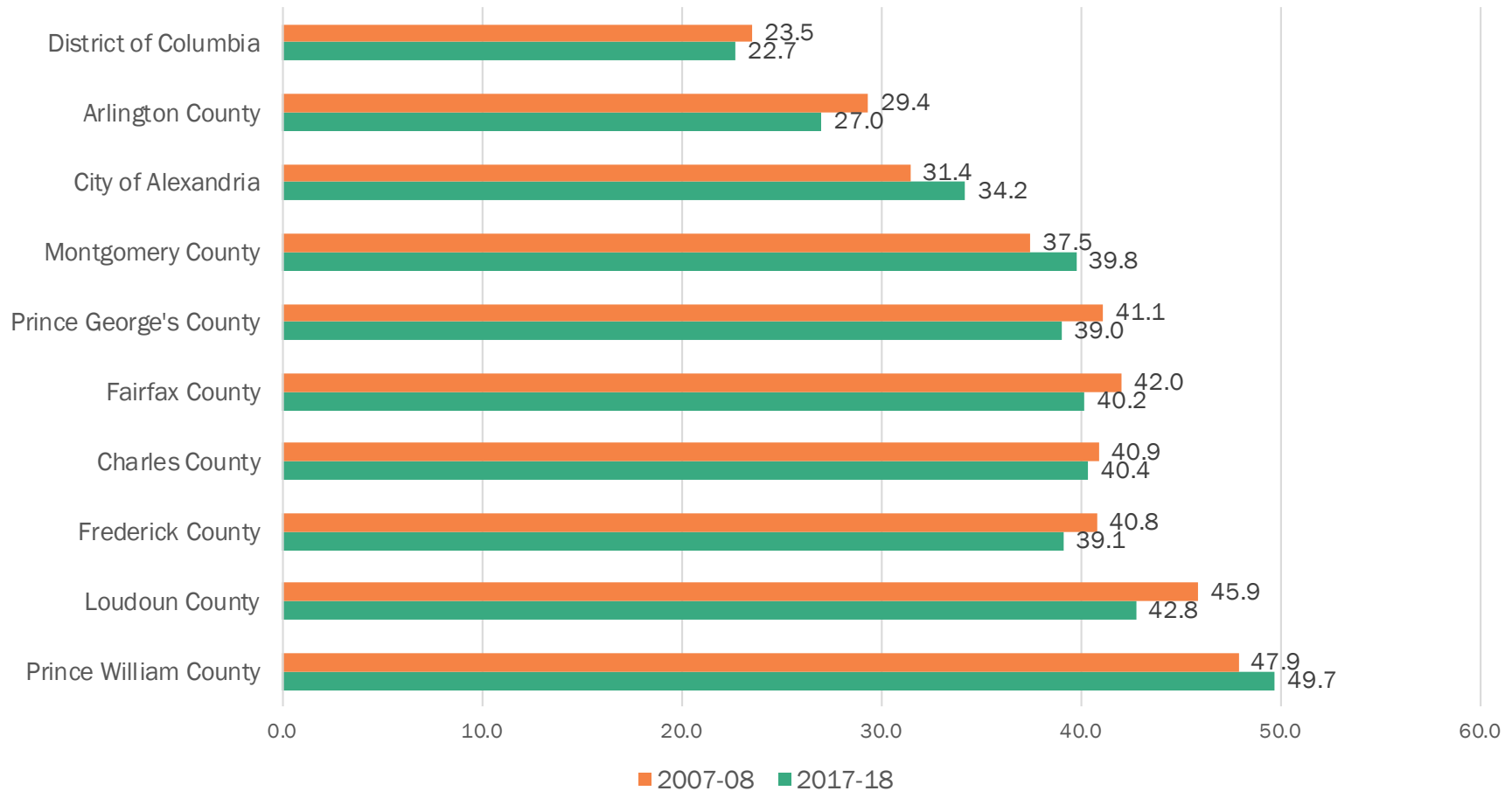


Planning Our Future Together

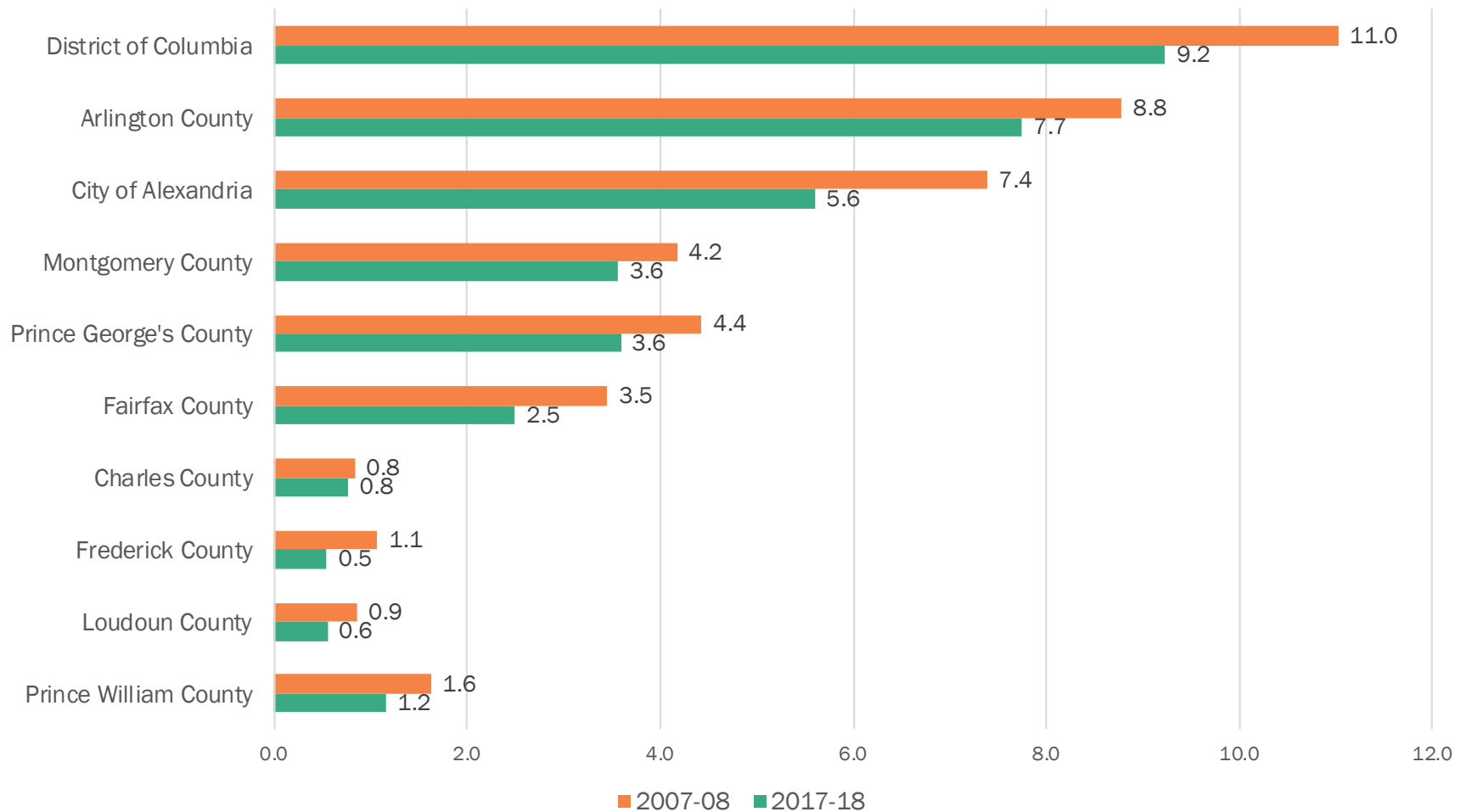
Mode Share for All Trips – Drive Alone (2007/08 – 2017/18)



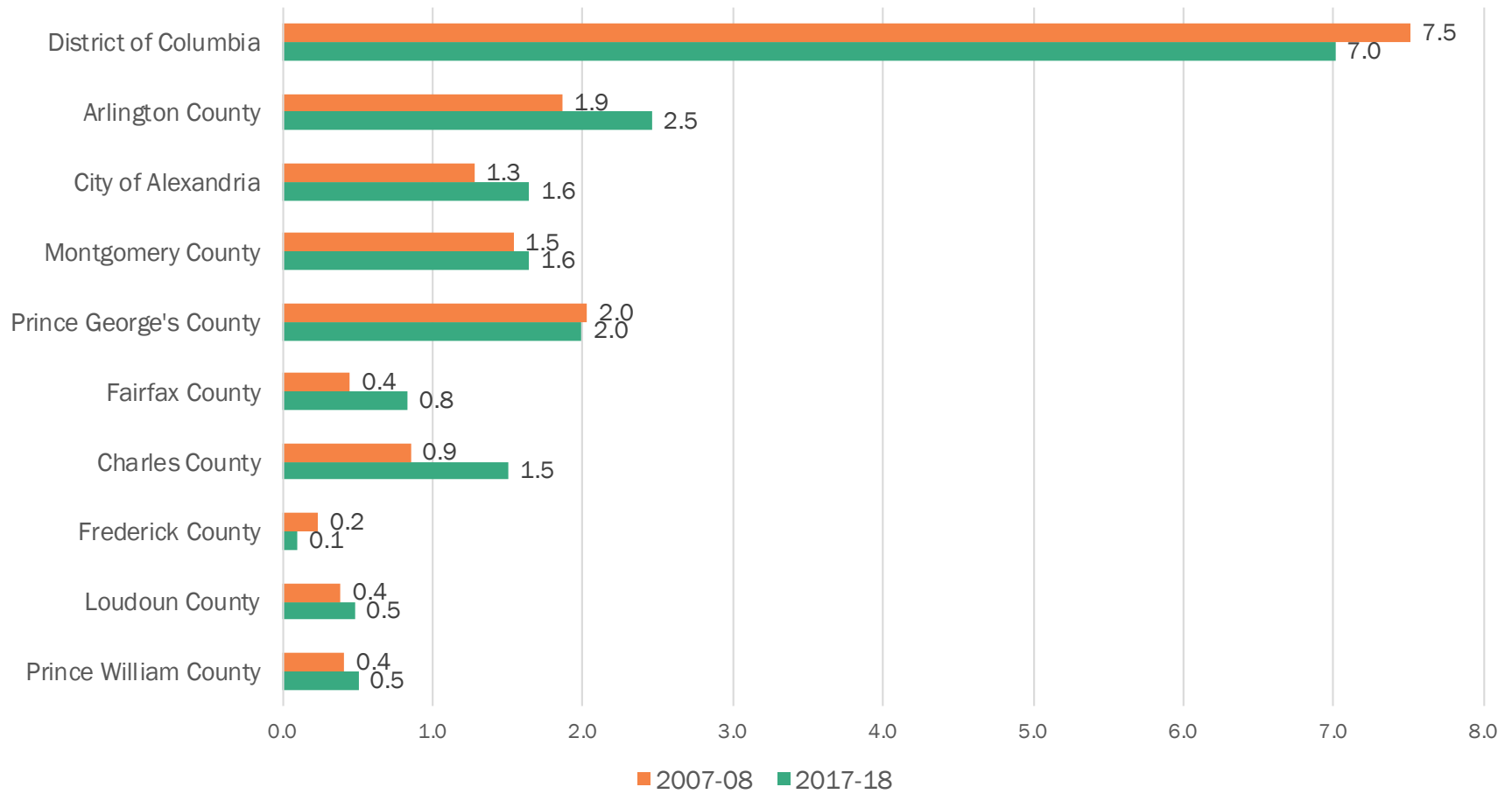
Mode Share for All Trips – Drive Others and Auto Passenger (2007/08 – 2017/18)



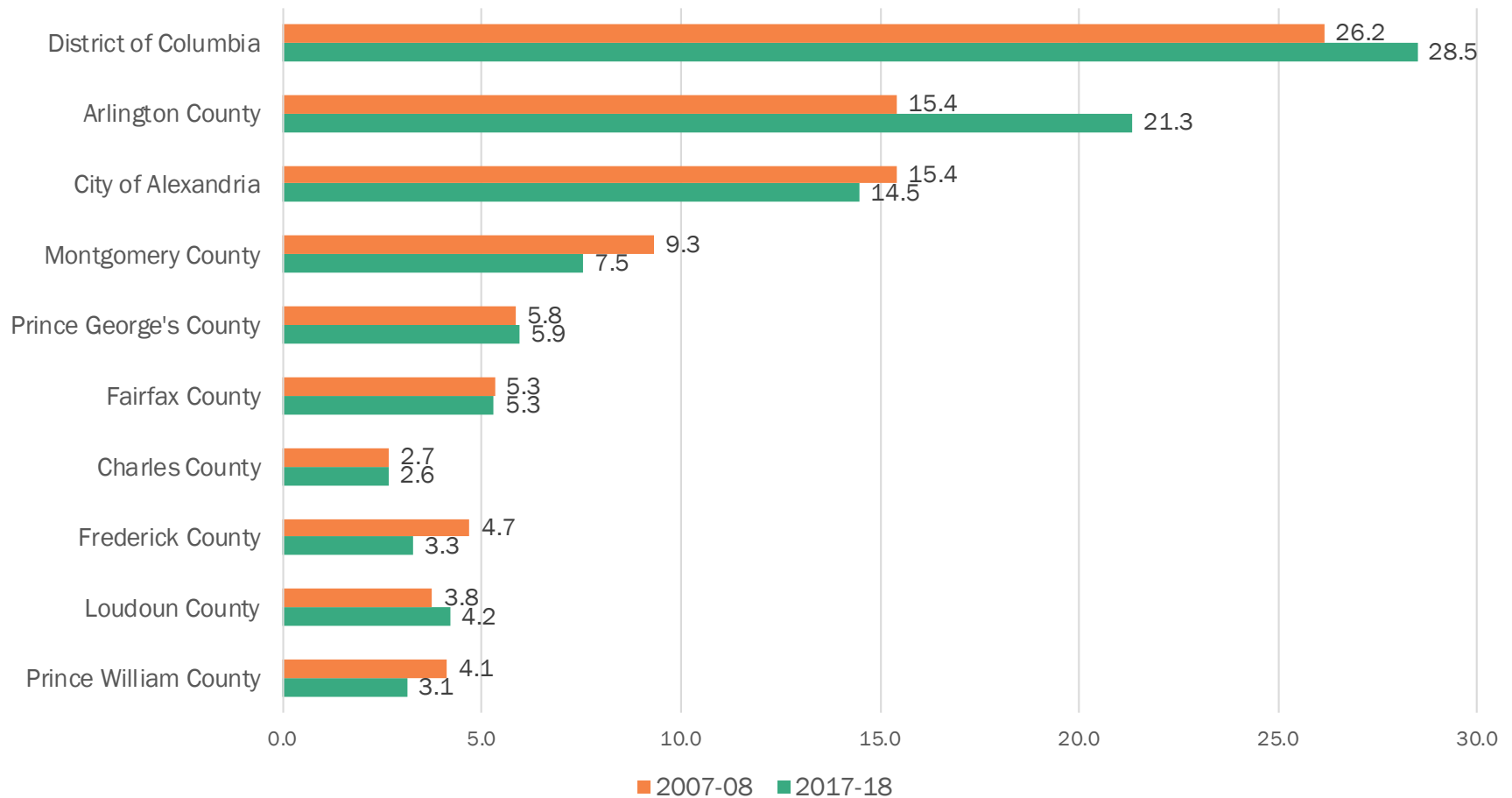
Mode Share for All Trips – Rail Transit (2007/08 – 2017/18)



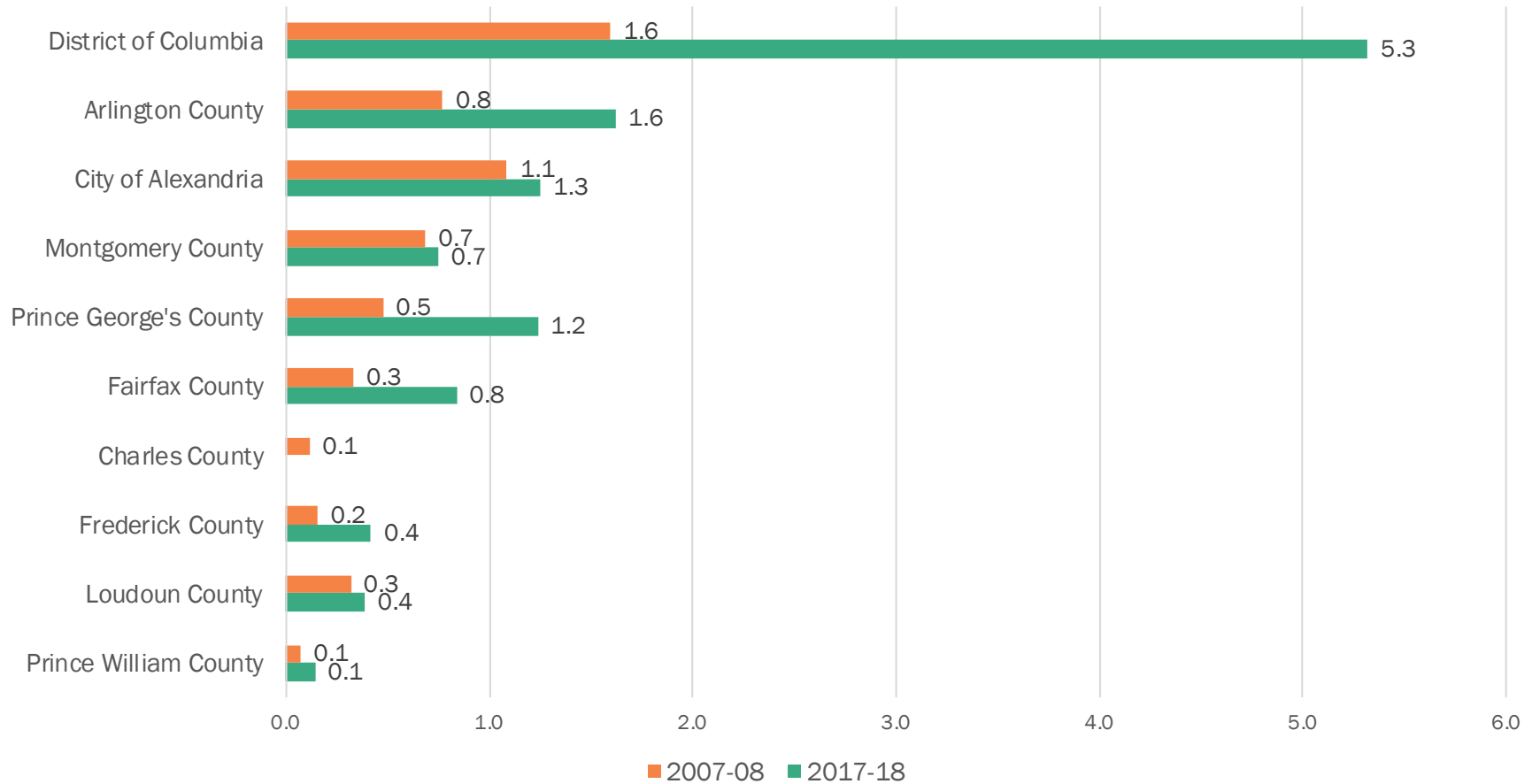
Mode Share for All Trips – Bus Transit (2007/08 – 2017/18)



