National Capital Region
Transportation Planning Board

TRANSPORTATION PLANNING BOARD

Wednesday, April 21, 2021
12:00 - 2:00 P.M.

VIRTUAL MEETING ONLY

SPECIAL WORK SESSION

- **10:30 - 11:55 A.M.** Facilitated Review of Visualize 2045 Technical Inputs

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@mwcog.org with the subject line "Item 1 Virtual Comment Opportunity." These statements must be received by staff no later than 9 A.M. on April 21, 2021 to be relayed to the board at the meeting.

12:15 P.M. **2. APPROVAL OF THE MARCH 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 AND ACCESS FOR ALL COMMITTEE REPORTS**
Elisa Walton, CAC Chair
Canek Aguirre, AFA 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. CRRSAA FUNDING RECOMMENDATIONS AND A FY 2019-2024 TIP AMENDMENT TO INCLUDE THE PROJECTS**
Lynn Winchell-Mendy, Transportation Planner

The board will be briefed on the projects recommended for funding for Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (CRRSAA) appropriations to the DC-MD-VA urbanized area. A grant solicitation for current and past FTA Section 5310 Enhanced Mobility grant recipients was conducted from February 23 to March 24. A selection committee reviewed the grant applications and recommended projects to be presented to the TPB officers for concurrence. The board will be briefed on the solicitation and selection process and asked to approve the projects for funding and inclusion in the TIP.

Action: Approve Resolution R17-2021 to approve funding recommendations for CRRSAA and to approve an amendment of the FY 2021-2024 Transportation Improvement Program (TIP) to include these projects.

1:00 P.M. **8. FY 2022 TLC TECHNICAL ASSISTANCE RECIPIENTS**
Lisa Rother, ULI Washington Executive Director (retired)
John Swanson, TPB Transportation Planner

The TPB's Transportation Land-Use Connections (TLC) Program has provided support to local jurisdictions since 2006 as they deal with the challenges of integrating land-use and transportation planning at the community level. Staff solicited applications for the FY 2022 TLC round of technical assistance between January 8 and March 8, 2021. The board will be briefed and asked to approve the applications that are being recommended for funding in FY 2022.

Action: Approve TLC technical assistance recipients under the FY 2022 TLC Program.

INFORMATION ITEMS

1:10 P.M. **9. VISUALIZE 2045: BRIEFING ON PROJECT INPUTS AND DRAFT SCOPE OF WORK FOR THE AIR QUALITY CONFORMITY ANALYSIS FOR THE 2022 UPDATE TO VISUALIZE 2045 AND THE FY2023-2026 TIP**
Stacy Cook, TPB Transportation Planner
Andrew Austin, TPB Transportation Planner
Jane Posey, TPB Transportation Engineer

TPB Transportation Planner, Stacy Cook, will briefly summarize the TPB work session.

The 2022 update to the Visualize 2045 constrained element will identify all regionally significant transportation investments that have demonstrated funding between now and 2045. Federal law requires that this collection of projects and programs be analyzed to ensure that future vehicle-related emissions remain below approved regional limits. The TPB will be briefed on the new major projects and significant changes to major projects already in the plan that were submitted for the update, and the draft scope of work for the air quality conformity analysis. The 30-day public comment on the inputs and scope is scheduled from April 2, 2021 to May 3, 2021.

1:35 P.M. **10. TPB CLIMATE CHANGE MITIGATION STUDY OF 2021**

Erin Morrow, TPB Transportation Engineer

The goal of this study is to demonstrate potential pathways for the region to reduce on-road transportation sector greenhouse gas (GHG) emissions to meet regional GHG reduction goals in 2030 and 2050. The study is divided into two phases: Phase 1, conducted by TPB staff, is a summary of major findings from past work done in this area by TPB and COG. Phase 2 will be a technical analysis conducted by a consultant. At today's meeting, TPB staff will summarize the findings of the Phase 1 report, which was presented to the Technical Committee in draft form in February and will be used as reference for Phase 2 of the study.

2:00 P.M. **11. ADJOURN**

The next meeting is scheduled for May 19, 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

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
FROM: Lyn Erickson, TPB Plan Development and Coordination Program Director
SUBJECT: Public Comments to date - April 2021 TPB Meeting
DATE: April 21, 2021

There were no comments received regarding the specific April TPB meeting agenda items. At this time, there is a public comment period open through May 3 and this memo provides a summary of the 116 comments and their contributors submitted to date. All of these comments will be captured and shared next month when all comments received to date are presented to the TPB.

PUBLIC COMMENT SUMMARY

Slightly different variations of the following message was sent by 112 people:

"Dear Chair Charles Allen, We must fight climate change. Transportation is the largest source of climate pollution in the region (42%), and you have the power to support projects and plans that reduce emissions and oppose those that do not.

Therefore, I urge you to act now to fix the draft list of projects submitted to the Transportation Planning Board (TPB) for the Visualize2045 update to the regional long range transportation plan.

The draft list is almost identical to that of the previous (2018) plan, which was shown to fall far short of meeting the region's adopted greenhouse gas reduction targets. Just last month, the TPB director, Kanti Srikanth, admitted that the currently proposed list of projects would not achieve those targets either.

It is inexcusable for this region to propose a transportation plan that fails to implement the COG climate plan and do our part to reduce emissions.

I ask you and each jurisdiction's representative at the TPB to fight for these options:

1) Model a smart growth/climate-friendly plan in addition to their business-as-usual plan, ideally adopting the climate-friendly plan in the coming year

2) Fix the current draft plan now, deleting the road projects that will increase emissions and adding in more transit and local street projects that create more walkable, transit-oriented communities.

A smart growth/climate-friendly network would focus on increasing accessibility to jobs, housing, and services in the region in ways that make our region more equitable, livable, and sustainable. This means reducing the need to drive by creating walkable, mixed-use, transit-oriented communities and

addressing the east-west jobs divide, affordable housing, and investments in walking, biking, and transit. These strategies are already being successfully implemented in some parts of our region, and they provide many benefits (equity, safety, health, livability, economic) in addition to significantly reducing GHG emissions.

Please be a leader in fighting climate change via all means, including transportation plans that offer major reductions in emissions.

Thank you for your consideration."

Elizabeth Ende, Mc Lean, VA
Patricia Tice, Rockville, MD
Robin Galbraith, Bethesda, MD
Johanna Wermers, Rockville, MD
Katherine Paterson, Bethesda, MD
Donna Sawyer, Silver Spring, MD
Carol Amburgey, Rockville, MD
Terrie Barr, Potomac, MD
Arlene Montemarano, Silver Spring, MD
Karen Onthank, Silver Spring, MD
Carolyn Williams, Bethesda, MD
Bruce Tinker, Alexandria, VA
Nanci Wilkinson, Bethesda, MD
Nancy Wallace, Bethesda, MD
Evelyn Jacob, Potomac, MD
Molly Hauck, Kensington, MD
Walter Weiss, Bethesda, MD
Marsha White, Fairfax Station, VA
Mia French, Oakton, VA
Elizabeth Zolper, Vienna, VA
Chris French, Oakton VA
John Cartmill, Herndon, VA
Rebecca Spring, Washington DC
Brian Lutenegger, Washington DC
Jennifer Cook, Silver Spring, MD
Ankit Jain, Vienna, VA
Natalie Rosser, Silver Spring, MD
Sirina Suckal, Savage, MD
Linda Hertz, Reston VA
Allen Munchink, Manassas, VA
Jay Rosin, Clarksburg, MD
Cheryl Cort, Washington DC
Madeline Amalphy, Gaithersburg, MD
Peter Harnik, Arlington, VA
Andrew Kalukin, Arlington, VA
Zachary Weinstein, Silver Spring, MD
Daniel Marcin, Silver Spring, MD
Douglas Sedon, Jefferson, MD

Richard Tortorella, Centreville, VA
David Maclean, Springfield, VA
Donna Sawyer, Silver Spring, MD
Amanda Hungerford, Takoma Park, MD
Dr. Laurie Ryan, Silver Spring, MD
Rachael Neill, Baltimore, MD
Joseph Reinhard, Silver Spring, MD
Allen Irvin, Alexandria, VA
William Maynard, Bowie, MD
Shawn Wozniak, Alexandria, VA
Steve Warner, Silver Spring, MD
Thomas Zeller, Greenbelt, MD
Charlotte Nugent, Washington DC
Cynthia Howell, Sterling VA
Steve Ashurst, Burtonsville, MD
Molly Hauck, Kensington MD
Sister Denise Curry, Philadelphia, PA
Garret Hennigan, Washington DC
Steven Vogel, Falls Church, VA
Gavin Baker, Washington DC
David Seldin, Laurel, MD
Hannah Follweiler, MD
Gerry Baill, Silver Spring, MD
Elizabeth Barbehenn, Bowie, MD
Jennifer Brown, Springfield, VA
Christopher Farrell, Wheaton, MD
Tim Hampton, Washington DC
James Reid, Reston, VA
Tom Hoffman, Pearisburg, VA
John Fay, Wheaton, MD
Laurence Fogelson, Baltimore, MD
Paulette Hammond, Baltimore, MD
Connie Dresser, Gaithersburg, MD
Debra Butler, Mc Lean, VA
Marco Sanchez, Arlington VA
Stu Simon, Chevy Chase, MD
Deborah Backman, Washington DC
James Mather, Lorton, VA
Charles Coleman, Alexandria, VA
Bernard Holloway, Mitchelville, MD
Dr. Jean Westler, Silver Spring, MD
Rhys Tucker, Washington DC
Dan Leggett, Clarksburg, MD
Donald Cuming, Bethesda, MD
MiYoung Park, North Bethesda, MD
Mr. Donald Paine, Washington DC
Michael Whelan, Washington DC
Clara Irazabal, College Park, MD
Ana Karimi, Washington DC

Nanci Wilkinson, Bethesda, MD
Kristina Borror, Silver Spring, MD
Paul Bickmore, Reston, VA
Anita Morrison, Silver Spring, MD
Brent Showalter, Columbia, MD
Melissa Bondi, Arlington, VA
Andrea Cimino, Kesington, MD
Steven Thai, Chantilly, VA
Ted Sheils, Crownsville, MD
Katherine White, Rockville, MD
Kripa Patwardhan, Herndon, VA
Steven Segerlin, Washington DC
Dieter Brill, Hyattsville, MD
Barry Greenhill, Reston, VA
Niels Pemberton, Reston, VA
James Fremont, Silver Spring, MD
Jose de Arteaga, Washington DC
Tina Schneider, Takoma Park, MD
Mary Ann Maikish, New York, NY
Professor Don Bronkema, Washington DC
Charlotte Cook, Silver Spring, MD
Jane Lyons, Silver Spring, MD
Lois Lommel, North Chesterfield, VA
Alayna Smith, Bethesda, MD
Stephen Hudson, Washington DC
Sarah Meadsday-ralls, Hagerstown, MD
Bill Gallagher, Washington DC

OTHER COMMENTS INCLUDE:

The project list under consideration at this stage of the Visualize 2045 process, in the aggregate, is a disappointing failure. Implemented as planned, the region would fall dramatically short of its goals for air quality improvements, for addressing the climate crisis, and for improving the quality of life of the region's residents.

Widening roads, if *successful* in reducing congestion, simply lead to induced demand and sprawl, and to higher traffic speeds leading to more deaths for all road users. More likely, many of these projects would have no long-term impact on congestion, and simply be a waste of resources that could have been invested in transportation systems that actually work.

New bridges that are on the project list lack dedicated space for cyclists and transit, designs that will be regretted and even cursed for decades to come.

The analysis assumptions include relying on 2014 telecommuting data. Given our collective experience during the pandemic, this is ludicrous. The assumptions also ignore the member jurisdictions' plans for housing growth closer to job centers.

Many of the highway plans were approved before this year, they are not new additions -- but they should be re-evaluated, and in many cases either cancelled or radically re-structured. The current plan should not be approved as is just because of inertia.
Adding new lanes to suburban streets is particularly insane, given how much effort needs to go into road *diets* instead. Instead of adding new lanes, Marland BRT plans should incorporate dedicated transit lanes for every portion of their route, removing travel lanes for single-occupancy vehicles wherever necessary. Egregious road-widening examples in Maryland include Buckeystown Pike, Annapolis Road, Georgia Ave, and Montrose Parkway. During the review of such projects, no matter what funding has already been approved and what designs have already been completed, regional bodies should pressure local authorities to stop them in their tracks. They are not just unnecessary, but dangerous and counter-productive.

Sincerely,
--Shalom Flank, Ph.D.

Dear Chair Charles Allen,

About: draft Regional Transportation plan:

To make plan climate-friendly you would need to:
- Model a smart growth/climate friendly plan.
- Delete projects that increase emissions.
-Add more transit and local street projects that create more walkable, transit-oriented communities.

Carl Shoolman

In reviewing the 2022 Update to the VISUALIZE 2045/CLRP(See Below), I noticed for "Project CE3180/VP1AG US1 Richmond Highway Widening between Lorton Road and Annapolis Way" the terminuses are being changed to Pohick Road and Occoquan River. Note: US1 between Pohick Road and Lorton Road is already six lanes.

Can you explain this change?

In researching the project, it appears this project was added back into the CLRP in **2013**. Also, It also appears this project was convenitally removed from the CLRP 2011 to align with the I-95 Express Lanes Comprehensive Agreement for compensation events for additional lanes over the Occoquan River on U.S. Route One.

I-95 Express Lanes Comprehensive Agreement: "Occoquan Bridge Improvements. **The Occoquan Bridge Improvements will be treated as a Compensation Event** unless the IRR Threshold has been reached as of the Commencement of Use of the Occoquan Bridge Improvements"

"Occoquan Bridge Improvements means the addition of any **additional lanes on the bridge over the Occoquan River on U.S. Route One** in Virginia, the plans for which have not been included in the **CLRP or the SYIP as of November 30, 2011**."

So, with this change, is VDOT not planning to add any additional vehicle capacity over the Occoquan for at least the next 20 years? or 65+ years? at the location of the biggest traffic bottleneck in the Commonwealth of Virginia by a large margin?

Based on this, could a **new VRE/Amtrak rail bridge over the Occoquan** or a **dedicated bus transit bridge with bike/ped over the Occoquan** be explicitly added to the CLRP as a replacement project in the 2030-2040 timeframe? There are a significant amount of highway projects in the 2030-2040 timeframe, but very few transit projects during this timeframe. **This does not seem to align with the guidance to priorizate future projects that reduce VMT/GHG emissions.** Hopefully, the Springfield to Quantico Enhanced Public Transportation Feasibility Study will help bring more transit projects to light in this corridor.

Thanks,
Mark Scheufler
PWC Resident

TRANSPORTATION PLANNING BOARD
MEETING MINUTES

March 17, 2021

VIRTUAL MEETING

MEMBERS AND ALTERNATES PRESENT

Charles Allen, TPB Chair – DC Council
Anna Chamberlin – DDOT
Mark Rawlings -- DDOT
Kristin Calkins – DC Office of Planning
Brooke Pinto – DC Council
Ella Hanson – 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
Denise Mitchell – College Park
Mark Mishler – Frederick County
Kelly Russell – City of Frederick
David Edmondson – City of Frederick
Dennis Enslinger – Gaithersburg
Emmett V. Jordan – Greenbelt
Mike Leszcz – Laurel
Gary Erenrich – Montgomery County Executive
Evan Glass – Montgomery County Legislative
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
Tammy Stidham – NPS

MWCOG STAFF AND OTHERS PRESENT

Kanti Srikanth
Chuck Bean
Lyn Erickson
Mark Moran
Tim Canan
Andy Meese
Nick Ramfos
Tom Gates
Bryan Hayes
Abigail Zenner
Deborah Etheridge
Charlene Howard
Dusan Vuksan
Arianna Koudounas
Erin Morrow
Karen Armendariz
Leonardo Pineda
Sergio Ritacco
Kenneth Joh
Jen Desimone
Stacy Cook
John Swanson
Elisa Walton – CAC

Materials referenced in the minutes can be found here:
https://www.mwcog.org/events/2021/3/17/transportation-planning-board/

Virtual Participation Procedures, Member Roll Call, and Virtual Public Comment Opportunity

Chair Allen said that the meeting was being recorded and broadcast and that the process for asking questions and voting would be the same as past meetings. After each item members would 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.

Referring to a document posted under Item 1, Ms. Erickson summarized the comments received, which largely related to the update to Visualize 2045.

1. APPROVAL OF THE FEBRUARY 17, 2021 MEETING MINUTES

As a correction to the draft minutes, Chair Allen noted that Kacy Kostiuk had attended the February meeting, but she was left off the minutes.

Mr. Jordan moved approval of the minutes, as amended. The motion was seconded by Ms. Mitchell and was approved unanimously.

2. TECHNICAL COMMITTEE REPORT

Referring to the posted summary, Mr. Groth said the Technical Committee met on March 5. He said the agenda included the following TPB agenda items: the draft FY 2022 Unified Planning Work Program, the FY 2022 Commuter Connections Planning Work Program, and results of the Voices of the Region survey. He said the following items were included for information and discussion: COG 2030 Climate and Energy Action Plan; the TPB Climate Change Mitigation Study of 2021; TPB Resiliency Study; Briefing on the impacts of COVID-19 on Enhanced Mobility grant projects; the new Transit Within Reach program; and other business.

3. CAC REPORT

Referring to the posted report, Ms. Walton said the CAC met on March 11. She said the group was briefed on the Voices of the Region survey results and learned about the history of the CAC and its role with the TPB. She said the meeting included small-group discussions which gave members the chance to get to know each other and discuss the year ahead.

4. STEERING COMMITTEE ACTIONS AND DIRECTOR'S REPORT

Referring to the posted materials, Mr. Srikanth said the Steering Committee met on March 5. He said the committee approved the allocation of leftover federal Transportation Alternative Program funds for the District of Columbia to nine projects to which the TPB had previously allocated funding. He said the committee also amended the District of Columbia's portion of the Transportation Improvement Program (TIP). These amendments included projects related to the H Street Bridge and the 11th Street Bridge Park.

Mr. Srikanth highlighted a few items from the Director's Report. He said the TPB would be holding a work session on April 21 at 10:30 a.m. prior to the board meeting. The work session would address the proposed changes to the projects in the TPB's long-range transportation plan Visualize 2045.

Mr. Srikanth also noted that the TPB is currently seeking and accepting applications from organizations in the region that provide transportation service to older adults and people with disabilities to offset the fiscal impacts of disruptions these organizations may have experienced due to the pandemic. He said the applications would be due on March 4. He said that at the TPB meeting on April 21, staff plans to bring recommendations for allocating the $560,000 that has been made available through the Federal Coronavirus Pandemic Relief Act.

5. CHAIR'S REMARKS

Chair Allen noted that the pandemic began one year ago and since that time the TPB and its partner agencies have conducted business virtually. He said this anniversary is not a distinction that was sought or something which should be celebrated, but it is something that is important to mark. But he noted that there is a lot of opportunity in the next few months to act with intentionality to make sure that part of the region's recovery is focused on equity.

6. AN AMENDMENT TO THE FY 2021 UPWP, AND FY 2021 CARRYOVER FUNDING TO FY 2022

Referring to the posted material, Ms. Erickson said that the TPB would be voting on three actions: 1) Adoption of Resolution R13-2021, which would amend the 2021 UPWP to remove funding to be "carried over" to FY 2022; 2) Adoption of Resolution R14-2021, which was an action to approve "carryover" fundin from FY 2021 to FY 2022, and 3) Adoption of Resolution R15-2021, which was an action to approve FY 2022 UPWP. She explained that the total FY 2022 revenue comes from three "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"); and "Carryover" funding from current year UPWP (FY 2021) that staff anticipate not being able to spend by June 30, 2021. She said the carryover funding was $2,787,377 from Tasks 3, 5, 6, 7, 8, 11 in the UPWP. She said the total budget for the FY 2022 UPWP is $18,035,794.

She said that no comments were received on the draft UPWP and carryover. She did note, however, that at the last meeting Mr. Snyder asked staff to develop a crosswalk depicting how the tasks in the UPWP correspond to TPB policy objectives. She presented a table with that information.

She said that after the board's actions, staff would submit the FY 2022 UPWP to the USDOT for approval, which typically takes approximately 60 days. In the meantime, the TPB's federal and state partners would provide authorization to begin spending from the UPWP, beginning on July 1.

Chair Allen asked about the timing for the TPB's greenhouse gas emissions study. He noted that the study would not be completed until December. He asked if that timing would preclude the study from being included in the forthcoming update of the long-range plan.

Ms. Erickson explained that funding for such projects, which extend over multiple fiscal years, is split between different UPWPs.

Mr. Srikanth confirmed that the climate change mitigation study has already begun in the current fiscal year and it will continue with funding from the next fiscal year. He further noted that the TPB's long-range transportation plan will not be adopted until June of next year and the results of the climate change mitigation study will be available this December. For the study, he noted, the board asked for the identification of specific levels of outcomes that need to be attained or achieved within the transportation sector to help reduce greenhouse gases within the transportation sector, according to the goals that have been set. So, the TPB will have up to five months to discuss the study and to integrate any of its findings into the new long-range plan. He said that over the past 11 years, the TPB has been engaged in at least four different studies on greenhouse gases, but those studies have been separate from the long-range plan as a document. He said this will be the first time in which the TPB will the opportunity to incorporate findings from such a study into the plan.

Chair Allen asked if the timing that Mr. Srikanth described would provide the TPB with the opportunity to evaluate projects that had been previously submitted.

Mr. Srikanth said the projects submitted for inclusion in the constrained element of the long-range plan, which the board is scheduled to approve in June for inclusion in the air quality conformity analysis, could not be individually assessed for greenhouse gas impacts. He said that TPB staff does not have the resources or the tools to do such a project-level analysis. He did note, however, that the project submissions, which will be approved in June, will be included in a regional-level air quality conformity analysis which will also forecast greenhouse gas emissions from all of the projects in the constrained element of the plan.

Mr. Kannan said it appeared there was a risk that the TPB would be inheriting and approving a list of projects that are not geared towards a climate change target or goal, and that only at a later point this year, such a goal or target would be set. But nonetheless, the board would be including those previously untargeted projects in the plan.

Mr. Srikanth said the plan that the TPB adopted in 2018 reduces greenhouse gas by 23 percent below 2005 levels between now and 2045, and this would occur while accommodating a 30 percent increase in employment and adding 1.3 million people. He said that even though these reductions fall short of the 50 percent that the region has established to reduce greenhouse gases by 2030, it is moving towards that direction. He noted that on a number of other measures— including reduction in the growth of VMT and increases in teleworking and walking and bicycling — progress has been made when comparing the long-range plan from 2010 with the 2018 plan. He noted that for large-scale policy objectives, such as equity and safety, it would not be realistic to expect one plan to achieve complete success. He reiterated that the climate change mitigation study would be very critical because it is going to identify specific levels of outcomes to achieve and work towards. However, he said he suspected it would be extremely challenging to achieve those outcomes with one plan update.

Chair Allen said that, based on Mr. Srikanth's comments, he understood that the projects that would be moved forward by October following the air quality conformity analysis may collectively represent a reduction in greenhouse gas emissions. However, the results from the climate change study will be coming in December, which would be occurring after the project submissions, but the findings from that study would be used to evaluate updates to the projects in the long-range plan in subsequent years.

Mr. Srikanth said Chair Allen's understanding was correct. He further noted that the forthcoming analysis for the air quality conformity analysis, which will include greenhouse gas forecasts, will provide data about the gap that will need to be addressed in the future to achieve greenhouse gas reduction goals.

Mr. Snyder noted that the discussion highlighted the disconnect between large policy pronouncements and the actual capabilities of projects to meet those policy objectives. He suggested that an agenda item for the next or future meetings might examine how the region's policy objectives might be better aligned with the grassroots development of individual projects. He further noted that the region is very diverse, including geographically diverse, and in no way did he want to make it difficult for any part of the region to prosper. He noted that different parts of the region have different needs. He said he did want to emphasize that the region is making progress on environmental policies, and hopefully equity policies as well.

Ms. Rishell thanked Mr. Snyder for his comments. She emphasized that the issues of the inner ring localities are different from the issues and needs of the outer ring localities.

Ms. Umstattd said she wanted to echo Ms. Rishell's comments, noting that outer jurisdictions do not typically have densities that are easily served by transit.

Mr. Lewis thanked the previous speakers for their comments. He said the region's transportation network is complex and decision makers need to take into account the differing needs of different parts of the region, while also meeting the region's goals, including environmental goals.

Ms. Kostiuk said she thinks the forthcoming climate change study is very important, but she was concerned that not enough is being done in the short term. She said she understood that VMT may be reduced per capita, but it is also true that the region's population is growing. She said she thought this long-range plan represented an opportunity to be a bit bolder than the region might be considering otherwise. She said it often feels confusing that the board is told that the impacts of projects cannot be known because analysis cannot be done for individual projects, but nonetheless, the board is tasked with approving those projects for inclusion in the plan. She noted that individual projects do impact the larger scale. She further reiterated Chair Allen's comments from an earlier meeting that the recovery from COVID provides a new opportunity to kind of rebuild the system in a better way. Finally, she suggested it would be helpful for COG staff to brief the TPB on how COG's climate plan fits into the TPB's long-range plan.

Mr. Wojahn said he would like to hear more from staff about how the region can be more flexible with its long-range planning. He said he understood that federal requirements require the development of plans many years in advance, but he said the region needs to be aggressive about how we are approaching climate to meet the region's goals. Echoing Ms. Kostiuk's comments, he asked that staff provide more information about how the TPB's long-range plan ties into the region's plans for climate change and greenhouse gas emissions reductions.

Chair Allen summed up some of the discussion, noting that members spoke about the need for regional balance, but also calling for urgency regarding climate change.

Chair Allen made a motion to adopt Resolution R13-2021 to amend the FY 2021 budget and work program. The motion was seconded by Vice Chair Sebesky, and was approved with one abstention from Ms. Newton.

Chair Allen made a motion to adopt Resolution R14-2021 to carry over work activities and funding to the next fiscal year. The motion was seconded by Ms. Russell and was approved unanimously.

7. THE FY 2022 UNIFIED PLANNING WORK PROGRAM

Chair Allen made a motion to adopt Resolution R15-2021. The motion was seconded by Mr. Lewis and was approved unanimously.

Ms. Erickson called attention to the work session on April 21 at 10:30, which would provide the opportunity to discuss the projects submitted for the constrained element of Visualize 2045.

8. THE FY 2022 COMMUTER CONNECTIONS WORK PROGRAM

Referring to the posted material, Mr. Ramfos said he had briefed the board on the draft FY 2022 Commuter Connections Work Program at the previous month's meeting. He said no comments were received and hence, no changes were made in the document. He described some focused work that will be undertaken as part of COVID recovery efforts, including educating the public about the benefits of using public transit and all alternative modes as the recovery kicks into gear, as well as giving attention to transit-dependent communities that were hit hardest during the pandemic.

Chair Allen made a motion to adopt Resolution R16-2021 to adopt the work program and budget for fiscal year 2022. The motion was seconded by Vice Chair Sebesky and was approved unanimously.

9. PRIORITY AIRPORT GROUND ACCESS PROJECTS

Referring to the posted material, Ms. Koudounas briefed the Board on the priority projects included in Visualize 2045 that will support airport ground access. It was noted that as Visualize 2045 is updated these updates will be reflected in future iterations of the project list contained in the presentation and the accompanying report, the Comprehensive Regional Air System Plan (RASP). Ms. Koudounas recommended that the projects, programs, and policies identified in the presentation (total of 33 highway projects and one transit project) be given priority consideration for implementation.

Mr. Emmett Jordan of Greenbelt expressed concerns about there being only one mass transit connection through the MARC Penn Line between Prince George's County and BWI Airport.

Mr. Erenrich said that the Purple Line should be included as a priority project.

Ms. Koudounas said that in the conversations between the MAA and MWAA, it was determined that the Purple Line from their perspective should be included in the list of projects, however it should not be considered a priority from their perspective in terms of connectivity.

Ms. Kostiuk echoed Mr. Erenrich's comment to include the Purple Line in the list of projects. Ms. Kostiuk expressed concerns about the number of highway projects, and the lack of transit projects.

Ms. Koudounas said that the purpose of the study is to look at airports exclusively. She agreed that the equity and climate lens should be used. Ms. Koudounas said that the draft document will be updated as updates are made to Visualize 2045.

Ms. Kostiuk said a project list with more of a transit focus would be ideal.

Mr. Lewis echoed previous comments about the importance of the Purple Line to help people connect to BWI Airport.

Ms. Taveras agreed with other comments about the Purple Line not being included in the projects. Ms. Taveras expressed confusion about why the Purple Line was not included.

Ms. Koudounas invited volunteers to provide comments during the Aviation Technical Subcommittee meeting next Thursday and confirmed that the comments shared will be discussed further. Ms. Koudounas said that the Environmental Impact Statement that was done for the Purple Line concluded that the Purple Line would impact connectivity to BWI Airport.

Mr. Snyder commented that the report suggests reducing congestion as the main objective. Mr. Snyder questioned whether the projects in the report are the best way to reduce congestion, improve air quality, and make the airports more accessible.

Mr. Kannan asked whether there was a decision up front to not include the Maryland Maglev study in the analysis.