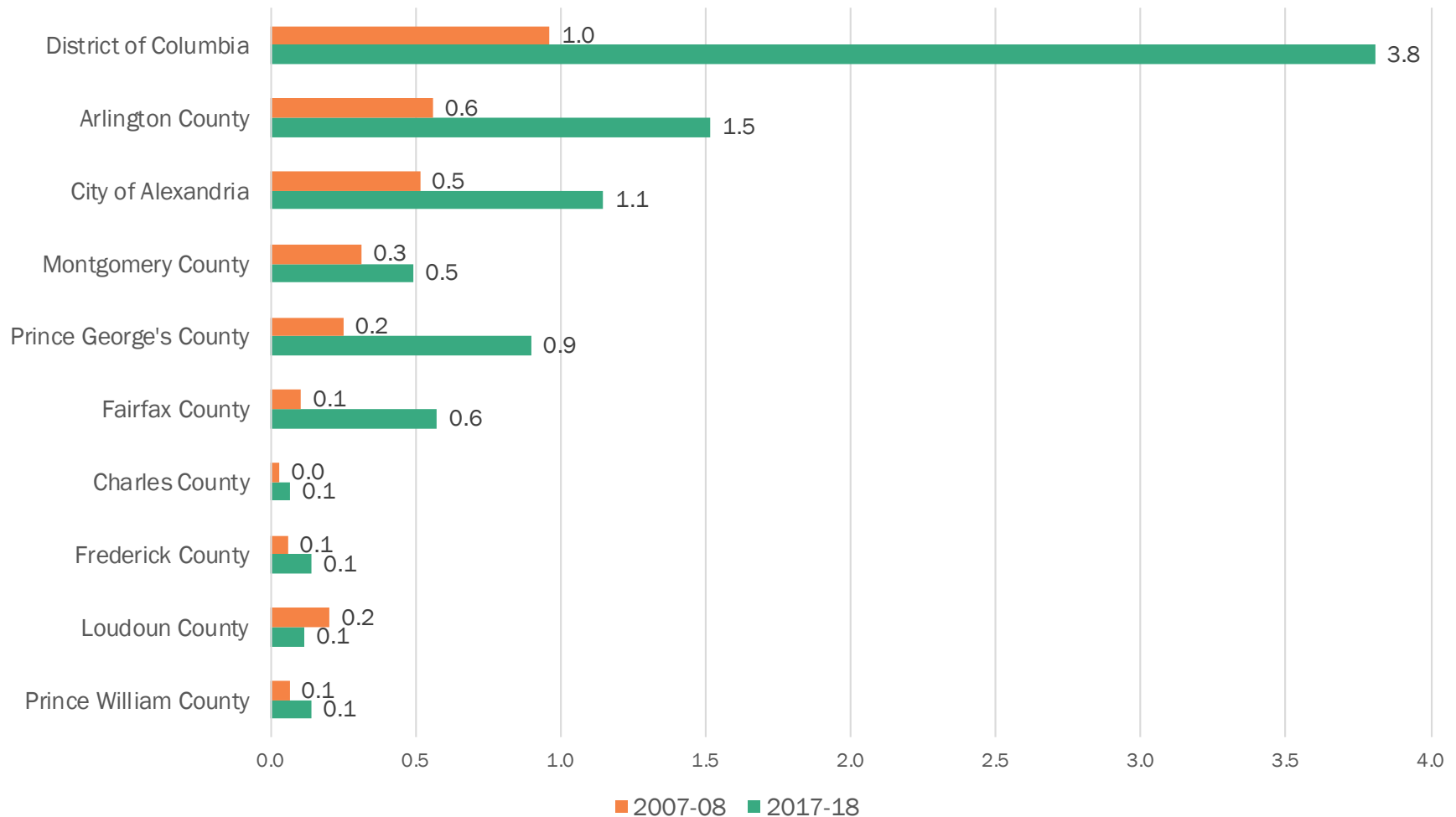
Mode Share for All Trips – Walk (2007/08 – 2017/18)



Mode Share for All Trips – Bicycle (2007/08 – 2017/18)



Mode Share for All Trips – Taxi/Ride-Hail (2007/08 – 2017/18)



ITEM 12 – Information

March 17, 2021

TPB Climate Change Mitigation Study of 2021

Background:

The goal of this study is to assess the types of transportation-related actions, and their levels of implementation, that would be needed to reduce transportation-sector greenhouse gas (GHG) emissions to meet various GHG reduction goals in the years 2030 and 2050. The study is divided into two phases: Phase 1, conducted by TPB staff, is a summary of past work done in this area by TPB and COG. Phase 2 will be a scenario study conducted by a consultant. At today's meeting, TPB staff will summarize the findings of the Phase 1 memo/report, which was presented to the Technical Committee in draft form last month and will be used as input to the Phase 2 portion of the study.

TPB CLIMATE CHANGE MITIGATION STUDY OF 2021

Phase 1 Report

Greenhouse Gas Emissions Reductions Strategies: Findings from Past Studies

March 2, 2021



National Capital Region
Transportation Planning Board

TPB CLIMATE CHANGE MITIGATION STUDY OF 2021 PHASE 1 REPORT

March 2, 2021

ABOUT THE TPB

The National Capital Region Transportation Planning Board (TPB) is the federally designated metropolitan planning organization (MPO) for metropolitan Washington. It is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area. Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia and the District of Columbia, 24 local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is staffed by the Department of Transportation Planning at the Metropolitan Washington Council of Governments (COG).

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Introduction

In October 2020, the Metropolitan Washington Council of Governments (COG) Board of Directors approved and the National Capital Region Transportation Planning Board (TPB) affirmed the Interim 2030 Greenhouse Gas (GHG) Reduction Goals for the region. Consistent with these actions and TPB's own interest in climate change planning, TPB staff outlined a plan for climate change mitigation planning activities in calendar year 2021 that was shared with the TPB in December 2020.¹

This report is the first product of the planned TPB Climate Change Mitigation Study (CCMS) of 2021 ("Review of Past COG and TPB Studies related to Climate Change"). This report reviews studies by TPB and COG that quantified greenhouse gas emissions (GHG) reductions from regional on-road transportation projects, programs, and policies. The three studies are the "What Would it Take?" scenario study (WWIT), the Multi-Sector Working Group (MSWG) study, and the Long-Range Plan Task Force (LRPTF) study. This report expands upon the summary of these studies that was provided to the TPB in October 2020 at the TPB Work Session on Climate Change Planning in the National Capital Region.²

This report also discusses the collaborative actions proposed to reduce GHG emissions from the on-road transportation sector that were identified in the Metropolitan Washington 2030 Climate and Energy Action Plan (CEAP) to support the region in achieving its 2030 GHG emission reduction goals.

The findings from the studies and the CEAP provide a useful reference regarding the potential effectiveness of strategies to reduce GHG emissions and will inform the second phase of the TPB's climate change mitigation study, which will be a scenario analysis to quantify levels of outcomes needed from on-road transportation strategies to achieve regional greenhouse gas reduction goals.

Section A: Background

Climate change mitigation is the effort to reduce GHG emissions. The COG Board of Directors adopted the following GHG reduction goals for the region:

- By 2012, GHG levels will be 10% below "business as usual" forecasts
- By 2020, GHG levels will be 20% below 2005 levels
- By 2030, GHG levels will be 50% below 2005 levels
- By 2050, GHG levels will be 80% below 2005 levels

1 Vuksan, Dusan and Mark S. Moran. Memorandum to the Transportation Planning Board. "Overview of Upcoming Planned Climate Change Planning Work Activities in the Metropolitan Washington Region." Memorandum, December 10, 2020. <https://www.mwcog.org/file.aspx?&A=CQB0w%2f9%2bWdl6C3uNhXMwmHK583WxgZ3MnDzxrC9aXs%3d>

2 Srikanth, K. Memorandum to the Transportation Planning Board. "Overview of COG and TPB Climate Change Planning Work Activities in the Metropolitan Washington Region." Memorandum, October 15, 2020. <https://www.mwcog.org/file.aspx?&A=IXr81RdQN3mqk%2bsh0xOy7lpWrxfo7oywjYOo12NYsw%3d>

The 2012, 2020, and 2050 goals were established with the adoption of the National Capital Region Climate Change Report in November 2008.³ The TPB accepted these in 2010 and affirmed those goals again in December 2014.⁴

The 2030 goal was adopted by the COG Board at the recommendation of its Climate, Energy, and Environment Policy Committee (CEEPC) in October 2020.⁵ The 2030 goal was then endorsed by the TPB, also in October 2020.⁶

CEEPC was established in 2009 by the COG Board and is responsible for managing implementation of the National Capital Region Climate Change Report. In making its recommendation for adopting a 2030 goal, CEEPC reviewed the updated Intergovernmental Panel on Climate Change (IPCC) guidance and Global Covenant of Mayors for Climate and Energy (GCoM) protocols. COG and its members were recognized by GCoM as a U.S. Metro-Scale Climate Leader in 2019 and CEEPC became a GCoM Signatory committing to follow global best practices in climate planning.

Consistent with the GCoM climate change planning protocol, CEEPC developed the **Metropolitan Washington 2030 Climate and Energy Action Plan** (CEAP) in November 2020.⁷ The CEAP outlines a Regional Mitigation Strategy that identifies a set of collaborative actions across all sectors that have the highest potential to reduce GHG emissions. The purpose of this plan is to “establish priority collaborative actions for COG and its members to work on together over the next ten years to help move the region towards meeting the 2030 goals” (p. 1) and notes that “achieving the regional goals would require unprecedented, aggressive cross-sectoral action from all COG members and its state and federal partners” (p. 1).

As shown in Figure 1, based on the latest analysis from **Visualize 2045**, which was published in 2018, between 2005 and 2019, GHG emissions from on-road transportation have decreased by 7%.⁸ By 2045, the latest analysis from Visualize 2045 forecasts GHG emissions to be 23% below 2005 emissions levels (16% below 2019 levels), with a slight uptick between 2040 and 2045. The region is forecast to experience a 23% growth in population and a 29% growth in employment between 2019 and 2045.

The GHG emissions reductions forecasted for the Visualize 2045 plan are largely attributable to increased fuel efficiency standards, but the uptick between 2040 and 2045 occurs as cleaner vehicles have saturated the fleet, and the benefits from fuel efficiency standards can no longer keep pace with growth-induced increases in vehicle-miles of travel (VMT).

³ National Capital Region Climate Change Report. Washington, D.C.: Prepared by the Climate Change Steering Committee for the Metropolitan Washington Council of Governments Board of Directors. November 12, 2008. <https://www.mwcog.org/documents/2008/11/12/national-capital-region-climate-change-report-climate-change/>

⁴ TPB R10- 2015: Resolution on the Metropolitan Washington Council of Governments' Regional Multi-Sector Goals for Reducing Greenhouse Gases. Washington, D.C.: National Capital Region Transportation Planning Board. December 17, 2014. <https://www.mwcog.org/file.aspx?&A=NQRpyfkLR1A9O4KiCx0%2bhAVEs%2fy07kl1bNCWYEItoHU%3d>

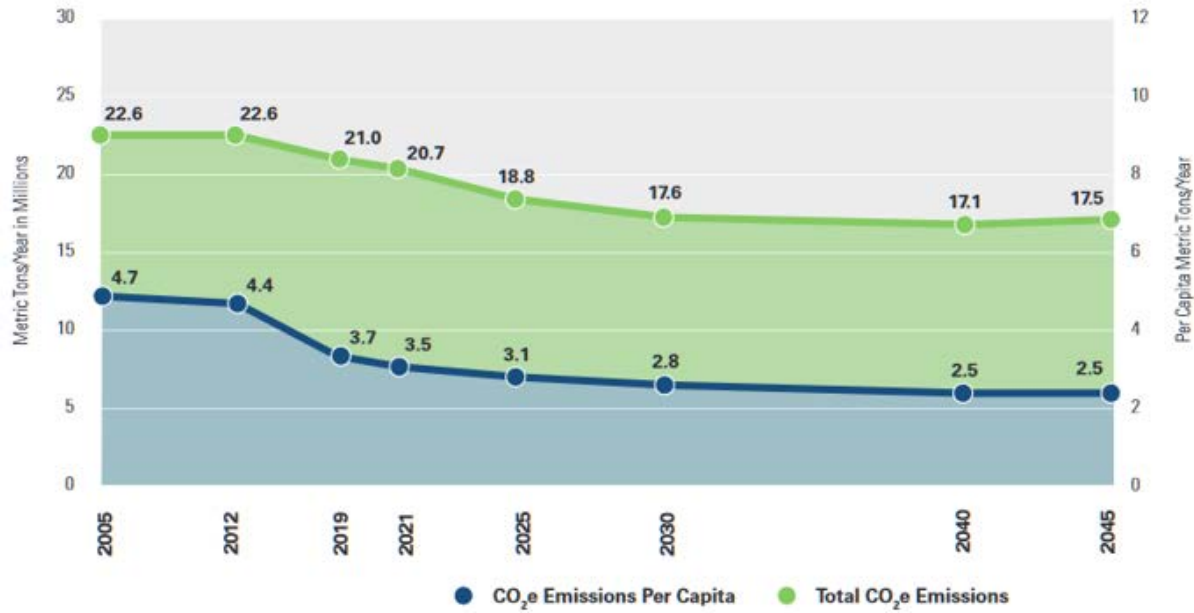
⁵ COG R45-2020: Resolution Endorsing Regional Climate Mitigation and Resiliency Goals. <https://www.mwcog.org/documents/2020/10/14/certified-resolution-r45-2020--endorsing-regional-climate-mitigation-and-resiliency-goals/>

⁶ TPB Resolution R8-2021: Interim 2030 Regional Greenhouse Gas Reduction Goal. Washington, D.C.: National Capital Region Transportation Planning Board. October 21, 2020. <https://www.mwcog.org/file.aspx?&A=ccJq0SmcRHpcRYOyJqF3NDMMJvruFbAily3FhFIY%2f6o%3d>

⁷ Metropolitan Washington Council of Governments. “Metropolitan Washington 2030 Climate and Energy Action Plan”. Washington, D.C. November 2020. <https://www.mwcog.org/documents/2020/11/18/metropolitan-washington-2030-climate-and-energy-action-plan/>

⁸ Visualize 2045: A Long-Range Transportation Plan for the National Capital Region. Washington, D.C.: National Capital Region Transportation Planning Board. October 17, 2018. https://www.mwcog.org/assets/1/28/Visualize_2045_Plan_2018_10_23_No_Crops_Single.pdf

Figure 1: Greenhouse Gas On-Road Mobile Source Emissions from Visualize 2045



According to the CEAP:

COG’s greenhouse gas inventories show that the region’s progress to date towards the GHG emission reduction goals has been mixed. The region exceeded its 2012 goal but is lagging on progress towards its 2020 goal. The most recent inventory indicates that 2018 GHG emissions in the region decreased by approximately 13 percent below 2005 levels, despite a 19 percent growth in population. Per capita emissions decreased between 2005 and 2018 from 15.6 metric tons of carbon dioxide equivalent (MTCO₂e) in 2005 to 11.4 MTCO₂e in 2018. Expedited and concerted actions will be needed throughout the region to achieve future goals of 50 percent GHG emission reduction by 2030 and 80 percent by 2050...