Ms. Koudounas said that there was a decision made up front to not include the project due to the EIS not being complete yet.

Mr. Kannan raised a question about how projects that do not receive federal funding are evaluated by the TPB. Mr. Kannan asked if major multibillion-dollar projects that do not receive federal funding should be considered in the TPB's evaluation.

Mr. Srikanth responded that any such project from a member agency or a non-member agency has to come to the TPB for formal inclusion in its plan and in the air quality conformity analysis. Mr. Srikanth said this both includes projects that are federally funded and projects that are privately funded.

Mr. Srikanth said that once a locally preferred alternative has been identified, the TPB would like to invite MDOT to brief the TPB on the Maglev project.

Chair Allen in closing statement added that he does not expect the Maglev project to be completely privately funded and expressed appreciation for Mr. Kannan's comment.

10. REGIONAL TRAVEL SURVEY: CHANGE IN OBSERVED TRIPS SINCE 2007/08

Mr. Joh referred to the presentation and briefed the board on the Regional Travel Survey, highlighting some trends and differences between the 2007/2008 survey and the 2017/2018 survey.

Mr. Allen asked about how this data can provide a baseline considering all the changes the region has faced in 2020. He asked for a crosswalk of the key takeaways that could inform future planning.

Mr. Joh noted that travel in the region changed drastically since the survey was completed. He noted that as things return to regular business, this data can help planners plan for the future. He also explained that this survey is used for the travel demand model.

Mr. Kannan made three comments, He noted that the commute trip is only one part of a bigger travel picture and that planners need to look beyond just the commute. He also noted that the survey shows how many traditionally underrepresented groups are forced to travel further and face more burdens. His third point was a comment about climate change and the need to take action to address it soon.

Mr. Alcorn also agreed with Mr. Kannan's comment about commute trips and noted that WMATA's funding structure is dependent on them. He also noted that there is more TOD development in the suburban areas and that is making a difference in how people travel.

Mr. Snyder asked how the survey captured remote work.

Mr. Joh explained that the survey did ask about telework but also noted that this survey is focused on all types of travel and not just the commute.

Mr. Wojahn asked about equity and requested a survey breakdown by race and ethnicity.

Mr. Joh explained that staff have examined the findings based on race and ethnicity and have presented those finding to the board in previous briefings. He said that he appreciated the comment because the data can be helpful in looking at equity questions.

Ms. Kostiuk asked about the decline in household trips and how much influence delivery services have had on that decrease. She wondered if there were more freight trips instead of household trips. She also asked about correlation and causation when looking at those decreases.

Mr. Joh explained that the survey was only looking at household travel and not at freight travel but that the survey did ask about delivery services and one out of three households in the region used delivery services. To the second question he explained that the survey cannot identify what caused the decrease in trips, and therefore conclusions regarding causation would be speculative based on other data.

Ms. Taveras noted that many African Americans have been pushed out of the District of Columbia due to housing affordability concerns. She wondered if this displacement showed up in the survey, including, for example, the effects of gentrification on trip lengths. She also noted the decrease in WMATA rail trips and the increased competition from other modes of travel. She asked if this ridership decline was linked to the higher cost of maintenance on WMATA. She said that a decline in transit ridership and services would place a burden on local jurisdictions.

Mr. Joh said that displacement is one factor that could explain longer commuting distances in commute trips. He further noted that transit rail trips are down not just in the region rather nationally, with one of the reasons being the increase in number of trips being made by bicycling, walking and ride hailing.

Mr. Srikanth explained that the data in the presentation is looking back and it reflects many factors, including socioeconomic factors that affect transit ridership. He noted that Metrorail ridership had been increasing right up to the pre-pandemic period. He noted other factors such as increases in telework. He noted that there is some data showing that a significant percentage of people who telework also ride transit. Looking to the future, he noted that the region cannot realize the growth that it is anticipating without investing in public transit. He noted that the three states came together to commit to additional dedicated revenue for WMATA. He said this commitment to funding needs to be looked at from the perspective of return on investment, not just for mobility and accessibility, but also to our environmental and equity goals.

11. TPB CLIMATE CHANGE MITIGATION STUDY OF 2021

This item was deferred.

13. ADJOURN

No other business was brought to the board. The meeting adjourned at 2:12 p.m.

Meeting Highlights
TPB Technical Committee – April 2, 2021

The Technical Committee met on Friday, April 2, 2021 in an online-only session. Meeting materials can be found here: https://www.mwcog.org/events/2021/4/2/tpb-technical-committee/

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

REGIONAL BIKE TO WORK DAY 2021 PROCLAMATION

In an effort to increase public awareness of the viability of bicycle commuting in the Washington region, regional Bike to Work Day events are being organized at over 90 locations in the region for Friday, May 21. These events will encourage the business community and other regional decision-makers to support increased bicycle commuting through bicycle-friendly policies and initiatives.

CRRSAA APPLICATIONS RECEIVED AND TIMELINE FOR SELECTION AND TPB APPROVAL

The committee was briefed on applications received from current and past FTA Section 5310 grant recipients for Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (CRRSAA) funding appropriated to the Washington region. The timeline and process for selection and approval of projects for funding and inclusion in the TIP were provided.

FY 2022 TLC TECHNICAL ASSISTANCE RECIPIENTS

The TPB's Transportation Land-Use Connections (TLC) Program has provided support to local jurisdictions as they deal with the challenges of integrating land-use and transportation planning at the community level since 2006. Staff solicited applications for the FY 2022 TLC round of technical assistance between January 8 and March 8, 2021. The committee was briefed on the applications that are being recommended for funding in FY 2022. The TPB will be asked to approve them on April 19.

VISUALIZE 2045: BRIEFING ON PROJECT INPUTS AND DRAFT SCOPE OF WORK FOR THE AIR QUALITY CONFORMITY ANALYSIS FOR THE 2022 UPDATE TO VISUALIZE 2045 AND THE FY2023-2026 TIP

The 2022 update to the Visualize 2045 constrained element will identify all regionally significant transportation investments the region can demonstrate we can afford between now and 2045. Federal law requires that this collection of projects and programs be analyzed to ensure that future vehicle-related emissions remain below approved regional limits. The committee was briefed on the major projects and significant changes to major projects already in the plan that were submitted for the update, and on the draft scope of work for the air quality conformity analysis. A 30-day public comment period on the inputs and scope is scheduled from April 2, 2021 to May 3, 2021.

CLIMATE CHANGE AND THE TPB

Staff reflected on the TPB's recent climate change discussions.

The following items were presented for information and discussion:

CLIMATE CHANGE MITIGATION STUDY OF 2021 – WORK PLAN

The consultant presented information on the study's work plan and schedule.

ADMINISTRATIVE UPDATE TO THE 2004 TPB/FAMPO AGREEMENT

The committee was briefed on the update to the TPB/FAMPO Agreement, which is an administrative agreement to more clearly document current practices and procedures that each MPO is responsible for conducting, specifically for the shared urbanized area (a portion of Stafford County). The TPB will be asked to approve the agreement at the May 19 TPB meeting.

MID-ATLANTIC ELECTRIFICATION PARTNERSHIP

The committee was briefed on a regional electrification ecosystem of intermodal leadership for efficient intercity travel and community benefit.

OTHER BUSINESS

- Street Smart
- Vision Zero Workshop
- Regional Roadway Safety Program
- TAP application opportunities
- Transit within Reach
- Visualize 2045 – (*new) inputs for ALL projects due April 30
- Resiliency Study Update
- CAV webinar

ACCESS FOR ALL ADVISORY COMMITTEE REPORT

April 9, 2021

Canek Aguirre, Chair

The Access for All Advisory Committee (AFA) met virtually on April 9 and the highlights from the meeting are provided below. A list of participants is on the last page. The AFA advises the TPB on transportation issues and services important to low-income communities, underrepresented communities, people with limited English proficiency, people with disabilities, and older adults.

VISUALIZE 2045 BRIEFING

Ms. Stacy Cook provided an update of on the status of the Visualize 2045 update for 2021, an overview of the parts of the plan, and how it is implemented. She also shared the timeline for public comment and introduced the public comment packet. Finally, she highlighted some of the new major projects and significant changes to existing projects in the update.

The discussion following the presentation included questions and suggestions about access, service coverage and frequency:

- the type of advertising used and how to involve the average citizen
- the need to consider the non-commuter and weekend users of transportation services
- the need to consider shift workers and their access having impact upon in-home care, nursing homes, family caregivers, etc.
- the fact that people with disabilities have basic, essential needs to meet before they can even consider transportation to employment

Staff confirmed the importance of the suggestions and shared how the plan considers where people live, and work based on a cooperative forecast and confirmed the testing of an additional performance measure for multimodal access.

REACH A RIDE BRIEFING

Mr. Dan Sheehan presented on Reach A Ride, a website and call center that provide consumers and social service agencies access to information about Specialized Transportation Services in the region. He provided an overview, walked through the steps to access information, discussed enhancements, and requested AFA feedback for improvements to the website.

Several members and participants provided suggestions for improvements, including:

- better identification of providers who only offer services to their own adult day or other programming
- addressing different information coming up when a zip code with additional 4 digits is used vs. one without
- the need for outreach and education to address negative impressions and the availability of the resource
- continuing to coordinate with existing County, WMATA, and Agencies on Aging databases to avoid duplicative efforts
- the need to consider other means of translation for the diverse populations in our regions, including the Language Line

Mr. Sheehan will follow up with specific requests for information on call and website statistics and a similar project the Virginia Department of Rail and Public Transportation is working on. The discussion included specific questions about access for local transportation programming (to be addressed directly by the provider) and discussions of whether the region would benefit from a one stop place for ride information that could also arrange the ride.

2021 ENHANCED MOBILITY SOLICITATION

Mr. Sergio Ritacco briefed the committee on anticipated funding, solicitation launch, and timeline for application and award for the 2021 Enhanced Mobility Program.

The discussion included eligibility for transportation voucher programs and a comparison of funding from the prior solicitation to this one, which is a slight bump up but last year included reallocated dollars from DDOT that are not a consideration this year. The Department of for Hire Vehicles shared concerns about unequal access to Enhanced Mobility and CRRSAA funding due to DC taxi companies being unable to meet COG's insurance requirements. Staff confirmed that DC taxi companies are still eligible to apply for equipment and operating, and the insurance levels were determined in consultation with legal counsel and insurance broker to limit COG's liability.

SUPPLEMENTAL RELIEF FUNDING UNDER 5310

Ms. Winchell-Mendy provided an overview of CRRSAA funding and the timeline for award and shared the number and types of applications received. In addition, she information on an upcoming solicitation for additional supplemental funding for Enhanced Mobility under the American Rescue Plan Act of 2021 will be shared

Responses to questions were somewhat limited by the pending concurrence of funding recommendations by TPB Officers and the AFA Chair before specific project details can be shared.

OTHER BUSINESS

Mr. Benito Perez from DDOT shared information on the Institute of Transportation Engineers' Accessible Streetscape Design Project he is spearheading and requested AFA participation. TPB staff will provide follow up information on an upcoming meeting and contact information for Mr. Perez.

Ms. Nicole McCall shared information on Regional Resources available to access data from the 2017/18 Regional Transportation Survey.

Chair Aguirre shared information about a webinar, hosted by the Bicycle and Pedestrian Subcommittee of the TPB Technical Committee, on Vision Zero Arterial Design that will occur on Friday, April 23 from 10 a.m. to 2 p.m. TPB staff will share a link to register.

Chair Aguirre and Ms. Doris Ray shared information on a judge's ruling that a lawsuit, Equal Rights Center v. Uber Technologies, Inc., et al, will continue over Uber's "failure to provide equivalent service under ADA Title III to people with disabilities, and specifically people who have physical disabilities and use mobility devices such as power chairs."

2021 MEETING DATES

- Friday, June 11th, 12-2
- Friday, September 10th, 12-2
- Friday, November 12th, 12-2

District of Columbia	Virginia	TPB Staff
Benito Perez, DDOT	Andrew Wexler, Arlington County	Abigail Zenner
Heather Foote, Age Friendly DC Transportation Committee	Brittany Voll, DRPT	Dan Sheehan
Jerry Kasunic, DFHV	Doris Ray, Endependence Center of Northern Virginia	John Swanson
Karen Randolph, DDOT	Doug Pickford, DATA	Kanti Srikanth
Nechama Maslianksy, S.O.M.E.	Karen Smith, Arc of Prince William/INSIGHT, Inc.	Karen Armendariz
Wendy Klancher, DFHV	MaryJo Hensler, Fairfax County Neighborhood & Community Services	Lyn Erikson
	Roger Hoskin, representing older adults	Lynn Winchell-Mendy
Maryland	Sarah McGowan, DATA	Nicole McCall
Bill Orleans, resident		Sergio Ritacco
Colleen Aistis, City of Hyattsville	**Regional**	Stacy Cook
Daria Cervantes, The Arc of Montgomery County	Angela White, National MS Society of Greater DC	
Deborah Fisher, representing people with developmental disabilities	Brenda Richardson, Women Like Us	**Chair**
Gloria Swieringa, Prince George's Commission for Individuals with Disabilities	Glenn Millis, WMATA	Canek Aguirre, City of Alexandria Councilmember
Marci LeFevre, City of Hyattsville		**Unknown**
Rob Malone, Arc of Prince William County		Caller #2
Sara Fought, JCA Connect-A-Ride		Caller #4
Shawn Brennan, Montgomery County Aging & Disability Services		Caller #6
Sherri Mohebbi, IT Curves		myu000
Yolanda Hipski, Tri-County Council for Southern Maryland		C. Price

COMMUNITY ADVISORY COMMITTEE
MONTHLY REPORT

April 15, 2021

Elisa Walton, CAC Chair

The Community Advisory Committee (CAC) to the TPB met on Thursday, April 15 for a virtual meeting. The committee received briefings on Visualize 2045 and the public comment period that is currently underway for the plan update. Also, at the meeting, staff briefed the CAC on three TPB technical assistance programs and the upcoming TPB agenda.

VISUALIZE 2045 OVERVIEW AND PUBLIC COMMENT

TPB Transportation Planner Stacy Cook briefed the committee on Visualize 2045. She showed a video about the plan, gave background information, and reviewed the federal requirements and regional policies the plan is based on. She highlighted the two main parts of the plan, the constrained element, which includes a subset of regional projects that must be included in the federally required air quality conformity analysis, and the 'rest' of the plan, which includes goals and discusses challenges. The rest of the plan will also communicate public opinion and report regional strategies to help the TPB and its member agencies address its many policy priorities. She reviewed themes staff are exploring like equity and how to plan for uncertainty and provided information about planned public outreach that will be coming up during the development of the Visualize 2045 update.

Community Engagement Specialist Karen Armendariz reviewed the public comment period for the Visualize 2045 update conformity projects. She reviewed where the materials could be found and how to comment.

VISUALIZE 2045 COMMITTEE DISCUSSION: EQUITY AND CLIMATE CHANGE

CAC members had two main concerns generally focused on equity and climate change. Committee members noted that equity should be woven throughout the plan and not be reserved as a separate topic area. Ms. Cook assured the committee that staff have been discussing how to incorporate equity into every aspect of the plan.

On the topic of climate change, CAC members asked about how the plan will address climate in both the plan as a whole and in the constrained element. Some questions focused on emerging technology and how a rise in electric vehicle use can reduce climate change but make congestion worse. Other questions focused on the conformity projects currently out for public comment, asking how the region will meet its climate goals if the projects in the plan have not changed much since the 2018 plan. Other members asked about how the projects will help reduce Vehicle Miles Traveled (VMT).

Ms. Cook explained that there are significant challenges in developing transportation projects in the face of the many constraints including current land use, transportation demand, funding, and competing needs. With these constraints in mind, the region is also committed to working together to address critical concerns such as climate change and equity. She also explained the air quality conformity analysis is for the purposes of demonstrating compliance and therefore must be based on defensible assumptions and validated data, rather than recent short term trends, such as telework levels assumed during the pandemic. She also explained that transportation projects take

time and the projects in the plan come from approved projects on the state and local level, therefore, projects cannot be quickly supplanted in the constrained element.

THREE TECHNICAL ASSISTANCE PROGRAMS

Transportation Planner John Swanson reviewed three technical assistance programs offered by the TPB, the Transportation Land-use Connections (TLC) program, the Regional Safety Program, and the Transit within Reach Program. Each of these three programs provide technical assistance to small jurisdictional projects through consultant support. He then reviewed the recommended TLC projects that will be up for approval at the April TPB meeting. In general, the committee expressed interest in these programs and how they further regional priorities.

A committee member expressed concern that these programs might be focusing too exclusively on high-capacity transit (HCT) station areas. He noted that some Activity Centers, particularly in the outer jurisdictions do not have HCT. Mr. Swanson said this is a valid comment. He said the TLC Program over the years has sought to be flexible by funding projects in a variety of different locations. For example, one project recommended for FY 2022, in Falls Church, focuses on access to a high-frequency bus center, which technically is not HCT, although it was designated a Transit Access Focus Area by the TPB last year.

Another committee member asked how equity concerns are incorporated into the selection of projects for these programs. Mr. Swanson answered that equity is considered in two ways. First, staff determines whether or not projects are in/close to the TPB's Equity Emphasis Areas (EEAs). Second, staff and the selection panel discuss how effectively potential projects would serve disadvantaged populations whether they are in EEAs or not.

OTHER BUSINESS

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

ATTENDEES

Members	
Elisa Walton, CAC chair	Katherine Kortum
Ashley Hutson	Michael Arston
Dan Papiernik	Nancy Abeles
Delia Houseal	Ra Amin
Delishia Pittman	Robert Jackson
Eyal Li	Ron Sktz
Jeff Jamawat	Solomon Haile
Jeff Parnes	Michael Arston
Guests	
Bill Pugh	
Tony Giancola	
Staff	
Abigail Zenner	Stacy Cook
John Swanson	Lyn Erickson
Karen Armendariz	Arianna Koudounas

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Steering Committee Actions and Report of the Director
DATE: April 15, 2021

The attached materials include:

- Steering Committee Actions
- Letters Sent/Received
- Announcements and Updates

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
SUBJECT: Steering Committee Actions
FROM: Kanti Srikanth, TPB Staff Director
DATE: April 15, 2021

At its meeting on April 2, the TPB Steering Committee approved the 2021 Regional Bike to Work Day Proclamation. All local jurisdictions are encouraged to adopt a similar proclamation. The annual event, which will be held on Friday, May 21, aims to increase public awareness of the viability of bicycle commuting in the Washington region, and to encourage the business community and other regional decision-makers to support increased bicycle commuting through bicycle-friendly policies and initiatives. A strict COVID policy will be in place for the event, please see the event website for more details: https://www.biketoworkmetrodc.org/

The Steering Committee also reviewed and approved the following resolutions to amend the FY 2021-2024 Transportation Improvement Program (TIP):

- SR14-2021: to include $60 million in concessionaire funding in FY 2021 for the I-95 Spot Improvements at Opitz Blvd project (placeholder TIP ID 11510): and $1.8 million in local funding in FY 2022 the Van Buren Road Extension (Study Only) project (TIP ID 8605), as requested by the Virginia Department of Transportation (VDOT).
- SR15-2021: to include additional funding for three projects and to decrease funding from one project, as requested by the District Department of Transportation (DDOT) and described below:
    - Add $6 million in Surface Transportation Block Grant (STBG) funding in FY 2021 for the Kenilworth Ave. NE Reconstruction project;
    - Add $9 million in DC/State funding, $4.9 million in National Highway Performance Program (NHPP) funding, and $7.5 million in STBG funding for the Streetlight Asset Management project grouping (TIP ID 5385);
    - Add $2.5 million each of DC/State funding, and STBG funding for the Streetlight Construction project (TIP ID 5439); and
    - Deprogram $11 million in DC/State, $6 million in NHPP, and $9.3 million in STBG funding from FY 2022 and FY 2023 from the Citywide Streetlight P3 project grouping (TIP ID 6625).

Funding for these projects was included in the financial analysis of Visualize 2045 and they were either exempt from the air quality conformity requirement or were included in the Air Quality Conformity Analysis of the 2020 Amendment to Visualize 2045 and the FY 2021-2024 TIP.

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

- Signed proclamation that Friday, May 21, 2021 is Regional Bike To Work Day
- Approved resolution SR14-2021 to amend the FY 21-24 TIP, requested by VDOT
- Approved resolution SR15-2021 to amend the FY 21-24 TIP, requested by DDOT

TPB Steering Committee Attendance – April 2, 2021
(only voting members listed)

TPB Chair/ DC rep.:	Charles Allen
TPB Vice Chair/VA rep.:	Pamela Sebesky
TPB Vice Chair/VA rep.:	Reuben Collins
DDOT:	Mark Rawlings
MDOT:	Kari Snyder
VDOT:	Norman Whitaker
WMATA:	Mark Phillips
Technical Committee chair:	Jason Groth
Previous TPB Chair:	Kelly Russell

bike to work day
2021

Proclamation

WHEREAS, Bike to Work Day 2021 is a welcome way for area workers to get needed exercise and mental wellbeing in light of the COVID pandemic; and

WHEREAS, employees still working from home may participate by bicycling to their local neighborhood "pit stop" and back home again to start their work day; and

WHEREAS, more than 90 Bike to Work Day pit stops are located within ten jurisdictions in the region; and

WHEREAS, staggered arrival and departure times and a strict COVID policy will keep bicyclists safe and healthy; and

WHEREAS, the Bike to Work Day pit stops will serve as T-shirt "pick-up-points" and bicyclists will be on their way within five to ten minutes; and

WHEREAS, bicycle commuting is an effective means to support the region's air quality goals, improve mobility, and conserve energy; and

WHEREAS, bicycle commuting benefits both employees and employers through better health and fitness, lower costs, and reduced parking space; and

WHEREAS, Capital Bikeshare's regional bike sharing system has more than 500 stations across six jurisdictions; and

WHEREAS, the National Capital Region Transportation Planning Board through its Commuter Connections program promotes bicycling and organizes Bike to Work Day along with the Washington Area Bicyclist Association; and

WHEREAS, the week of May 17th is National Bike to Work Week, which promotes bicycling as a viable means of transportation to and from work;

NOW, THEREFORE, BE IT RESOLVED THAT THE
NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD:

1. Proclaims Friday, May 21, 2021 as Bike to Work Day throughout the Washington, DC metropolitan region; and

2. Encourages TPB member jurisdictions to adopt similar proclamations in support of the event; and

3. Reminds all members of the importance of bicycle safety as advocated by the Street Smart campaign.

Chairman, National Capital Region Transportation Planning Board

National Capital Region
Transportation Planning Board

TPB SR14-2021
April 2, 2021

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 I-95 SPOT IMPROVEMENTS AT OPITZ BOULEVARD AND VAN BUREN ROAD EXTENSION PROJECTS, AS REQUESTED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)

WHEREAS, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of 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 letters of March 24, 2021, VDOT has requested amendments to the FY 2021-2024 TIP to include the **I-95 Spot Improvements at Opitz Blvd project (placeholder TIP ID 11510)** with $60 million in Concessionaire Funding in FY 2021, provided by TransUrban, the private entity that manages the I-95 Express Lanes; and to include $1.8 million in local funding in FY 2022 for the **Van Buren Road Extension (Study Only) project (TIP ID 8605),** as described in the attached materials; and

WHEREAS, the full scopes of both of these projects are included in the Air Quality Conformity Analysis of the 2020 Amendment to Visualize 2045 and the FY 2021-2024 TIP; the Van Buren Extension project is funded for study only at this time and is therefor exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012; and

WHEREAS, these amendments were submitted to TPB staff using the Project InfoTrak database and saved under TIP Action 21- 22.

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2021-2024 TIP include the **I-95 Spot Improvements at Opitz Blvd project (TIP ID 11510)** with $60 million in Concessionaire Funding in FY 2021; and to include $1.8 million in local funding in FY 2022 for the **Van Buren Road Extension (Study Only) project (TIP ID 8605),** as described in the attached materials.

Approved by the TPB Steering Committee at its virtual meeting on April 2, 2021.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

Stephen C. Brich, P.E.
Commissioner

1401 East Broad Street
Richmond, Virginia 23219

(804) 786-2701
Fax: (804) 786-2940

March 24, 2021

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

RE: FY 2019-2024 Transportation Improvement Program Amendment for I-95 Spot Improvements at Opitz Boulevard (UPC# 115198)

Dear Chairman Allen:

The Virginia Department of Transportation (VDOT) requests an amendment to the FY 2021-2024 Transportation Improvement Program (TIP) to revise the funding for the I-95 Spot Improvements at Opitz Boulevard. The project includes adding new on and off ramps ramp to the southbound I-95 Express Lanes at Opitz Boulevard and relocating existing slip-ramp entries to the Express Lanes south of Dale Boulevard interchange. This project contributes to the safety of travelers and enhances the integration and connectivity of the transportation network system at a location know as a major bottleneck.

Sixty million dollars in private funding is being provided by TransUrban, the concessionaire operating the I-95 Express Lanes, for construction in FY 21. The project is included in the Visualize 2045 Air Quality Conformity Analysis and the private funding is consistent with the financial constraint finding of the Visualize 2045 Financial Plan.

VDOT requests approval of this TIP Amendment by the Transportation Planning Board's Steering Committee at its meeting on April 2, 2021. VDOT's representative will be available to answer any questions about the amendment.

Thank you for your consideration of this request.

Sincerely,

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

Cc: Ms. Maria Sinner, P.E., VDOT-NoVA,
Ms. Susan Shaw, P.E.
Mr. Norman Whitaker, AICP, VDOT-NoVA

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

Stephen C. Brich, P.E.
Commissioner

1401 East Broad Street
Richmond, Virginia 23219

(804) 786-2701
Fax: (804) 786-2940

March 24, 2021

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

RE: FY 2019-2024 Transportation Improvement Program Amendment for Van Buren Road Extension Project in Prince William County

Dear Chairman Allen:

The Virginia Department of Transportation (VDOT) requests an amendment to the FY 2021-2024 Transportation Improvement Program (TIP) to add the Van Buren Road Extension Project in Prince William County. At this time, the project is being added to the TIP as a Study. It will provide a four lane extension of Van Buren Road between Route 234 and Cardinal Drive. The project is currently going through the environmental study phase and the County will be completing a NEPA document. The funding is being provided by Prince William County.

Cost of the study phase is estimated at $1.8M. Completion is anticipated in fall, 2022. As a study, the project is exempt from Air Quality Conformity Analysis, but it is already included in Visualize 2045. The study is being funded by Prince William County with non-Federal funds, so the project does not impact the financial constraint finding of the Visualize 2045 Financial Plan.

VDOT requests approval of this TIP Amendment by the Transportation Planning Board's Steering Committee at its meeting on April 2, 2021. VDOT's representative will be available to answer any questions about the amendment.

Thank you for your consideration of this request.

Sincerely,

Helen Cuervo

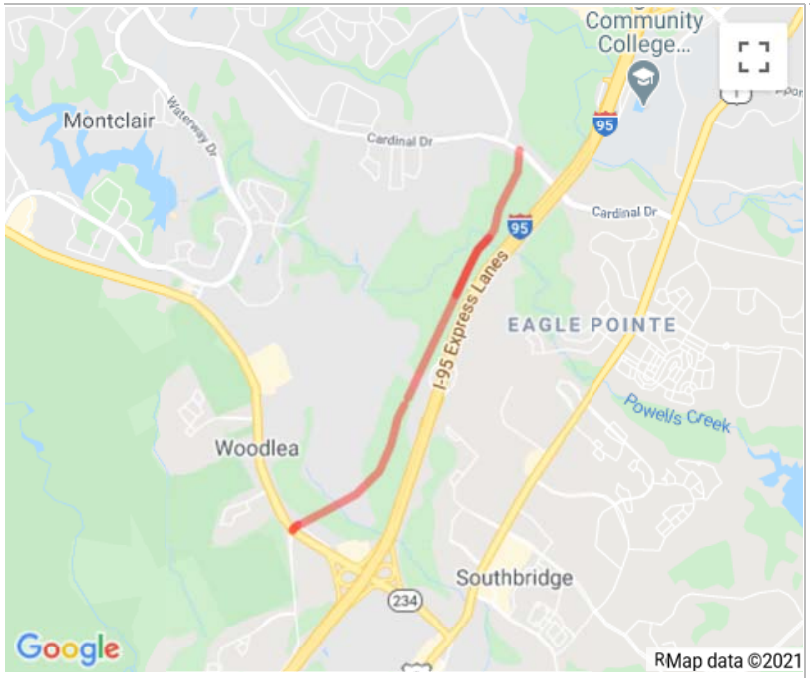
Helen Cuervo, P.E.
District Administrator,
Northern Virginia District, VDOT

Cc: Ms. Maria Sinner, P.E., VDOT-NoVA,
Mr. Norman Whitaker, AICP, VDOT-NoVA
Mr. Ricardo Canizales, Director of Transportation, Prince William County

National Capital Region Transportation Planning Board
FY 2021-2024 Transportation Improvement Program
TIP Action 21-22: Formal Amendment Approved by the
TPB Steering Committee on April 2, 2021

TIP ID	8605	*Agency Project ID*		*Total Cost*	$93,000,000
Lead Agency	VDOT	*Municipality*		*County*	Prince William
Project Type	Study/Planning/Research	*Completion Date*		*TCM*	
Project Name	Van Buren Road Extension (Study Only)				
Project Limits					
Description	Extend Van Buren Road from Rte. 234 to Cardinal Drive. The widening will consist of a 4-lane divided facility. A sidewalk and trail are included				

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	Future	Total
STUDY	Local	-	-	$1,800,000	-	-	-	$1,800,000
Total STUDY		-	-	$1,800,000	-	-	-	$1,800,000
Total Programmed		**-**	**-**	**$1,800,000**	**-**	**-**	**-**	**$1,800,000**



Version History

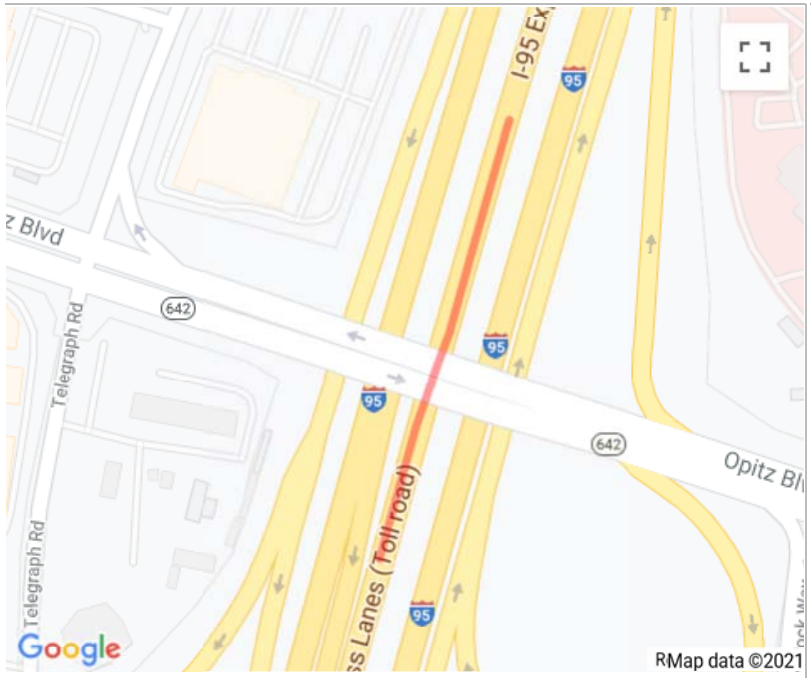
TIP Document	*MPO Approval*	*State Approval*	*FHWA Approval*	*FTA Approval*
21-22 Amendment 2021-2024	*4/21/2021*	*Pending*	*Pending*	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Updates into 45-22

TIP ID	11510	*Agency Project ID*	115198	*Total Cost*	$60,000,000
Lead Agency	VDOT	*Municipality*		*County*	
Project Type	Road - HOV/Managed Lanes	*Completion Date*		*TCM*	
Project Name	I-95 Reversible Ramp to/from Express Lanes @ Optiz Blvd.				
Project Limits	Point location on I 95 at Express Lanes @ Opitz Blvd.				
Description	Construct reversible ramp to/from express lanes at I-95/Optiz Blvd. Interchange				

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	Future	Total
CON	Concession Funds	-	$60,000,000	-	-	-	-	$60,000,000
	Total Construction	-	$60,000,000	-	-	-	-	$60,000,000
	Total Programmed	**-**	**$60,000,000**	**-**	**-**	**-**	**-**	**$60,000,000**



Version History

TIP Document	*MPO Approval*	*State Approval*	*FHWA Approval*	*FTA Approval*
21-22 Amendment 2021-2024	*4/21/2021*	*Pending*	*Pending*	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Programming Update

TIP ID	PROJECT TITLE	% CHANGE	COST CHANGE	COST BEFORE	COST AFTER	CHANGE REASON	NARRATIVE DESCRIPTION
11510	I-95 Reversible Ramp to/from Express Lanes @ Optiz Blvd.	100	$60,000,000	$0	$60,000,000	Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): Concession Funds ► Add funds in FFY 21 in CON for $60,000,000 *Total project cost $60,000,000*
8605	Van Buren Road Extension (Study Only)	100	$1,800,000	$0	$1,800,000	Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): Local ► Add funds in FFY 22 in STUDY for $1,800,000 *Total project cost $1,800,000*

TPB SR15-2021
April 2, 2021

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 KENILWORTH AVE NE RECONSTRUCTION PROJECT AND TO REDISTRIBUTE FUNDING BETWEEN THREE GROUPED STREETLIGHT 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 25, 2021, DDOT has requested amendments to the FY 2021-2024 TIP to include $6.122 million in Surface Transportation Block Grant (STBG) funding in FY 2021 for construction of the **Kenilworth Ave NE Reconstruction project** (**TIP ID 3290**), to reduce District funding by $11.13 million, National Highway Performance Program (NHPP) funding by $6.095 million, and STBG funding by $9.275 million in FY 2022 and FY 2023 for the **Citywide Streetlight P3 project grouping** (**TIP ID 6625**), to increase District funding in FY 2022 and 2023 by $9.030 million; and to increase NHPP and STBG funding in the same years by $4.945 million and $7.525 million respectively for the **Streetlight Asset Management project grouping** (**TIP ID 5385**); and to increase District and STBG funding in FY 2022 and FY2023 by $2.5 million each for the **Streetlight Construction project** (**TIP ID 5439**), as described in the attached materials; and

WHEREAS, these projects are all exempt from the air quality conformity requirement; and

WHEREAS, these amendments were submitted to TPB staff using the Project InfoTrak database and saved under TIP Action 21- 23.

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2021-2024 TIP to include $6.122 million in STBG funding in FY 2021 for construction of the **Kenilworth Ave NE Reconstruction project** (**TIP ID 3290**), to reduce District funding by $11.13 million, NHPP funding by $6.095 million, and STBG funding by $9.275 million in FY 2022 and FY 2023 for the **Citywide Streetlight P3 project grouping** (**TIP ID 6625**), to increase District funding in FY 2022 and 2023 by $9.030 million; and to increase NHPP and STBG funding in the same years by

$4.945 million and $7.525 million respectively for the **Streetlight Asset Management project grouping** (**TIP ID 5385**); and to increase District and STBG funding in FY 2022 and FY2023 by $2.5 million each for the **Streetlight Construction project** (**TIP ID 5439**), as described in the attached materials.

Approved by the TPB Steering Committee at its virtual meeting on April 2, 2021.

Government of the District of Columbia
Department of Transportation

March 25, 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 four projects as detailed below:

1. **Kenilworth Ave NE Reconstruction (TIP ID# 3290)**
    a. Increase STBG funding by $6,122,409.00 for Construction in FY21

2. **Citywide Streetlight P3 (TIP ID# 6625)**
    a. Decrease DC STATE funding by $5,460,000 for Construction in FY22
    b. Decrease DC STATE funding by $5,670,000 for Construction in FY23
    c. Decrease NHPP funding by $2,990,000 for Construction in FY22
    d. Decrease NHPP funding by $3,105,000 for Construction in FY23
    e. Decrease STBG funding by $4,550,000 for Construction in FY22
    f. Decrease STBG funding by $4,725,000 for Construction in FY23

3. **Streetlight Asset Management (TIP ID# 5385)**
    a. Increase DC STATE funding by $4,410,000 for Construction in FY22
    b. Increase DC STATE funding by $4,620,000 for Construction in FY23
    c. Increase NHPP funding by $2,415,000 for Construction in FY22
    d. Increase NHPP funding by $2,530,000 for Construction in FY23
    e. Increase STBG funding by $3,675,000 for Construction in FY22
    f. Increase STBG funding by $3,850,000 for Construction in FY23

4. **Streetlight Construction (TIP ID# 5439)**
    a. Increase DC STATE funding by $1,250,000 for Construction in FY22
    b. Increase DC STATE funding by $1,250,000 for Construction in FY23
    c. Increase STBG funding by $1,250,000 for Construction in FY22
    d. Increase STBG funding by $1,250,000 for Construction in FY23

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

identified, and the TIP will remain fiscally constrained. Therefore, DDOT requests that the TPB Steering Committee approve these amendments at its April 2nd meeting.

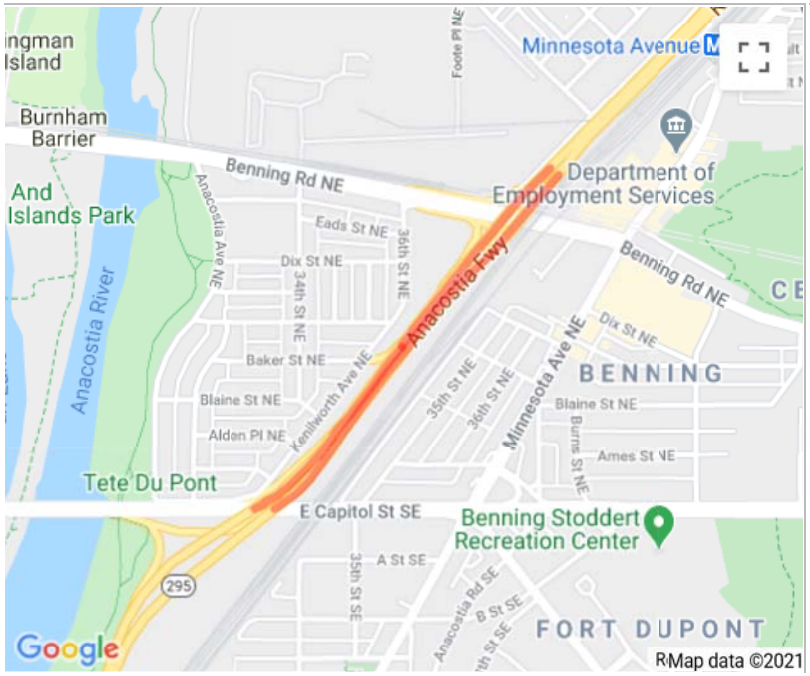
We appreciate your cooperation in this matter. Should you have questions regarding these amendments, please contact Mark Rawlings at (202) 671-2234 or by e-mail at mark.rawlings@dc.gov. Of course, feel free to contact me directly.

Sincerely,

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

TIP ID	3290	*Agency Project ID*	SR049A	*Total Cost*	$28,071,409
Lead Agency	DDOT	*Municipality*	District of Columbia	*County*	
Project Type	Road - Recons/Rehab/Maintenance	*Completion Date*		*TCM*	
Project Name	Kenilworth Ave NE Reconstruction				
Project Limits	Milepost begins at 1 ends at 1.5				
Description	Design of Kenilworth Ave/I295 from East Capitol Street, NE to Penn Rail Road Bridge over pass is a total reconstruction project. The length of the project is about 2,600 both directions. The design project will include upgrade of the existing curb and gutter, replace existing fences, remove the existing temporary Jersey Barriers and replace with permanent Jersey Barriers and address the current hydraulic problem. a: NB Kenilworth Ave NE Reconstruction b: SB Kenilworth Ave NE Reconstruction				

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	Future	Total
PE	National Highway Performance Program	$722,840	-	-	-	-	-	$722,840
PE	State or District Funding	$175,160	-	-	-	-	-	$175,160
	Total Preliminary Engineering	$898,000	-	-	-	-	-	$898,000
CON	National Highway Performance Program	$17,471,500	-	-	-	-	-	$17,471,500
CON	State or District Funding	$3,578,500	$1,224,482	-	-	$1,000	-	$4,803,982
CON	Surface Transportation Block Program	-	$4,897,927	-	-	-	-	$4,897,927
	Total Construction	$21,050,000	$6,122,409	-	-	$1,000	-	$27,173,409
	Total Programmed	**$21,948,000**	**$6,122,409**	**-**	**-**	**$1,000**	**-**	**$28,071,409**



Version History

TIP Document	*MPO Approval*	*State Approval*	*FHWA Approval*	*FTA Approval*
21-06 Amendment 2021-2024	09/16/2020	9/16/2020	*Pending*	N/A
21-23 Amendment 2021-2024	04/21/2021	*Pending*	*Pending*	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s)

Funding Change(s):
Total project cost increased from $3,754,660 to $28,071,409

National Capital Region Transportation Planning Board
FY 2021-2024 Transportation Improvement Program
TIP Action: 21-23 Formal Amendment Approved by the
TPB Steering Committee on April 2, 2021

TIP ID	5385	*Agency Project ID*	AD020A	*Total Cost*	$31,592,228
Lead Agency	DDOT	*Municipality*	District of Columbia	*County*	
Project Type		*Completion Date*		*TCM*	
Project Name	Streetlight Asset Management				
Project Limits	Various Locations				
Description	This project will provide maintenance for the Districts lighting system to provide safe operations. Work includes upgrade of lights in tunnels and underpasses, bridges, highways, overhead guide sign lighting, obsolete incandescent and mercury vapor lights as well as navigation lights on bridges and waterways.				

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	Future	Total
CON	National Highway Performance Program	-	$1,856,970	$1,932,000	$2,024,000	-	-	$5,812,970
CON	State or District Funding	-	$5,409,434	$5,628,000	$5,896,000	-	-	$16,933,434
CON	Surface Transportation Block Program	-	$2,825,824	$2,940,000	$3,080,000	-	-	$8,845,824
Total Construction		-	$10,092,228	$10,500,000	$11,000,000	-	-	$31,592,228
Total Programmed		**-**	**$10,092,228**	**$10,500,000**	**$11,000,000**	**-**	**-**	**$31,592,228**

*Various Locations

Version History

TIP Document	*MPO Approval*	*State Approval*	*FHWA Approval*	*FTA Approval*
21-00 Adoption 2021-2024	03/20/2020	10/01/2020	05/27/2020	05/27/2020
21-06 Amendment 2021-2024	09/16/2020	9/16/2020	*Pending*	N/A
21-23 Amendment 2021-2024	04/21/2021	04/21/2021	*Pending*	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s)

Funding Change(s):
Total project cost increased from $10,092,228 to $31,592,228

TIP ID	5439	*Agency Project ID*	AD017A	*Total Cost*	$10,400,000
Lead Agency	DDOT	*Municipality*	District of Columbia	*County*	
Project Type		*Completion Date*		*TCM*	
Project Name	Streetlight Construction				
Project Limits	Various Locations				
Description	This project will provide installation/construction of the District's aging streetlight systems to provide safe operations. Work includes upgrading of lighting in tunnels, freeway air rights, overhead signs structures, and obselete navigational lights on bridges.				

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	Future	Total
PE	State or District Funding	-	$180,000	-	-	-	-	$180,000
PE	Surface Transportation Block Program	-	$120,000	-	-	-	-	$120,000
	Total Preliminary Engineering	-	$300,000	-	-	-	-	$300,000
CON	State or District Funding	-	$3,060,000	$1,500,000	$1,500,000	-	-	$6,060,000
CON	Surface Transportation Block Program	-	$2,040,000	$1,000,000	$1,000,000	-	-	$4,040,000
	Total Construction	-	$5,100,000	$2,500,000	$2,500,000	-	-	$10,100,000
	Total Programmed	**-**	**$5,400,000**	**$2,500,000**	**$2,500,000**	**-**	**-**	**$10,400,000**

*Various Locations

Version History

TIP Document	*MPO Approval*	*State Approval*	*FHWA Approval*	*FTA Approval*
21-00 Adoption 2021-2024	03/20/2020	10/01/2020	05/27/2020	05/27/2020
21-06 Amendment 2021-2024	09/16/2020	9/16/2020	*Pending*	N/A
21-23 Amendment 2021-2024	04/21/2021	04/21/2021	*Pending*	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s)

Funding Change(s):
Total project cost increased from $5,400,000 to $10,400,000

TIP ID	6625	*Agency Project ID*		*Total Cost*	$155,029,795
Lead Agency	DDOT	*Municipality*	District of Columbia	*County*	
Project Type		*Completion Date*		*TCM*	
Project Name	Citywide Streetlights P3				
Project Limits	Various Locations				
Description	This project will be to develop a Private, Public, Partnership (P3) for the Streetlights in the District of Columbia. The P3 will include the conversion of all District Streetlights to LED in addition to a long-term, performance-based asset management contract. Work to develop the P3 will include technical, legal, and financial aspects of the project which will be developed into an RFP. Section 106 and NEPA work will also be included during the development of the RFP. This project will be split 42% Local, 23% NHPP and 35% STP. The development of the P3 is anticipated to take between 12 and 18 months. The P3 contract will be for between 10 and 15 years.				

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	Future	Total
CON	National Highway Performance Program	-	$278,453	$2,295,619	$2,203,619	$4,687,619	-	$9,465,310
CON	State or District Funding	-	$811,145	$6,687,238	$6,419,238	$13,655,238	-	$27,572,859
CON	Surface Transportation Block Program	-	$423,733	$3,493,333	$3,353,333	$7,133,333	-	$14,403,732
Total Construction		-	$1,513,331	$12,476,190	$11,976,190	$25,476,190	-	$51,441,901
Total Programmed		**-**	**$1,513,331**	**$12,476,190**	**$11,976,190**	**$25,476,190**	**-**	**$51,441,901**

*Various Locations

Version History

TIP Document	*MPO Approval*	*State Approval*	*FHWA Approval*	*FTA Approval*
21-00 Adoption 2021-2024	03/20/2020	10/01/2020	05/27/2020	05/27/2020
21-06 Amendment 2021-2024	09/16/2020	9/16/2020	*Pending*	N/A
21-23 Amendment 2021-2024	04/21/2021	04/21/2021	*Pending*	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s)

Funding Change(s):
Total project cost decreased from $77,941,901 to $51,441,901

TIP ID	PROJECT TITLE	% CHANGE	COST CHANGE	COST BEFORE	COST AFTER	CHANGE REASON	NARRATIVE DESCRIPTION
3290	Kenilworth Ave NE Reconstruction	28	$6,122,409	$21,949,000	$28,071,409	Cost change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): State or District Funding ► Add funds in FFY 21 in CON for $1,224,482 Surface Transportation Block Program ► Add funds in FFY 21 in CON for $4,897,927 *Total project cost increased from $21,949,000 to $28,071,409*
5439	Streetlight Construction	93	$5,000,000	$5,400,000	$10,400,000	Cost change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): State or District Funding ► Add funds in FFY 22 in CON for $1,500,000 ► Add funds in FFY 23 in CON for $1,500,000 Surface Transportation Block Program ► Add funds in FFY 22 in CON for $1,000,000 ► Add funds in FFY 23 in CON for $1,000,000 *Total project cost increased from $5,400,000 to $10,400,000*
6625	Citywide Streetlights P3	-34	($26,500,000)	$77,941,901	$51,441,901	Cost change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): - Decrease funds in FFY 22 in CON from $2,955,238 to $1,447,238 - Decrease funds in FFY 23 in CON from $2,955,238 to $1,389,238 State or District Funding - Decrease funds in FFY 22 in CON from $10,700,000 to $5,240,000 - Decrease funds in FFY 23 in CON from $10,700,000 to $5,030,000 National Highway Performance Program - Decrease funds in FFY 22 in CON from $4,687,619 to $2,295,619 - Decrease funds in FFY 23 in CON from $4,687,619 to $2,203,619 Surface Transportation Block Program - Decrease funds in FFY 22 in CON from $7,133,333 to $3,493,333 - Decrease funds in FFY 23 in CON from $7,133,333 to $3,353,333 *Total project cost decreased from $77,941,901 to $51,441,901*
5385	Streetlight Asset Management	213	$21,500,000	$10,092,228	$31,592,228	Cost change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): State or District Funding ► Add funds in FFY 22 in CON for $5,628,000 ► Add funds in FFY 23 in CON for $5,896,000 National Highway Performance Program ► Add funds in FFY 22 in CON for $1,932,000 ► Add funds in FFY 23 in CON for $2,024,000 Surface Transportation Block Program ► Add funds in FFY 22 in CON for $2,940,000 ► Add funds in FFY 23 in CON for $3,080,000 *Total project cost increased from $10,092,228 to $31,592,228*

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Letters Sent/Received
DATE: April 15, 2021

The attached letters were sent/received since the last TPB meeting.

National Capital Region
Transportation Planning Board

March 15, 2021

The Honorable Peter Buttigieg
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590-0001

Re: INFRA Program Grant Application for Prince William County, Virginia

Dear Secretary Buttigieg:

I am writing to express the support of the National Capital Region Transportation Planning Board (TPB), the Metropolitan Planning Organization (MPO) for the National Capital Region, for an application by Prince William County, in partnership with the Virginia Department of Transportation (VDOT), for an Infrastructure for Rebuilding America (INFRA) Program Grant to improve the I-95 and Route 123 interchange and adjoining interchanges. Improving this I-95 interchange, on the primary Interstate route along the nation's East Coast, is critical to reducing congestion on the I-95 corridor, improving regional travel times, and reducing greenhouse gases. The project will also improve pedestrian and bicyclist safety and improve access to transit.

Prince William County has used the Strategically Targeted Affordable Roadway Solutions (STARS) program to develop and evaluate alternatives for the I-95 and Route 123 interchange and the adjacent intersection of Route 123 and Old Bridge Road to the east of the 95 ramps. The STARS process utilizes a comprehensive, corridor wide approach to improving the safety and operations of Route 123 at Interstate 95. Alternatives are being evaluated in coordination with a complementary STARS study for the adjacent Route 1/123 interchange to the west of I-95 to better facilitate movement of traffic through these intersections to support the I-95 and US Route 1 corridors. The INFRA grant will provide funding to implement the recommended improvements of the planning studies for these three intersections on Route 123 at I-95 to improve local and regional mobility.

The project is consistent with the regional transportation goals adopted by the TPB in our Regional Transportation Priorities Plan and as identified in the Washington region's long-range transportation plan, Visualize 2045. The TPB has long supported the provision of a broad range of public and private transportation choices for our region which maximize safety and improve accessibility and affordability to everyone.

The TPB requests your favorable consideration of this request by Prince William County. I anticipate that upon a successful grant award, subject to the availability of the required matching funding, the region's transportation improvement program (TIP) will be amended to include the grant funding for this project.

Sincerely,

Charles Allen
Chair, National Capital Region Transportation Planning Board

Cc: Mr. Paolo Belita, Prince William County Department of Transportation
Mr, Norman Whitaker, Virginia Department of Transportation

National Capital Region
Transportation Planning Board

March 30, 2021

Nuria Fernandez
Acting Administrator
Federal Transit Administration
1200 New Jersey Ave, SE
Washington, D.C. 20590

Dear Ms. Fernandez:

I am writing to express the support of the National Capital Region Transportation Planning Board (TPB), the Metropolitan Planning Organization (MPO) for the National Capital Region, for an application by the District of Columbia's Department of Transportation's (DDOT) for federal funds under the FY 2021 Low or No Emission Grant Program to support the purchase of 14 electric buses and to fund the addition of solar infrastructure to DDOT's South Capitol Street facility to house the electric bus fleet. The implementation of carbon-free electrical power generation will enable the provision of emissions-free local bus service through the District, providing transportation to residents, commuters and the millions of visitors that come to visit the nation's capital each year.

The project proposed for this grant directly responds to the regional transportation goals adopted by the TPB and identified in the Washington region's long-range transportation plan, *Visualize 2045*. The TPB has long supported increased investment of transportation dollars to support improvements in the environment and the region's bus system. New buses using zero emissions systems will provide benefits to the region's citizens and visitors through cleaner and higher quality public transportation service. The support and promotion of electric vehicles and of public transportation are key strategies of our adopted Regional Transportation Priorities Plan.

We urge your favorable consideration of DDOT's request, as it directly responds to regional transportation goals and priorities adopted by the Transportation Planning Board and identified in the Washington region's long-range transportation plan. I anticipate that upon a successful grant award, subject to the availability of the required matching funding, the region's transportation improvement program (TIP) will be amended to include the grant funding for this project.

Sincerely,

Charles Allen
Chair, National Capital Region
Transportation Planning Board

Cc: Mr. Everett Lott, Interim Director, District of Columbia Department of Transportation

National Capital Region
Transportation Planning Board

April 7, 2021

Nuria Fernandez
Acting Administrator
Federal Transit Administration
1200 New Jersey Ave, SE
Washington, D.C. 20590

Dear Ms. Fernandez:

I am writing to express the support of the National Capital Region Transportation Planning Board (TPB), the Metropolitan Planning Organization (MPO) for the National Capital Region, for an application by Prince George's County, Maryland, for federal funds under the FY 2021 Low and No Emissions Grant Program to support the purchase of six battery electric buses and associated infrastructure, including four fast charging stations and two overhead pantograph charging units. Prince George's County has proudly set a goal to achieve a Carbon Neutral or Zero-Emission Fleet and envisions converting the bus fleet to 100 percent zero-emission by 2040 by retiring and replacing the aging diesel fleet vehicles with battery-electric buses. The County will begin the operation of four battery electric buses during the spring of 2021, using the FY 2019 Low-No grant award, with an additional eight electric buses set to begin service toward the end of the year.

The project proposed for this grant directly responds to the regional transportation goals adopted by the TPB and identified in the Washington region's long-range transportation plan, *Visualize 2045*. The TPB has long supported increased investment of transportation dollars to support improvements in the environment and the region's bus system. New buses using zero emissions systems will provide benefits to the region's citizens and visitors through cleaner and higher quality public transportation service. The support and promotion of electric vehicles and of public transportation are key strategies of our adopted Regional Transportation Priorities Plan.

We urge your favorable consideration of Prince George's County's request, as it directly responds to regional transportation goals and priorities adopted by the Transportation Planning Board and identified in the Washington region's long-range transportation plan. I anticipate that upon a successful grant award, subject to the availability of the required matching funding, the region's transportation improvement program (TIP) will be amended to include the grant funding for this project.

Sincerely,

Charles Allen
Chair, National Capital Region
Transportation Planning Board

Cc: Mr. Terry Bellamy, Director, Prince George's County Department of Public Works & Transportation

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Announcements and Updates
DATE: April 15, 2021

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

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Fredericksburg MPO Agreement Update
DATE: April 15, 2021

The National Capital Region Transportation Planning Board (TPB) and the Fredericksburg Area Metropolitan Planning Organization (FAMPO) are two adjacent metropolitan planning organizations (MPOs) which have a special relationship as defined in the "2004 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" (2004 TPB/FAMPO MOU). Simply put, FAMPO and the TPB share the federally prescribed responsibilities for conducting the metropolitan transportation planning process for the Washington D.C. Urbanized area, with FAMPO responsible for the urbanized area portion of Stafford County.

The TPB's metropolitan transportation planning process was reviewed and certified by Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) in Spring of 2019. The FHWA and FTA have strongly recommended that the 2004 TPB/FAMPO MOU be updated by June 2020. Since 2019, FAMPO and TPB staff have been coordinating a draft update to the MOU. FAMPO approved a final draft on March 15, 2021 (see attached FAMPO resolution and updated MOU). The TPB is being asked to review and approve the attached MOU that was approved by FAMPO at the TPB meeting on May 19. The agreement is administrative in nature and provides clearer and updated documentation for current practices and procedures that are already in place.

BACKGROUND

The purpose of the 2004 TPB/FAMPO MOU was to identify roles and responsibilities for cooperatively conducting the metropolitan transportation planning and programming process in the FAMPO portion of the Washington D.C. Urbanized Area (UZA). This became necessary when the Washington D.C. UZA (that the TPB conducts the metropolitan planning process for) expanded with the 2000 census into the northern portion of Stafford County. The U.S. Census Bureau defines (or redefines) urbanized areas typically following a decennial census.

At that time, Stafford County had a choice regarding its metropolitan transportation planning process: join the TPB (the designated MPO of the expanded UZA) or remain part of FAMPO with responsibility to conduct some additional metropolitan planning activities. Stafford County expressed a desire to remain part of FAMPO, the MPO for the adjacent Fredericksburg UZA. FAMPO indicated its willingness to accept the additional responsibilities to conduct the metropolitan planning process for the portion of Stafford County found to be contiguous with Washington UZA. TPB responsibilities are slightly different and include more tasks than what FAMPO's responsibilities are for the rest of its planning area.

Based on discussions with its membership, input from its federal partners, and having determined FAMPO's ability to provide for the planning process for the urbanized portion of Stafford County, the TPB supported the County and FAMPO's request. The MOU outlines these provisions.

2019 FEDERAL CERTIFICATION REVIEW

Every 4 years, large MPOs must be certified by FHWA and FTA. This certification involves a close examination of all products and processes produced and conducted by the MPO to certify if the federal regulations are met. As defined by the 2004 TPB/FAMPO MOU, FAMPO is conducting metropolitan planning for the northern portion of Stafford County that is part of the Washington D.C. UZA. Therefore, FAMPO products and processes were also part of the review.

While the 2004 TPB/FAMPO MOU has been reviewed on a periodic basis through the 4-year certification review cycle in 2006, 2010, and again in 2014, no updates were made. However, the most recent federal transportation authorization (FAST Act) has made changes to MPO requirements, including the addition of a new requirement to provide written provisions on PBPP implementation. Since the 2004 TPB/FAMPO MOU does not reflect these additional requirements, the FHWA and FTA recommended the following be executed by June 4, 2020.

1. The **2004 TPB/FAMPO MOU 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 on-going roles and responsibilities are consistent with regional, State, and Federal expectations.