The inventories measure GHG-emitting activities undertaken by residents, businesses, industry, and government located in metropolitan Washington, as well as emissions from visitors. More than 90 percent of metropolitan Washington’s GHG emissions come from residential and commercial building energy consumption and transportation. Building energy consumption accounts for 50 percent and 40 percent is from transportation.⁹ The

⁹ Transportation emissions in the regional GHG inventory for 2018 include emissions from on-road transportation (34%), commuter rail (1%), aviation (3%), and other non-road sources (3%; e.g. construction vehicles and water transportation). (Davis, Maia. Email to Kanti Srikanth. “Question on CEAP Document Citation,” February 1, 2021.) For additional details on the regional GHG inventory for 2018, please refer to Appendix F: Metropolitan Washington Council of Governments. “Metropolitan Washington 2030 Climate and Energy Action Plan Appendices”. Washington, D.C. November 2020. <https://www.mwcog.org/documents/2020/11/18/metropolitan-washington-2030-climate-and-energy-action-plan/>

*remainder of emissions comes from other activities and sources including solid waste, wastewater treatment, agriculture, and fugitive emissions.*¹⁰ (p. 3)

The CEAP's Regional Mitigation Strategy contains collaborative, voluntary actions in all sectors to move the region towards its 2030 goals. A planning level analysis of the various actions in all sectors was undertaken to illustrate how the region could achieve the 2030 GHG reduction goal. Details of the development of the baseline inventory, future projections, and the assumptions in the scenario analysis can be found in the technical appendices to the CEAP.¹¹

For on-road transportation, actions fall into two categories: Zero Emission Vehicles (ZEV) and Mode Shift and Travel Behavior (MSTB). While ZEV strategies reduce GHG emissions by changing the type of fuel consumed (fossil fuel to clean fuel) for vehicular travel, the MSTB strategies reduce GHG emissions by reducing the amount of fossil fuel consumed by reducing the amount of travel. The actions, along with examples of how COG member jurisdictions can support implementation, are:

Zero Emission Vehicles

1. ZEV-1: Expand Light-Duty Electric Vehicle (EV) Deployment
 - Implement community-wide electric vehicle (EV) buying co-ops
 - Promote state and national incentives and mandates for purchasing EVs
 - Transition fleets to zero emission vehicles. Adopt green fleet policy and plans or participate in cooperative procurement opportunities for public fleets to support transition
2. ZEV-2: Accelerate Electrification of Medium- and Heavy-Duty Vehicles
 - Transition public fleet medium- and heavy-duty vehicles (MHDVs) to electric
 - Connect private fleets with partners and opportunities to educate and incentivize electrification
3. ZEV-3: Build Out Regional Electric Vehicle Charging Network
 - Require new developments to install EV infrastructure or be EV-Ready
 - Provide or promote incentives for EV infrastructure deployment in the community
 - Develop EV infrastructure plans for community deployment
 - Develop EV infrastructure strategy for the public fleet and deploy EV infrastructure at public facilities, garages, and refueling facilities
 - Partner with utilities, transit agencies, and EV infrastructure providers to deploy in community
 - Implement innovative pilot initiatives to advance new technologies, including vehicle-to-grid, regenerative power, and solar-powered EV infrastructure

¹⁰ Fugitive emissions are emissions that are not physically controlled but result from the intentional or unintentional release of GHGs. They commonly arise from the production, processing, transmission, storage and use of fuels or other substances, often through joints, seals, packing, gaskets, etc. Examples include hydrofluorocarbons (HFCs) from refrigeration leaks, SF₆ from electrical power distributors, and CH₄ from solid waste landfills. (ICLEI - Local Governments for Sustainability)

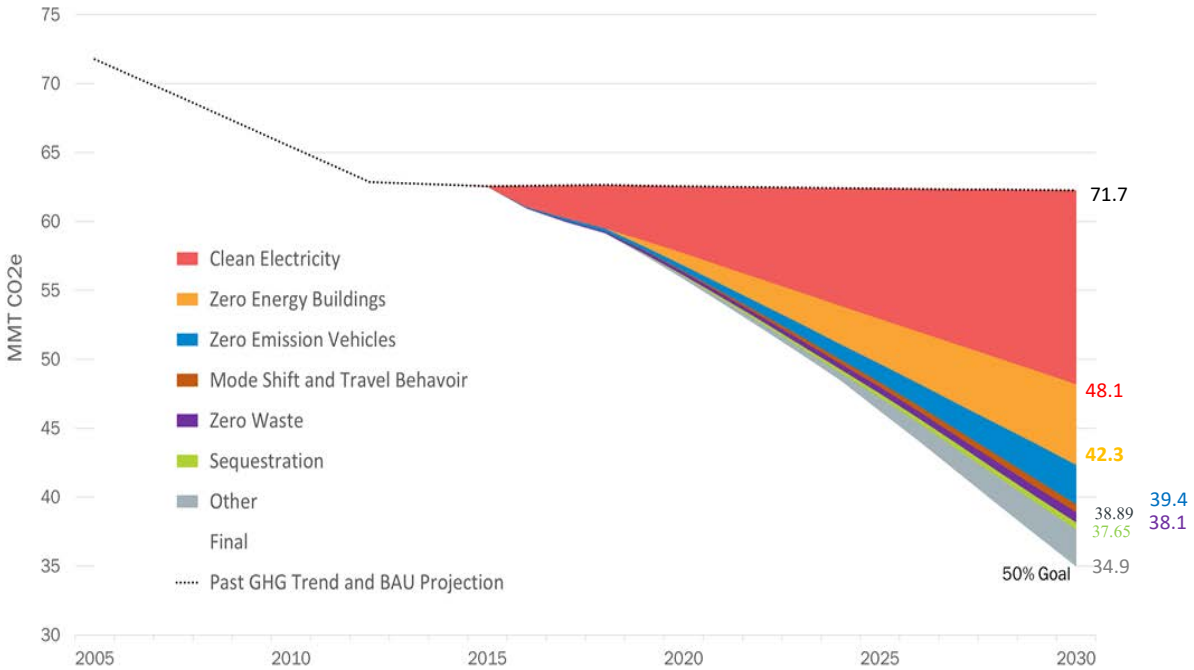
¹¹ Metropolitan Washington Council of Governments. "Metropolitan Washington 2030 Climate and Energy Action Plan Appendices". Washington, D.C. November 2020. <https://www.mwcog.org/documents/2020/11/18/metropolitan-washington-2030-climate-and-energy-action-plan/>

Mode Shift and Travel Behavior

1. MSTB-1: Invest in Infrastructure that Increases Transit, Carpooling, and Non-Motorized Travel
 - Expand bus rapid transit and transitways
 - Expand express highway (toll) network
 - Move more people on Metrorail
 - Improve walk and bike access to transit
 - Complete the National Capital Trail Network
2. MSTB-2: Bring Jobs and Housing Closer Together
 - Take actions to achieve regional housing targets
 - Coordinate local policy revisions to zoning and plans to allow more people to live closer to their job.
3. MSTB-3: Enhance Options for Commuters
 - Continue, expand, or initiate transit benefits and teleworking for public sector employees
 - Support teleworking and transit benefits programs for private sector employees
 - Discontinue free parking at employment sites within Activity Centers and near high capacity transit stations

Figure 2 shows the results of the 2030 CEAP scenario analysis.

Figure 2: 2030 Scenario Results from CEAP Analysis



Source: Page 5 of the CEAP

The 2030 CEAP scenario analysis identified potential reductions from various strategies in the ZEV category of actions based on the EV adoption rates in the National Renewable Energy Laboratory’s “Electrification Futures Study” which had low, medium, and high levels. For the CEAP’s ZEV-1 and ZEV-2 strategies, the analysis assumed the “high EV adoption rates,” i.e., adoption rates of greater than 20 percent for light-duty cars, 9 percent for light-duty trucks, 4 percent for medium/heavy-duty trucks, and 30 percent for transit buses. These levels of EVs informed the implementation action for ZEV-3.

The 2030 CEAP scenario analysis identified potential reductions from various MSTB strategies based primarily on the MSWG study with supportive actions based on the TPB’s Aspirational Initiatives, which were analyzed in the LRPTF study. The MSTB strategies include increasing transit, carpooling, and non-motorized travel; bringing jobs and housing closer together; and travel demand management (teleworking, transit benefits). While the analysis from the MSWG study was used to identify the level of implementation for strategies derived from the MSWG study, the level of implementation for the Aspirational Initiatives was not explicitly identified in the CEAP.

Sections B-E of this report will present the major findings from the past TPB and COG studies, all of which studied similar actions, and provide discussion of the potential for GHG reductions from various transportation strategies to help inform the development of scenarios to be analyzed now.

Section B. Past TPB and COG Studies

In 2008, the TPB began a scenario study to see how the region could achieve the regional GHG reduction goals in the transportation sector. The **“What Would it Take?” Scenario Study (WWIT)** was completed in 2010 and showed the challenge of meeting those goals.¹²

In 2015, the TPB partnered with the Metropolitan Washington Air Quality Committee (MWAQC) and CEEPC to form the **Multi-Sector Working Group (MSWG)**, which was tasked with identifying potentially viable and implementable local, regional, and state strategies for reducing GHG emissions across key sectors - Energy, the Built Environment, Land Use, and Transportation.¹³

In 2016, the TPB convened its **Long-Range Plan Task Force (LRPTF)** to identify projects, programs, and policies to improve the performance outcomes of the region’s transportation system.¹⁴ While the work of the Long-Range Plan Task Force was not specifically focused on climate change, many of the initiatives that were analyzed contained projects, programs, and policies that have been shown to reduce GHG emissions and the analysis, completed in 2017, reported estimated CO2 emissions.

The summary of findings from the three above studies is described in Section C, and the key differences between the studies are described in Section D. Additionally, Appendix A lists the major findings from the three studies, Appendix B contains detailed strategy descriptions, and Appendix C details the technical approach and documentation for each study. Each study quantified the potential greenhouse gas reductions from various on-road transportation projects, programs, and policies, often referred to as strategies. Depending on how the study is designed, a strategy could be a single project, program, or policy, or a few similar projects, programs, and policies combined for analysis purposes.

Strategies are often categorized based on how they reduce greenhouse gas emissions. Different studies have grouped strategies in different ways, but for the purpose of this report, these three categories will be used:

1. **Fuel efficiency, fuel content, and vehicle technology** – Greenhouse gas emissions from on-road transportation are the result of the combustion of fossil fuels (e.g. gasoline, diesel, natural gas).¹⁵ Switching from carbon-intensive fossil fuel to less carbon-intensive fuels and reducing the amount of fossil fuel used (in the short term) by improving the fuel efficiency of conventional vehicles or developments in vehicle technology, such as electric vehicles, reduces greenhouse gas emissions.
2. **Automobile travel reduction** – Reducing vehicle-miles traveled (VMT) and vehicle trips reduces the amount of fossil fuels burned by conventional vehicles, thus reducing GHG

12 Final Report: What Would It Take? Transportation and Climate Change in the National Capital Region. Washington, D.C.: Metropolitan Washington Council of Governments. May 18, 2010. <https://www.mwcog.org/documents/2010/05/18/what-would-it-take-scenario-land-use-projects/>

13 Final Technical Report: Multi-Sector Approach to Reducing Greenhouse Gas Emissions in the Metropolitan Washington Region. Washington, D.C.: Metropolitan Washington Council of Governments (submitted by ICF International). January 31, 2016. <https://www.mwcog.org/documents/2016/08/01/multi-sector-approach-to-reducing-greenhouse-gas-emissions-in-the-metropolitan-washington-region-final-technical-report/>

14 An Assessment of Regional Initiatives for the National Capital Region: Technical Report on Phase II of the Long-Range Plan Task Force. Washington, D.C.: National Capital Region Transportation Planning Board (prepared by ICF International). December 20, 2017. <https://www.mwcog.org/documents/2017/12/20/long-range-plan-task-force-reports-projects-regional-transportation-priorities-plan-scenario-planning-tpb/>

15 US Environmental Protection Agency (EPA). “Greenhouse Gas Emissions from a Typical Passenger Vehicle.” EPA Office of Transportation and Air Quality. EPA-420-F-18-008. March 2018. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100U8YT.pdf>

emissions. Travel reduction strategies can shorten trips, encourage shifts to less polluting modes, or eliminate a trip altogether.

3. **Operational efficiency** – Greenhouse gas emissions from conventional vehicles are highest during idling and at very low speeds,¹⁶ thus reducing idling and highly congested conditions by improving transportation system operations can potentially reduce GHG emissions.

Each of the three studies looked at strategies to reduce automobile travel and improve operational efficiency. The WWIT and MSWG studies also looked at fuel efficiency and vehicle technology strategies.

¹⁶ See for, example Matthew Barth and Kanok Boriboonsomsin, "Traffic Congestion and Greenhouse Gases," ACCESS Magazine, Fall 2009, <https://www.accessmagazine.org/fall-2009/traffic-congestion-greenhouse-gases/>; OR Adriano Alessandrini et al., "Driving Style Influence on Car CO2 Emissions," in 2012 International Emission Inventory Conference Website (2012 International Emission Inventory Conference, Tampa, Florida, August 13-16, 2012, Tampa, Florida, 2012), <https://www3.epa.gov/ttn/chief/conference/ei20/>.

Section C. Summary Findings of Past Studies

Below is a summary of some of the findings, from all three studies, regarding individual on-road transportation strategies grouped under the above mentioned three categories. It is important to note that the three studies were conducted in different periods of time, using different sets of assumptions, methodologies and analysis tools. As such, comparing the effectiveness of a particular strategy among other strategies across studies, for example, is not advisable. The substantive differences between the three studies are listed later in this section.

1. Fuel efficiency, fuel content, and vehicle technology

- **Fuel Efficiency:** The MSWG study showed a significant GHG emissions reduction from the light-duty CAFE standards that were phased in with model years 2012-2025 and the MHDV fuel efficiency standards that were phased in with model years 2014-2018. Compared with the business-as-usual (BAU) projections, in 2040, the analysis showed that the regional GHG emissions would decrease by 14% and emissions within the transportation sector by 53% with the “current policies” projection.
- **Fuel Content:** The low-carbon fuel standard (TLU-6) was the most impactful transportation-only strategy studied by the MSWG. The low-carbon fuel standard contributed a 5% reduction in GHG emissions from the transportation sector total in 2040, but overall, less than a 1% reduction from the region’s BAU forecast for 2040.
- **Vehicle Technology:** Additional accelerated deployment of zero-emission vehicles examined in the MSWG (TLU-3) was the most impactful transportation-only strategy studied. TLU-3 contributed a 5% reduction in GHG emissions from the transportation sector’s BAU forecast for 2040, but overall, it is only a 1% reduction from the region’s BAU forecast for 2040. Electric vehicles do not have tailpipe GHG emissions that would be included in on-road vehicle emissions inventories; however, there are GHG emissions from the electric generation needed for charging the vehicles.¹⁷ In the MSWG study and the CEAP 2030 analysis, the GHG emissions produced to generate the electricity needed to charge electric vehicles were accounted for, thus reducing the net GHG reduction benefit of electric vehicles.

2. Automobile travel reduction

a. Shifting Land Use Patterns:

- Both the MSWG (TLU-2) and LRPTF (Initiative 8) studies showed that shifting future projected growth to locate jobs and households closer together in regional Activity Centers and near high-capacity transit reduces automobile travel. The MSWG study specifically assumed bicycle and pedestrian enhancements.
- The LRPTF study showed a 4% reduction in CO₂ emissions, 18% reduction in daily vehicle hours of delay (VHD), 3% reduction in daily VMT, 6% reduction in daily VMT per capita, and a 29% increase in non-motorized trips compared to the Constrained Long-Range Plan (CLRP) in 2040. The MSWG study showed

¹⁷ US Environmental Protection Agency (EPA). “Greenhouse Gas Emissions from a Typical Passenger Vehicle.” EPA Office of Transportation and Air Quality. EPA-420-F-18-008. March 2018. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100U8YT.pdf>

an 11.6% reduction in daily VMT compared to the “current policies” (CLRP) forecast in 2040.

- It should be noted that the land use strategies in the MSWG and LRPTF were evaluated using different assumptions and different modeling tools, which accounts for the difference in forecasted VMT and GHG reductions due to shifting future land use patterns. The MSWG analysis used a tool developed by the consultant while the LRPTF analysis used the TPB regional travel demand model and sketch planning tools.

b. **Travel Demand Management:** Both the MSWG (TLU-9) and LRPTF (Initiative 10) studies showed promising GHG reductions from employer-based travel demand management including transit subsidies and priced parking in Activity Centers. The LRPTF analysis also included a 40% office worker telework rate (i.e., an increase from the overall pre-Covid telework rate for all jobs from 10% to 20%). The LRPTF study showed a 7% reduction in CO2 emissions, 24% reduction in VHD, 6% reduction in daily VMT, 6% reduction in daily VMT per capita, and 20% reduction in single-occupant vehicle work trips compared to the CLRP in 2040. Because of the increase in teleworking, there was a 9% reduction in transit work trips.

c. **Pricing**

- Pricing strategies had mixed results depending on the assumptions. The most impactful was in the WWIT study and based on the 2009 Annual Energy Outlook’s “High Price Case”. That strategy included \$7/gallon gasoline, which led to a 6% reduction in VMT between 2010 and 2030 compared to the CLRP baseline. It should be noted that the 6% VMT reduction is a result from the national level models employed by the U.S. Department of Energy.
- The road pricing strategy (TLU-12) in the MSWG study included a cordon price of \$5/trip into downtown DC in 2040 and the cordon price plus a VMT tax of 10 cents/per mile everywhere in 2050. The sketch planning analysis for this strategy showed significant VMT reductions (7.8% annually compared to the current policies forecast) in 2050 due to the VMT tax; however, it did not show significant GHG reductions due to the improved fuel efficiency of the fleet.
- A strategy that is more incentive-based, such as pay-as-you-drive insurance in the WWIT study, showed promise in reducing emissions among the automobile travel reduction strategies, although much less than fuel efficiency strategies.

d. **Transit**

- Each of the studies had multiple strategies that improved transit service, expanded transit service, or lowered the cost of transit service. Overall, these strategies tended to do fairly well among the project-focused strategies in their respective studies but could be expensive to implement. For example, the Metrorail regional core capacity improvements in the LRPTF study (Initiative 6) ranked a distant third behind TDM and land use for GHG reduction, but ahead of other project-focused initiatives. The Metrorail core capacity improvements reduced CO2 by 2%, daily VHD by 9%, daily VMT by 1%, daily VMT per capita by 1%, and increased transit commute mode share

by 2.8 percentage points compared to the CLRP in 2040 (i.e., transit mode share increased from 24.6% to 27.4%).

- Both the MSWG (TLU-11) and LRPTF (Initiative 9) studies examined policies that reduce transit fares. The transit fare policies examined in the LRPTF reduced CO2 by 1%, daily VHD by 2%, daily VMT by 1%, and daily VMT per capita by 1% compared to the CLRP in 2040.

e. Bicycle and Pedestrian

- The WWIT study showed benefits of an accelerated completion of the 2010 Bicycle and Pedestrian Plan compared to other local/state/regional strategies.
- The MSWG study did not analyze separate bicycle and pedestrian strategies. Instead, it simply assumed that safe and expanded bicycle and pedestrian infrastructure is essential to the success of the concentrated land use strategies.
- The LRPTF study assumed that transit investments will be supported by improvements in bike/walk infrastructure, facilitating access to those transit services.

3. Operational efficiency:

- a. **Operational Efficiency:** The findings on operational efficiency strategies are mixed, likely due to the fact that, in the MSWG and LRPTF studies, all of the operational efficiency strategies under consideration are grouped into one strategy, unlike the transit strategies. Travel efficiency fared only a bit better in the MSWG study (TLU-7) than in the LRPTF study (Initiative 2), likely due to the inclusion of eco-driving, which promotes driving patterns to reduce rapid acceleration/deceleration and extended idling, and assumptions about system efficiency improvements through connected vehicles. Overall, though, operational efficiency improvements show only modest GHG reductions.
- b. **Express Highway (Toll) Network Expansion:** The LRPTF study found that expanding the express highway network and express bus service (Initiative 1) did not lower GHG emissions, but did leave GHG emissions unchanged while increasing daily VMT and daily VMT per capita each by less than one percent and decreasing daily VHD by 11% compared to the CLRP in 2040. In addition to express buses, the express lanes can be available to carpool and vanpool users without charge, increasing options for reliable non-single-occupant vehicle travel. The revenue generated by the tolls charged to SOVs can be invested in high-quality regional bus service.

Section D. Key Differences Between Past Studies

These three studies were conducted over a period of almost a decade. When each study was conducted, the latest planning assumptions (long-range transportation plan and land use forecasts), modeling tools (travel demand model and emissions model), and federal policies (light-duty fuel economy standards and medium and heavy-duty fuel efficiency standards) were assumed.

These are some of the key differences in the studies that should be kept in mind when reviewing the major findings below, and especially when reviewing the more detailed technical information in the appendices:

- The WWIT and LRPTF studies reported carbon dioxide (CO₂) emissions which is the primary greenhouse gas. There are other greenhouse gases including methane and nitrous oxides. The MSWG study reported emissions from three GHG gases, CO₂, methane, and nitrous oxide, and expressed these as an equivalent amount of CO₂ (CO₂e or CO₂-equivalent) based on their global warming potential. For purposes of this report, emissions from all three studies are referred to as GHG emissions in the narrative in the discussion section.
- The WWIT study estimated cumulative reductions over a 20-year period; The MSWG and LRPTF studies estimated annual emissions for the specified analysis year(s).
- Each study assumes the light-duty corporate average fuel economy (CAFE) standards that were in place at the time of the study. The WWIT study assumes GHG emissions equivalent of 35.5 miles-per-gallon (mpg) by 2016; the MSWG and LRPTF studies assume GHG emissions equivalent of CAFE standards of 54.5 mpg by 2025. The current GHG emissions standards, promulgated in 2020 with the SAFE Vehicles Rule, call for GHG emissions equivalent of CAFE standards of 47.7 mpg for passenger cars by 2026.¹⁸
- The MSWG and LRPTF assume the medium and heavy-duty fuel efficiency standards that phase in between model years 2014 and 2018, after the WWIT study was completed.
- WWIT and LRPTF only examined on-road transportation strategies. The MSWG study considered non-road transportation existing policies and regional strategies and grouped those with energy and built environment. All of the “transportation/TLU” strategies in the MSWG were on-road.
- The LRPTF study calculates percentage reductions relative to a Constrained Long Range Plan (CLRP) forecast; the estimates in the WWIT and MSWG studies are compared to the 2005 “Business as Usual” (BAU) forecast from the 2008 National Capital Climate Change Report, which was updated with the current modeling tools for the MSWG study.
- Strategies chosen for analysis and the level of implementation for those strategies differs between studies.
- Each study used different planning tools to estimate GHG reductions for strategies. The WWIT and MSWG studies relied primarily on spreadsheet-based sketch planning tools. The LRPTF used both sketch planning and the regional travel demand model.
- The WWIT and MSWG studies reported primarily on GHG reductions; the LRPTF study focused on travel metrics with an emphasis on reducing congestion reported as vehicle-hours of delay (VHD).

As these planning assumptions and modeling tools change over time, the analysis of a strategy could have a slightly different outcome. Furthermore, each study was developed differently. Thus, **comparing the effectiveness of a particular strategy and comparing its exact ranking among other strategies across studies, for example, is not advisable.** However, despite these caveats, TPB staff maintain confidence in the major findings of the studies.

¹⁸ Srikanth, Kanti and Steve Walz. Memorandum to Kelly Russell, Chair, TPB. “Preliminary assessment of the Safer Affordable Fuel-Efficient (SAFE) Vehicles Final Rule for Model Years 2021-2026.” Memorandum, May 12, 2020.

<https://www.mwco.org/file.aspx?&A=duwNsxz2%2Fxd%2F2DXHZ14CUvhFvLvEezgHB%2BzndnNpkvg%3D>

Section E. Conclusion

Findings from the “What Would it Take” Scenario Study, the Multi-Sector Working Group Study, and the Long-Range Plan Task Force Study can assist the TPB in developing a scenario study to evaluate what the on-road transportation sector needs to do to work towards meeting the regional goal of reducing GHG emissions 50% below 2005 levels by 2030. Due to the substantial differences in the assumptions, analysis methodology, and metrics extracted, a new analysis of the most promising transportation strategies is needed. This new analysis should be based on assumptions reflecting the current travel and policy environment, and should also account for actions that have been taken since these previous studies were conducted.

All three studies show that it is possible to reduce GHG emissions from the transportation sector; however, the MSWG study and the 2030 scenario analysis conducted for the CEAP found that other sectors like the energy and buildings sectors, have more potential for GHG emissions reductions in part because on-road transportation is already anticipated to achieve high levels of GHG emissions reductions due to policies in place to improve fuel efficiency.

The MSWG study showed that phased-in CAFE standards from model years 2012-2025 light-duty vehicles and phased-in fuel efficiency standards for model year 2014-2018 medium- and heavy-duty vehicles significantly reduced future GHG emissions projections as those more fuel-efficient vehicles become a larger share of the vehicles on the region’s roadways. Unfortunately, those future emissions reductions are not guaranteed. CAFE standards assumed in the current policies for the MSWG and LRPTF were rolled back when the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule was finalized in 2020.

While national-level strategies such as fuel economy and fuel efficiency standards have the highest potential for GHG reductions, they are slow to implement as they require the region’s vehicle fleet to turn over. Strategies that accelerate the deployment of zero-emission vehicles, such as electric vehicles, can help to bring about those reductions sooner, but will need supportive infrastructure, like charging stations, and the GHG reduction potential depends on the energy mix used to generate the electricity for the region.

At the regional and local levels, the studies show that land use policies that bring housing and jobs closer together and closer to transit reduce both GHG emissions and vehicle travel. Travel demand policies such as teleworking are also effective at reducing GHG emissions and vehicle travel and are also cost-effective. On the other side of the spectrum, the studies found that some of the ambitious projects, such as Initiative 1 (Regional Express Travel Network) and Initiative 7 (Transit Rail Extensions including all Metrorail lines) in the LRPTF study had very little impact on VMT and GHG emissions, with VMT actually increasing slightly in Initiative 1.

The region has already begun to implement some of the strategies that have been studied in past studies. TPB staff have conducted multiple site visits with member jurisdictions and led other efforts regarding the implementation of the Visualize 2045 Aspirational Initiatives.¹⁹ Member jurisdictions and states have made progress toward transportation electrification.^{20 21} At the same time, staff

19 Visualize 2045: A Long-Range Transportation Plan for the National Capital Region. Washington, D.C.: National Capital Region Transportation Planning Board. October 17, 2018. https://www.mwcog.org/assets/1/28/Visualize_2045_Plan_2018_10_23_No_Crops_Single.pdf

20 Metropolitan Washington Council of Governments. “Metropolitan Washington 2030 Climate and Energy Action Plan”. Washington, D.C. November 2020. <https://www.mwcog.org/documents/2020/11/18/metropolitan-washington-2030-climate-and-energy-action-plan/>

21 See, for example, Howard, B., S. Vaidyanathan, C. Cohn, N. Henner, and B. Jennings. 2021. The State Transportation Electrification Scorecard. Washington, DC: ACEEE.

recognize that some of the other potentially effective strategies that have been studied, such as \$7 a gallon gasoline or a VMT tax, may be more politically challenging or may take longer time to implement (in part because these pricing measures are viewed as regressive, so they would need to be crafted in a way to make them as equitable as possible).

While different strategies and actions that will be studied in the scenario study envisioned for this year may yield a different outcome, the categories of strategies, in order of effectiveness and ability to provide GHG emissions reductions, are provided below:

1) Fuel efficiency, fuel content, and vehicle technology

These types of strategies and policies were found to have the greatest potential to reduce GHG emissions. For example, strategies could include new GHG emissions standards for light-duty vehicles, perhaps similar to (or more aggressive than) the standards promulgated in 2012, which called for the emissions equivalent to 54.5 miles per gallon CAFE Standards. The current GHG emissions standards, promulgated in 2020 with the SAFE Vehicles Rule, call for the emissions equivalent to 47.7 miles per gallon for passenger cars by 2026. Similarly, these strategies could also include higher rates of market penetration by electric vehicles and supportive actions to reduce the carbon emissions in the energy sector for charging those vehicles. While fuel efficiency strategies were shown in the studies to be the most effective in reducing GHG emissions, these strategies are dependent on, among other things, residents replacing their personal vehicles. This means that the reduction potential from these strategies may not be fully realized until the majority of the region's vehicle fleet is replaced. Prior studies have shown that equity implications of policies should be considered as well.²²

Federal actions are largely responsible for the reduction in ozone emissions in this region and elsewhere.²³ For example, the 8-hour ozone design value for our region has decreased from 91 parts per billion to 72 parts per billion between 2005 and 2019. These design values represent averages based on the readings from air quality monitors that are located throughout our region. The decrease in ozone emissions occurred while VMT increased by nearly 10 million, or over 7%, during the same time period.²⁴

2) Aggressive federal/local transportation and land use policy actions that could have a significant impact on travel behavior

The studies showed that there are aggressive transportation and land use policy actions that have not been implemented in this region in the past, but that have the potential to significantly reduce VMT and GHG emissions. These actions could include significant shifts in land use to activity centers and high-capacity transit station areas, large increases in the price of gasoline, cordon pricing, a VMT tax, travel demand management (e.g., increased telework), and a substantial increases in the cost of parking.

²² See, for example, p. 105 of ICF International, "Multi-Sector Approach to Reducing Greenhouse Gas Emissions in the Metropolitan Washington Region," Final Technical Report (Metropolitan Washington Council of Governments, January 31, 2016), <https://www.mwco.org/file.aspx?D=Uj%2f0vKporwCjlofmfR2gk7ay5EmB0b9a4UhR7cKKQig%3d&A=ITSigZNd01uWwMHJVzUV1WIPhZ9IDhMGqWIEQSF9CM%3d>.

²³ Kumar, Sunil. "Ozone Season Summary 2020." Presented at the July meeting of the Technical Advisory Committee of the Metropolitan Washington Air Quality Committee (MWAQC-TAC), Washington, D.C., July 14, 2020.

²⁴ Seifu, Meseret. Memorandum to Feng Xie. "Year 2019 Jurisdictional Weekday VMT Summaries." Memorandum, November 18, 2020.

None of the three studies analyzed carbon pricing, which a Brookings study found to be one of the most efficient ways to reduce GHG emissions.²⁵ Examples of carbon pricing include carbon taxes and cap-and-trade/cap-and-invest mechanisms. In December 2020, the Transportation and Climate Initiative (TCI) announced a multi-state cap-and-invest program to cap carbon dioxide emissions from transportation fuels and invest revenue from the program into programs and policies to further reduce greenhouse gas emissions from on-road vehicles. The District of Columbia, Massachusetts, Connecticut, and Rhode Island have already committed to participate in the program. Maryland and Virginia are in a group of eight states that have committed to continue collaboration with TCI and work to develop the model rule for the program.²⁶

In contrast to most of the vehicle-related strategies, many of these policy actions can be implemented in a shorter timeframe contributing to critical near-term GHG reductions. The Transportation and Climate Initiative Program, for example, could begin as soon as January 2022. Prior studies have shown that equity implications of policies should be considered as well.^{27 28}

3) New transportation projects

Construction and implementation of new highway and transit projects has a lower potential to significantly impact VMT and GHG emissions. The LRPTF study analyzed ambitious packages of initiatives that grouped together managed lanes projects and extensive transit service extensions, all of which had a fairly low level of impact on VMT (mainly within 1%). It is important to note that although individual projects / groups of projects may not have a significant impact on GHG emission reductions, many of them would benefit the residents of equity emphasis areas by providing additional access to jobs and other activities (health care providers, grocery stores, etc.).²⁹

The technical analyses for these studies have limitations that should be considered when reviewing the findings from these studies and designing future studies. The strategies were analyzed individually, not taking into account that, due to synergy, some strategies can amplify total benefits, whereas other strategies can counteract each other, resulting in reduced total benefits. The LRPTF study, for example, lists potential compatibilities and conflicts.

Each study noted that most strategies have numerous co-benefits. Most of the strategies analyzed are not cost-effective as GHG reduction strategies alone,³⁰ but should be evaluated as part of an equitable regional transportation network.

25 "Ten Facts about the Economics of Climate Change and Climate Policy." The Hamilton Project and the Stanford Institute for Economic Policy Research, October 2019. <https://www.brookings.edu/research/ten-facts-about-the-economics-of-climate-change-and-climate-policy/>

26 Morrow, E. Memorandum to the Transportation Planning Board. "Transportation and Climate Initiative (TCI): Memorandum of Understanding released." Memorandum, January 14, 2021. <https://www.mwcog.org/file.aspx?&A=vJzRrjQZi2Wleqwe80MmdahejC9TXOQKKBQJISRWX4%3d>

27 See, for example, p. 85 of ICF et al., "An Assessment of Regional Initiatives for the National Capital Region: Technical Report on Phase II of the TPB Long-Range Plan Task Force" (Metropolitan Washington Council of Governments, National Capital Region Transportation Planning Board, December 20, 2017).

28 Note that while some groups of strategies, such as addressing the land use disparities inherent in the East-West Divide and transit fare subsidies, would have positive equity impacts, other strategies, such as those involving parking pricing, could result in out-of-pocket cost burdens on low-income residents, if the policies are not designed using an equity lens.

29 See, for example, ICF International, "Multi-Sector Approach to Reducing Greenhouse Gas Emissions in the Metropolitan Washington Region," 123.

30 See, for example, p. 33 of Monica Bansal and Erin Morrow, "What Would It Take? Transportation and Climate Change in the National Capital Region," Final Report (Washington, D.C.: National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments, May 18, 2010), <http://www.mwcog.org/uploads/pub-documents/qF5eXVw20110617114503.pdf>.

APPENDIX A: MAJOR FINDINGS FROM PAST TPB AND COG STUDIES

I. “What Would it Take?” Scenario Study (WWIT)

The WWIT study,³¹ published in May 2010, is the oldest of the three studies and was one of the earlier MPO studies of its kind. The study asked what it would take if the newly adopted multi-sectorial greenhouse gas reduction goals had to be met within the transportation sector.

At the time of the study, the TPB long-range plan went out to 2030, so TPB staff did a straight-line interpolation to calculate a reduction goal of 40% below 2005 levels by 2030, which should be noted is less aggressive than the 50% reduction goal that was adopted by the COG Board in 2020.

The WWIT study examined strategies that could be taken at the local, state, and regional levels both in the short- and long-term including travel demand management, bicycle and pedestrian improvements, traffic signal optimization, and the purchase of more fuel-efficient transit vehicles. Note that if the WWIT study were conducted today, input assumptions made for many of the individual strategies, such as the eco-driving strategy, would likely be different.

Additionally, the study considered actions that would need to be taken at the federal level, which was dubbed the “high federal role.” The actions included significant increases to light-duty vehicle fuel economy (CAFE) standards in place at the time and implementing heavy-duty fuel efficiency standards. It should be noted that after the WWIT study was completed, the National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA) took actions to improve CAFE standards and medium- and heavy-duty vehicle fuel efficiency, which were later included in the MSWG and LRPTF studies. The WWIT study also considered the impact of the “high price case” from the US Department of Energy’s 2009 Annual Energy Outlook that contained \$200/barrel oil, which translated to \$7/gallon gasoline.

Due to technical limitations, the local/regional/state strategies were not combined with the high federal role strategies and are shown on Figure 3 and Figure 4, respectively.

It is important to remember that the WWIT study was presented almost 11 years ago. The WWIT study is included in this report to illustrate the broader findings regarding the impacts of local/state/regional strategies versus national strategies and the impacts of strategies that can be implemented in the short-term versus the long-term, not to focus on the analysis of individual strategies.

The WWIT study found that neither grouping of strategies alone could achieve the 40% reduction goal by 2030. **Local/state/regional efforts (Figure 3) could help the region achieve short-term GHG reduction goals, but actions implemented at the federal level (Figure 4) would be required to meet long-term goals.** The federal strategies were found to be highly effective, due to the broadly impacted population in the region. Given that CO2 emissions are directly linked to fuel consumption, increasing the efficiency of vehicles showed to be “a clear strategy for reducing mobile CO2 emissions.”