2. The TPB, FAMPO, State, and providers of public transportation, **develop agreed upon specific written provisions** for cooperatively developing and sharing information **related to Performance Based Planning and Programming (PBPP) requirements,** including transportation performance data, the selection of performance targets, the reporting of performance targets, the reporting of performance to be used in tracking progress toward attainment of critical outcomes for the region of the MPO, and the collection of data for the State asset management plan for the National Highway System.

STATUS OF RECOMMENDATIONS

Performance Based Planning and Programming Letter of Agreement
A letter of agreement detailing specific provisions for the TPB and FAMPO to cooperatively develop and share information related to the PBPP requirements was **executed in May 2020**.

2004 TPB/FAMPO MOU Update
Work on an update to the 2004 TPB/FAMPO MOU has proceeded and is now in the final form seeking the TPB's approval.

TPB staff provided a first draft for USDOT, FAMPO staff, FAMPO members and VDOT review. After several iterations, FAMPO and TPB staff agree that this version addresses all of the comments and inputs and best meets the needs of both MPOs, accurately reflects current practices and procedures, and meets the latest federal requirements.

The main changes between the 2004 version and the 2021 version are as follows:

- The preamble was updated to reflect past actions and the justification for having the agreement in place;
- All previous sections in Article 1 that contained reference to the "process" were consolidated into Article 1 Section A "Transportation Management Areas responsibilities and process" and in Article 2;
- Per USDOT recommendation, a new section describing how federal Surface Transportation Block Grant (STBG) Funds and projects are programmed and prioritized by FAMPO (new in Section C "Programming Surface Transportation Block Grant (STBG) Funds" and Section D "Selection of Projects") has been added;
- Reference to the letter of agreement between FAMPO and TPB for Performance Based Planning and Programming was added; and
- All references to air quality responsibilities have been removed since they no longer apply to FAMPO.

This update is administrative in nature and does not change the coordination process currently in place. Upon execution of this updated MOU, TPB will be in full compliance with the 2019 Federal Certification Review. The FAMPO board approved the attached version of the updated MOU on March 15, 2021 through FAMPO Resolution 21-23. Staff recommends approval of the updated 2021 TPB/FAMPO Agreement at the May 19, 2021 TPB meeting. Upon TPB approval, Chair Allen will sign the MOU and staff will send it back to FAMPO for their final signature to compete the process.

Fredericksburg Area Metropolitan Planning Organization

Cindy Shelton
Chair

Ian Ollis
FAMPO Administrator

FAMPO RESOLUTION 21-23

APPROVING THE TRANSPORTATION PLANNING BOARD (TPB)-FREDERICKSBURG AREA METROPOLITAN PLANNING ORGANIZATION (FAMPO) MEMORANDUM OF UNDERSTANDING

WHEREAS, metropolitan planning organizations (MPOs) are responsible for carrying out a continuing, cooperative, and comprehensive (3-C) planning process for urbanized areas (UZAs) in the United States; and

WHEREAS, the National Capital Region Transportation Planning Board (TPB) serves as the MPO for Washington D.C. UZA; and

WHEREAS, as a result of the 2000 Census, the Washington D.C. UZA extended into the northern portion of Stafford County which is part of FAMPO; and

WHEREAS, a memorandum of understanding (MOU) was established in 2004 between TPB and FAMPO to determine how the metropolitan planning process would be performed for the transportation management area (TMA) in Stafford County; and

WHEREAS, the 2018 Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) certification review recommended updating this MOU;

WHEREAS, between September 2019 and February 2021, FAMPO has worked with legal counsel, VDOT, FHWA, and staff to develop and refine a draft MOU in cooperation with the TPB.

NOW, THEREFORE, BE IT RESOLVED that the Fredericksburg Area Metropolitan Planning Organization hereby approves the TPB-FAMPO MOU (Attachment 1) and authorizes its Chair to execute the agreement on behalf of the Policy Committee.

Adopted by the Policy Committee at its meeting on March 15, 2021.

Cindy Shelton, Chair
Fredericksburg Area Metropolitan Planning Organization
Policy Committee

Attachment 1 – TPB-FAMPO MOU

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

THIS AGREEMENT, made and entered into as of this _____ day of [Month] 2021 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, DC--VA--MD Urbanized Area (Washington D.C. UZA).

WHEREAS, 23 U.S.C. 134, 23 U.S.C. 150, and 49 U.S.C. 5303 mandate the establishment of a metropolitan planning organization ("MPO") in each US Bureau of Census defined "urbanized area" with a population of more than 50,000 individuals and as a condition to the receipt of Federal capital or operating assistance, which shall have a continuing, cooperative and comprehensive transportation (3-C) planning process carried out by a MPO in cooperation with the States and their local jurisdictions that results in plans and programs consistent with the planned development of the "urbanized area" pursuant to the foregoing statutes; and

WHEREAS, since 1965 the TPB has been the designated MPO for the Washington, DC-MD-VA UZA, and FAMPO the designated MPO for the Fredericksburg urbanized area, each with its own and distinct metropolitan planning area (MPA) including the respective urbanized areas and its vicinity, as depicted in figure 1, and have, pursuant with 23 CFR 450, independently executed a federal planning agreement (herein referred to as the 3-C agreement) among the MPO, the State(s), and the providers of public transportation serving the planning area identifying their mutual responsibilities in carrying out the metropolitan transportation planning process; and

WHEREAS, based on US Census since the Washington, DC-MD-VA UZA population exceeded 200,000 it was classified as a Transportation Management Area (TMA) with additional metropolitan planning requirements placed on the TPB, while the Fredericksburg urbanized population, thru the 2010 US Census, was below 200,000 and hence was not designed a TMA and FAMPO had no additional metropolitan planning requirements beyond that of a MPO; and

WHEREAS, the additional responsibilities for a TMA specifically includes responsibilities to have a Congestion Management Process pursuant to 23 U.S.C. 134 and 49 U.S.C. 5303, programming Surface Transportation Program (STP) funds sub-allocated to the TMAs pursuant to 23 U.S.C. section 133, as amended, and a process for selecting projects for receipt of STP funds sub-allocated to a TMA as per 23 C.F.R. 450.332.(c) , as amended; and

WHEREAS, based on the year 2000 census data, the US Bureau of Census updated the urbanized area boundaries and included the northern portion of Stafford County as part of the Washington, DC-MD-VA UZA; and

WHEREAS, the northern portion of Stafford County added to the Washington, DC-MD-VA UZA was of FAMPO's metropolitan planning area (not urbanized area) as depicted in Figure 2; and

WHEREAS, as part of the process of re-evaluation of the MPO planning boundaries after the year 2000 census and as an outcome of discussions between the representatives of the TPB, Commonwealth of Virginia, Maryland, and Washington D.C. transportation department, **Federal Highway Administration** (FHWA), **Federal Transit Administration** (FTA), FAMPO and Stafford County held, in 2004; and

WHEREAS, pursuant to provisions of 23 U.S.C. 134, and 49 U.S.C. 5303 and applicable federal regulations and guidance it was collectively agreed to not expand the TPB's planning boundary and instead have the FAMPO continue conducting the metropolitan planning functions for Stafford county with the additional requirement that FAMPO undertake the additional responsibilities TMA applicable to the northern portion of Stafford County that is part the Washington, DC-MD-VA UZA; and

WHEREAS, the parties executed an agreement for cooperatively conducting the metropolitan planning and programming process in the portion of the metropolitan Washington Urbanized area within the FAMPO planning boundary on November 17, 2004 (Attachment A), herein referred to as 2004 TPB-FAMPO agreement; and

WHEREAS, pursuant to provisions of 23 U.S.C. 134, 23 U.S.C. 150, and 49 U.S.C. 5303 and applicable federal regulations, FAMPO has continued to conduct the metropolitan planning process for all of Stafford County, including the additional TMA responsibilities applicable to the northern portion of Stafford County that is part the Washington, DC-MD-VA UZA; and

WHEREAS, the FHWA and FTA MPO certification review process of 2014 and 2018 recommended that the 2004 TPB-FAMPO agreement be updated to reflect, among other things, a description of the additional responsibility for programming Surface Transportation Block Grant (STBG) funds sub-allocated to the TMAs pursuant to 23 U.S.C. section 133, as amended, and a process for selecting projects for receipt of STBG funds sub-allocated to a TMA as per 23 U.S.C. 134, as amended as applicable to the northern Stafford County TMA area; and

WHEREAS, there being, at this time, no change to the metropolitan planning areas of the TPB or the FAMPO and to the arrangement of FAMPO taking additional TMA responsibilities for conducting the metropolitan planning process for the northern Stafford area that is part of the Washington, DC-VA-MD urbanized area; TMA.

NOW, THEREFORE, FAMPO and TPB do hereby agree to the following updated responsibilities:

ARTICLE I

FAMPO AREA TRANSPORTATION PLANNING AND PROGRAMMING PROCESS

A. Transportation Management Area responsibilities and process: 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 Washington, DC-MD-VA UZA exceeds 200,000 in population and the Washington D.C. UZA has been designated a TMA. Because of the action of the U.S. Bureau of the Census in its determinations for the 2010 Census of Population, the Washington, DC-MD-VA UZA extends into the northern portion of Stafford County - a member of FAMPO. The FAMPO Policy Committee has agreed to conduct additional metropolitan planning activities required of a TMA, pursuant to 23 C.F.R § 450 as amended, including those described in sections B, C and D below, for the TMA portion of Stafford County (northern parts of Stafford County as specified in Figure 1 while continuing to provide the general metropolitan transportation planning and programming functions for all of Stafford County pursuant to pursuant to 23 C.F.R § 450 as amended.

B. Congestion Management Process: FAMPO shall maintain a Congestion Management Process (CMP) for the northern portion of Stafford County that is included in the Washington, DC-MD-VA UZA, in accordance with applicable federal law and regulation, including 23 C.F.R. § 450.322, as amended. FAMPO will coordinate its development and update activities with the TPB, including those related to federally-required Performance-Based Planning and Programming (PBPP) process under 23.U.S.C. 150.

C. Programming Surface Transportation Block Grant (STBG) Funds: FAMPO shall develop and adopt a process for programming decisions for the STBG funds attributable to the northern portion of Stafford County that is included in the Washington D.C. UZA, pursuant to federal law and regulations including 23 U.S.C. 134 (K)(4), as amended. FAMPO shall allocate the TMA-attributed STBG funds for the benefit of the TMA, consistent with 23 U.S.C. § 133.d.(2), as amended.

D. Selection of Projects: FAMPO shall comply with all applicable federal laws and regulations related to its process for selecting projects to receive federal funds. FAMPO shall adhere to a project selection process for the STBG funds that prioritizes projects that are within or directly benefit the TMA, pursuant to 23 U.S.C §134.j.(5), k.(4), as amended.

E. Unified Planning Work Program: FAMPO will maintain a Unified Planning Work Program ("UPWP"), developed in cooperation with the State and Providers of Public Transportation, that meets the requirements of 23 C.F.R part 450, subpart C. Implementation of the functions, responsibilities, and duties identified in this agreement shall be described specifically in the annual unified planning work program for FAMPO and the TPB.

F. Performance Based Planning and Programming: Pursuant with 23 U.S.C. 150, 23 C.F.R. 490 and 23.C.F.R. Subpart G 490.703, the TPB and FAMPO are required to establish performance targets for the traffic congestion component of the National Performance Management Measure for Assessing the Congestion Mitigation and Air Quality Improvement Program established for their respective urbanized areas. As noted in earlier sections of this agreement. the Washington, DC-MD-VA UZA is served by two MPOs, the TPB and FAMPO. Federal regulations (23 CFR §450.314(h)), note that when more than one MPO serves an urbanized area, the MPO(s), TPB and FAMPO in this case, State(s) and Providers of Public Transportation "shall jointly agree upon and develop specific written provisions for cooperatively developing and

sharing information related to transportation performance data, the selection of performance targets, the reporting of performance targets, and the reporting of performance to be used in tracking progress toward attainment of critical outcomes for the region." The TPB and FAMPO have jointly developed and executed a letter of agreement for this purpose and it is included as Attachment B.

ARTICLE 2

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 and share required planning documents on the same cycle.

Pursuant to 23 U.S.C. 134(k) and 49 U.S.C. 5303(k), the TPB, as a TMA, will undergo a joint certification review by the FHWA and FTA. Such a federal review is intended to ensure full compliance with the metropolitan planning requirements for a UZA. Since the TPB and FAMPO are jointly responsible for the metropolitan planning activities of the Washington, DC-MD-VA UZA, TPB and FAMPO will coordinate and participate in the joint federal certification process. The TPB will also participate and assist FAMPO in its certification review process as required.

ARTICLE 3

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 4

TERMINATION

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

There ceases to exist a federal or state requirement for this agreement, such as when the responsibilities to conduct the federal metropolitan planning process for the Washington D.C-VA-MD urbanized area is not shared by the TPB and FAMPO, and/or,

The Commonwealth of Virginia or its designee, the FHWA and FTA, the TPB and FAMPO mutually agree to conclude and thereby terminate this agreement.

In the event of termination of this agreement, by the mutual agreement of the FAMPO and the TPB, a written notice of not less than ninety (90) days shall be provided to the other party and to the FHWA and FTA.

ARTICLE 5

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 review and approval 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: _____
Administrator, FAMPO
Date: _____

_____
Chairman, NCR-TPB

WITNESSED BY: _____
Director, NCR-TPB
Date: _____

Figure 1 Current Washington D.C.-VA-MD and Fredericksburg Urbanized Areas

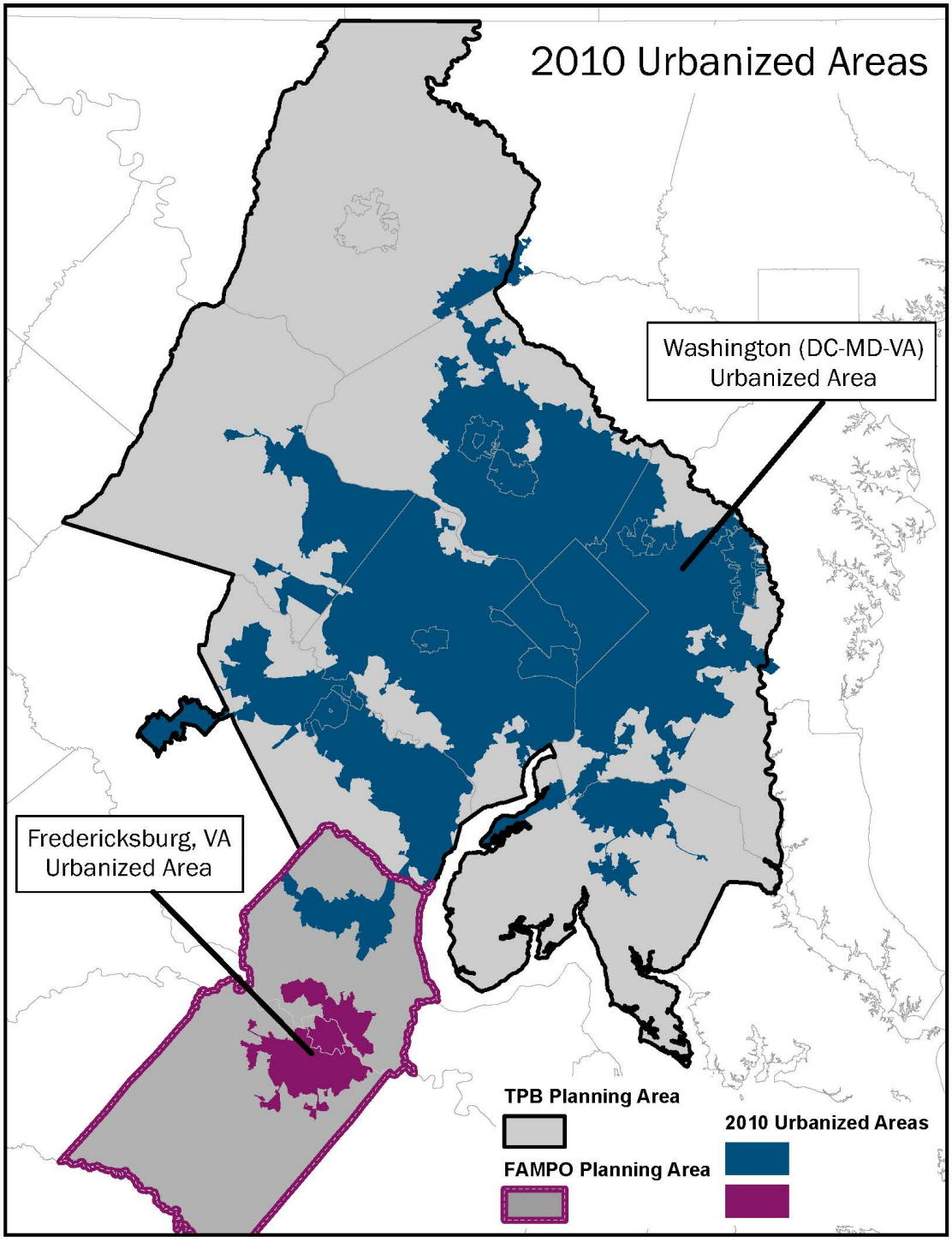
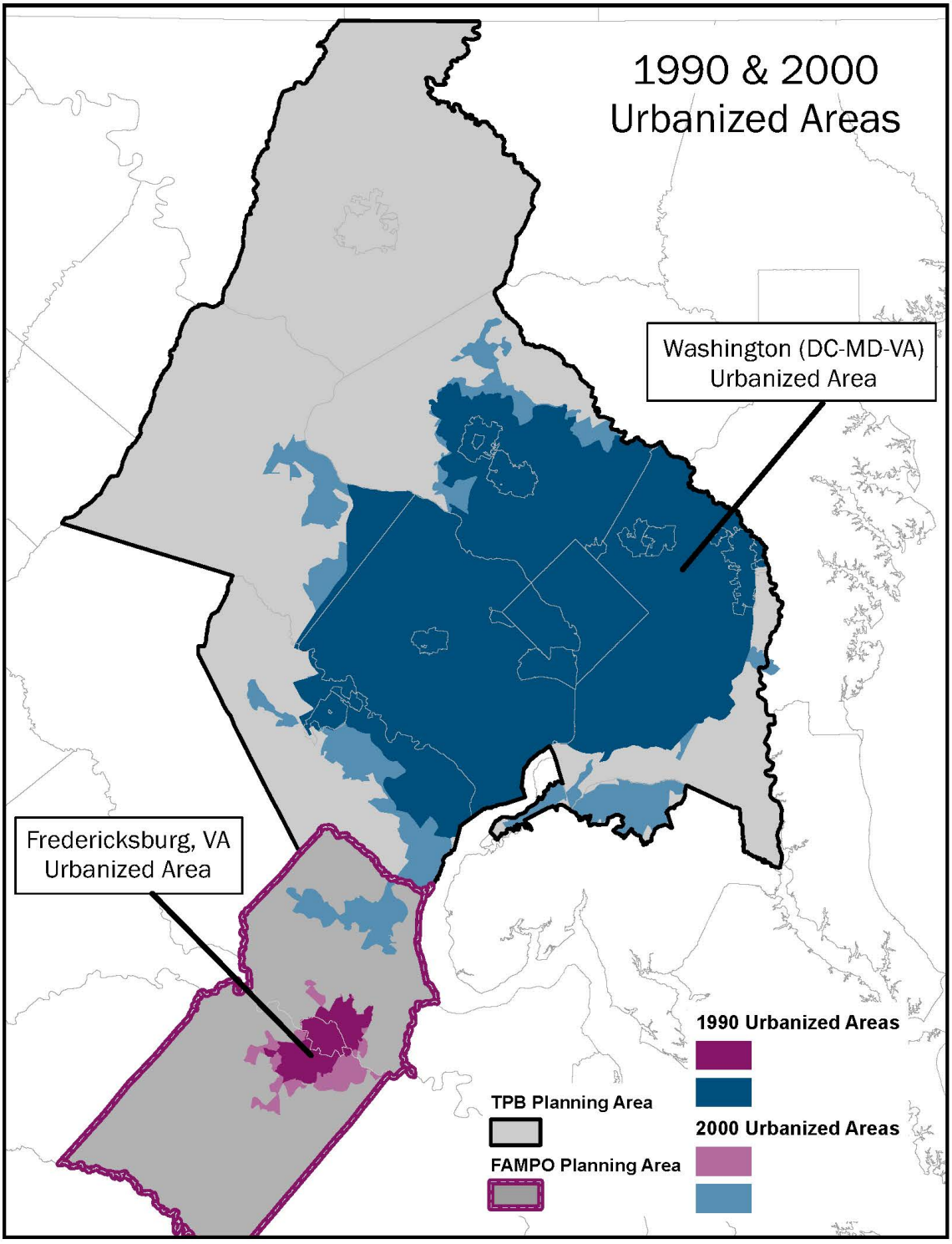


Figure 2 Washington D.C.-VA-MD and Fredericksburg Urbanized Areas – 1990 Vs 2000



ATTACHMENT A

November 17, 2004 TPB-FAMPO PLANNING AGREEMENT

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board

FROM: John Swanson, Transportation Planner
Arianna Koudounas, Regional Planner

SUBJECT: Upcoming Solicitations for Applications for the Transportation Alternatives Set-Aside Program

DATE: April 15, 2021

The application periods for the Transportation Alternatives Set-Aside (TA Set-Aside) Program are listed below:

- District of Columbia: March 31 - May 12, 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

The TA Set-Aside is a federal program that funds smaller-scale capital improvement projects such as pedestrian and bicycle facilities, trails, safe routes to school (SRTS) projects, environmental mitigation, and other community improvements. Information on the program is available from FHWA at: https://www.fhwa.dot.gov/environment/transportation_alternatives/.

Applications must be submitted through the state DOTs, which are responsible for selecting projects on a statewide basis using some TA Set-Aside funding. However, under federal law, another portion of the program's funds are suballocated to the TPB, which is responsible for selecting additional projects for our region's portions of DC, Maryland, and Virginia. The TPB is currently expected to approve funding on July 21, 2021 for projects in D.C. and Maryland. For Virginia, the TPB is tentatively scheduled to approve the next round of projects in February of 2022.

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

For more information about the TPB's role in this program, please contact John Swanson (jswanson@mwcog.org; 202-962-3295) or Arianna Koudounas (akoudounas@mwcog.org; 202-962-3312).

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board

FROM: Jon Schermann, TPB Systems Performance Analysis Manager

SUBJECT: Regional Roadway Safety Program: Update

DATE: April 15, 2021

The FY 2021 application period for the Transportation Planning Board's (TPB) Regional Roadway Safety Program (Program) closed on March 22, 2021. This memo provides an update on the status of the Program including the number of applications received, the collective amount of funding requested, next steps for staff and the board, and an update to the timeline.

APPLICATIONS RECEIVED

As shown in the table below, eleven applications were received by the March 22 deadline. These applications represent a total of $700,000 in requests for $250,000 in Program funding.

Subregion	Number of Applications Received	Funding Requested
Suburban Maryland	4	$450,000
Northern Virginia	7	$250,000
Total	**11**	**$700,000**

SELECTION PANEL

The Selection Panel is currently in the process of reviewing and evaluating the applications. In early May 2021 the Selection Panel will meet to discuss the applications and come to a consensus about the projects they will recommend for board approval. The TPB will take action on the recommended projects in June.

The Selection Panel consists of the following members (in alphabetical order):

- Usman Ali, Safety & Operations Transportation Specialist, FHWA – DC Division
- Tim Kerns, Director, Maryland Highway Safety Office
- Azadeh Norouzi, Transportation Engineer, DDOT
- Stephen Read, Highway Safety Planning Manager, VDOT
- Jon Schermann, Systems Performance Analysis Manager, COG/TPB

CONSULTANT SUPPORT

A Request for Qualifications (RFQ) seeking qualified consultants to conduct/implement the projects (i.e., provide technical assistance) has been published with an end date of May 14, 2021. The intent is to prequalify a set of consultant firms to do the work coming out of the Program. Once projects are approved by the TPB the preapproved consultants would submit proposals. The winning firm, who would already be under a master contract, would be authorized to execute the project as a task order.

FY 2021 (PILOT) TIMELINE UPDATE

- Solicit applications: January 19, 2021 through March 22, 2021
- Optional abstracts due: February 12, 2021
- Selection panel recommendations: May 2021
- TPB approves projects: June 2021
- Consultant selection: July 2021
- Contract award: August 2021
- Project completion: May 2022

FY 2022 TIMELINE UPDATE

- Solicit applications: July or August 2021
- Selection panel recommendations: September 2021
- TPB approves projects: October 2021
- Consultant selection: November 2021
- Contract award: December 2021
- Project completion: September 2022

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board

FROM: Timothy Canan, TPB Planning Data and Research Director

SUBJECT: Follow up to Priority Ground Access Projects Briefing

DATE: April 15, 2021

BACKGROUND

At the March TPB meeting, staff presented a list of priority airport ground access projects included in Visualize 2045 that support airport ground access. These projects were recommended by the Aviation Technical Subcommittee as part of the Continuous Airport Systems Planning (CASP) Program, carried out by the Metropolitan Washington Council of Governments (COG), and are important because of their potential to improve ground access to the region's major commercial airports: Baltimore/Washington International Thurgood Marshall Airport (BWI), Washington Reagan National Airport (DCA), and Washington Dulles International Airport (IAD). During the TPB briefing, several questions were raised regarding how the projects were selected to be included in the priority list and what other considerations were given for these projects in addition to their ability to support airport ground access improvements. This memorandum provides an update to the TPB on subsequent discussions on the matter by the Aviation Technical Subcommittee as well as providing more information on the CASP program for additional context.

PRIORITY GROUND ACCESS PROJECTS

As part of the CASP process, TPB staff, in consultation with the Aviation Technical Subcommittee, prepares ground access forecast updates, travel time studies, and an assessment of priority projects, programs, and policies that support airport ground access.

TPB staff presented the latest priority ground access projects to the TPB at its March 17, 2021 meeting. These projects were identified from among those projects already included in the region's long-range transportation plan, Visualize 2045, and they included 33 highway projects and one transit project. Several members inquired about the process used to identify these projects, including several observations that the list appeared to be disproportionately focused on highway projects. Also, there were questions about what other considerations may have been given to identifying these priority projects, including whether they supported other aspects such as land use development goals within transportation corridors.

Staff shared these observations with the Aviation Technical Subcommittee during its March 25, 2021 meeting. During the discussion, subcommittee members noted that while many projects can support airport ground access indirectly, the projects recommended by the Subcommittee were determined to most directly-support improved airport ground access to the region's three large commercial airports.

The Subcommittee also discussed the process of selecting priority projects from among those already contained in the approved long-range transportation plan and whether it should consider and recommend new projects that are not yet funded. Should unfunded projects be recommended in the future, such recommendations would need to be coordinated with appropriate transportation implementing agencies, and project development activities would need to be carried out by those agencies. If such a project is identified for inclusion in a future priority list, it could not be included in the region's long-range transportation planning until the project has been fully proposed by an implementing agency, appropriate regulatory compliance activities have been completed, and funding has been identified to support its implementation.

CASP PROGRAM

COG has conducted the CASP program since 1975 when the first grant application was approved by the Federal Aviation Administration (FAA). The goal of the CASP program is to provide a process that supports the planning, development, and operation of airport facilities and the transportation facilities that serve the airports in a systematic framework for the Washington-Baltimore region. The airport system planning process consists of a continuous cycle that begins with a regional air passenger survey. This survey is followed by forecasts of future air passenger travel and the 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 CASP program is funded principally by the Federal Aviation Administration (FAA) through grants from its Airport Improvement Program (AIP). These grants provide an opportunity for the region to consider and plan for the ground access needs of the region's airports through a systematic framework. The scope of these grants is limited to air systems planning studies and considerations. MAA and MWAA provide additional funding every other year to fund the data collection activities of the biennial air passenger survey. These activities are not covered by the scope of FAA AIP grants.

The CASP program is developed, implemented, and monitored with the assistance of the Aviation Technical Subcommittee of the TPB's Technical Committee. The Subcommittee is responsible for coordinating airport system planning with the regional transportation planning process. The region's three major commercial airports are represented on the TPB by the Maryland Aviation Administration (MAA) and the Metropolitan Washington Airports Authority (MWAA). Although the TPB is the designated metropolitan planning organization (MPO) for the Washington metropolitan area, the air systems planning region included in its air system planning area consists of both the Washington metropolitan area as well as the Baltimore metropolitan area. As a result, TPB, through its Aviation Technical Subcommittee, coordinates its air systems planning process very closely with the Baltimore Metropolitan Council's Baltimore Regional Transportation Board, the designated MPO for the Baltimore metropolitan area.

NEXT STEPS

As TPB staff, in consultation with the Aviation Technical Subcommittee, carries out future CASP program activities, staff will continue to make periodic briefings to the TPB on notable milestones and work products.

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board

FROM: Stacy Cook, TPB Transportation Planner, Andrew Meese, Systems Planning and Performance Manager

SUBJECT: Scope and Outreach for TPB Resiliency Study

DATE: April 15, 2021

BACKGROUND

The TPB staff are now conducting the TPB Resiliency Study. This memorandum documents the purpose of the research within context of related studies. The memorandum provides the federal resiliency planning requirements for MPOs, the approach to TPB technical member outreach, and summarizes the scope and schedule of this research project.