31. Final Report: What Would It Take? Transportation and Climate Change in the National Capital Region. Washington, D.C.: Metropolitan Washington Council of Governments. May 18, 2010. <https://www.mwcog.org/documents/2010/05/18/what-would-it-take-scenario-land-use-projects/>

Figure 3: GHG Reductions from Local/State/Regional Strategies (as defined in WWIT Study)

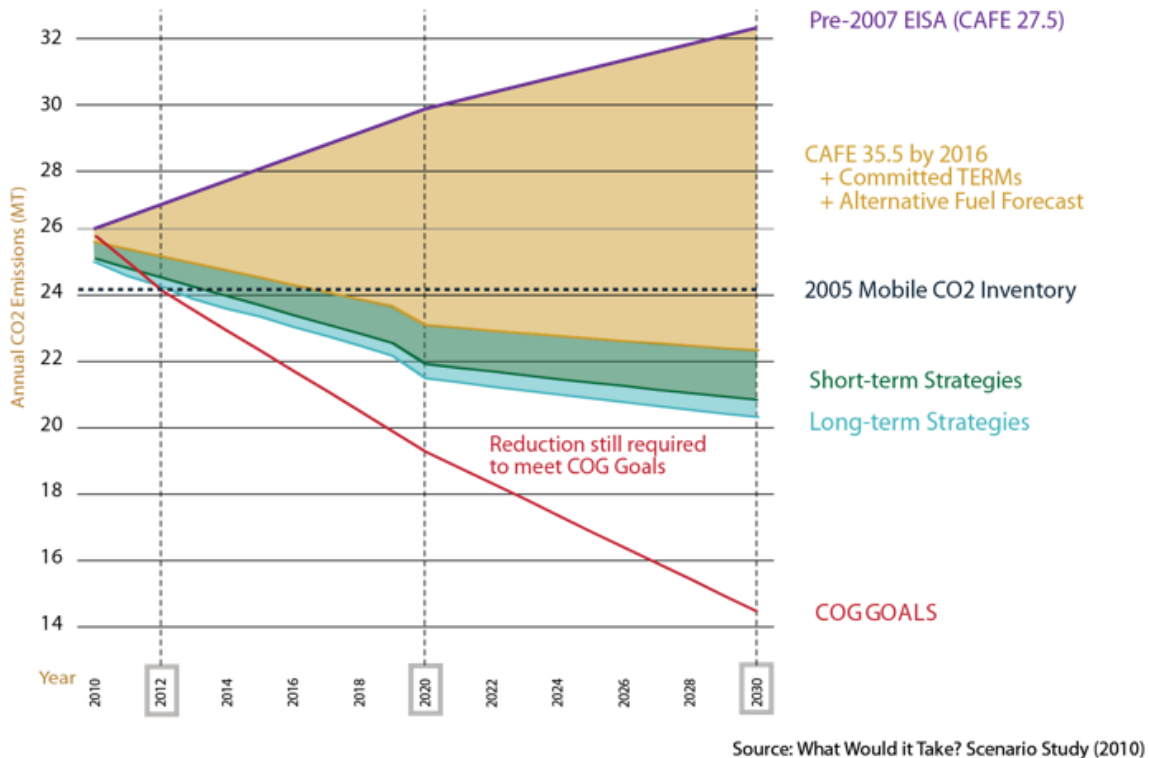
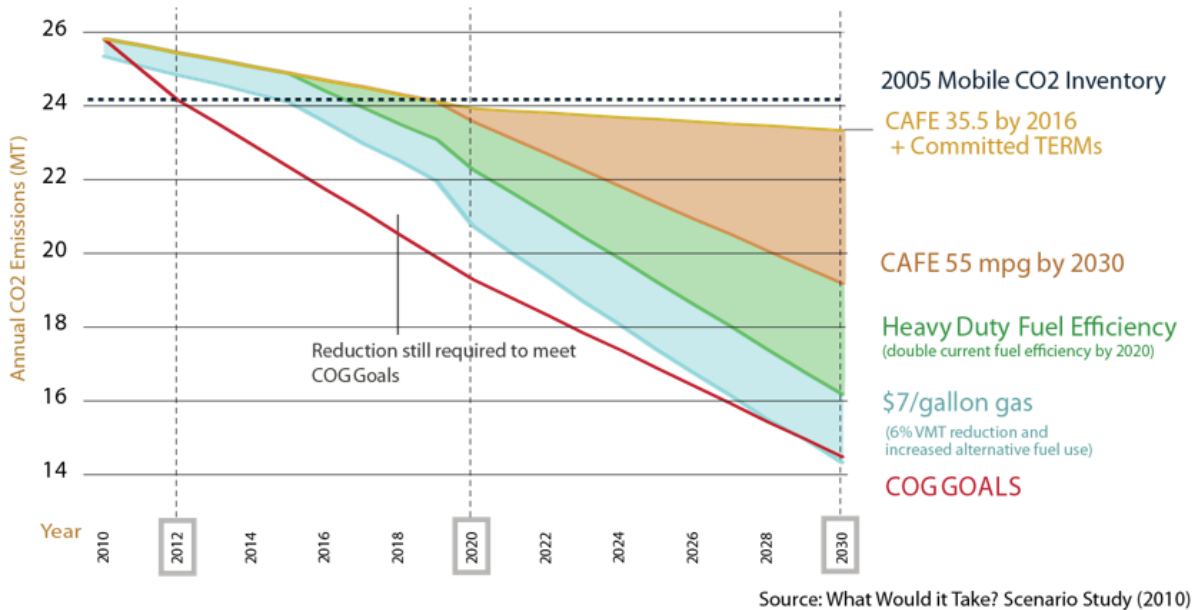


Figure 4: GHG Reductions from “High Federal Role” Strategies (as defined in WWIT study)



The cost-benefit analysis conducted for the WWIT study found that:

most measures demonstrated modest CO2 reduction potential and thus show high cost-per-ton values. Since CO2 emissions reductions are unlikely to be the sole justification for investing in transportation projects, other methods of weighing costs and benefits may be necessary. (p. 33)

II. Multi-Sector Working Group (MSWG)

The final technical report for the MSWG study was published in January 2016.³² The technical analysis for the MSWG study was designed in a similar manner to the 2008 National Capital Region Climate Change Report, which used a 2005 “Business as Usual” (BAU) projection as baseline for analysis, i.e., the emissions projections if no new policies or programs to reduce GHG emissions were implemented after 2005. The BAU projection was updated for this study with the latest modeling tools and population projections. The analysis years for the study were 2020, 2040, and 2050. The assumptions for strategies in 2020 and 2040 were considered “viable.” The assumptions for 2050 were considered to be more aggressive or a “stretch.”

The analysis for the MSWG study was completed in three steps. First, the GHG emission reductions were estimated for policies and programs implemented between 2005 and 2015, the “current policies” at the time of the study. Second, the potential emissions reductions from regional strategies were estimated. Lastly, additional national-level strategies were considered to move the region towards its 2050 goal.

1. Policies implemented between 2005 and 2015 are making a difference.

The first step of the MSWG study was to examine the impact that the policies that were implemented between 2005 and 2015, when the study began, have on future emissions projected to 2050. For the transportation sector, this forecast is estimated with the same method as GHG emissions are estimated for the performance analysis of the long-range transportation plan, in this case the 2014 CLRP. At the time of this study, the horizon year for the long-range plan was 2040 and emissions for 2050 were estimated by growing emissions based on the rate of population growth. The study found that:

the most significant reductions are in emissions from on-road transportation combustion, due to higher federal corporate average fuel economy (CAFE) standards, including light-duty vehicle GHG regulations that phase in for model years 2017-2025 cars and light trucks and heavy-duty engine and vehicle GHG regulations that phase in during model years 2014-2018. In addition, regional land use patterns, transportation investments, and policies in the Constrained Long Range Plan (CLRP) also will reduce the rate of growth of vehicle travel... Based on significant improvements in vehicle fuel economy and local policies, GHG emissions from on-road transportation combustion are projected to be 17% lower in 2050 than 2005 levels based on currently implemented policies and plans. (p. 5)

The analysis noted that there was a small uptick in emissions between 2040 and 2050, which is similar to the uptick between 2040 and 2045 forecasted for Visualize 2045 that was noted earlier.

2. Additional regional strategies can reduce GHG emissions considerably, but do not achieve the 80% reduction goal by 2050.

³² Final Technical Report: Multi-Sector Approach to Reducing Greenhouse Gas Emissions in the Metropolitan Washington Region. Washington, D.C.: Metropolitan Washington Council of Governments (submitted by ICF International). January 31, 2016. <https://www.mwcog.org/documents/2016/08/01/multi-sector-approach-to-reducing-greenhouse-gas-emissions-in-the-metropolitan-washington-region-final-technical-report/>

The second step of the study analyzed the GHG emissions reduction potential for the strategies developed by the members of the MSWG. These strategies were divided into two groups - Transportation and Land Use (TLU) and Energy and Built Environment (EBE). The analysis found that potentially achievable and “stretch” reductions from the energy and built environment sector far surpassed the reductions that could be achieved by the transportation and land use sector.

Overall, EBE strategies show significant potential, particularly in the later years, as longer-term implementation measures go into effect. While looking relatively small in the context of total GHG emissions, regional TLU strategies support continued reductions in on-road transportation combustion emissions and have multiple co-benefits. TLU strategies are estimated to achieve significant GHG reductions in the near-term (approximately 1.2 MMTCO_{2e} reduction in on-road transportation combustion emissions by 2020, or 5.5% of emissions from this source under the “current policies” scenario) and are forecast to have the potential for significant further reductions in GHGs over the 2040 to 2050 time-horizon (up to 6.8 MMTCO_{2e} in 2050, or 36% of on-road transportation emissions under the “current policies” scenario). (p. 10)

Table 1 shows the reductions from the BAU projects from the current policies and the analyzed EBE and TLU strategies along with the reductions still needed to achieve the 2050 goal. Figure 5 shows that same information in graphic form. Table 2 shows the GHG reductions from TLU and EBE strategies in descending order of GHG benefits in 2050. Appendix A contains a detailed listing of the strategy assumptions. For the transportation sector, each strategy was analyzed individually and it is “important to note that these strategies implemented in combination will cumulatively yield less than the sum of each individual strategy (e.g., a more fuel efficient and lower-carbon vehicle fleet will mean that each mile reduced yields less GHG reduction).” (p. 17).

Table 1: Estimated GHG Reductions from Current Policies and Potential Future Regional Strategies from MSWG Study

	GHG Emissions (MMTCO ₂ e)				
	2005	2012	2020	2040	2050
2005 BAU Projections	74.5	82.3	91.3	103.3	106.3
Revised 2005 BAU Projections	74.5	82.2	91.0	106.9	113.3
Impacts of Current EBE Policies	--	-5.9	-8.3	-15.2	-16.2
Impacts of Current TLU Policies		-2.5	-6.6	-15.3	-16.4
2015 Current Policies Projection	74.5	73.7	76.1	76.4	80.8
Impacts of additional regional EBE Strategies	--	--	-7.3	-26.1	-32.4
Impacts of additional regional Land Use Strategies [^]			-0.4	-1.5	-1.9
Impacts of additional regional Transportation Strategies [^]	--	--	-0.7	-2.4	-4.2
<i>Total Impacts of New Regional Strategies</i>	--	--	-8.4	-29.8	-38.3
Net Projected Emissions	74.5	73.7	67.7	46.6	42.6
Goal Emissions*	74.5	74.0	59.6	29.8	14.9
Further Reductions Needed to Meet Goal	--	-0.2	8.1	16.8	27.7
Projected Reductions from 2005 levels (%)			9%	37%	43%
Projected Reductions from 2005 BAU Projections (%)		10%	26%	56%	62%

Note: Results are presented by type of strategy (rather than emissions source).

[^]Land use strategies impact includes reductions in on-road transportation combustion and building energy emissions; transportation strategies impact includes net impact of reductions in on-road transportation combustion and increase in electricity emissions. Carbon sequestration is not included in these figures since not part of the baseline inventory.

*The goal emissions were determined by using the goal of reducing GHGs to 20% below 2005 levels by 2020 and to 80% below 2005 levels by 2050. The interim years were linearly interpolated based on these data points.

Source: Table 1, pp. 8-9 of ICF International. "Multi-Sector Approach to Reducing Greenhouse Gas Emissions in the Metropolitan Washington Region." Final Technical Report. Metropolitan Washington Council of Governments, January 31, 2016.

Figure 5: Estimated GHG Reductions from Current Policies and Potential Future Regional Strategies from MSWG Study

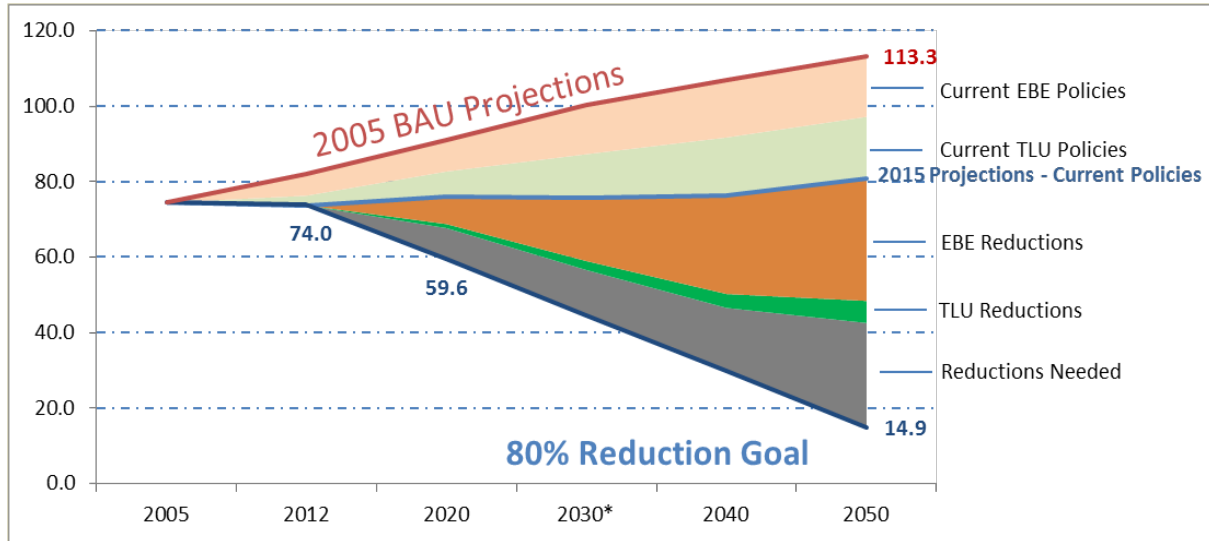


Table 2: Estimated GHG Reductions from Potential Future Regional Strategies (in Descending Order of GHG benefits in 2050) from MSWG Study

Strategy	Strategy Name	GHG Reductions (MMTCO _{2e})		
		2020	2040	2050
EBE-6	Targeted reductions in power sector emissions	1.97	8.05	10.74
EBE-1	Reduce energy and water consumption in existing buildings	2.73	10.55	10.55
EBE-4	Improve new building energy and water efficiency performance	1.03	4.18	6.59
EBE-2	Support existing building-level renewable energy development	1.15	1.86	2.78
TLU-2	Sustainable development patterns & urban design (including enhancements for non-motorized modes)	0.34	1.32	1.67
TLU-6	Low carbon fuel standard	0	1.02	1.29
TLU-1	Increase tree canopy and reduce loss of vegetation through sustainable development patterns ²	0.19	0.82	0.98
TLU-3	Improve fuel economy of light-duty vehicle fleet	0.09	0.50	0.88
TLU-7	Enhancing system operations	0.34	0.56	0.85
EBE-9	Reduce emissions from non-road engines	0.28	0.85	0.85
TLU-12	Road pricing	0	0.03	0.79
TLU-9	Travel demand management	0.13	0.24	0.54
EBE-3	Encourage development in activity centers	0.02	0.34	0.44
EBE-5	Achieve annual and cumulative reductions in fossil energy use by improving Infrastructure efficiency and increasing renewable energy use	0.05	0.23	0.32
EBE-8	Achieve targeted reduction in municipal solid waste	0.08	0.15	0.27
TLU-11	Transit incentives / fare reductions	0.12	0.10	0.19
EBE-7	Achieve targeted reductions in reduce natural gas pipeline leaks	0.02	0.11	0.11
TLU-4	Increase alternative fuels in public sector fleets	0.007	0.05	0.09
TLU-10	Transit enhancements	0.06	0.06	0.08
TLU-8	Reduce speeding on freeways	0.005	0.006	0.006
TLU-5	Truck stop electrification	<0.001	0.002	0.006

1 Note that the additive impact of individual strategies does not sum to the combined impact of implementing all strategies.

Also note that EBE-10/TLU-0 (Educate and motivate the public through community engagement) has not been presented separately in this table because its effects are supportive of and are subsumed in other strategies.

2 Carbon sequestration benefits are not counted against the 80% GHG reduction target; over half of the benefit is the prevention of loss of tree coverage and vegetation due to more compact development.

3 Net GHG reduction accounts for increase in power sector emissions for electric vehicles; the increase is highly dependent upon other power sector strategies (not accounted for here when analyzing strategies independently). TLU-3 results in a reduction of on-road transportation combustion emissions of 0.22, 1.23, and 2.14 MMT CO_{2e} in 2020, 2040, and 2050 respectively; however, this strategy results in increased electricity consumption from electric vehicles.

Source: Table 2, p. 11 of ICF International. "Multi-Sector Approach to Reducing Greenhouse Gas Emissions in the Metropolitan Washington Region." Final Technical Report. Metropolitan Washington Council of Governments, January 31, 2016.

Table 3 shows the projection of on-road transportation sector BAU emissions, 2015 current policies emissions, and estimated reductions from regional TLU strategies. In the five-year period from the beginning of the analysis period (2015) to 2020, VMT reduction strategies have the highest reduction potential among the transportation strategies as many of those strategies can be implemented relatively quickly and produce results, although the relative magnitude of impact of all

on-road strategies is still fairly low in the short-term. In the long-term, in 2040 and 2050, vehicle and fuel strategies are forecasted to have slightly higher reductions as the vehicle fleet turns over. VMT strategies provide GHG reductions close to that of the vehicles and fuels strategies due to aggressive assumptions such as a 10 cent/mile VMT tax and significant shifts in land use projections; however, the lower emissions rates forecasted for the future vehicle fleet reduces the emissions savings for each mile of travel reduced.

Table 3: Estimated GHG Reductions from Current Transportation and Land Use Policies and Potential Future Regional Transportation and Land Use Sector Strategies from MSWG Study

On-Road Transportation Combustion Emissions	GHGs (MMTCO _{2e})				
	2005	2012	2020	2040	2050
2005 BAU Projections	22.58	25.17	28.14	33.13	35.00
2015 Current Policies Projections	22.58	22.63	21.54	17.80	18.64
VMT Strategies (including Land Use)	-	-	-0.64	-1.75	-3.27
Vehicle/Fuels Strategies*	-	-	-0.23	-2.30	-3.53
Operational Efficiency Strategies	-	-	-0.34	-0.57	-0.86
Total On-Road GHG Reductions+	-	-	-1.19	-4.30	-6.77
Net Projected Emissions	22.58	22.63	20.35	13.50	11.86
Projected Reductions from 2005 levels (%)			10%	40%	47%
Projected Reductions from 2005 BAU Projections (%)			28%	59%	66%
Impacts to Other GHG Source Categories					
<i>Increased emissions from electricity consumption*</i>			0.13	0.72	1.26
<i>Carbon sequestration benefits</i>			0.19	0.82	0.98
*Note that an increase in electric vehicles reduces on-road transportation combustion emissions but increases electric utility emissions; the level of increase in electric utility emissions will depend on many factors, including the implementation of EBE strategies. Also note that the total does not equal the sum of the individual types of strategies due to off-setting effects.					

The MSWG study examined aggressive strategies to reduce VMT. According to the final technical report:

the aggressive land use strategies analyzed reduce VMT by 11.6% in 2040 and 14.1% in the 2050 stretch scenario, but have relatively modest effects in the near term due to the time-frame for development to occur. Other VMT reduction strategies generally reduce VMT by 2 to 4% from 2020 to 2040, but have a much more significant impact in the 2050 stretch scenario (a 13.5% reduction in VMT) due to assumptions of wide-scale implementation of pricing mechanisms, including VMT-based road pricing, parking pricing, and mandated employer-provided commute subsidies. In combination with land use, the analysis suggests nearly a 28% reduction in VMT compared to the “current policies” baseline.

... Viewed comprehensively, these levels of VMT reduction reduce the rate of growth in regional VMT over the analysis period through 2040; the 2050 stretch scenario actually reduces total VMT within the region below 2012 levels, as shown in Table 5

[Table 4 in this report]. The significant VMT reductions highlight how aggressive the stretch scenario is, given the expected growth in regional population over this timeframe. While per capita daily VMT is already forecast to decline, the additional TLU strategies reduce average per capita daily VMT by nearly one-third across the entire region by 2050. (pp. 18-19)

Table 4: VMT Reductions and Average Daily VMT for the Land Use and the VMT reduction strategies Compared to “Current Policies” (2014 CLRP) from MSWG Study

	2012	2020	2040	2050 stretch
VMT Reductions due to Strategies Compared to Baseline with Current Policies (2014 CLRP)				
LU Strategies	-	2.2%	11.6%	14.1%
LU + Other VMT Reduction Strategies	-	4.2%	15.4%	27.6%
Average Daily VMT by Passenger Vehicles (millions)				
VMT with Current Policies	100.81	108.59	126.01	131.91
With LU Strategies		106.18	111.39	113.31
With LU + Other VMT Reduction Strategies		104.00	106.59	95.57
Daily VMT per Capita by Passenger Vehicles				
With Current Policies	19.49	19.13	18.86	18.86
With LU Strategies		18.71	16.67	16.20
With LU + Other VMT Reduction Strategies		18.33	15.95	13.66

3. Additional Strategies are Needed to Achieve the 2050 Goal

In the final part of the analysis, the Final Technical Report discusses a “combination of aggressive national and regional level actions additional strategies” (p. 22) that could make the 80% reduction goal achievable by 2050. Please refer to the Final Technical Report for more information on that discussion.

III. Long Range Plan Task Force (LRPTF)

After a review of planning information and establishing regional challenges and performance metrics, the LRPTF developed ten initiatives to analyze their potential to improve the performance of the long-range transportation plan. The analysis in the Phase II Detailed Technical Report³³ showed that **policies that optimize the regional land-use balance and increase employer-based travel demand management (such as teleworking policies) can improve the performance of the transportation network as well as have a noticeable impact on GHG emissions.** This is similar to the findings of the MSWG study.

Table 5 shows Initiatives 1-10 listed in descending order by the change in annual CO2 reductions

Table 5: Percent change in GHG, VHD, VMT, and VMT per Capita versus 2040 (2016 CLRP) from LRPTF Study

	Change in 2040 CO2 Emissions (annual)	Change in 2040 Daily VHD	Change in 2040 Daily VMT	Change in 2040 Daily VMT per Capita
10. Amplified Employer-Based Travel Demand Management	-7%	-24%	-6%	-6%
8. Optimize Regional Land-Use Balance	-4%	-18%	-3%	-6%
6. Metrorail Regional Core Capacity Improvements	-2%	-9%	-1%	-1%
7. Transit Rail Extensions	-1%	-3%	-1%	-1%
9. Transit Fare Policy Changes	-1%	-2%	-1%	-1%
4. Regionwide Bus Rapid Transit and Transitways	-1%	-2%	<-1%	<-1%
2. Operational Improvements and Hotspot Relief	-1%	-8%	2%	2%
5. Regional Commuter Rail Enhancements	0%	-2%	<-1%	<-1%
1. Regional Express Travel Network	0%	-11%	<1%	<1%
3. Additional Northern Bridge Crossing/Corridor	1%	-3%	1%	1%

³³ An Assessment of Regional Initiatives for the National Capital Region: Technical Report on Phase II of the Long-Range Plan Task Force. Washington, D.C.: National Capital Region Transportation Planning Board (prepared by ICF International). December 20, 2017. <https://www.mwcog.org/documents/2017/12/20/long-range-plan-task-force-reports-projects-regional-transportation-priorities-plan-scenario-planning-tpb/>

APPENDIX B: DETAILED STRATEGY DESCRIPTIONS

I. “What Would it Take?” Scenario Study (WWIT)

1. Federal Actions:

a. No Further Federal or Local Action

Strategies:	Description
<i>Fuel Efficiency:</i> CAFE 35.5 mpg by 2016	CAFE standards adopted in 2007 and later strengthened in 2009 moving from 25 mpg corporate average fuel economy to 35.5 mpg by 2016
<i>Alternative Fuels:</i> DOE Annual Energy Outlook, based on current energy legislation	Uses national forecasts of energy usage in the transportation sector completed annually by the U.S. Department of Energy. Forecasts are conducted according to current legislation and market assumptions.
<i>Travel Efficiency:</i> Committed TERMS	Committed TERMS include strategies already adopted by state and local jurisdictions in the region to address criteria air pollutants.

b. High Federal Role

Strategies:	Description
<i>Fuel Efficiency:</i> CAFE 55 mpg by 2030	Assumes that after CAFE 35.5 mpg is achieved in 2016, CAFE standards are further strengthened to 55 mpg by 2030.
<i>Fuel Efficiency:</i> Doubling heavy duty vehicle CAFE by 2020	Assumes institution of heavy-duty CAFE standards, which would double current heavy duty vehicle fuel economy by 2020
<i>Alternative Fuels and Travel Efficiency:</i> High energy prices (\$7/gallon gas)	Uses DOE forecasts for a national high energy price scenario, which assumes \$7/gallon gasoline. This causes higher alternative fuel usage and a 6% reduction in VMT.

2. State/Regional/Local Actions

a. Shorter term Strategies

Strategies:	Description
(1) Increase transit use	
Metrorail feeder bus service	At 2 underutilized park and ride lots and \$.50 am fare buy-down program
Implement neighborhood circulator buses	Expanded circulator bus service to/from Metrorail in 10 neighborhoods
Real-time bus schedule information	Internet and bus shelter display units, with satellite technology tracking 596 buses.
Purchase 185 WMATA buses	CNG buses on 36 crowded routes in DC
WMATA bus information displays with maps (2000 cases)	Increased and improved bus service information at 2000 stops.

Enhanced commuter services	Bus service from Metrorail to Potomac Mills and Arundel Mills shopping centers; bus service from Reston/Herndon, Centreville, and Springfield to Pentagon and downtown DC.; and bus service on HOV facilities such as US 50, I-270, and US 29.
Free bus-rail transfers	Free bus to rail transfers similar to the reduced fare rail to bus transfers.
Free off-peak bus service	Free bus service mid-day and on weekends.
K Street Transitway	Implementation of the K Street Transitway project on K Street in NW DC between 10 th St and 23 rd St.
TIGER smart hubs	Implementation of the technology component of the TPB TIGER grant submission: regional website of comprehensive transportation information and digital displays at 20 intermodal hubs.
TIGER bus priority	Implementation of the bus priority component of the TPB TIGER grant submission: transit signal priority, queue jump lanes, etc on 10 bus corridors.
10 transit stores in MD	Arlington stores used as the example
6 kiosks in MD	Transportation information kiosks similar to ones in VA and DC
(2) Increase non-motorized mode share	
Bike stations at rail stations	Assumes construction of 9 bike stations similar to the Union Station BikeStation.
TIGER bike-sharing	Implementation of the bike-sharing component of the TPB TIGER grant submission: regional expansion of DC's bike-sharing program from 500 bikes to 3000.
Improve pedestrian facilities near rail stations	Improved sidewalks, curb ramps, crosswalks, and lighting at 11 MARC stations and 12 Metrorail stations in Montgomery County.
(3) Pricing	
Volunteer employer parking cash-out subsidy	Equal compensation for free parking to those not driving to work
Parking impact fees	Administered by local governments to recoup costs associated with maintaining roadways and mitigating negative impacts of auto use. Fees are charged per parking space to land owners.
Pay-as-you-drive insurance	Assumes 30% of light duty drivers will switch to PAYD insurance within 6 years (insurance premiums are on a per-mile driven basis).
(4) Improve operational efficiency	
Eco-driving incentives and promotion	Based on study done in Denver, assuming 50% of drivers adopt eco-driving practices.
Idling reduction	Enforcement of existing idling regulations. Many states have state-wide anti-idling laws and several counties and cities have their own anti-idling rules.
MATOC	Regional coordination of incident management. Assumes current MATOC commitments.
Traffic signal optimization	Optimization of almost 2000 signals throughout the region.

(5) Reduce travel	
Expanded Telecommuting (conversion of all potential telecommuters)	Based on State of the Commute Report, all commuters stating that they are able and willing to begin telecommuting do so within 5 years.
Carpool incentive program	Based on Commuter Connections Carpool Incentive Demonstration Project Study where participants received \$1 per carpool trip taken.
Vanpool incentive program (\$25/van/day)	Incentive program designed to increase number of vanpools in the region.
Expand car-sharing program	Funds incentives for 1000 new car-sharing customers.
Employer outreach, public and private (Metrochecks and carpooling)	Marketing and implementing employer-based TDM programs

b. Longer term Strategies

Strategies:	Description
(1) Increase transit use	
Construction of 1000 parking spaces at Metrorail stations	WMATA adding 1000 parking spaces at different Metrorail stations.
Incremental increase in transit (heavy rail)	Example used is the Dulles rail project to indicate the order of magnitude of CO ₂ reduction for a major Metrorail expansion.
(2) Increase non-motorized mode share	
Completion of 2030 Bike/Ped plan by 2020	Accelerated completion of the TPB Bicycle and Pedestrian Plan by 2020 instead of 2030.
(3) Pricing	
TPB Value Pricing Study, with transit	2008 TPB Value Pricing Study, including new priced lanes on major freeways, pricing of existing arterials in DC and pricing of national parkways. Also includes enhances bus transit operating on priced lanes.
(4) Reduce travel	
CLRP Aspirations Scenario	TPB land use and transportation scenario examining concentrated land use around a network of BRT and pricing. Also includes a scenario of just concentrated, transit-oriented land use.

II. Multi-Sector Working Group (MSWG)

<p>TLU-2: Sustainable development patterns and urban design, including bicycle/pedestrian enhancements</p>	<ul style="list-style-type: none"> • 2040: Major reallocations of growth, but attempted to retain overall CLRP control totals within the host jurisdiction, focusing instead on allocating as much of that growth as possible into activity centers. Top priority was given to locating in activity centers that include premium transit service. Second priority was given to premium transit station areas that were not formerly designated as activity centers, and third priority was given to those remaining activity centers that were not served with premium transit. • 2050: Relaxed the constraint on moving jobs or households across jurisdictional lines, and sought to achieve a better regional distribution of employment opportunity and a better balance between jobs and housing.
<p>TLU-3: Improve fuel economy of light-duty vehicle fleet</p>	<ul style="list-style-type: none"> • 2020: Increase light-duty zero emission vehicles (ZEVs) to 2% of total vehicle population in region (beyond those anticipated with existing policies) • 2040: Increase light-duty ZEVs to 15% of total vehicle population in region (beyond those anticipated with existing policies) • 2050 (stretch): Increase light-duty ZEVs to 25% of total vehicle population in region (beyond those anticipated with existing policies)
<p>TLU-4: Increase alternative fuels in public sector fleets</p>	<ul style="list-style-type: none"> • 2020: Add 200 zero emission vehicle (ZEV) buses to public transit fleet in the study region (replacements). • 2040: Increase ZEVs in municipal light-duty fleets to 15% of total fleet population; require B5 in all municipal fleets and school buses; require 15% of public transit fleet to be ZEVs. • 2050 (stretch): Increase ZEVs in municipal light-duty fleets to 25% of total fleet population; require B20 in all municipal fleets and school buses; require 25% of public transit fleets to be ZEVs.
<p>TLU-5: Truck stop electrification (TSE)</p>	<ul style="list-style-type: none"> • 2020: One TSE location with 20 bays/site in the region. • 2040: Six (6) TSE locations with 20 bays/site in the region. • 2050 (stretch): Fourteen (14) TSE locations with 20 bays/site in the region.
<p>TLU-6: Low carbon fuel standard</p>	<ul style="list-style-type: none"> • 2020: No reductions (assume measure will not be implemented by this date). • 2040: Reduction in total on-road fuel emissions in region by 10%. • 2050 (stretch): Reduction in total on-road fuel emissions in region by 15%.

<p>TLU-7: Enhancing system operations</p>	<ul style="list-style-type: none"> • 2020: 20% of drivers adopt eco-driving practices (based on public campaigns); region wide operational improvements reduce vehicle operating emissions by additional 1.65% (based on best available regional simulation study). • 2040: 80% of drivers adopt eco-driving practices (based in part via connected vehicle/automated vehicle technologies); regionwide operational improvements reduce vehicle operating emissions by additional 1.65% (based on best available regional simulation study). • 2050 (stretch): 100% of drivers utilize eco-driving practices (via connected vehicle/automated vehicle technologies); regionwide operational improvements reduce vehicle operating emissions by additional 1.65% (based on best available regional simulation study).
<p>TLU-8: Reduce speeding on freeways</p>	<ul style="list-style-type: none"> • 2020: One-third of freeway speeding eliminated (above 57.5 mph) • 2040: All freeway speeding eliminated (through automated enforcement/autonomous vehicles) • 2050: All freeway speeding eliminated (through automated enforcement/autonomous vehicles)
<p>TLU-9: Travel Demand Management</p>	<ul style="list-style-type: none"> • 2020: Expand employer-based incentives (subsidies of \$50 per month for 40% of employers); 50% of parking in activity centers is priced at an average of \$8 per day for work trips. • 2040: Expand employer-based incentives (subsidies of \$50 per month for 80% of employers); 90% of parking in activity centers is priced at an average of \$8 per day for work trips. • 2050 (stretch): Expand employer-based incentives (subsidies of \$80 per month for 100% of employers); 100% of parking in activity centers is priced at an average of \$8 per day for work trips.
<p>TLU-10: Transit enhancements</p>	<ul style="list-style-type: none"> • 2020: Reduce transit travel times by 10% and reduce headways (wait time) by 10%. • 2040: Reduce transit travel times by 15% and reduce headways (wait time) by 15%. • 2050 (stretch): Reduce transit travel time by 20% and reduce headways (wait time) by 20%.
<p>TLU-11: Transit incentives/ Fare reductions</p>	<ul style="list-style-type: none"> • 2020: Reduce transit fares regionally by 20%. • 2040: Reduce transit fares regionally by 25%. • 2050: Reduce transit fares regionally by 40% partially funded through pricing strategies.
<p>TLU-12: Road pricing</p>	<ul style="list-style-type: none"> • 2020: None – long term scenario only • 2040: Cordon pricing into downtown DC at \$5/trip • 2050 (stretch): Full VMT-based pricing on road network at \$0.10 per mile peak. Cordon pricing into downtown DC at \$5/trip.

III. Long-Range Plan Task Force (LRPTF)

Multimodal Initiatives	
1. Regional Express Travel Network	<ul style="list-style-type: none"> Express toll lanes network (free to HOV and transit vehicles) with added lanes where feasible on existing limited access highways (including remaining portion of the Capital Beltway, I-270, Dulles Toll Road, U.S. 50); includes expanded American Legion Bridge. New express bus services on network (paid in part through tolls) connecting major Activity Centers.
2. Operational Improvements and Hotspot Relief	<ul style="list-style-type: none"> Application of technology and enhanced system operations strategies, such as ramp metering, active traffic management, and integrated corridor management (including transit signal priority and enhanced multimodal travel information), plus targeted capacity enhancements where feasible to address top regional congestion hotspots and adjoining connections. Improved roadway design (such as treatments of turning movements) and reversible lanes on major roadways, as appropriate (to be identified based on strong directional flows). Expanded regional incident management where appropriate. Technological integration of demand-responsive services for persons with disabilities and others with limited mobility to create efficiencies of scale and improve mobility of traditionally underserved populations.
3. Additional Northern Bridge Crossing/Corridor	<ul style="list-style-type: none"> New northern bridge crossing of Potomac River, as a multimodal corridor between the Intercounty Connector and Northern Virginia. New express bus services connecting existing Activity Centers in this new multimodal corridor.
Transit-Focused Initiatives	
4. Regionwide Bus Rapid Transit and Transitways	<ul style="list-style-type: none"> Bus rapid transit (BRT)/transitway networks in Montgomery County, Prince George's County, Northern Virginia (TransAction 2040), Washington D.C., and transitway from Branch Ave to Waldorf; specifications according to jurisdiction plans. Additional D.C. streetcar line (north-south) as complement to network. Improved bicycle and pedestrian connections and access improvements to transit stations.
5. Regional Commuter Rail Enhancements	<ul style="list-style-type: none"> VRE System Plan 2040, MARC Growth and Investment Plan (including run-thru and two-way service on selected lines, increased frequency and hours of service).¹ Long Bridge corridor improvements including at least four tracks and bicycle-pedestrian facilities. Improved bicycle and pedestrian connections and access improvements to rail stations.