OVERVIEW

The purpose of the TPB Resiliency Study is to:

- Research and document TPB member agency resiliency (adaptation) activities
- Develop Resiliency white paper to inform the update to Visualize 2045

Meaning of 'resilience' for the purpose of this research: As defined by the Federal Highway Administration; resilience is 'the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions'.[1]

TPB is conducting research, with consultant support, to document activities that TPB members and select partners are undertaking to prepare for the transportation system to be resilient in the face of natural disasters. The purpose of this work is to respond to one of the federal Planning Factors and to advance important planning work and regional coordination on the topic of resiliency, one of TPB's policy priorities. This study is referred to as the TPB Resiliency Study.

As context to this effort, it should be noted that TPB and COG have and continue to conduct numerous efforts regarding climate change and resiliency, including but not limited to the activities listed below:

- In 2010, the TPB joined MWCOG's action to set greenhouse gas (GHG) reduction targets to mitigate the impact of climate change.
- The TPB completed two studies to evaluate strategies to address these targets, including the 2010 What Would It Take scenario analysis and the 2016 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.

[1] PowerPoint Presentation (trb-adc60.org)

- In October, the COG Board approved the 2030 Regional Climate and Energy Action Plan. TPB issued a resolution endorsing the climate goals in this plan.

Currently, TPB is advancing the following two studies.

- TPB Climate Change Mitigation Study of 2021: COG/TPB staff are now planning to undertake, with consultant assistance, a scenario study to assess ways to reduce [greenhouse gas (GHG)] emissions in the on-road transportation sector. This study is to be known as the "TPB Climate Change Mitigation Study of 2021" (CCMS). 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 GHG emissions to meet various goals associated with the years 2030 and 2050. (Study description as of 3/1/2021)
- TPB Resiliency Study, described in this memorandum.

OUTREACH TO MEMBERS

With consultant support, the TPB staff are gathering information from TPB member agency technical staff to establish a baseline understanding of resiliency planning activities across the region. Through this study the TPB staff /consultants will assess planning gaps, determine ways that TPB might be able to support its members in planning for resilience, and to determine the next steps for TPB related to this important planning area.

FEDERAL REQUIREMENTS

Fixing America's Surface Transportation (FAST) Act Transportation Planning Rule (May 2016) added:

- Metropolitan Transportation Plan must assess capital investment and other strategies that reduce the vulnerability of existing transportation infrastructure to natural disasters (23 CFR450.324(f)(7)).
- MPOs recommended to consult with agencies and officials responsible for natural disaster risk reduction when developing Plan and TIP (23 CFR 450.316(b)).
- New planning factor on improving the resiliency and reliability of transportation system (23 CFR 450.206(a) and 23 CFR450.306(b)), which is:
    - Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation

SCOPE OF WORK

The primary work activities include:

- Developing a research framework
- Researching and documenting agency resiliency/adaptation and stormwater mitigation activities and initiatives
- Assessing capital investment and other strategies that reduce the vulnerability of existing transportation infrastructure to natural disasters
- Identifying opportunities for regional coordination

The final product will be a resiliency white paper to communicate about the topic of resiliency planning in the region (transportation-focused) and to communicate about TPB activities for resiliency planning. The research task is scheduled for completion in FY 2021.

TPB NEWS

What did the Voices of the Region survey tell us about travel during COVID-19 and beyond?

Mar 9, 2021

(Elvert Barnes/Flickr)

Residents of the region have spoken! In the TPB's Voices of the Region survey, part of the update to Visualize 2045, we asked how people have changed their travel habits due to COVID-19 and how they imagine they will get around post pandemic. Here's what they had to say.

One year post-pandemic, people expect to walk and bike more

Considering their travel habits during the pandemic, 50 percent of respondents reported walking more and 17 percent reported biking more than they did before COVID-19. These changes appear to be more than temporary as 38 percent of respondents expect to have different travel habits than before the pandemic.

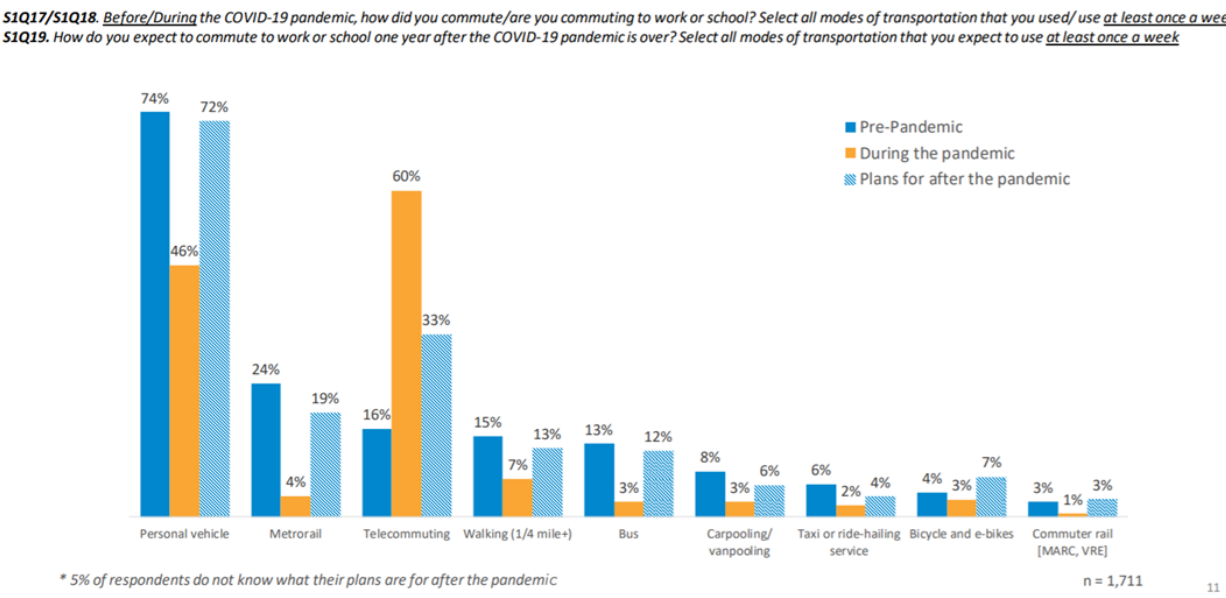
For those who expect to have different travel habits than before COVID-19, 53 percent of people surveyed expect to walk more after the pandemic, while 26% expect to bike more.

While results show momentum for more walking and biking, the survey results also show that people want to see transportation improvements that will help them make these travel habits more permanent in the future.

So, what would make people want to bike and walk more?

When it comes to biking, 34 percent of respondents said they would be more likely to ride a bike if bicycle lanes and routes were more direct and complete. Thirty-two percent would be more likely to use a bicycle if bike lanes were separated from vehicles by a barrier, and 31 percent would be more likely if there were bike lane or trails near their homes.

When it comes to walking, 75 percent of respondents said that they would continue to support the use of street space that has become available for pedestrian access during COVID-19. To supplement this, 63 percent of respondents said that they would like to see more or wider sidewalks.



Source: TPB Voices of the Region Survey

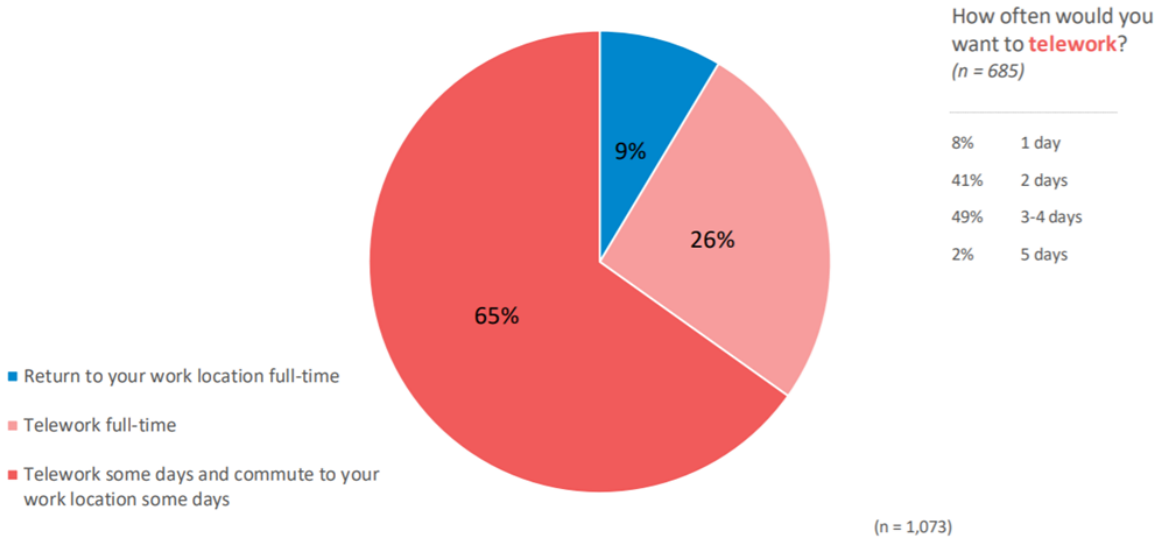
Ninety-one percent of those currently teleworking want to do it in the future

COVID-19 also brought significant changes to the number of people teleworking. The survey results show that the percentage of people working from home at least part time went from 16 percent pre-pandemic to 60 percent during the pandemic.

A large majority (91 percent) of the respondents currently working from home said that they want to continue working from home one year after the pandemic. Of those current teleworkers, 26 percent said they want to work from home full time and 65 percent said they want to work from home part time.

However, COVID-19 is clearly not the only factor promoting interest in telework, which was demonstrated in the answers to the survey's open-ended question, "What transportation investments should we make today that future generations will thank us for tomorrow?" Responses show there are reasons beyond the pandemic that people want to work from home. Some said they want to make working from home more accessible to reduce traffic congestion, while others mentioned their impacts on climate change.

S1Q20. *If given the choice to return to a work location once the COVID-19 pandemic is over, would you prefer to…?*
S1Q21. *How often would you want to telework?*



Source: TPB Voices of the Region Survey

What about essential workers? How are their travel habits affected?

During COVID-19, public officials have encouraged employers to allow their employees to work from home, but there are many jobs that cannot be done from home. These include essential jobs like those in health care, food service, construction, and many others.

The survey acknowledged this difference by asking explicit questions about essential worker status and the need to leave home for work. One question asked respondents who were currently employed whether they needed to travel outside their homes during the pandemic to economically support themselves or their family. Another question asked respondents if they are considered essential workers who are required to travel outside their homes for a job in specific industries.

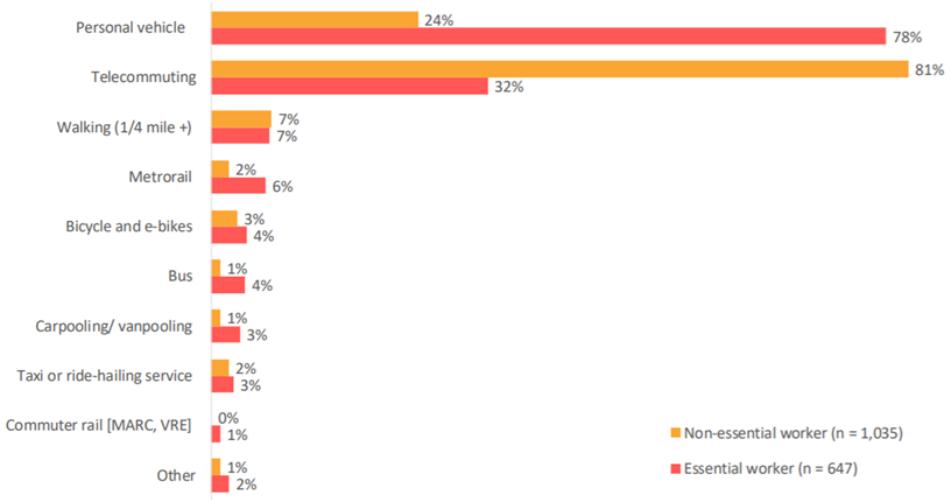
Forty-three percent of respondents who work full or part-time said they needed to travel outside their homes during the pandemic to economically support themselves or their families. Low-income respondents were significantly more likely to fall into this group.

The majority of respondents with low-incomes declared themselves as having to travel outside the home to economically support themselves. Only 21 percent of respondents with low-income said that they teleworked during the pandemic in contrast to 62 percent of higher-income individuals who reported teleworking during this time.

People who identified themselves as essential workers were significantly more likely to drive alone to work, carpool/vanpool, and use Metrorail relative to non-essential workers. And people working outside the home due to economic necessity used these modes in even greater numbers.

These results confirm that while there is momentum for teleworking, there are still people who are unable to telework and will continue to be dependent on public transportation and driving. The region will need to continue working to provide safe and reliable transportation options for these people during COVID-19 and afterwards.

S1Q18. *During the COVID-19 pandemic, how are you commuting to work or school? Select all modes of transportation that you currently use at least once a week.*



Source: TPB Voices of the Region Survey

Public transportation continues to be important as we move to recovery

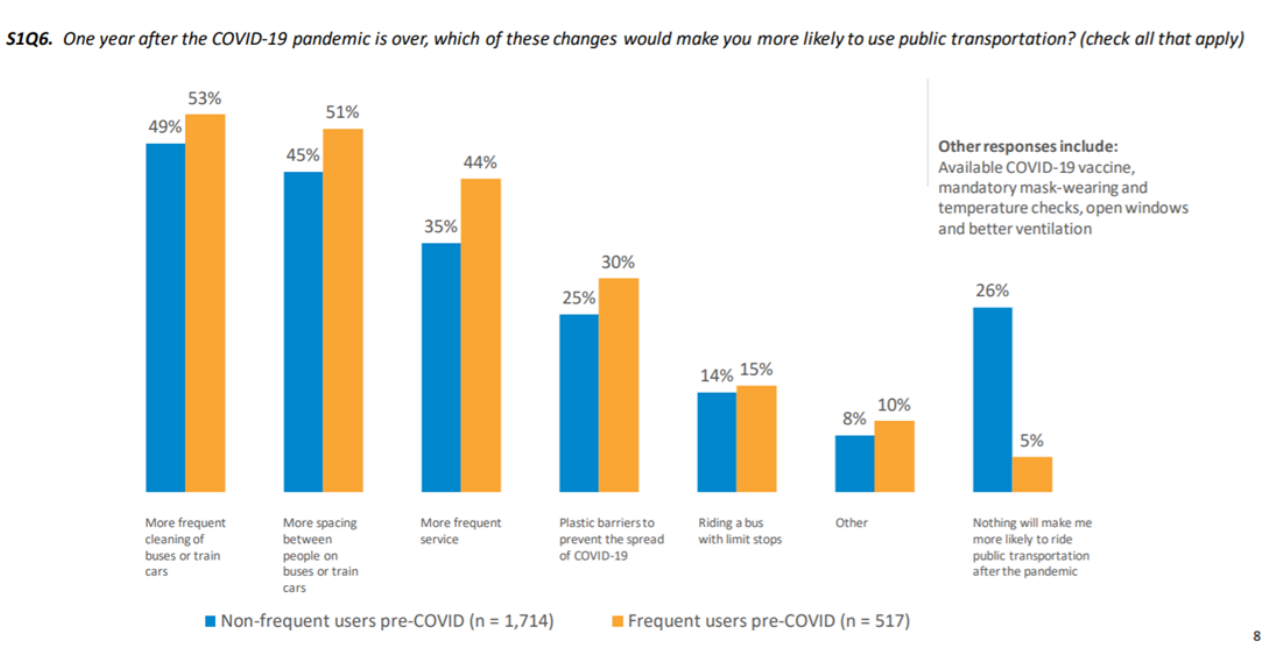
Public transportation continues to be an important choice for many people. And while public transportation has seen a decline in ridership during COVID-19, people are expecting and wanting to get back on transit one year post-pandemic.

When asked how they were expecting to commute one-year after the pandemic, 19 percent of respondents said that they expect to use Metrorail and 12 percent said that they would use the bus. These are slight decreases from 24 percent of people reporting using Metrorail and 13 percent using the bus before the pandemic.

However, respondents encouraged public transportation officials to continue implementing safety precautions to continue making them feel safe while using public transportation during COVID-19 and afterwards.

Of people who reported being frequent public transportation users, 53 percent said that more frequent cleaning of buses and trains would make them more likely to use transit. Fifty-one percent would be more likely use to transit if there were more spacing between people on buses and trains, and 44 percent would be more likely to use it if service were more frequent. Many transportation agencies are already acting to implement these improvements, and these survey responses provide confirmation of their importance with the public.

The qualitive results from the survey through the open-ended question show that the majority of the respondents want to invest in public transportation to benefit future generations. In their answers, people emphasized the need to continue investing in public transportation to reduce our impact on climate change, create equitable options for vulnerable populations, to continue to provide connections to opportunities within the region.



Source: TPB Voices of the Region Survey

About the survey

The Voices of the Region Survey was a statistically significant survey conducted from September to November 2020. The survey's purpose was to capture a regional snapshot of public opinion on transportation issues including travel changes during the COVID-19 pandemic and transportation improvements that residents would like to see in the future. The survey also measured public opinion on factors affecting transportation such as equity, safety, and climate change. The survey will be helpful for regional transportation planners to understand public opinion as they plan for the future.

The first section of the survey asked about travel habits during the COVID-19 pandemic. We asked these questions not only to understand how people are adapting to the public health emergency but also to understand how these changes might impact long-term travel patterns after the pandemic.

Methodology

The Voices of the Region survey was a statistically significant survey of 2,407 respondents conducted from September to November 2020. The survey used random-sampling methodology to reach out to more than 24,000 residents from across the TPB planning area. Participants were invited to participate by mail. The survey was primarily completed online but people were also given the option to complete the survey over the phone.

View the *Voices of the Region Survey Report*

Contact: **Karen Armendariz**
Phone: **(202) 962-3275**
Email: **karmendariz@mwcog.org**

Lyn Erickson

Subject: FY2022-2027 SYIP Public Hearing

From: Shropshire, Michelle <michelle.shropshire@vdot.virginia.gov>
Sent: Tuesday, March 30, 2021 11:07 AM
To: Kanti Srikanth <ksrikanth@mwcog.org>; plmauney@rrregion.org; cjacobs@tjpdc.org
Subject: FY2022-2027 SYIP Public Hearing

Dear MPO's:

The Commonwealth Transportation Board (CTB) will conduct a series of virtual public meetings to give citizens the opportunity to provide comments on projects and programs to be included in the Fiscal Year 2022-2027 Six-Year Improvement Program (FY2022-2027 SYIP), including highway, rail and public transportation initiatives. These projects and programs represent important improvements to address safety, congestion and preservation of Virginia's transportation network.

The meetings will be conducted using electronic communications in accordance with Item 4-0.01.g. of Chapter 1289 (2020 Acts of Assembly), as the COVID-19 emergency makes it impracticable or unsafe to assemble in a single location. The virtual meetings may be viewed via live stream by clicking the "View stream" button on the corresponding district tab found at the following link: http://www.ctb.virginia.gov/planning/springmeetings2021/default.asp. The virtual public meeting for citizens in our region will start at 4:00 p.m. on April 22, 2021. Formal public comment on projects proposed to be included in the draft will be accepted at the meeting. Written comments may also be submitted during the meeting, or they may be mailed or e-mailed afterwards and accepted through May 17, 2021.

I encourage you to attend the virtual public meeting in our region, or one of the other meetings listed on the attachment if it is more convenient for you. If you cannot attend the meeting, you may send your comments to Infrastructure Investment Director at 1401 E. Broad Street, Richmond, VA 23219 or e-mail them to SixYearProgram@vdot.virginia.gov. For transit and public transportation, you may send your comments DRPTPR@drpt.virginia.gov, Public Information Office, Virginia Department of Rail and Public Transportation 600 East Main Street, Suite 2102, Richmond VA, 23219. Comments on the Draft SYIP and candidate projects will be received until May 17, 2021. For more information, please visit the Spring Meeting website at http://www.ctb.virginia.gov/planning/springmeetings2021/default.asp.

To help us identify elected officials who wish to speak at the virtual meeting ahead of public commenters, please contact Karen Settle at Karen.Settle@vdot.virginia.gov or 540-829-7512 at least one day prior to the scheduled public meeting date so that you can be recognized at the beginning of the comment period. I truly appreciate your attendance at this session. If you have any questions prior to the meeting, please contact Karen Settle as listed above or Stacy Londrey – Assistant District Administrator for Business/Planning and Investment Management at Stacy.Londrey@vdot.virginia.gov or 540-718-7698.

Sincerely,

Michelle Shropshire, P.E., DBIA
Acting District Engineer - Culpeper District
Virginia Department of Transportation
540-899-4278 o. / 540-207-9025 c.
Michelle.Shropshire@VDOT.Virginia.gov

Attachment
FY2022-2027 Draft SYIP Public Meeting Dates

Culpeper District April 22 4 p.m. Dial: 720-260-4991 PIN: 490 669 687#	**Bristol District** April 27 4 p.m. Dial: 720-260-4991 PIN: 490 669 687#	**Fredericksburg District** April 27 6 p.m. Dial: 707-518-3672 PIN: 447 283 101#
Lynchburg District April 29 4 p.m. Dial: 720-260-4991 PIN: 490 669 687#	**Staunton District** April 29 6 p.m. Dial: 707-518-3672 PIN: 447 283 101#	**Richmond District** May 3 4 p.m. Dial: 720-260-4991 PIN: 490 669 687#
Northern Virginia District May 3 6 p.m. Dial: 707-518-3672 PIN: 447 283 101#	**Salem District** May 5 4 p.m. Dial: 720-260-4991 PIN: 490 669 687#	**Hampton Roads District** May 5 6 p.m Dial: 707-518-3672 PIN: 447 283 101#

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Summary of President Biden's American Jobs Plan
DATE: April 20, 2021

In response to requests and suggestions received, this memorandum provides a summary of staff's understanding of the various elements of the American Jobs Plan (AJP) announced by President Biden on March 31, 2021.

The summary focuses on elements related to the transportation system. Information in this memorandum is based on staff's review of official White House documents describing the plan and webinars, articles, and other publications of national organizations, including American Association of State Highway and Transportation Officials (AASHTO), American Public Transportation Association (APTA), National Association of Regional Councils, and particularly the Eno Center for Transportation.

It is important to note that details of the AJP continue to emerge and evolve. As such, the information below represents a "point in time" summary. Additionally, the White House has issued a "need for action" fact sheet for the various U.S. states and territories. The fact sheets for the District of Columbia, Maryland, and Virginia are attached to this memorandum (pages 5 – 10).

OVERVIEW

On March 31, 2021, President Biden announced a $2.3 trillion American Jobs Plan calling it "an investment in America that will create millions of good jobs, rebuild our country's infrastructure." The president noted the crumbling "roads, bridges and water system," vulnerability of our electric grid to "catastrophic outages," how "too many lack access to affordable high-speed Internet and quality housing," the state of employment, the "fragility of our caregiving infrastructure," and that the nation was "falling behind its biggest competitors on research and development." In describing the plan, the president noted that the plan "prioritizes addressing long-standing and persistent racial injustice" and "40 percent of the benefits of climate and clean energy infrastructure investments" will benefit "disadvantaged communities."

The plan organizes the proposed investments of the AJP under the following objectives:

- Fix highways, rebuild bridges, upgrade ports, airports, and transit systems.
- Deliver clean drinking water, a renewed electric grid, and high-speed broadband to all Americans.
- Build, preserve, and retrofit more than two million homes and commercial buildings, modernize our nation's schools and childcare facilities, and upgrade veterans' hospitals and federal buildings.
- Solidify the infrastructure of our economy by creating jobs and raising wages and benefits for essential home care workers.

- Revitalize manufacturing, secure U.S. supply chains, invest in research and development, and train Americans for jobs of the future.
- Create good quality jobs that pay prevailing wages in safe and healthy workplaces while ensuring workers have a free choice to organize, join a union, and bargain collectively with their employers.

WHAT IS IN THE PLAN?

The AJP calls for investing $2.3 trillion into a set of specific projects and programs. Using the Office of Management and Budget (OMB) definition for "federal investments," the Eno Center for Transportation (Eno) groups the proposed investments as below (Table 1).

TABLE 1: PROPOSED FEDERAL INVESTMENTS

INFRASTRUCTURE	OTHER PHYSICAL CAPITAL	OTHER INVESTMENTS
Transportation ($571B)	Affordable housing ($213B)	Research & development ($180B)
Drinking/Wastewater ($111B)	Build public schools ($100B)	
Broadband ($100B)	Build community colleges ($12B)	Invest in manufacturing ($300B)
Power/electric grid ($100B)	Build childcare facilities ($25B)	
Resiliency for the above ($50B)	Upgrade VA hospitals ($18B)	Workforce development ($100B)
	Federal buildings ($10B)	

Source: Eno Center for Transportation, Webinar, March 31, 2021

Eno reported that the total federal investments in FY 2019 was $556B including national defense, and $337B excluding defense. The investment proposed by the AJP is about four times the total FY 2019 investment (or about 5.5 times the FY 2019 investment excluding national defense amount).

It is reported that this investment would be made over an eight year period and that legislative budget proposals are typically evaluated over a 10 year period.

HOW IS THE PLAN TO BE FUNDED?

The AJP calls for an investment of about $2.3 trillion based a set of new revenues outlined in what is referred to as the Made in American Tax Plan. The general elements of the revenue plan are:

- Reset the corporate tax rate to 28 percent.
- Establish a minimum tax rate for U.S. Multinational corporations at 21 percent.
- Eliminate the rule that allows U.S. companies pay zero taxes on first 10 percent on returns on investments located in foreign countries.
- Enact a minimum tax rate of 15 percent on large corporations' "book income."
- Eliminate tax preferences for fossil fuels and restore payments from polluting industries into the Superfund Trust Fund.
- Eliminate tax incentives for "foreign derived intangible income" (tax break for shifting assets abroad).
- Disallow deduction to foreign corporations based in countries without a strong minimum tax to strip profits out of U.S.
- Deny companies expense deductions for "offshoring" jobs and provide tax credit to support "onshoring" jobs.

QUESTIONS BEING EXPLORED

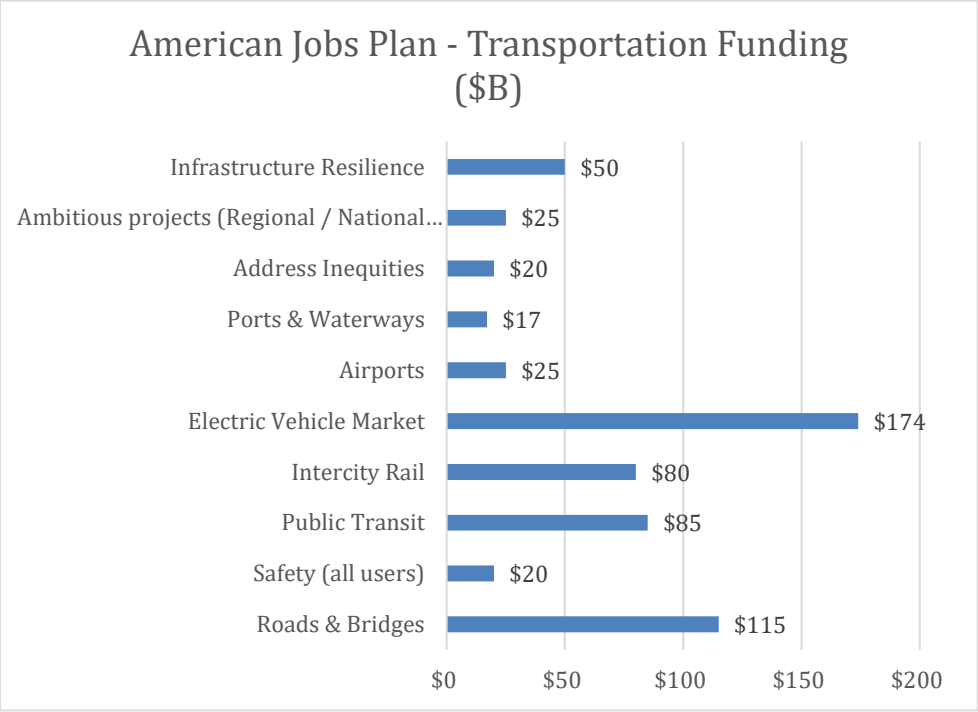
TPB staff are awaiting details on many aspects of the American Jobs Plan. The questions associated with the AJP include:

- How will the plan move through the Congress to become law and to include budget appropriations?
- What elements of the AJP and at what levels of funding will emerge at the end of the legislative process?
- Will this funding be additive to the regular federal funding and within the transportation related funding?
- What will the transportation related investments mean to the reauthorized Surface Transportation Act (and is there any growth in the underlying programs)?
- What will be the federal share of these funding amounts?
- How would these funds be distributed (formulas, dedicated, or discretionary grants)?

PRELIMINARY REPORTS OF TRANSPORTATION FUNDING

The original announcement noted the transportation and resiliency investments at $621B[1] with the breakdown as shown below (Figure 1).

FIGURE 1: PROPOSED FEDERAL INVESTMENTS



Source: White House Fact Sheet: The American Jobs Plan, March 31, 2021

[1] The White House Fact sheet document cites $621B while the breakdown amounts specified (as in Figure 1) adds up to $611B

TPB staff are awaiting the details of the above category of funds, particularly from programs within the U.S. Departments of Transportation. An Eno newsletter citing media reports[2] of documents—apparently from an US DOT official—provided the following breakdown of $456B in transportation related funding from the US DOT as below (Table 2). It is important to underscore the evolving nature of the details of the AJP and that the process for and prospects with congressional action is yet to be finalized. As such, the amounts, and program categories in this memo is subject to change.

TABLE 2: POTENTIAL BREAKDOWN OF TRANSPORTATION FUNDING IN AJP

Roads and Bridges	**$115B**	**Safety for All Users**	**$20B**
"Fix it Right" Road Modernization	*$50B*	*Expand (FHWA) HSIP*	*$ 8B*
Bridge Investment Program	*$40B*	*Support Safe Driving Behaviors*	*$ 1B*
Community Transpo. Block Grant	*$ 5B*	*Safe Streets For All, Fund*	*$10B*
Transportation Alternatives	*$ 5B*	*Pipeline Safety Modern. Grants*	*$ 1B*
Carbon Reduction Bonus Program	*$10B*		
CMAQ	*$ 5B*	**Advancing Transformative Projects**	**$44B**
		Transformational Infra. Projects	*$25B*
Public Transportation		*ARPA-I and Basic Research*	*$ 2B*
"Fix it Right" State of Good Repair	*$50B*	*Predevelopment &Planning Funds*	*$ 2B*
Replace Diesel Buses with Electric	*$25B*	*Infrastructure Grand Challenge*	*$ 5B*
Transit System Expansion	*$25B*	*Expand BUILD Program*	*$ 5B*
ADA Compliance Upgrades	*$ 5B*	*Expand INFRA Program*	*$ 3B*
		Other (RRIF, PAB, etc.)	*$ 2B*
Intercity Rail			
Northeast Corridor Modernization	*$39B*	**Restore/Reconnect Thriving Communities**	**$25B**
AMTRAK National Network	*$16B*	*Thriving Communities Initiatives*	*$ 5B*
Other Intercity Passenger Rail	*$20B*	*Highways-to-Neighborhoods*	*$15B*
Freight Rail & Rail Safety Upgrades	*$ 5B*	*Transpo. Workforce Training*	*$ 2B*
		Tribal Transportation program	*$ 3B*
Aviation	**$ 25B**		
FAA NextGen Air Traffic Control	*$ 5B*	**Build/Install 500,000 EV Chargers**	**$15B**
"Airside" AIP Grants	*$10B*		
"groundside" Airport Grants	*$10B*	**PROTECT, Resiliency Grants**	**$ 5B**
Ports and Waterways	**$ 17B**		
USACE Parts & Inland Waterways	*$ 8B*		
GSA Land Ports of Entry	*$ 3B*		
Healthy Ports Initiative	*$ 6B*		

Source: Eno Center for Transportation, April 9, 2021 Newsletter

[2] Eno Newsletter, April 2, 2021: Reuters and POLITICO news outlets reported on the proposed US DOT programs to allocate AJP funds.

AMERICAN JOBS PLAN

The Need for Action in the District of Columbia

For decades, infrastructure in the District of Columbia has suffered from a systemic lack of investment. The need for action is clear:

The District of Columbia's infrastructure received a **C-** grade on its Infrastructure Report Card. The American Jobs Plan will make a historic investment in our nation's infrastructure.

- **ROADS AND BRIDGES**: In the District of Columbia there are 8 bridges and over 402 miles of highway in poor condition. Since 2011, commute times have increased by 2% in the District of Columbia and on average, each driver pays $1,100 per year in costs due to driving on roads in need of repair. The American Jobs Plan will devote more than $600 billion to transform our nations' transportation infrastructure and make it more resilient, including $115 billion repairing roads and bridges.

- **PUBLIC TRANSPORTATION**: D.C residents who take public transportation spend an extra 25.2% of their time commuting and non-White households are 0.7 times more likely to commute via public transportation. 5% of trains and other transit vehicles in the state are past useful life. The American Jobs Plan will modernize public transit with an $85 billion investment.

- **RESILIENT INFRASTRUCTURE**: The District of Columbia has experienced extreme weather events, costing the city millions in damages. The President is calling for $50 billion to improve the resiliency of our infrastructure and support communities' recovery from disaster.

- **DRINKING WATER**: Over the next 20 years, The District of Columbia's drinking water infrastructure will require $1.75 billion in additional funding. The American Jobs Plan includes a $111 billion investment to ensure clean, safe drinking water is a right in all communities.

- **HOUSING**: In part due to a lack of available and affordable housing, 79,000 renters in the District of Columbia are rent burdened, meaning they spend more than 30% of their income on rent. The President proposes investing over $200 billion to increase housing supply and address the affordable housing crisis.

- **BROADBAND**: Even where infrastructure is available, for many District residents, reliable broadband may be too expensive to be within reach. Nearly 13% of District households do not have an internet subscription. The American Jobs Plan will invest $100 billion to bring universal, reliable, high-speed, and affordable coverage to every family in America.

- **CAREGIVING**: Across the country, hundreds of thousands of older adults and people with disabilities are in need of home and community-based services. The President's plan will invest $400 billion to help more people access care and improve the quality of caregiving jobs.

- **CHILD CARE**: In the District of Columbia, 27% of residents live in a childcare desert. The American Jobs Plan will modernize our nation's schools and early learning facilities and build new ones in neighborhoods across the District and the country.

- **MANUFACTURING**: Manufacturers employ 1,000 residents in the District and account for $300 million in total output. The American Job's Plan will invest $300 billion to retool and revitalize American

manufacturers.

- **HOME ENERGY**: In the District of Columbia, many low-income families are forced to make tough choices between paying energy bills and buying food, medicine or other essentials. The American Jobs Plan will upgrade low-income homes to make them more energy efficient through a historic investment in the Weatherization Assistance Program, a new Clean Energy and Sustainability Accelerator to finance building improvements, and expanded tax credits to support home energy upgrades.

- **CLEAN ENERGY JOBS**: As of 2019, there were 15,383 District residents working in clean energy, and the American Jobs Plan invests in creating more good paying union jobs advancing clean energy production by extending and expanding tax credits for clean energy generation, carbon capture and sequestration and clean energy manufacturing.

- **VETERANS HEALTH**: The District of Columbia is home to close to 28,000 veterans, 14% of whom are women and 41% of whom are over the age of 65. The President is calling for $18 billion to improve the infrastructure of VA health care facilities to ensure the delivery of world-class, state of the art care to veterans enrolled in the VA health care system. This includes improvements to ensure appropriate care for women and older veterans.

AMERICAN JOBS PLAN

The Need for Action in Maryland

For decades, infrastructure in Maryland has suffered from a systemic lack of investment. The need for action is clear:

Maryland's infrastructure received a **C** grade on its Infrastructure Report Card. The American Jobs Plan will make a historic investment in our nation's infrastructure.

- **ROADS AND BRIDGES**: In Maryland there are 273 bridges and over 2,201 miles of highway in poor condition. Since 2011, commute times have increased by 5.1% in Maryland and on average, each driver pays $637 per year in costs due to driving on roads in need of repair. The American Jobs Plan will devote more than $600 billion to transform our nations' transportation infrastructure and make it more resilient, including $115 billion repairing roads and bridges.

- **PUBLIC TRANSPORTATION**: Marylanders who take public transportation spend an extra 66.3% of their time commuting and non-White households are 2.7 times more likely to commute via public transportation. 23% of trains and other transit vehicles in the state are past useful life. The American Jobs Plan will modernize public transit with an $85 billion investment.

- **RESILIENT INFRASTRUCTURE**: From 2010 to 2020, Maryland has experienced 31 extreme weather events, costing the state up to $10 billion in damages. The President is calling for $50 billion to improve the resiliency of our infrastructure and support communities' recovery from disaster.

- **DRINKING WATER**: Over the next 20 years, Maryland's drinking water infrastructure will require $9.3 billion in additional funding. The American Jobs Plan includes a $111 billion investment to ensure clean, safe drinking water is a right in all communities.

- **HOUSING**: In part due to a lack of available and affordable housing, 353,000 renters in Maryland are rent burdened, meaning they spend more than 30% of their income on rent. The President proposes investing over $200 billion to increase housing supply and address the affordable housing crisis.

- **BROADBAND**: 3.8% of Marylanders live in areas where, by one definition, there is no broadband infrastructure that provides minimally acceptable speeds. And 34.5% of Marylanders live in areas where there is only one such internet provider. Even where infrastructure is available, broadband may be too expensive to be within reach. 10.9% of Maryland households do not have an internet subscription. The American Jobs Plan will invest $100 billion to bring universal, reliable, high-speed, and affordable coverage to every family in America.

- **CAREGIVING**: Across the country, hundreds of thousands of older adults and people with disabilities are in need of home and community-based services. The President's plan will invest $400 billion to help more people access care and improve the quality of caregiving jobs.

- **CHILD CARE**: In Maryland, there is an estimated $615 million gap in what schools need to do maintenance and make improvements and 51% of residents live in a childcare desert. The American Jobs Plan will modernize our nation's schools and early learning facilities and build new ones in neighborhoods across Maryland and the country.

- **MANUFACTURING**: Manufacturers account for more than 5.89% of total output in Maryland, employing 108,000 workers, or 3.92% of the state's workforce. The American Job's Plan will invest $300 billion to retool and revitalize American manufacturers.

- **HOME ENERGY**: In Maryland, an average low-income family spends 6-8%of their income on home energy costs forcing tough choices between paying energy bills and buying food, medicine or other essentials. The American Jobs Plan will upgrade low-income homes to make them more energy efficient through a historic investment in the Weatherization Assistance Program, a new Clean Energy and Sustainability Accelerator to finance building improvements, and expanded tax credits to support home energy upgrades.

- **CLEAN ENERGY JOBS**: As of 2019, there were 84,549 Marylanders working in clean energy, and the American Jobs Plan invests in creating more good paying union jobs advancing clean energy production by extending and expanding tax credits for clean energy generation, carbon capture and sequestration and clean energy manufacturing.

- **VETERANS HEALTH**: Maryland is home to over 389,600 veterans, 13.3% of whom are women and 42.2% of whom are over the age of 65. The President is calling for $18 billion to improve the infrastructure of VA health care facilities to ensure the delivery of world-class, state of the art care to veterans enrolled in the VA health care system. This includes improvements to ensure appropriate care for women and older veterans.

AMERICAN JOBS PLAN

The Need for Action in Virginia

For decades, infrastructure in Virginia has suffered from a systemic lack of investment. The need for action is clear:

- **ROADS AND BRIDGES**: In Virginia there are 577 bridges and over 2,124 miles of highway in poor condition. Since 2011, commute times have increased by 7.7% in Virginia and on average, each driver pays $517 per year in costs due to driving on roads in need of repair. The American Jobs Plan will devote more than $600 billion to transform our nations' transportation infrastructure and make it more resilient, including $115 billion repairing roads and bridges.

- **PUBLIC TRANSPORTATION**: Virginians who take public transportation spend an extra 72.2% of their time commuting and non-White households are 1.6 times more likely to commute via public transportation. 10% of trains and other transit vehicles in the state are past useful life. The American Jobs Plan will modernize public transit with an $85 billion investment.

- **RESILIENT INFRASTRUCTURE**: From 2010 to 2020, Virginia has experienced 40 extreme weather events, costing the state up to $10 billion in damages. The President is calling for $50 billion to improve the resiliency of our infrastructure and support communities' recovery from disaster.

- **DRINKING WATER**: Over the next 20 years, Virginia's drinking water infrastructure will require $18.1 billion in additional funding. The American Jobs Plan includes a $111 billion investment to ensure clean, safe drinking water is a right in all communities.

- **HOUSING**: In part due to a lack of available and affordable housing, nearly 500,000 renters in Virginia are rent burdened, meaning they spend more than 30%of their income on rent. The President proposes investing over $200 billion to increase housing supply and address the affordable housing crisis.

- **BROADBAND**: 9.7% of Virginians live in areas where, by one definition, there is no broadband infrastructure that provides minimally acceptable speeds. And 39.4% of Virginians live in areas where there is only one such internet provider. Even where infrastructure is available, broadband may be too expensive to be within reach. 13.3% of Virginia households do not have an internet subscription. The American Jobs Plan will invest $100 billion to bring universal, reliable, high-speed, and affordable coverage to every family in America.

- **CAREGIVING**: Across the country, hundreds of thousands of older adults and people with disabilities are in need of home and community-based services. The President's plan will invest $400 billion to help more people access care and improve the quality of caregiving jobs.

- **CHILD CARE**: In Virginia, there is an estimated $973 million gap in what schools need to do maintenance and make improvements and 47% of residents live in a childcare desert. The American Jobs Plan will modernize our nation's schools and early learning facilities and build new ones in neighborhoods across Virginia and the country.

- **MANUFACTURING**: Manufacturers account for nearly 9% of total output in Virginia, employing 246,000 workers, or 6.1% of the state's workforce. The American Job's Plan will invest $300 billion to retool and revitalize American manufacturers, including providing incentives for manufacturers to invest in

innovative energy projects in coal communities.

- **HOME ENERGY**: In Virginia, an average low-income family spends 6-8% of their income on home energy costs forcing tough choices between paying energy bills and buying food, medicine or other essentials. The American Jobs Plan will upgrade low-income homes to make them more energy efficient through a historic investment in the Weatherization Assistance Program, a new Clean Energy and Sustainability Accelerator to finance building improvements, and expanded tax credits to support home energy upgrades.

- **CLEAN ENERGY JOBS**: Virginia has outsized potential for innovative energy technologies including carbon capture and sequestration and geothermal energy generation, that create good paying union jobs. As of 2019, there were 97,305 Virginians working in clean energy, and the American Jobs Plan invests in building that industry through a reformed and expended Section 45Q tax credit and extending renewable energy tax credits.

- **VETERANS HEALTH**: Virginia is home to over 725,028 veterans, 14.3% of who are women and 36.3% who are over the age of 65. The President is calling for $18 billion to improve the infrastructure of VA health care facilities to ensure the delivery of world-class, state of the art care to veterans enrolled in the VA health care system. This includes improvements to ensure appropriate care for women and older veterans.

ITEM 7 – Action
April 21, 2021

CRRSSA Funding Recommendations and a FY 2021-2024 TIP Amendment to Include the Projects

Action: Approve Resolution R17-2021 to approve funding recommendations for CRRSAA and to approve an amendment of the FY 2021-2024 Transportation Improvement Program (TIP) to include these projects.

Background: The board will be briefed on the projects recommended for funding for Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (CRRSAA) appropriations to the DC-MD-VA urbanized area. A grant solicitation for current and past FTA Section 5310 Enhanced Mobility grant recipients was conducted from February 23 to March 24. A selection committee reviewed the grant applications and recommended projects to be presented to the TPB officers for concurrence. The board will be briefed on the solicitation and selection process and asked to approve the projects for funding and inclusion in the TIP.

TPB R17-2021
April 21, 2021

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

RESOLUTION TO APPROVE PROJECTS FOR FUNDING UNDER THE FEDERAL TRANSIT ADMINISTRATION'S CORONAVIRUS RESPONSE AND RELIEF SUPPLEMENTAL APPROPRIATIONS ACT OF 2021 (CRRSAA) PROGRAM AND TO AMEND THE FY 2021-2024 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

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, FAST authorizes the Federal Transit Administration's Section 5310 Enhanced Mobility program to provide capital and operating grants to eligible subrecipients to "improve mobility for seniors and individuals with disabilities…by removing barriers to transportation services and expanding the transportation mobility options available";

WHEREAS, under FAST, projects funded by the Enhanced Mobility program must respond to strategies in a "locally developed, coordinated public transit-human services transportation plan"; and

WHEREAS, in June 2013, the Governor of Maryland, the Governor of Virginia and the Mayor of the District of Columbia designated the Metropolitan Washington Council of Governments (COG), as the administrative agent for the TPB, the recipient of the Enhanced Mobility program for the Washington, DC-VA-MD Urbanized Area; and

WHEREAS, the TPB adopted an Update to the Coordinated Human Service Transportation Plan at its regular meeting on December 19, 2018 (R9-2019), which includes the comments and input of the TPB's Access for All Advisory Committee received on June 7, 2018; and

WHEREAS, the TPB, with COG as the administrative agent, is the Designated Recipient of CRRSAA funding for the Washington, DC-VA-MD Urbanized Area because of its role as Designated Recipient of Enhanced Mobility; and

WHEREAS, the Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (CRRSSA) was signed into law on December 27, 2020, and the purpose of CRRSAA funding is to support expenses eligible under Enhanced Mobility, but recipients are directed to prioritize payroll and operational needs; and

WHEREAS, eligibility criteria was adopted to make CRRSAA funding available to existing subrecipients and recent subrecipients of Enhanced Mobility (or JARC and New Freedom projects funded under an Enhanced Mobility solicitation) who qualify; and

WHEREAS, a solicitation for CRRSAA grant applications was conducted from February 24 through March 24; and

WHEREAS, a selection committee comprised of COG/TPB staff met on April 7, 2021 to review the applications and evaluate them against the selection criteria; and

WHEREAS, the selection committee recommended funding six projects described in the attached memorandum; and

WHEREAS, the TPB Officers and Chair of the AFA Committee concurred with the selection committee recommendations; and

WHEREAS, the attached FY 2021-2024 TIP amendment includes the project information for these projects; and

WHEREAS, there is $532,218 in FTA CRRSSA program funds, at 100% Federal, allocated to COG for supporting qualifying projects in the Washington, DC-VA-MD Urbanized Area program.

NOW, THEREFORE, BE IT RESOLVED THAT THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD approves six projects for funding described in the attached memorandum and TIP amendment and amends the FY 2021-2024 TIP to include these projects.

National Capital Region Transportation Planning Board
FY 2021-2024 Transportation Improvement Program
TIP Action 21-23: Formal Amendment
Approved by the TPB on April 21, 2021

TIP ID	6366	*Agency Project ID*		*Total Cost*	$16,632,218
Lead Agency	TPB	*Municipality*	Region-wide	*County*	
Project Type	Human Service Transportation Coordination	*Completion Date*		*TCM*	
Project Name	Enhanced Mobility of Seniors and Individuals with Disabilities				
Project Limits					
Description	This program is intended to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act (ADA) complementary paratransit services. This also includes funding for six sub-projects funded in FY 2021 by the Coronavirus Response and Relief Supplemental Appropriations Act of 2021. These funds are for the urbanized area within the District of Columbia, Maryland and Virginia metropolitan region.				

Phase	Fund Source	Prior	FY2021	FY2022	FY2023	FY2024	Future	Total
OTHER	5310 - Elderly and Persons with Disabilities Program	$3,220,000	$3,752,218	$3,220,000	$3,220,000	$3,220,000	-	$16,632,218
	Total Other	$3,220,000	$3,752,218	$3,220,000	$3,220,000	$3,220,000	-	$16,632,218
Total Programmed		**$3,220,000**	**$3,752,218**	**$3,220,000**	**$3,220,000**	**$3,220,000**	**-**	**$16,632,218**

CRRSAA PROJECTS FUNDED IN FY 2021

SUBRECIPIENT	DESCRIPTION	COST	LOCATION
Capitol Hill Village	Mobility Management services for transportation to vaccination sites.	$90,000	DC
Dulles Area Transportation Association (DATA)	Mobility Management services for transportation to vaccination sites for Veterans who are seniors and/or have a disability.	$80,000	Northern Virginia
ECHO	Vehicle operating expenses, including driver salaries and benefits to avoid layoffs, and maintenance	$100,000	Northern Virginia
Prince George's County DPW&T	Expansion of an existing taxi voucher program to include transportation to vaccination sites.	$107,218	Prince George's County, MD
Regency Taxi	Mobility Management services for transportation to vaccination sites, including escort by the driver when necessary.	$75,000	Montgomery County, MD and some DC
Arc of Prince William/INSIGHT, Inc.	Reestablishment of transportation for individuals with developmental disabilities, including salary and benefits for furloughed drivers.	$80,000	Prince William County, VA

*Map Has Not Been Marked

Version History

TIP Document	*MPO Approval*	*State Approval*	*FHWA Approval*	*FTA Approval*
21-00 Adoption 2021-2024	03/20/2020	10/01/2020	05/27/2020	05/27/2020
21-23 Amendment 2021-2024	*Pending*	*Pending*	*Pending*	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Programming Update

Funding Change(s):
Total project cost increased from $16,100,000 to $16,632,218

Change Report for TIP Action 21-23
Formal Amendment
for TPB Review and Approval on April 21, 2021

TIP ID	PROJECT TITLE	% CHANGE	COST	COST BEFORE	COST AFTER	CHANGE REASON	NARRATIVE DESCRIPTION
6366	Enhanced Mobility of Seniors and Individuals with Disabilities	3	$532,218	$16,100,000	$16,632,218	Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): Edit project description to includle 6 sub-projects funded by CRRSAA listed on supplemental page. 5310 - Elderly and Persons with Disabilities Program Increase funds in FY 21 in OTHER from $3,220,000 to 3,752,218

$

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board

FROM: Nicholas Ramfos, Director, Transportation Operations Programs
Lynn Winchell-Mendy, Transportation Planner

SUBJECT: Funding Recommendations for the Federal Transit Administration's (FTA) Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (CRRSAA) and Amendment of the TIP

DATE: April 15, 2021

The purpose of this memo is to provide funding recommendations for FTA's Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (CRRSAA) program. On April 7, 2021, the selection committee finalized its recommendations for grant funding $532,218 of allocated FTA funds from applications totaling $1.4M in requested funds with concurrence from the TPB officers and the Access for All (AFA) Committee Chair. The TPB will be asked on April 21, 2021 to approve these funding recommendations and amend the FY 2021-2024 Transportation Improvement Program (TIP) to include these projects and the funding accordingly.

BACKGROUND

The TPB's Enhanced Mobility of Seniors and Individuals with Disabilities program provides funding to remove barriers to transportation services and expand transportation mobility options for these communities. The federal Coronavirus Response and Relief Supplemental Appropriations Act of 2021 provided supplemental funds ($50M nationally) to the FTA's Enhanced Mobility of Seniors and Individuals with Disabilities program (Section 5310). The allocations of these funds to the National Capital region provided this supplemental opportunity to provide additional funds for existing subrecipients and recent subrecipients of previous Enhanced Mobility (or JARC and New Freedom) program funds to help mitigate adverse fiscal impacts to the organization or the service due to the COIVD-19 pandemic.

SUMMARY

A TPB and COG staff selection committee reviewed the nine applications received for this supplemental funding and on April 7, 2021, finalized its recommendations for awarding the available $532,218. A description of the Committee's recommendations is provided below with additional details on the recommended projects in Attachment A. Also, an overview of the CRRSAA program is provided in Attachment B.

The TPB's Selection Committee for FTA's CRRSAA program was made up of five COG/TPB staff members as outlined in Attachment B. The selection committee discussions resulted in a unanimous recommendation to fund six applications, all at a scalable amount. The committee's recommendations were reviewed by TPB Officers and the AFA Chair who were able to ask clarifying questions about the recommendations and concurred with the presentation for approval at the April 21 meeting.

FUNDING RECOMMENDATIONS

The Selection Committee recommends funding six of the nine applications received, competitively allocating the $532,218 in federal funding available. Since the total funding requests of $1,430,221 exceeded the amount available, and with the intent of providing some relief to as many of the programs/services adversely affected by the pandemic, the Selection Committee acted to provide partial funding to all of the six applications recommended. The funds are 100% Federal, so no match is required.

Recommendations prioritize awarding funds for payroll and operating expenses for direct transportation providers to bring staff back or keep them from being furloughed, per the primary intent of the funding, and secondarily for transportation to COVID vaccination sites. Attachment A provides a summary of the projects being recommended for funding.

NEXT STEPS

The TPB will be asked to approve the recommendations for funding and the update of the TIP to include the projects. Following the approval, applicants will be notified of the TPB action and staff will develop the submittal materials for FTA approval. Upon FTA approval, staff will work with the applicants to issue contracts and administer the grants. These activities will be carried out as expeditiously as possible given the needs and that some of the awards are to help provide transportation services for Covid vaccinations.

Applicants with projects not recommended for funding will be notified and offered a debriefing about their application with TPB staff, including suggestions for improving their application for a second round of pandemic relief funding made available by the recently enacted American Rescue Plan Act (ARPA) of 2021.

ATTACHMENT A - RECOMMENDATIONS FOR FUNDING UNDER THE CORONAVIRUS RESPONSE AND RELIEF SUPPLEMENTAL APPROPRIATIONS ACT OF 2021 (CRRSAA)

1. **Capitol Hill Village:** Mobility Management services for transportation to vaccination sites. Expenses include staff salary and taxi vouchers.

   Geographic Focus: DC

Requested		Recommended	
Federal Funds	$100,000	Federal Funds	$90,000

2. **Dulles Area Transportation Association:** Mobility Management services for transportation to vaccination sites for Veterans who are seniors and/or have a disability. Expenses include staff salary and taxi vouchers.

   Geographic Focus: Northern Virginia

Requested		Recommended	
Federal Funds	$100,630	Federal Funds	$80,000

3. **ECHO:** Vehicle operating expenses and maintenance. Expenses include driver salaries & benefits (to avoid layoffs), fuel, insurance, preventative maintenance, and licensing.

   Geographic Focus: Northern Virginia

Requested		Recommended	
Federal Funds	$212,977	Federal Funds	$100,000

4. **Prince George's County Department of Public Works and Transportation:** Expansion of an existing taxi voucher program to include transportation to vaccination sites. Expense is taxi vouchers.

   Geographic Focus: Prince George's County, Maryland

Requested		Recommended	
Federal Funds	$230,000	Federal Funds	$107,218

5. **Regency Taxi:** Mobility Management services for transportation to vaccination sites. Expenses include staff salary, training, driver salary for escorted transportation service, and marketing.

   Geographic Focus: Montgomery County, Maryland, some DC

Requested		Recommended	
Federal Funds	$105,764	Federal Funds	$75,000

6. **The Arc of Greater Prince William/INSIGHT, Inc.:** Reestablishment of transportation for individuals with developmental disabilities. Expenses include salary and benefits for furloughed drivers, fuel, preventative maintenance, and repairs.

   Geographic Focus: Prince William County, Virginia

Requested		Recommended	
Federal Funds	$175,450	Federal Funds	$80,000

Applications Not Recommended for Funding

The following table shows the applications not recommended for funding (see next page for Table). The rationale for not funding these applications include:

- Applications were lower scoring.
- Question of whether project meets the intent of the funding.
- The results from previous COG/TPB grants have not yet been realized.
- Poor past performance.

It is important to note that applications not recommended for funding at this time will have another opportunity under the ARP solicitation and will receive a notice with recommendations for improving their application. They will also be offered a debriefing about their application with TPB staff.

Applications Not Recommended for Funding			
Applicant	**Geographic Focus**	**Proposed Project**	**Federal Funds Requested**
Boat People SOS	Virginia	To assist seniors and individuals with disabilities to register and get vaccinated within the given timelines using educational workshops and mass media campaign on vaccine safety and existing Mobility Management program to help identify transportation options. Request includes staff salary & fringe, PPE, transportation vouchers, marketing, audit, travel, phone, printing	$100,000
Chinese Culture and Community Service Center	Montgomery County, MD	Door-to-door transportation service to improve mobility and quality of life during the pandemic by delivering meals, groceries, and medication and providing transportation to medical appointments, including vaccination. Request includes driver and management staff salary, fuel, insurance, PPE	$160,000
MontCo Taxi Union Co-op	Montgomery County, MD	Staffing and increased marketing for a recently expanded wheelchair accessible taxi program to ensure sufficient passengers and income for its driver-members, and driver lot fees for the co-op's revenue. Request includes administrative and management staff salary and marketing	$245,400

ATTACHMENT B - CORONAVIRUS RESPONSE AND RELIEF SUPPLEMENTAL APPROPRIATIONS ACT OF 2021 (CRRSAA)

Overview

The Federal Transit Administration's (FTA's) Enhanced Mobility of Seniors and Individuals with Disabilities program (Section 5310) is for improving mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. The Metropolitan Washington Council of Governments (COG), as the administrative agent for the National Capital Region Transportation Planning Board (TPB), is the Designated Recipient for this program for the Washington DC-VA-MD Urbanized Area. Under CRRSAA the Designated Recipient for Section 5310 is tasked with the management of the program, including the approval of grant awards. The funds are 100% Federal; no match is required.

Coordinated Human Service Transportation Plan

By adopting eligibility criteria that made funding available only to existing subrecipients and recent subrecipients of Enhanced Mobility (or JARC and New Freedom projects funded under an Enhanced Mobility solicitation) who qualify, the projects are known to be consistent with the 2018 Update to the Coordinated Human Service Transportation Plan for the National Capital Region ("Coordinated Plan") and the expanded eligibility of transportation to vaccination sites.