Transit-Focused Initiatives (Continued)	
6. Metrorail Regional Core Capacity Improvements	<ul style="list-style-type: none"> • 100% 8-car trains. • Metrorail station improvements at high-volume stations in system core. • Second Rosslyn station to reduce interlining and increase frequency. • New Metrorail core line to add capacity across Potomac River (new Rosslyn tunnel) between Virginia and D.C. through Georgetown to Union Station toward Waterfront. • Improved bicycle and pedestrian connections and access improvements to rail stations.
7. Transit Rail Extensions	<ul style="list-style-type: none"> • Metrorail extensions to Centreville/Gainesville, Hybla Valley /Potomac Mills. • Can consider an extension(s) in MD, such as to National Harbor or north of Shady Grove (to be defined later). • Purple line extension to Tysons (west) and Eisenhower Avenue (east). • Improved bicycle and pedestrian connections and access improvements to rail stations.
Policy-Focused Initiatives	
8. Optimize Regional Land-Use Balance	<ul style="list-style-type: none"> • Optimize jobs/housing balance regionwide. • Increase jobs and housing around underutilized rail stations and Activity Centers with high-capacity transit. • Build more housing in the region to match employment (about 130,000 more households) and reduce the number of long distance commuters outside of the region.
9. Transit Fare Policy Changes	<ul style="list-style-type: none"> • Reduced price Metrorail fare for off-peak direction during peak period and on underutilized segments. • Free transit for low-income residents.
10. Amplified Employer-Based Travel Demand Management	<p>New policies (e.g., employer trip reduction requirements) and programs (e.g., financial incentives) implemented at the local and regional scale to significantly reduce single-occupancy vehicle commute trip making, including:</p> <ul style="list-style-type: none"> • Employer-based parking cash-out • Expanded employer-based transit/vanpool benefits • Expanded telework and flexible schedule adoption • Substantial increase in priced commuter parking in major Activity Centers

APPENDIX C: TECHNICAL APPROACH AND DOCUMENTATION

I. “What Would it Take?” Scenario Study (WWIT)

Date Completed: May 18, 2010

Oversight: TPB

Documentation: Final Report: What Would It Take? Transportation and Climate Change in the National Capital Region³⁴

Final Technical Report: What Would It Take? Transportation and Climate Change in the National Capital Region³⁵

Study Purpose

The “What Would it Take?” Scenario Study was one of two scenario studies that were undertaken under the purview of the Scenario Study Task Force that the TPB established in September 2007. The WWIT Scenario Study was the TPB’s first step toward answering some major questions about climate change mitigation, specifically in the transportation sector in the Washington metropolitan region. The study examined what types of projects, programs, and policies it would take in the transportation sector to meet the regional aspirational GHG reductions targets established in the National Capital Region Climate Change report and adopted by the COG Board in November 2008. The study developed the baseline GHG emissions in the transportation sector and tested the potential reductions in GHG emissions from various projects/programs/policies would generate in the transportation sector. The intent was to determine the nature and scope of actions that would be necessary to reduce GHG in the transportation sector in the target amounts noted below.

- By 2012, 10% below “business as usual” (of the transportation sector)
- By 2020, 20% below 2005 levels (of the transportation sector)
- By 2050, 80% below 2005 levels (of the transportation sector)

Study Design

The technical analysis for this study was conducted by TPB staff. The WWIT study reported cumulative CO₂ emissions reductions from 2010-2030 as compared to a CLRP baseline. Because the horizon year for the long-range plan was 2030, a straight-line interpolation goal of 40% below 2005 levels by 2030 was used as the benchmark for the study. The study was reported in two separate groupings (Systemwide and State/Regional/Local) to avoid double-counting emissions reductions benefits from strategies. Emissions for strategies were estimated using spreadsheet-based sketch planning techniques developed for Transportation Emissions Reduction Measure (TERMs) analyses.

³⁴ Final Report: What Would It Take? Transportation and Climate Change in the National Capital Region. Washington, D.C.: National Capital Region Transportation Planning Board. May 18, 2010. <https://www.mwcog.org/documents/2010/05/18/what-would-it-take-scenario-land-use-projects/>

³⁵ Preliminary Analysis of Potential Transportation-related Greenhouse Gas Reduction Strategies for the Washington, DC Region. National Capital Region Transportation Planning Board. May 13, 2010.

Technical Approach

CLRP:	2009
Emissions Model:	Mobile6.2 + offline spreadsheet for fuel economy standards
Travel Demand Model:	Version 2.2
Demographic Data:	Round 7.2
Vehicle Registration Data:	2008
Analysis Years:	2010, 2020, 2030
Geography:	8-hour Ozone Non-Attainment Area

II. Multi-Sector Working Group (MSWG)

Date Completed: January 18, 2017

Oversight: TPB/MWAQC/CEEPC

Documentation: Final Technical Report: Multi-Sector Approach to Reducing Greenhouse Gas Emissions in the Metropolitan Washington Region³⁶

Recommendation of the Multi-Sector Working Group³⁷

Study Purpose

In December 2014, the TPB and the Metropolitan Washington Air Quality Committee (MWAQC) affirmed COG's adopted voluntary greenhouse gas reduction goal of 80% below 2005 levels by 2050,³⁸ and committed staff and resources to support a multi-sector, multi-disciplinary professional working group to be convened by COG to:

- Identify viable, implementable local, regional, and state actions to reduce GHG emissions in four sectors (Energy, the Built Environment, Land Use, and Transportation) in accordance with the voluntarily adopted goals
- Quantify the benefits, costs and implementation timeframes of these actions
- Explore specific GHG emission reduction targets in each of the four sectors
- Jointly develop an action plan for the region

Study Design

³⁶ Final Technical Report: Multi-Sector Approach to Reducing Greenhouse Gas Emissions in the Metropolitan Washington Region. Washington, D.C.: Metropolitan Washington Council of Governments (submitted by ICF International). January 31, 2016.
<https://www.mwcog.org/documents/2016/08/01/multi-sector-approach-to-reducing-greenhouse-gas-emissions-in-the-metropolitan-washington-region-final-technical-report/>

³⁷ Recommendation of the Multi-Sector Working Group. Washington D.C.: Metropolitan Washington Council of Governments. January 18, 2017.
<https://www.mwcog.org/documents/2017/01/18/multi-sector-working-group-greenhouse-gas-emission-reducing-strategies-air-quality-climate-mitigation-greenhouse-gas-multi-sector-working-group/>

³⁸ TPB R10- 2015: Resolution on the Metropolitan Washington Council of Governments' Regional Multi-Sector Goals for Reducing Greenhouse Gases. Washington, D.C.: National Capital Region Transportation Planning Board. December 17, 2014.
<https://www.mwcog.org/file.aspx?&A=NQRpyfklR1A9O4KiC0%2bhAVes%2fYo7kl1bNCWYEIt0HU%3d>

The MSWG work was directly tied to the greenhouse gas reduction targets laid out in the National Capital Region Climate Change Report. Baseline for comparison is the 2005 “Business as Usual” (BAU) forecasts from the Climate Change Report, which were updated with the latest planning tools to be consistent. The analysis MOVES2014, TRIMMs, analysis conducted by consultant team lead by ICF International.

Technical Approach

CLRP:	2014
Emissions Model:	MOVES2014
Travel Demand Model:	Version 2.3
Demographic Data:	Round 8.3
Vehicle Registration Data:	2014
Analysis Years:	2020, 2040, 2050**
Geography:	TPB Planning Area

**Emissions for analysis years 2012, 2020, and 2040 were estimated by TPB staff using MOVES2014. Emissions for analysis year 2050 were estimated by the consultant team.

III. Long-Range Plan Task Force (LRPTF)

Date Completed: December 20, 2017

Oversight: TPB

Documentation: An Assessment of Regional Initiatives for the National Capital Region: Technical Report on Phase II of the Long-Range Plan Task Force³⁹

R-8 2018: TPB Resolution endorsing initiatives recommended by the LRPTF⁴⁰

Study Purpose

TPB Resolution R16-2017, adopted on March 15, 2017, directed the Long-Range Plan Task Force to identify a limited set (6-10) of projects, policies, or programs that would have the potential to improve the performance of the region’s transportation system and to make substantive progress towards achieving the goals laid out in TPB’s and the Metropolitan Washington Council of Government’s (COG’s) governing documents. As a part of this study, among other measures, GHG impacts of each initiative were analyzed in relationship to the Planned Build.

Study Design

³⁹ An Assessment of Regional Initiatives for the National Capital Region: Technical Report on Phase II of the Long-Range Plan Task Force. Washington, D.C.: National Capital Region Transportation Planning Board (prepared by ICF International). December 20, 2017. <https://www.mwcog.org/documents/2017/12/20/long-range-plan-task-force-reports-projects-regional-transportation-priorities-plan-scenario-planning-tpb/>

⁴⁰ TPB R-8 2018; TPB Resolution endorsing initiatives recommended by the LRPTF. Washington, D.C.: National Capital Region Transportation Planning Board (prepared by ICF International). December 20, 2017. <https://www.mwcog.org/documents/2017/12/20/r8-2018--resolution-endorsing-initiatives-recommended-by-the-long-range-plan-task-force/>

The analysis looked at 10 initiatives, which were groupings of individual strategies. The initiatives were compared to horizon year 2040 from 2016 CLRP. Sketch planning methods, including simple VMT-based factoring, were used for the analysis. The analysis was conducted by a consultant team lead by ICF International and assisted by TPB staff.

Technical Approach

CLRP:	2016
Emissions Model:	MOVES2014a
Travel Demand Model:	Version 2.3.66
Demographic Data:	Round 9.0
Vehicle Registration Data:	2014 for baseline scenario
Analysis Year:	2040
Geography:	TPB Planning Area

TPB CLIMATE CHANGE MITIGATION STUDY OF 2021

Findings from Past TPB and COG Studies

Erin Morrow
TPB Transportation Engineer

Transportation Planning Board
March 17, 2021



Regional Climate Change Goals

The Metropolitan Washington Council of Governments (COG) Board of Directors adopted, and National Capital Region Transportation Planning Board (TPB) affirmed, the following greenhouse gas (GHG) reduction goals for the region:

- By 2012, GHG levels will be 10% below “business as usual” forecasts
- By 2020, GHG levels will be 20% below 2005 levels
- By 2030, GHG levels will be 50% below 2005 levels
- By 2050, GHG levels will be 80% below 2005 levels

On-road GHG Emissions (Visualize 2045)



Visualize 2045 (2018):

- 1.3M more people and 1M more jobs forecasted between 2019 and 2045
- Rate of growth in walk/bike and transit trips is greater than that of auto trips
- Growth in VMT less than in previous long-range plans
- VMT per capita reduced (Region Forward target)
- GHG emissions 23% below 2005 levels in 2045



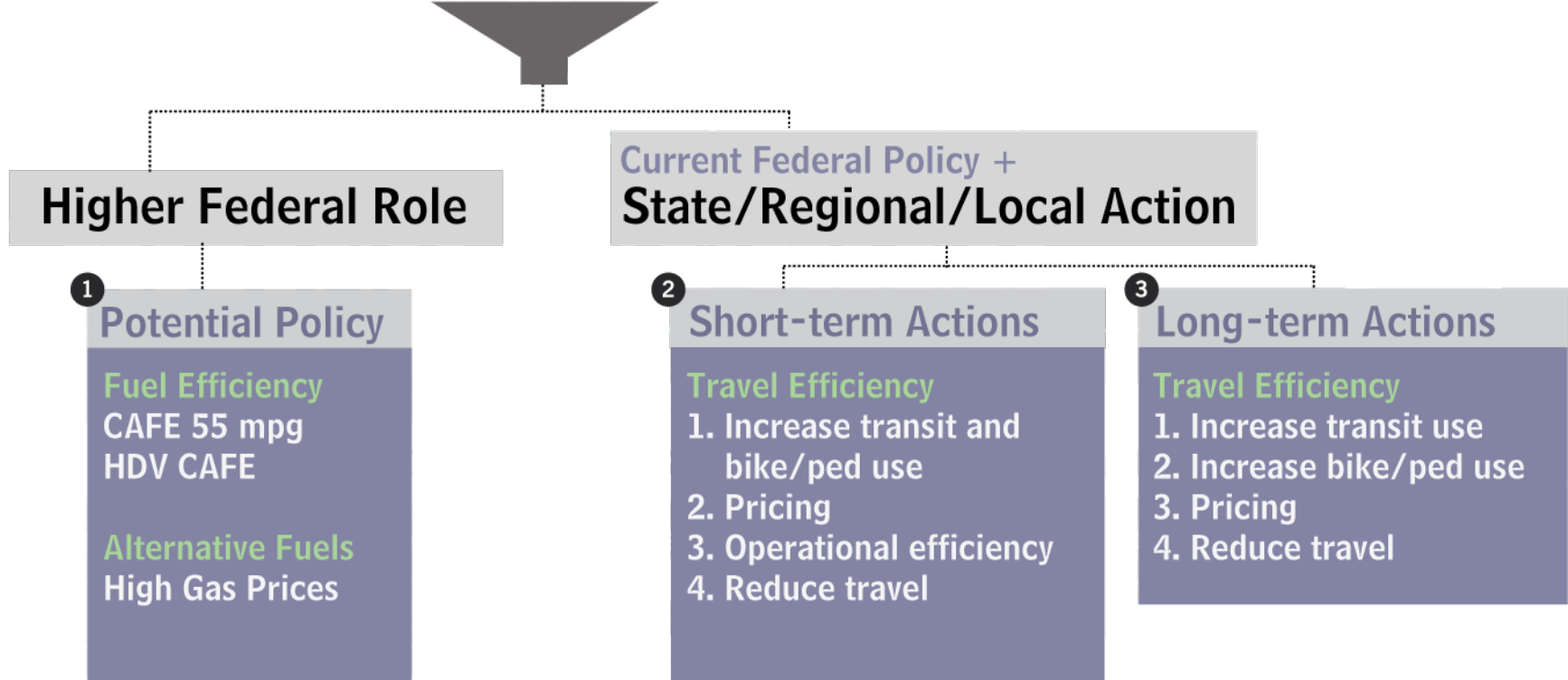
TPB and COG Climate Change Studies

“What Would it Take?” Scenario Study (WWIT)	May 2010
<ul style="list-style-type: none">• Examined transportation sector only• Proportional reductions in sector’s GHG emissions by 2030• Explored strategies and potential GHG reductions	
Multi-Sector Working Group (MSWG) Study	Jan. 2017
<ul style="list-style-type: none">• Collaborated with COG and MWAQC• Examined all sectors for 2020, 2040, and 2050• Explored strategies and potential GHG reductions	
Long-Range Plan Task Force (LRPTF)	Dec. 2017
<ul style="list-style-type: none">• Examined scenarios to improve system performance• Interrelations between changes in travel and GHG emissions	
2030 Climate and Energy Action Plan (CEAP)	Nov. 2020
<ul style="list-style-type: none">• Examined select MSWG Strategies for 2030	



“What Would It Take?” Study (WWIT)

Individual Strategies



Source: WWIT Final Results Presentation, May 19, 2010



WWIT: Assumed Actions

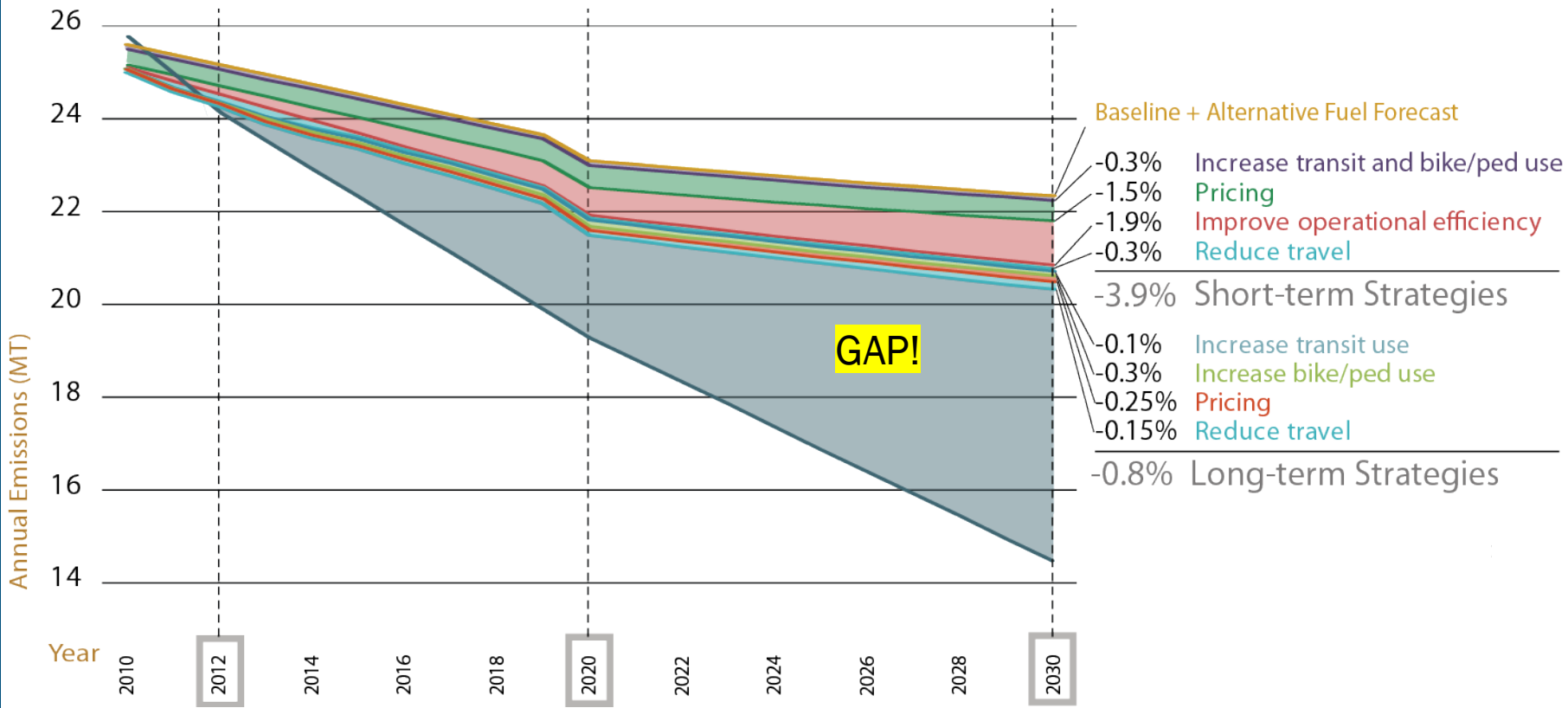
Significant enhancements to existing policy and funding needed to harness potential local, regional and state strategies