Selection Process and Criteria for CRRSAA

The TPB adopted the following eligibility criteria for CRRSAA:

- Funding will be made available to existing subrecipients and recent subrecipients of Enhanced Mobility (or JARC and New Freedom projects funded under an Enhanced Mobility solicitation) who qualify.
- The application must be for the benefit of the same project as the existing or recently closed award, and/or for transportation to COVID vaccination sites. If for vehicles already delivered, it should be to support the purpose of the vehicles, i.e. driver salaries, coordination staff, operating costs, etc.
- Applicants will be required to document impact, specifically the need to end or limit activities or services and lay off or furlough staff.
- Applicants will be required to document that any CARES act dollars received have been fully expended or were not used for the project in the application
- It is recommended that the request be at least $75,000 - $100,000 for ease of management but does not preclude applying for funding for lower amounts.

The TPB adapted the Enhanced Mobility quantitative scoring process to the eligibility criteria for CRRSAA:

Criterion	Maximum Points
Project Focus: Additional points (up to the 45) will be awarded to projects addressing transportation to vaccination sites in Equity Emphasis Areas	45
Project Feasibility	25
Institutional Capacity to Manage and Administer an FTA Grant	20
Partnership/Coordination Additional points (up to the 10) will be awarded to partnerships across department or jurisdictions	10

Solicitation for CRRSAA projects

The TPB solicitation for CRRSAA funds was conducted from February 24 through March 24, 2021. Notification of the funding opportunity was sent to existing subrecipients and recent subrecipients of Enhanced Mobility (or JARC and New Freedom projects funded under an Enhanced Mobility solicitation) who qualify. An overview of CRRSAA funding, eligibility criteria to apply and selection criteria was also shared with the TPB, the TPB's Technical Committee, the Access for All Advisory Committee, and COG staff involved in Public Health and Emergency Preparedness.

Selection Committee

Towards the goal of getting the funding out into our region as soon as possible, an internal selection committee was convened and consisted of five COG/TPB staff members:

- Lynn Winchell-Mendy, TPB Transportation Planner
- Sergio Ritacco, TPB Transportation Planner
- Lyn Erickson, Plan Development and Coordination Program Director
- Nicholas Ramfos, Program Director, Transportation Operations Programs
- Jenny Schitter, COG Principal Health Planner

After the solicitation period closed, the selection committee thoroughly reviewed all the applications and scored them based on the selection criteria listed above.

The Selection Committee collectively reviewed the applications, scores, and after a thoughtful and deliberative process, developed funding recommendations as described in Attachment A. TPB is requested to approve the recommendations and update of the TIP.

PROJECTS RECOMMENDED FOR CORONAVIRUS RESPONSE AND RELIEF SUPPLEMENTAL APPROPRIATIONS ACT OF 2021 (CRRSAA) FUNDING

For Approval and Inclusion in the FY 2021-2024 TIP

Lynn Winchell-Mendy
TPB Transportation Planner

Transportation Planning Board
April 21, 2021

Outline of Presentation

- CRRSAA program basics/eligibility/selection criteria
- Review six recommended projects
- Action on resolution R17-2021 to approve projects and amend the TIP
- Next steps

CRRSAA Program Basics

- On December 27, 2020, CRRSAA was signed into law
- Included $50 million for the 5310 Enhanced Mobility Program
- Washington, DC/VA/MD urbanized area = $532,218 (100 % Federal) available for award
- For expenses eligible under Enhanced Mobility, but recipients are directed to prioritize payroll and operational needs

CRRSAA Eligibility

- Existing subrecipient/recent subrecipients of Enhanced Mobility (or JARC and New Freedom projects funded under an Enhanced Mobility solicitation)
- Application for the benefit of the same project as the existing or recently closed award, and/or for transportation to COVID vaccination sites
- Applicants required to document impact, specifically the need to end or limit activities or services and lay off or furlough staff
- Applicants required to document that any CARES act dollars received was fully expended or not used for the project in the application

CRSSAA Selection Criteria

Recommendations for funding were based on the following selection criteria:

Criterion	Maximum Points
Project Focus: Additional points (up to the 45) will be awarded to projects addressing transportation to vaccination sites in Equity Emphasis Areas	45
Project Feasibility	25
Institutional Capacity to Manage and Administer an FTA Grant	20
Partnership/Coordination Additional points (up to the 10) will be awarded to partnerships across department or jurisdictions	10

Selection Recommendations

- Internal selection committee of COG and TPB staff
  - 5 members scored 9 applications based on Selection Criteria
  - Met April 7 and developed recommendations for funding
- Selection committee recommends funding 6 of the 9 applications received, using the entire $532,218
  - Recommendations prioritize awarding funds for payroll and operating expenses for direct transportation providers
  - Recommendations include transportation to COVID vaccination sites

Summary of Applications Received

Funding Available: $532,218

Requested: $1,430,221

	Requested
Total Number of Projects:	9
DC:	1
MD (includes some DC):	4
VA:	4

Projects Types

- Mobility Management services and vouchers for transportation to vaccination sites
- Payroll & operating expenses to restart or continue direct transportation services

Project Recommendations

Capitol Hill Village

Mobility Management services for transportation to vaccination sites. Expenses include staff salary and taxi vouchers.

Geographic Focus: District of Columbia

- **Total:** $90K

Dulles Area Transportation Association (DATA)

Mobility Management services for transportation to vaccination sites for Veterans who are seniors and/or have a disability. Expenses include staff salary and taxi vouchers.

Geographic Focus: Northern Virginia

- **Total:** $80K

Project Recommendations

ECHO

Vehicle operating expenses and maintenance. Expenses include driver salaries & benefits (to avoid layoffs), fuel, insurance, preventative maintenance, and licensing.

Geographic Focus: Northern Virginia

- **Total:** $100K

Prince George's County Department of Public Works and Transportation

Expansion of an existing taxi voucher program to include transportation to vaccination sites. Expense is taxi vouchers.

Geographic Focus: Prince George's County, Maryland

- **Total:** $107.2K

Project Recommendations

Regency Taxi

Mobility Management services for transportation to vaccination sites. Expenses include staff salary, training, driver salary for escorted transportation service, and marketing.

Geographic Focus: Montgomery County, Maryland and some District of Columbia

- **Total:** $75K

The Arc of Greater Prince William/INSIGHT, Inc.

Reestablishment of transportation for individuals with developmental disabilities. Expenses include salary and benefits for furloughed drivers, fuel, preventative maintenance, and repairs.

- **Geographic Focus:** Prince William County, VA
- **Total:** $80K

Next Steps

- Approve R17-2021
  - 6 projects recommended for funding
  - Amend the FY 2021-2024 TIP to include the projects
- TPB staff notifies applicants
  - Projects not recommended for funding will receive a notice with recommendations for improvement, and be offered a debriefing
  - Confirm Federal compliance for projects recommended for funding
- TPB staff submits selected projects to FTA for final approval

Lynn Winchell-Mendy

TPB Transportation Planner
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Metropolitan Washington Council of Governments
777 North Capitol Street NE, Suite 300
Washington, DC 20002

Photo courtesy of NADTC

National Capital Region
Transportation Planning Board

ITEM 8 – Action
April 21, 2021

FY 2022 TLC Technical Assistance Recipients

Action: Approve TLC technical assistance recipients under the FY 2022 TLC Program.

Background: The TPB's Transportation Land-Use Connections (TLC) Program has provided support to local jurisdictions since 2006 as they deal with the challenges of integrating land-use and transportation planning at the community level. Staff solicited applications for the FY 2022 TLC round of technical assistance between January 8 and March 8, 2021. The board will be briefed and asked to approve the applications that are being recommended for funding in FY 2022.

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: National Capital Region Transportation Planning Board

FROM: John Swanson, Transportation Planner

SUBJECT: FY 2022 Transportation Land-Use Connections Technical Assistance Funding Recommendations

DATE: April 15, 2021

This memo provides information on the recommendations of the Selection Panel for the FY 2022 round of technical assistance under the Transportation Land-Use Connections (TLC) Program. At the panel's meeting on March 29, the group identified 11 projects to recommend for funding in FY 2022. The TPB is scheduled to vote on the panel's recommendations on April 21.

FUNDING RECOMMENDATIONS FOR FY 2021

A total of $600,000 will be provided for the TLC Program in FY 2022 through funding in the Unified Planning Work Program (UPWP). The TLC Selection Panel recommends the 11 projects listed below for funding.

The recommended slate of projects is highly consistent with key TPB objectives:

- All 11 projects are in or near Activity Centers.
- 10 projects are in or near Equity Emphasis Areas.
- All 11 projects are in or near high-capacity transit station areas, and eight of these are in or near Transit Access Focus Areas (TAFAs).
- Nine projects support the National Capital Trail Network (NCTN). Three projects are directly part of the NCTN while an additional six will support connections to the NCTN.

Projects recommended for funding:

Discovery District Multi-Use Trail Transit Access Plan

College Park, $60,000

This project will prepare a plan for a multi-use trail between the University of Maryland East Campus Purple Line Station and the Riverdale Park Purple Line Station. It will review previous recommendations for pedestrian and bicycle access, including the proposal for a "Pink Line" connection made in a 2010 TLC study on Purple Line pedestrian and bicycle access.

Congress Heights Pedestrian Access Study

District of Columbia, $60,000

This study will examine the existing pedestrian transportation infrastructure in Congress Heights, with a focus on four areas. It will identify where safer pedestrian crossings, more accessible bus stops, and enhanced access to green spaces and community services are needed. The project will build upon a TLC-funded Metrorail Walkshed Improvement Project, conducted in FY 2017.

Microtransit in D.C - Assessment of DC Connect and Opportunities for Expansion

District of Columbia, $30,000

Given the current COVID-19 public health emergency and subsequent reductions in public transit service, the District aims to explore alternative ways to efficiently and effectively improve mobility and transportation equity in the District – particularly for vulnerable populations accessing medical and food services. This study will assess the Department of For-Hire Vehicles' (DFHV) DC Neighborhood Connect microtransit service, identify opportunities for expansion and develop a cost-savings model for funding microtransit compared to traditional bus service.

Development of an Active Transportation Plan near the Huntington Metrorail Station

Fairfax County, $55,000

This project will create an Active Transportation Plan for the Huntington Metrorail station and surrounding area. It will include an assessment of existing conditions, identification of barriers to access, and development of recommendations that will promote walkability, bikeability, and access to transit.

East End Transportation Study

Falls Church, $60,000

A multimodal transportation study for the East End of Falls Church will be conducted under this project. The area encompasses approximately 40 acres of commercial properties on the eastern edge of the City, adjacent to the Seven Corners area in Fairfax County, and approximately one mile south of the East Falls Church Metro Station. The study will support and be incorporated into the City's upcoming small area planning efforts and inform future site layout as part of redevelopment and city grant applications.

East Street Redesign

City of Frederick, $60,000

A new design for East Street will be created under this project, including a road diet, new and improved sidewalks, and bicycle access. The project will extend from North Market to Monocacy Boulevard/New Design Road. It will support a form-based code and a small-area plan initiative for the East Frederick area.

Greenbelt Road Corridor Plan

Greenbelt, $55,000

This project will prepare a plan to enhance multimodal access and increase safety along the Greenbelt Road Corridor. This plan will create a cohesive vision for the corridor and encourage alternate forms of transportation by identifying opportunities to increase bicycle and pedestrian facilities along the corridor.

Connecticut Avenue Corridor Pedestrian and Bicycling Access and Safety Study

Kensington (Montgomery County), $55,000

This planning study will identify bold options for transforming the Connecticut Avenue corridor through the Kensington and Ken-Gar communities, including major intersecting roads (such as Knowles Avenue, Plyers Mill Road/Metropolitan Avenue, and University Boulevard). The study will identify a vision, along with concrete solutions, for improving pedestrian and bicycle access and safety, expanding personal mobility options (e.g., a siting analysis for future Capital Bikeshare and micromobility locations, increasing use of the MARC station, etc.), developing traffic calming measures, and improving connectivity to the National Capital Trail Network to the immediate East and West of Kensington.

Cool-Street Design Guidelines and Standards

Montgomery County, $50,000

Climate change is the underlying subject of this project which will build on the Silver Spring Downtown & Adjacent Communities Plan. The project will study ways to mitigate the effects of escalating temperatures of the urban streetscape to create a more livable, usable, and tolerable streetscape even in the hottest of seasons. The guidelines will: assess a variety of surface materials, colors and textures showing temperatures and emission rates; offer alternative cooler material options when designing streetscapes; include green infrastructure analysis and standards as integrated elements within all streetscapes to maximize cooling and shading capacities; and outline other features that can be considered for cooling the streetscape and community.

Anacostia Gateway Connector

Prince George's County, $60,000

This project will develop 30% design plans, a geotechnical study, and a cost estimate for a more promising alignment of the Anacostia Gateway Connector/Prince George's County Connector, a long-planned (30 years) trail link between the NW Branch Trail at West Hyattsville and the Metropolitan Branch Trail at Ft. Totten.

Innovation Park Town Center Shuttle Service Feasibility Study

Prince William County, $55,000

This feasibility study will determine the capital infrastructure and operational needs to implement a proposed shuttle service to points of interest within the Innovation small area, including employment centers, commercial, and recreation, and the Broad Run VRE Station.

APPLICATION PROCESS

On January 8, 2021, the TPB issued a call for projects for the FY 2022 round of TLC technical assistance. The deadline for application submissions was March 8, 2021. Applicants were invited to submit optional abstracts which provided applicants an interim opportunity for TPB staff to review project concepts and to provide feedback on how to develop stronger TLC applications.

As in past years, technical assistance was again offered in amounts between $30,000 and $60,000 for planning projects, and up to $80,000 for 30% design projects. The Call for Projects and the application placed a focus on TPB priorities, including the aspirational initiatives included in Visualize 2045.

The TPB received 27 applications for FY 2022. Total requested funding for the entire application package was $1,645,000. This was the largest total request and largest number of applications received since the program's inception in 2006.

For this application cycle, $600,000 is available. This includes three funding sources:

- $260,000 from the TPB's FY 2021 UPWP core regional planning funds. Applications from all TPB jurisdictions are eligible for these funds
- $260,000 from the Maryland UPWP Technical Assistance account for projects from Maryland
- $80,000 from the Virginia UPWP Technical Assistance account for projects from Virginia

SELECTION PROCESS

The selection panel included the following members:

- Doug Noble, Institute of Transportation Engineers (ITE)
- Lisa Rother, Former Director, Urban Land Institute Washington Chapter
- Claire Randall, Transportation Research Board
- Michael Farrell, COG/TPB staff
- Nicole McCall, COG/TPB staff
- John Swanson, COG/TPB staff

The selection panel met on March 29 to review the project applications and develop a list of recommended projects for the FY 2022 round of TLC technical assistance. The selection panel used established regional evaluation criteria and their own extensive industry knowledge to assess the proposed projects. The selection panel members individually reviewed and scored each application in advance based on their assessments of the projects as well as regional criteria. The panel members then used their scores to divide the applications in rankings of high/medium/low. The rankings served as a starting point for the panel's collective discussion.

Based upon discussion of the regional and local merits of the applications, the selection panel developed a list of 11 projects to recommend to the TPB for approval. The panel believes this package of projects will be locally and regionally beneficial. In developing the list, the panel strove to equitably allocate funding shares of different sizes among the District of Columbia, Maryland, and Virginia, while also attempting to create a slate of projects that addresses regional priorities across a diversity of topics affecting core, inner, and outer jurisdictions.

In some cases, the panel chose to award funding at lower levels than the applications requested. These changes were made in accordance with information on scalability provided in the applications. In other cases, the panel provided guidance regarding the scopes for specific projects.

PROPOSED PROJECT COMPLETION TIMELINE

On April 21, 2021, the TPB will be asked to approve the proposed slate of 11 projects for funding under the FY 2022 TLC technical assistance program. Upon approval of the projects, TPB staff will begin to coordinate with the jurisdictions that have been awarded technical assistance to commence the consultant selection process from the pre-qualified list of TLC consultants. All projects will begin soon after consultant contracts are signed. The projects will be scheduled for completion by June 30, 2022.

For further questions regarding the TLC program, contact John Swanson (jswanson@mwcog.org; 202-962-3295), Nick Suarez (nsuarez@mwcog.org), or Arianna Koudounas (akoudounas@mwcog.org).


TRANSPORTATION LAND USE CONNECTIONS

FY 2022 TECHNICAL ASSISTANCE

John Swanson
Transportation Planner

Transportation Planning Board
April 21, 2021

Background on the TLC Program

- Began in 2006
  - 145 Technical Assistance projects funded for more than $6 million between 2007-2021
- Promotes TPB policy objectives:
  - Multimodal transportation options
  - Land-use enhancements in activity centers and around high-capacity transit stations
  - Access for low-income and minority communities
  - Access to transit
  - Key regional trails

New Specificity this Year

- Began in 2006
  - 145 Technical Assistance projects funded for more than $6 million between 2007-2021
- Promotes TPB policy objectives:
  - Multimodal transportation options
  - Land-use enhancements in activity centers and around high-capacity transit stations
  - Access for low-income and minority communities
  - Access to transit → **Transit Access Focus Areas**
  - Key regional trails → **National Capital Trail Network**

Program Components

- Planning and design projects
- Small ($30,000-$80,000)
- Short-term (8-9 months)
- Cover a range of issues, including ped/bike planning, corridor and small area planning, and development of analytical tools

Funding for Technical Assistance in FY22

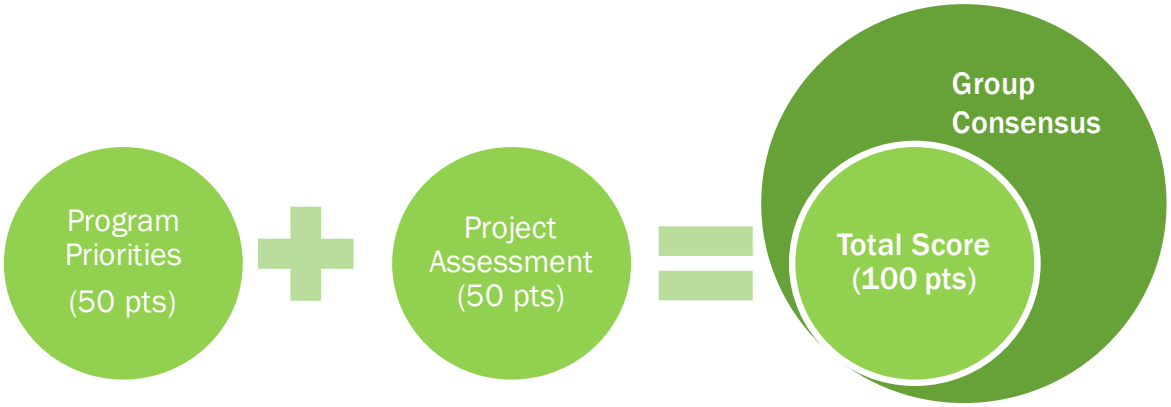
- Total funding for FY 2022: $600,000
  - *Core Regional Funds:* $260,000 – All projects are eligible
  - *Maryland Technical Assistance:* $260,000 – Maryland projects are eligible
  - *Virginia Technical Assistance:* $80,000 – Virginia projects are eligible

Solicitation

- Application solicitation period: January 8–March 8, 2021
  - Optional Abstracts were due January 26
- 27 applications were received
  - 3 applications from the District of Columbia, 14 from Maryland, and 10 from Virginia
  - Total of $1,645,000 in requested funding

Selection

- Panel
  - External experts (Institute of Transportation Engineers, Urban Land Institute, Transportation Research Board) and COG/TPB staff
- Evaluation



- Panel seeks to fund a variety of types of projects, provide regional value, and reflect geographic balance among projects
- Final recommendations based on consensus

Recommended Projects

- Total funding: $600,000
- 11 applications recommended
  - 11 projects – in/near Activity Centers
  - 10 projects – in/near Equity Emphasis Areas
  - 11 projects – in/near high-capacity transit stations
    - 8 projects – in/near Transit Access Focus Areas (TAFAs)
  - 9 projects – support National Capital Trail Network (NCTN)
    - 3 projects – directly part of the NCTN
    - 6 projects – support connections to the NCTN.

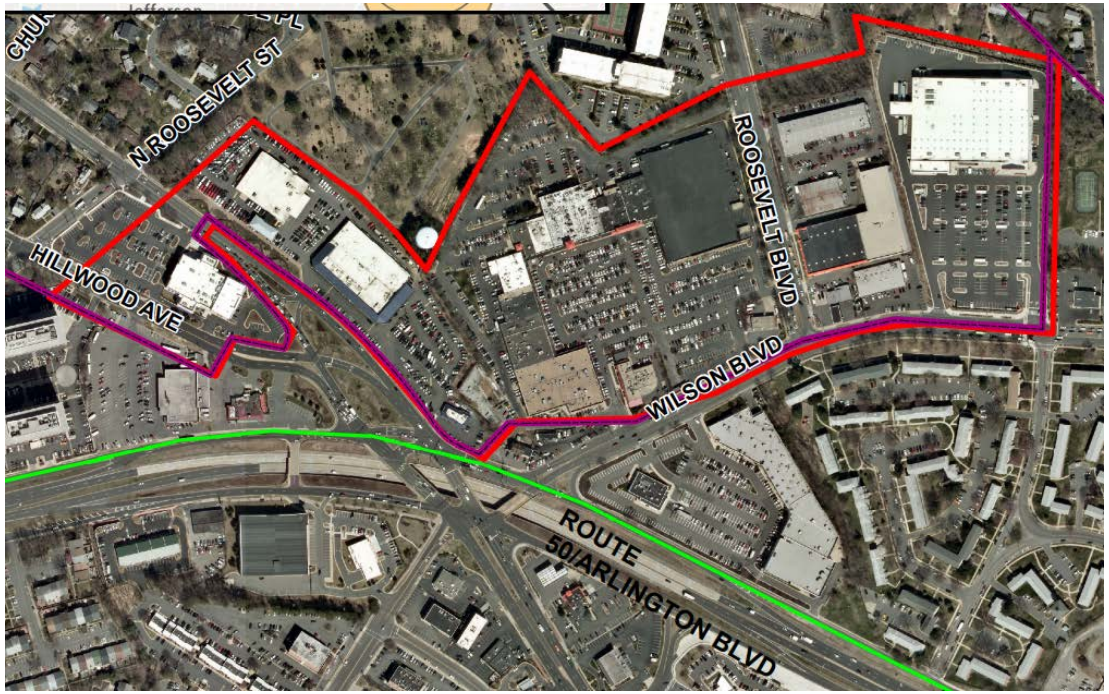
Draft Funding Recommendations

Jurisdiction Name	Project	Panel Recommendation
College Park	Discovery District Multi-Use Trail Transit Access Plan	$60,000
District of Columbia	Congress Heights Pedestrian Access Study	$60,000
District of Columbia	Assessment of Microtransit	$30,000
Fairfax County	Active Transportation Plan near Huntington Metrorail	$55,000
Falls Church	East End Transportation Study	$60,000
The City of Frederick	East Street Redesign	$60,000
Greenbelt	Greenbelt Road Corridor Plan	$55,000
Kensington (Mont. Co)	Connecticut Avenue Corridor Planning	$55,000
Montgomery County	Cool-Street Design Guidelines and Standards	$50,000
Prince George's County	Anacostia Gateway Connector	$60,000
Prince William County	Innovation Park Shuttle Service Feasibility Study	$55,000

Details from a few examples…

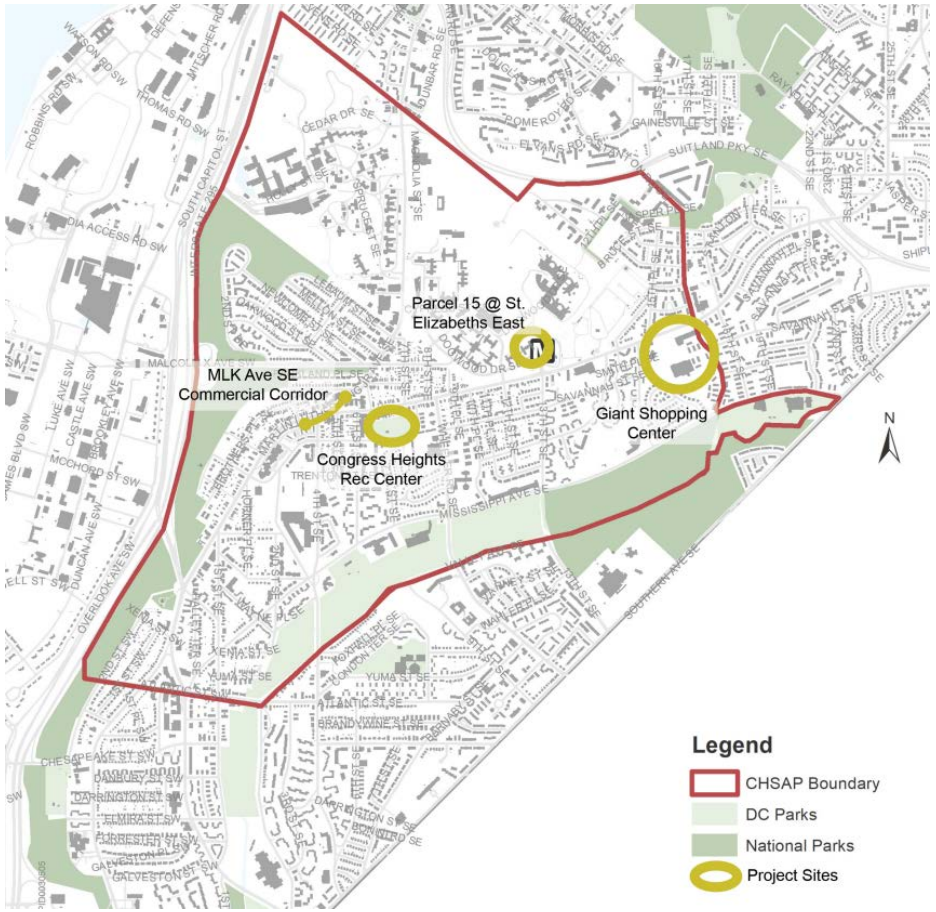
Falls Church: East End Transportation Study

- Approximately 40 acres of commercial properties. Part of Eastern Gateway/Seven Corners
- A “crossroads” -- transportation connections; cultural and commercial; multi-jurisdictional
- Make recommendations for connectivity and accessibility



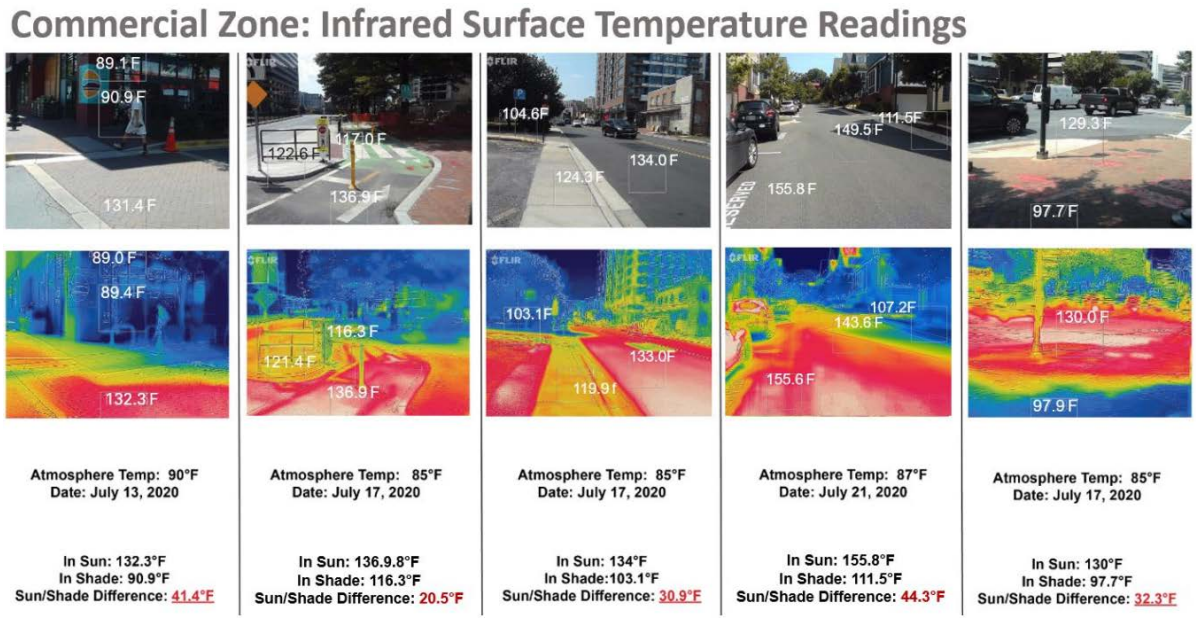
DC: Congress Heights Pedestrian Access Study

- Focus on pedestrian access to four community-serving sites
- Identify needs for safer pedestrian crossings, more accessible bus stops, enhanced access to green spaces and community services.
- Coordinated with previous and ongoing planning work, including St. Elizabeth's redevelopment



Montgomery County: Cool-Street Design Guidelines & Standards

- Identify ways to mitigate the effects of climate change on the escalating temperatures of the urban streetscape
- Create a more livable, usable, and tolerable streetscape even in the hottest of seasons.
- Build on the Silver Spring Downtown & Adjacent Communities Plan



Next Steps

- Seek TPB approval of project recommendations at meeting on April 21
- Begin consultant selection process in May

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ITEM 9 – Information
April 21, 2021

Visualize 2045: Briefing on Project Inputs and Draft Scope of Work for the Air Quality Conformity Analysis for the 2022 Update to Visualize 2045 and the FY 2023-2026 TIP

Background:

TPB Transportation Planner, Stacy Cook, will briefly summarize the TPB work session.