Category	Example Short term Strategy	Reduction (% Off BAU)	Example Long term Strategy	Reduction (% Off BAU)
1. Increase transit use	Implement kiosks, feeder buses & circulators, real-time bus information, bus priority, free transfers, bike stations, improved bike/ped access to transit, bike sharing; improved bike/ped access to transit, bike sharing	-0.30%	Major transit expansion, such as Dulles Rail line and park & ride lots at rail stations	-0.15%
2. Increase bike/ped use			Accelerated completion of the TPB Bicycle and Pedestrian	-0.30%
3. Travel Pricing	Implement parking impact fees, pay-as-you drive insurance, parking cash out subsidies	-1.50%	Variable pricing of new and existing freeway and select arterial lanes	-0.25%
4. Improve operational efficiency	Promote eco-driving (public education campaign), incident management, traffic signal optimization, idling reduction	-1.80%		
	TOTAL	-3.90%	TOTAL	-0.85%



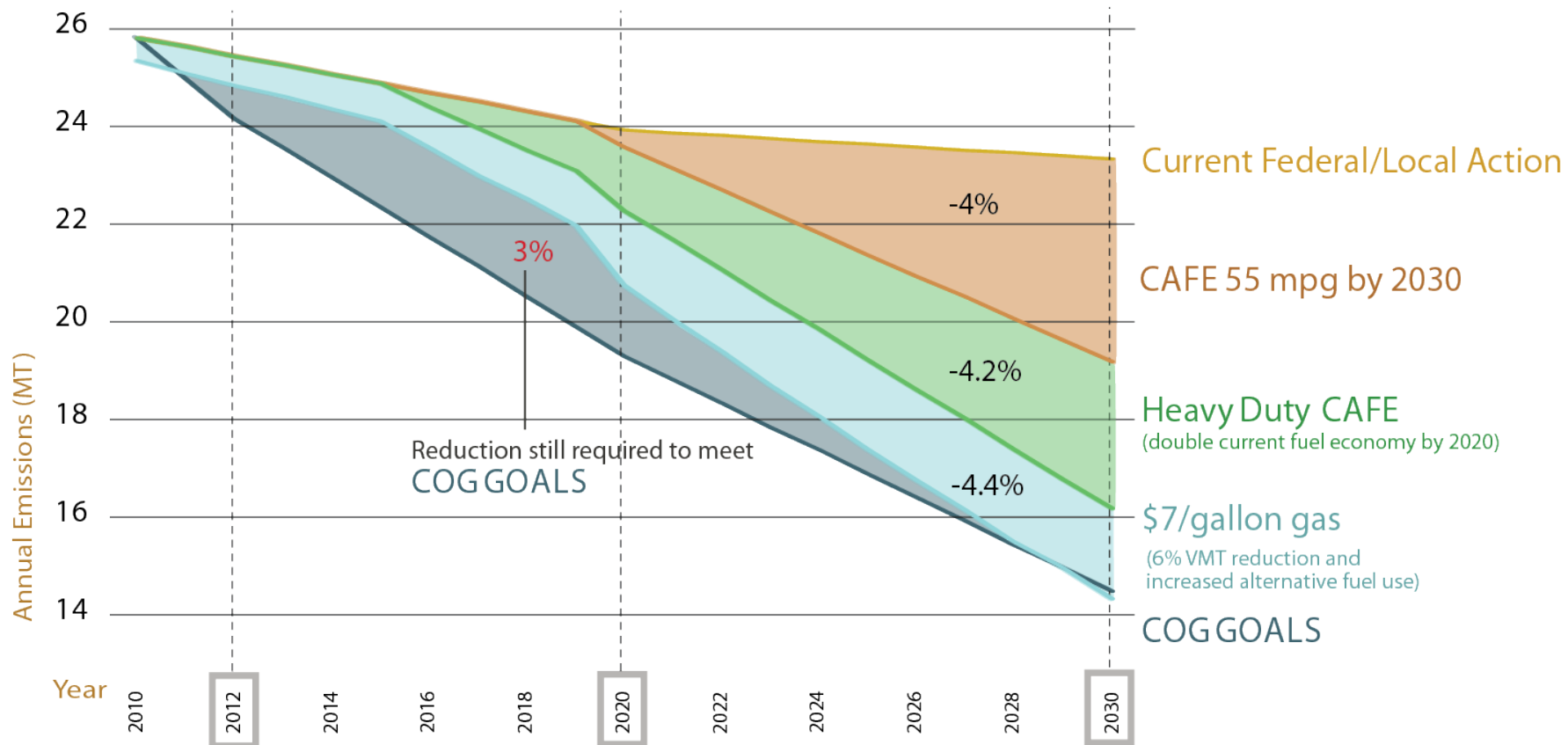
WWIT: Findings 1

Local/State/Regional actions contribute to GHG reductions, but fall far short of regional goals

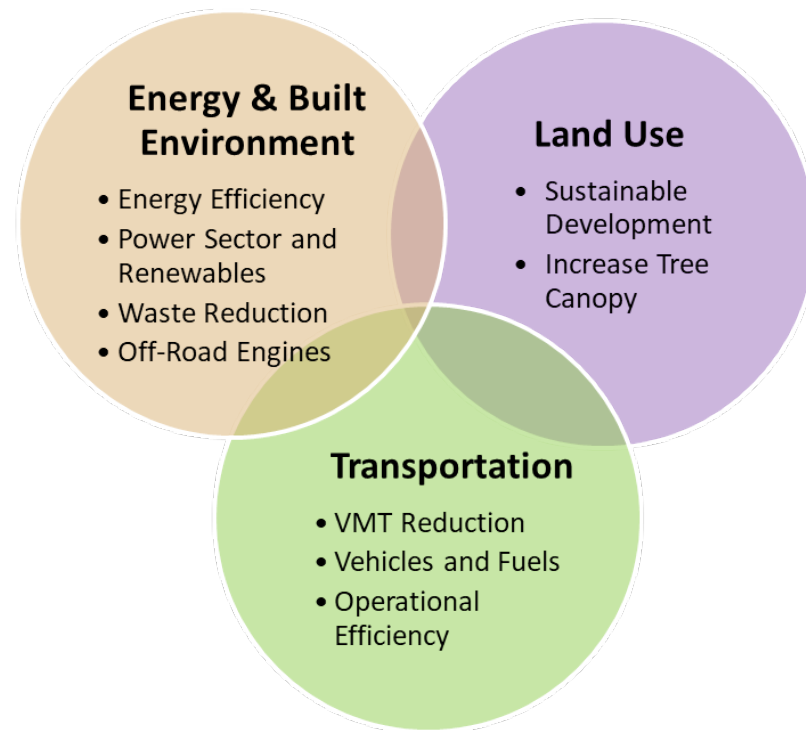


WWIT: Findings 2

Systemic measures can provide substantial, dependable GHG reductions to cover the gap



Multi-Sector Working Group (MSWG)



- Existing policies and plans analyzed for projected 2020, 2040, and 2050 reductions
- Additional strategies analyzed at “viable” and “stretch” levels for 2040 and 2050 reductions, respectively

MSWG: Assumed Actions

Concentrate more of the region's anticipated growth in walkable, mixed-use, transit-oriented activity centers

- 2040: Future growth within each jurisdiction concentrated in: 1) Activity Centers with premium transit; 2) other locations with premium transit; or 3) other Activity Centers without premium transit
- 2050: Future regional growth optimized by re-distribution across jurisdictional boundaries, and concentrated as above

Vehicle and fuels strategies

- 2040: 15% zero emissions vehicles (e.g. EVs) in on-road light-duty fleet (LDV) and public sector heavy-duty fleet (PSHD); reduce on-road fuel emissions by 10% by reducing carbon content of fuel
- 2050: 25% zero emissions vehicles in on-road LDV fleet and PSHD; reduce on-road fuel emissions by 15% by reducing carbon content of fuel

MSWG: Assumed Actions

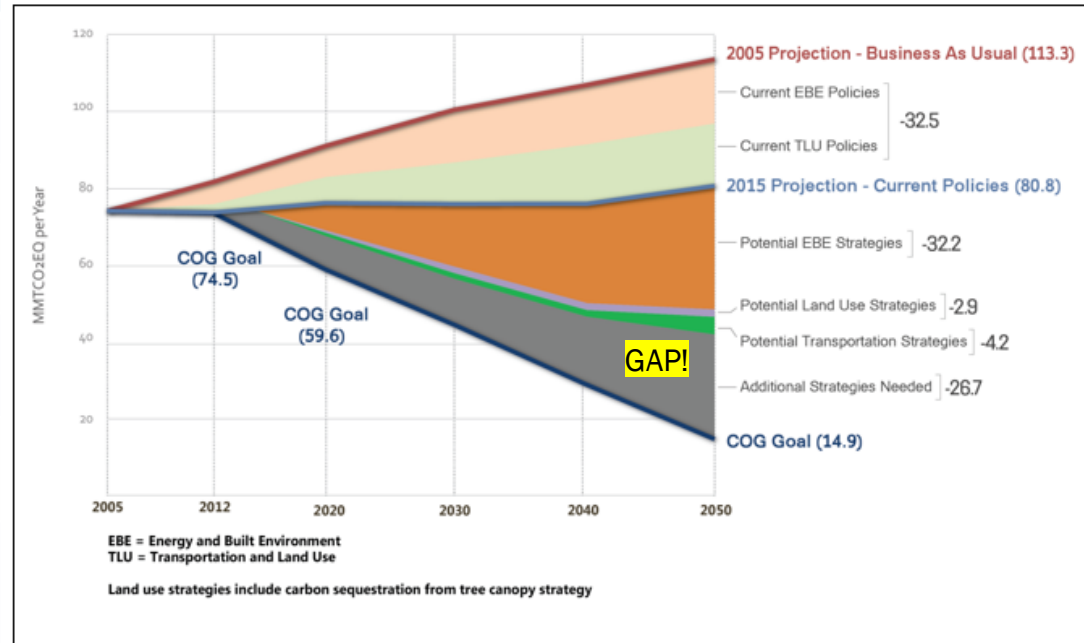
Travel demand management, transit, and pricing strategies

- 2040: \$50/month subsidy for 80% of employers; increased parking charges in 90% of Activity Centers; \$5 cordon pricing entering downtown DC; reduce transit fares by 25% regionally
- 2050: \$80/month subsidy for 100% of employers; increased of parking charges in 100% of Activity Centers; \$5 cordon pricing entering downtown DC; \$0.10/mile VMT charge; reduce transit fares by 40% regionally



MSWG: Findings

Grouped Strategy	Viable Reduction 2050 Goal	Stretch Reduction 2050 Goal
Building Energy Efficiency	15%	18%
Power Sector and Renewables	10%	14%
Land Use and Tree Canopy	2%	3%
Vehicles and Fuels	2%	4%
Travel Demand Management and Pricing	<1%	2%
Total	29%	40%



Additional national, state, local strategies needed to close the gap



Long Range Plan Task Force (LRPTF)

- Study purpose: identify potential long-term improvements in the multi-modal system performance outcomes (*not Climate Change focused*)
- 10 alternative scenarios of land use and transportation projects/programs/policies evaluated
- Scenario evaluation metrics included changes in VMT, VHD, and GHG emissions



LRPTF: Assumed Actions

Multimodal

1. Regional Express Travel Network

2. Operational Improvements & Hotspot Relief

3. Additional Northern Bridge Crossing/Corridor

Transit

4. Regionwide High-Capacity Transitways

5. Regional Commuter Rail Enhancements

6. Metrorail Regional Core Capacity Improvements

7. Transit Rail Extensions

Policy-Focused

8. Optimize Regional Land Use Balance

9. Transit Fare Policy Changes

10. Amplified Travel Demand Management (for commute trips)



LRPTF: Findings

	Change in 2040 CO2 Emissions (annual)	Change in 2040 Daily VHD	Change in 2040 Daily VMT	Change in 2040 Daily VMT per Capita
10. Amplified Employer-Based Travel Demand Management	-7%	-24%	-6%	-6%
8. Optimize Regional Land-Use Balance	-4%	-18%	-3%	-6%
6. Metrorail Regional Core Capacity Improvements	-2%	-9%	-1%	-1%
7. Transit Rail Extensions	-1%	-3%	-1%	-1%
9. Transit Fare Policy Changes	-1%	-2%	-1%	-1%
4. Regionwide Bus Rapid Transit and Transitways	-1%	-2%	<-1%	<-1%
2. Operational Improvements and Hotspot Relief	-1%	-8%	2%	2%
5. Regional Commuter Rail Enhancements	0%	-2%	<-1%	<-1%
1. Regional Express Travel Network	0%	-11%	<1%	<1%
3. Additional Northern Bridge Crossing/Corridor	1%	-3%	1%	1%

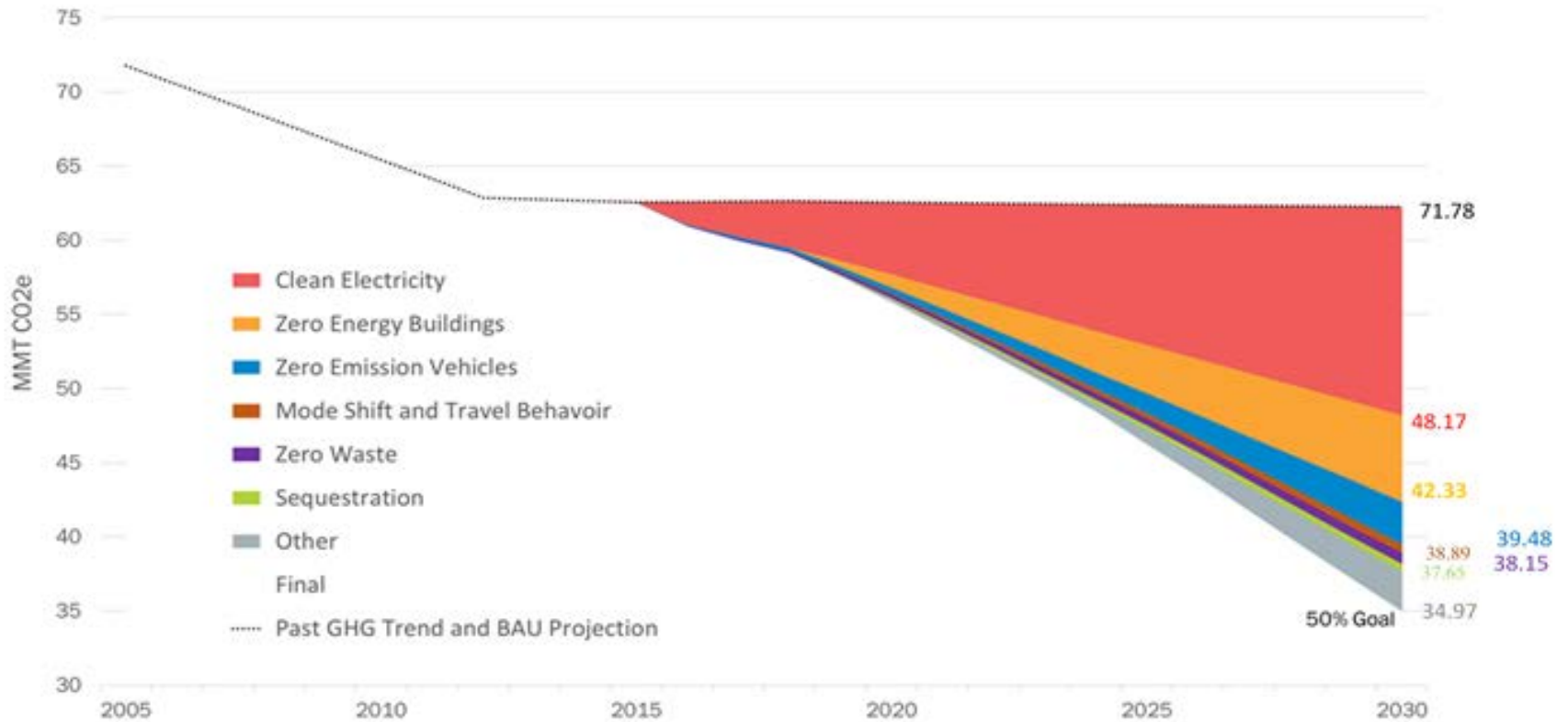


2030 Climate Energy Action Plan (CEAP)

- 2030 scenario for the plan analyzes the technical potential for metropolitan Washington to reach a 50% reduction in GHG emissions from 2005 levels by 2030
- This scenario leverages results from a previous scenario analysis conducted by COG’s Multi-Sector Working Group and results have been updated based on new data and progress since that time
- On-road transportation strategies include Zero Emission Vehicle (ZEV) and Mode Shift and Travel Behavior (MSTB) actions
 - ZEV strategies are based on the “high electric vehicle (EV) adoptions rates from the National Renewable Energy Laboratory’s “Electrification Futures Study” i.e., adoption rates of greater than 20% for light-duty cars, 9% for light-duty trucks, 4% for medium/heavy-duty trucks, and 30% for transit buses.
 - MSTB strategies are from the MSWG study and include increasing transit, carpooling, and non-motorized travel; bringing jobs and housing closer together; and travel demand management (teleworking, transit benefits).



CEAP 2030 Scenario Analysis: Findings



Zero Emission Vehicles: 2.85 MMT CO₂e in 2030

Mode Shift and Travel Behavior: 0.59 MMT CO₂e in 2030



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