The 2022 update to the Visualize 2045 constrained element will identify all regionally significant transportation investments that have demonstrated funding between now and 2045. Federal law requires that this collection of projects and programs be analyzed to ensure that future vehicle-related emissions remain below approved regional limits. The TPB will be briefed on the new major projects and significant changes to major projects already in the plan that were submitted for the update, and the draft scope of work for the air quality conformity analysis. The 30-day public comment on the inputs and scope is scheduled from April 2, 2021 to May 3, 2021.

The materials that have been posted for the public comment period can be found here:

TPB Comment Form - Getting Involved & Public Comment | Metropolitan Washington Council of Governments (mwcog.org)

Visualize 2045: Briefing on Project Inputs and Draft Scope of Work for the Air Quality Conformity Analysis for the 2022 Update to the Plan and FY 2023-2026 TIP

Stacy M. Cook
TPB Transportation Planner

Agenda Item 9

April 21, 2021

visualize 2045

A long-range transportation plan for the National Capital Region

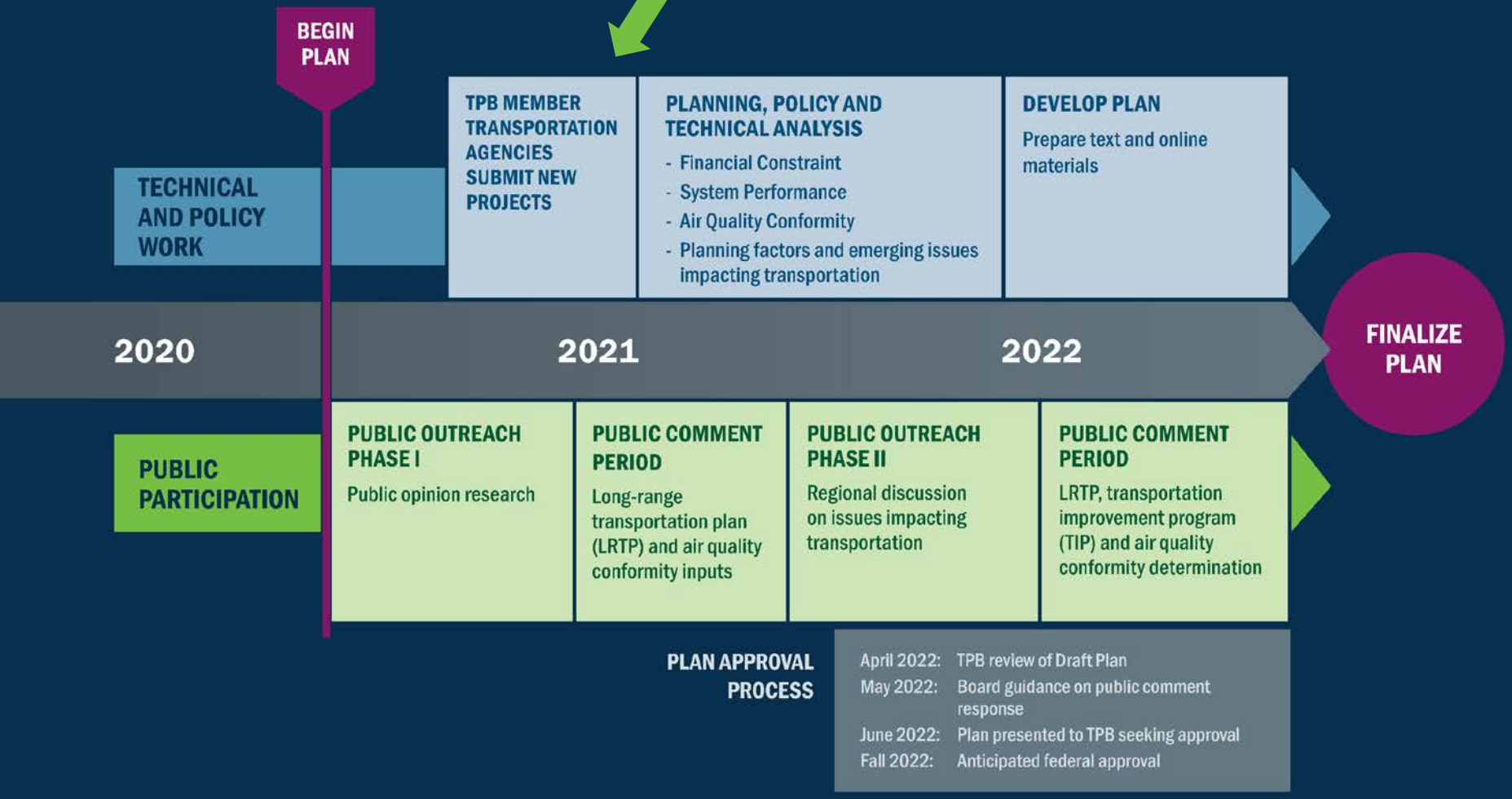
Work Session – Brief Summary

- 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. 4. District of Columbia projects
- 11:00 A.M. 5. Virginia projects
- 11:20 A.M. 6. Maryland projects
- 11:45 A.M. 7. Other projects / Technical Inputs
- 11:55 A.M. 8. Adjourn

TPB's Visualize 2045 Long-Range Transportation Plan Update (2022)

We are here

visualize 2045



Visualize 2045: A Regional Vision and Local Actions Come Together

TPB establishes policy framework

TPB staff evaluate system performance

TPB develops consensus on strategic solutions > e.g., Aspirational Initiatives

Member agencies develop projects, programs and policies to address local and regional needs

Technical Inputs Solicitation

Member agencies prioritize projects, submit projects to TPB

Must submit projects that:

- impact air quality conformity analysis
- use federal funds

Local Decision-making

visualize 2045

Two Parts of Visualize 2045

Plan's Constrained element

- Projects from approved local plans
- Projects are vetted through local planning processes
- Constrained

Rest of the Plan

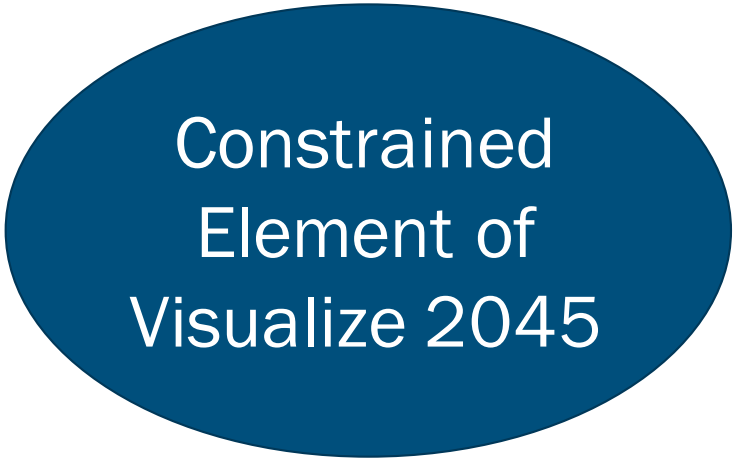
- Vision and Goals
- Reflects Where We are Today
- Factors we must Consider when Planning for the Future
- Strategies for a Better Future (and more)

What are some Constraints?

- **Federal Requirements**
  - Fiscal constraint: expected revenues must cover project list
  - Projects included through about a 20- year (minimum) horizon 2045
- **Air Quality Conformity Analysis**
  - Certain project types required – those that impact capacity
- **Funding Availability and Silos**
  - Much of fed/state project funding is dedicated to specific uses, allocated through formulas
  - About 80% of funding goes to maintenance

What Is in the Constrained Element?

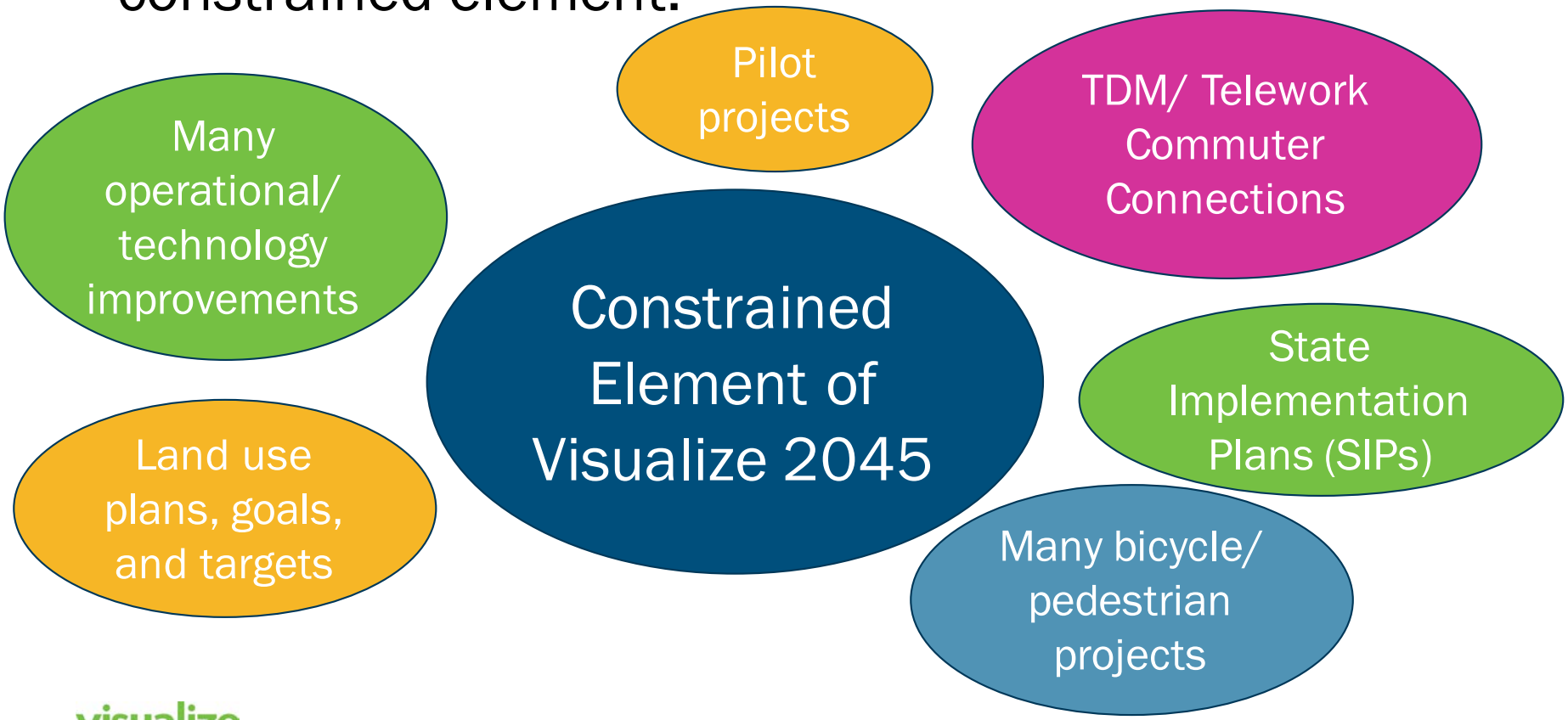
- Projects that impact air quality conformity analysis
- Projects that use federal funding



Financial constraint means we can't include projects that don't have identified funding sources

How is Visualize 2045 Implemented?

- Implementation activities extend beyond the constrained element:



Aspirational Initiatives - Implementation

- Bring Jobs and Housing Closer Together
- Improve Walk and Bike Access to Transit
- Complete the National Capital Trail
- Provide More Telecommuting and…

Implemented mostly **outside** of the Visualize 2045 constrained element

- Other Options for Commuting
- Move More People on Metrorail
- Expand Express Highway Network
- Expand Bus Rapid Transit and Transitways Regionwide

Implemented mostly **within** the Visualize 2045 constrained element

Climate Change Mitigation Study of 2021 as input to Visualize 2045 Update

We are here

April 2-May 3 2021	June 2021	June 2021 - Jan 2022	April 2022	June 2022
Step 1 – Update and add projects, public comment	Step 2 – Request Board approval new inputs for analysis	Step 3 – Conduct analysis and develop plan draft chapters	Step 4 – Post draft plan and AQC results for public comment	Step 5 – Request Board approval of plan, TIP, AQC results

TPB Climate Change Mitigation Study of 2021 –conducted in CY 2021

Results merged into Visualize 2045

Facilitated Review of Proposed Technical Inputs

visualize 2045

Comment Period Materials

- **Visualize 2045 Update – Comment Period Materials – Packet includes:**
  - Memorandum with overview
    - Background
    - Summary of existing highway, transit and HOV major projects
    - Maps
  - Federal and Regional Goals/Initiatives Matrixes
  - Major Project Profiles (for new Major Projects and ones already in the plan with significant changes)
  - Project Description Sheets – new/changed projects
  - Air Quality Conformity Table and Scope of Work

DDOT: New Major Project

- In the District of Columbia:
  - DDOT is proposing to implement bus-only lanes on H and I street

VDOT: New Major Project

- In Loudoun County, Virginia, the County and VDOT are proposing to:
  - Construct a new 4-lane road for completion in 2029, the US-50 North Collector Road

MDOT: Significant Change to Major Project already in Visualize 2045

The I-270 component of MDOT's "Traffic Relief Plan" project, is in the current plan, Visualize 2045. MDOT is proposing changes.

New Description: Project will add one High Occupancy Toll (HOT) managed lane in each direction along I-270 between the Capital Beltway (I-495) and I-70/US 40, while converting the existing HOV lane in each direction to a HOT lane.

Proposed Changes:

- Changing the managed lanes along I-270 from Express Toll Lanes (ETL) in each direction to HOT lanes in each direction.
  - *Note: For both TRP projects: all users pay tolls on ETLs, only those vehicles not meeting high occupancy requirements pay tolls on HOT lanes. Carpool/vanpools of three or more occupants will travel toll-free on the HOT lanes on the I-495 and I-270 components of the TRP. Transit buses will also travel toll-free.*
- Adding one additional HOT lane in each direction (previously proposed two lanes are being reduced to one while converting the existing HOV lanes to HOT lanes in each direction).
- Changing the completion date for the segment from I-370 to I-70 from 2025 to 2030.

MDOT: Significant Change to Major Project already in Visualize 2045

The I-495 component of MDOT's "Traffic Relief Plan" project, is in the current plan, Visualize 2045. MDOT is proposing changes

New Description: Project will add two High Occupancy Toll (HOT) managed lanes in each direction along the Capital Beltway between the Virginia end of the American Legion Bridge to the Maryland end of the Woodrow Wilson Bridge

Proposed changes:

- Changing the managed lanes along the entire Maryland Capital Beltway from Express Toll Lanes (ETLs) to High Occupancy Toll (HOT) lanes in each direction
- Changing the completion date for the segment of the HOT lanes from MD 355 to the Wilson Bridge from 2025 to 2030

TABLE 1
VISUALIZE 2045 UPDATE - PROJECT SUBMISSIONS AND THE REGIONAL TRANSPORTATION PRIORITIES PLAN GOALS

This matrix provides a visual summary of the responses provided by the relevant implementing agencies as to how their proposed projects and updated projects support the goals identified in the RTPP.

Project ID			GOAL 2: SOV	HOV	MetroRail	Commuter Rail	Streetcar/Lt. Rail	BRT	Exp. Bus	Metrobus	Local Bus	Bicycling	Walking	Other	Disadvantaged Groups	GOAL 1: Non Auto Travel/ Reduce VMT	Begin/End in AC	Connect ACs	Non-Auto w/in AC	Connect EEA to ACs	GOAL 3: Maintenance	Reduce Time w/o Capacity	Enhance Safety	GOAL 4: Criteria Pollutants	Greenhouse Gases	GOAL 5: Long Haul Truck	Local Delivery	Freight Rail	Freight Air	Air Passenger	Amtrak	Intercity Bus
MAJOR PROJECTS*																																
1. H&I Bus Lanes	$ 1.1 Million	2021								✓	✓	✓				✓	✓		✓			✓		✓	✓							✓
2. I-270 Toll Lanes	$ 3.4 Billion	2025	✓	✓					✓	✓	✓					✓	✓	✓					✓	✓	✓							
3. I-495 Toll Lanes	$ 4.2 Billion	2030	✓	✓					✓	✓	✓					✓	✓	✓					✓	✓	✓							
4. US50 North Collector Rd	$ 110 Million	2029	✓	✓							✓				✓	✓										✓	✓	✓	✓			
OTHER PROJECTS																																
5. 16th St NW	$ 2 Million	2024	✓						✓			✓		✓	✓	✓	✓	✓		✓		✓	✓	✓	✓							
6. MD 85 Buckeystown Pike	$ 140 Million	2035	✓												✓	✓							✓	✓	✓	✓				✓		
7. VA 620 Braddock Rd	$ 34 Million	2028								✓		✓			✓	✓		✓					✓			✓						
8. Worldgate Dr Ext.	$ 20 Million	2030													✓	✓	✓	✓		✓		✓	✓	✓								
9. VA 607 Loudoun Cty Pky	$ 3 Million	2022			✓						✓	✓			✓	✓																
10. VA 645 Croson Ln	$ 19 Million	2027			✓						✓					✓																
11. VA 659 Belmont Ridge Rd	$ 68 Million	2025										✓											✓	✓		✓						
12. Crosstrail Blvd	$ 66 Million	2026						✓			✓														✓	✓					✓	
13. VA 3171 Northstar Blvd	$ 33 Million	2028									✓	✓			✓																	
14. Annapolis Way Ext	$ 8.7 Million	2028		✓				✓			✓	✓		✓	✓	✓		✓						✓	✓							
15. Horner Rd	$ .3 Million	2030		✓				✓			✓	✓		✓	✓	✓			✓					✓	✓							
16. Dale City Pkwy Node New Through Blvd	$ 10 Million	2030									✓	✓			✓										✓							
17. Williamson Blvd	$ 3 Million	2030								✓	✓	✓			✓									✓	✓							
18. Alexandria 4th Track	$ 185 Million	2025						✓			✓	✓	✓		✓	✓	✓	✓						✓	✓		✓			✓		
19. Broad Run Expansion	$ 164 Million	2025		✓	✓						✓	✓	✓		✓	✓	✓	✓		✓				✓	✓	✓		✓			✓	
20. Observation Drive	$ 113 Million	2035						✓		✓		✓			✓											✓				✓		

* Major projects are defined as changes to interstates, major arterials, and expressways or freeways with at-grade intersections, as well as dedicated transit facilities.

TABLE 2
VISUALIZE 2045 UPDATE - PROJECT SUBMISSIONS AND THE ASPIRATIONAL INITIATIVES

This matrix provides a visual summary of the responses provided by the relevant implementing agencies as to how their proposed projects support the Aspirational Initiatives

	Estimated Cost	Projected Completion	Bring Jobs and Housing Closer Together	Expand Bus Rapid Transit and Transitways Regionwide	Move More People on Metrorail	Provide More Telecommuting and Other Options for Commuting	Expand Express Highway Network	Improve Walk and Bike Access to Transit	Complete the National Capital Trail
MAJOR PROJECTS*									
1. H & I Bus Lanes	$1.1 Million	2021		✓				✓	
2. I-270 Toll Lanes	$3.4 Billion	2030					✓		
3. I-495 Toll Lanes	$4.2 Billion	2025					✓		
4. US 50 North Collector Rd	$110 Million	2028	✓				✓		
OTHER NEW PROJECTS									
5. 16th St NW	$2 Million	2024							
6. MD 85 Buckeystown Pike	$140 Million	2035							
7. VA 620 Braddock Rd	$34 Million	2028						✓	
8. Worldgate Dr Ext.	$20 Million	2030					✓		
9. VA 607 Loudoun Cty Pky	$3 Million	2022						✓	✓
10. VA 645 Croson Ln	$19 Million	2027			✓			✓	✓
11. VA 659 Belmont Ridge Rd	$68 Million	2025						✓	
12. Crosstrail Blvd	$66 Million	2026					✓		
13. VA 3171 Northstar Blvd	$33 Million	2028							
14. Annapolis Way Ext	$8.7 Million	2028	✓					✓	
15. Horner Rd	$0.3 Million	2030	✓					✓	
16. Dale City Parkway Node New Through Boulevard	$10 Million	2030	✓					✓	
17. Williamson Blvd	$3 Million	2030						✓	
18. Alexandria 4th Track	$185 Million	2025							
19. Broad Run Expansion	$164 Million	2025				✓		✓	
20. Observation Dr	$113 Million	2035		✓				✓	

* Major projects are defined as changes to interstates, major arterials, and expressways or freeways with at-grade intersections, as well as dedicated transit facilities.

TABLE 3
VISUALIZE 2045 UPDATE - PROJECT SUBMISSIONS AND THE FEDERAL PLANNING FACTORS

This matrix provides a visual summary of the responses provided by the relevant implementing agencies as to how their proposed projects support the planning factors set forth in the FAST Act

	Estimated Cost	Projected Completion	Economic Vitality	Safety	Homeland Security	Accessibility/Mobility People	Accessibility/Mobility Freight	Environment	Integration/Connectivity	Management & Operation	Preservation	Resiliency & Stormwater Impact	Tourism
MAJOR PROJECTS*													
1. H & I Bus Lanes	$1.1 Million	2021	✓	✓		✓		✓					
2. I-270 Toll Lanes	$3.4 Billion	2030	✓	✓	✓	✓	✓	✓	✓	✓			
3. I-495 Toll Lanes	$4.2 Billion	2025	✓	✓	✓	✓	✓	✓	✓	✓			
4. US 50 North Collector Rd	$110 Million	2028	✓			✓	✓		✓				✓
OTHER NEW PROJECTS													
5. 16th St NW	$2 Million	2024	✓	✓		✓		✓	✓	✓			
6. MD 85 Buckeystown Pike	$140 Million	2035	✓										
7. VA 620 Braddock Rd	$34 Million	2028		✓					✓	✓			
8. Worldgate Dr Ext.	$20 Million	2030				✓							
9. VA 607 Loudoun Cty Pky	$3 Million	2022		✓					✓				
10. VA 645 Croson Ln	$19 Million	2027				✓			✓				
11. VA 659 Belmont Ridge Rd	$68 Million	2025	✓	✓	✓	✓	✓	✓	✓	✓			
12. Crosstrail Blvd	$66 Million	2026				✓	✓		✓			✓	
13. VA 3171 Northstar Blvd	$33 Million	2028		✓		✓			✓				
14. Annapolis Way Ext	$8.7 Million	2028	✓			✓			✓				
15. Horner Rd	$0.3 Million	2030	✓			✓			✓				
16. Dale City Parkway Node New Through Boulevard	$10 Million	2030				✓			✓				
17. Williamson Blvd	$3 Million	2030				✓							
18. Alexandria 4th Track	$185 Million	2025	✓	✓	✓	✓	✓	✓	✓	✓	✓		
19. Broad Run Expansion	$164 Million	2025	✓	✓		✓	✓	✓	✓	✓		✓	✓
20. Observation Dr	$113 Million	2035	✓	✓		✓		✓	✓	✓	✓	✓	✓

Federal Planning Factors

- Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- Increase the **safety** of the transportation system for all motorized and non-motorized users.
- Increase the ability of the transportation system to support **homeland security** and to safeguard the personal security of all motorized and non-motorized users.
- Increase accessibility and mobility of **people**.
- Increase accessibility and mobility of **freight**.
- Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight.
- Promote efficient system **management and operation**.
- Emphasize the **preservation** of the existing transportation system.
- Improve the **resiliency** and reliability of the transportation system and reduce or **mitigate** stormwater impacts of surface Transportation
- Enhance travel and **tourism**

*** Major projects are defined as changes to interstates, major arterials, and expressways or freeways with at-grade intersections, as well as dedicated transit facilities.**

Air Quality Conformity Inputs and Scope of Work

visualize 2045

Air Quality Conformity Scope of Work

Pollutants	Ozone Season VOC and NOx
Emissions Model	MOVES2014b
Conformity Test	Budget Test: Using mobile emissions budgets most recently approved by EPA: 2008 Ozone NAAQS Maintenance Plan mobile budgets found adequate by EPA in August 2018.
Vehicle Fleet Data	July 2020 (DC)[2] and December 2020 (MD & VA) vehicle registration data
Geography	8-hour ozone non-attainment area
Network Inputs	Regionally significant projects
Land Activity	Cooperative Forecasts Round 9.2
HOV/HOT	VA: I-95, I-395, and I-495 are all HOT3+; I-66 inside the Beltway will convert from HOT2+ to HOT3+ when I-66 outside the Beltway opens as HOT3+; the Dulles Toll Road will convert from HOV2+ to HOV3+ in 2023; all other HOV facilities will be HOV2+ through 2045 MD: HOV facility on US 50 will remain HOV2+ through 2045; HOV facility on I-270 will convert from HOV2+ to HOT3+ when an additional HOT lane is added; planned additional Capital Beltway express toll lanes will be HOT3+ when added
Roadway Restrictions	Roadway restrictions, such as truck prohibitions, are reflected in the travel model network using information supplied by the Departments of Transportation
Transit Constraint	NO Metrorail "capacity constraint" (removed with March 2018 passage of annual funding for WMATA agreement)
Analysis Years	2021 or 2024[3], 2025, 2030, 2040, and 2045
Modeled Area	6,800 square mile area with 3,722 Transportation Analysis Zones (TAZs)
Travel Demand Model	Gen2/Version 2.4 or latest

Draft

Conformity Project Input Table

2022 Update to VISUALIZE 2045 AIR QUALITY CONFORMITY NETWORK INPUTS
(highway)

DRAFT 3/29/2021

PIT Project ID	Con ID	Project ID	Agency ID	Improvement	Facility	From	To	Facility Fr	Facility To	Lanes Fr	Lanes To	Completion Date
CE2248	942	NRS	PG5811	Reconstruct	MD 223	MD 4	Steed Road	3	3	2	2	2045
CE1207	175	MS18D	PG6541	Widen	MD 450 Annapolis Road	Stonybrook Drive	west of MD 3	2	2	2	4	~~2020~~ 2030
	516	same as MC15B	MO3441	Construct	Montrose Parkway	Randolph Road	East of Parklawn Drive	0	2	0	4	2020
6384	152	BRAC nrs	MO5931	Reconstruct	BRAC Intersection Improvements near the National Naval Medical Center, Bethesda			2	2			2020 complete
	Frederick County											
	Secondary											
	648	MS36C	FR5491	Widen/Upgrade	MD 180 Ballenger Creek Pike	Ballenger Center Drive	Corporate Drive	3	2	2	4	2020
	993	in FS3		Widen/Upgrade	Christopher's Crossing	Whittier Drive	Poole Jones Road	3	3	2	4	2024
	880	FS3		Expansion	Christopher's Crossing	Walter Martz Road	Thomas Johnson Drive	3	3	0 to 2	4	2020
	879	NRS		Construct	Christopher's Crossing	Shookstown Road	Rocky Springs Road	3	3	0	4	2026
	651	FS2a		Widen	Monocacy Boulevard	Schifferstadt Boulevard	Gas House Pike	3	3	2	4	2019
	691	NRS	F3	Construct	Spectrum Drive	Technology Way	MD 85 Buckeystown Pike	0	4	0	2	2030
	Montgomery County											
	Secondary											
3498	208	NRS		Construct	Burtonsville Access Road	MD 198 Spencerville Road	School Access Road in Burtonsville	0	4	0	2	2025
5944	597	NRS		Construct	Century Boulevard	Current terminus south of Oxbridge Tract	Intersection with future Dorsey Mill Road	0	3	0	4	~~2020~~ 2013 Completed
CE1577	199	MC43		Construct	Dorsey Mill Road Bridge over I-270	Century Blvd.	Milestone Center Dr.	0	3	0	4	~~2020~~ 2030
3049	112	MC7A		Widen	Goshen Road South	South of Girard Street	1000 feet north of Warfield Road	3	3	2	4	~~2025~~ 2030
CE1245	172	MC11A		Construct	M 83 MidCounty Highway Extended	MD 27 Ridge Road	Middlebrook Road	0	2	0	4-6	~~2025~~ 2045
CE1245	204	MC11D	509337-1	Construct	M 83 Midcounty Highway Extended	Middlebrook Road	Montgomery Village Avenue	0	2	0	4-6	~~2025~~ 2045
	113	MC12F		Widen	MD 118 Germantown Road Extended	MD 355	M 83 at Watkins Mill Road	2	2	3	4	2020

NOTE: Shaded areas represent changes from the 2020 Amendment to Visualize 2045

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visualize 2045

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Metropolitan Washington Council of Governments

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ITEM 10 – Information
April 21, 2021

TPB Climate Change Mitigation Study of 2021

Background:

The goal of this study is to demonstrate potential pathways for the region to reduce on-road transportation sector greenhouse gas (GHG) emissions to meet regional GHG reduction goals in 2030 and 2050. The study is divided into two phases: Phase 1, conducted by TPB staff, is a summary of major findings from past work done in this area by TPB and COG. Phase 2 will be a technical analysis conducted by a consultant. At today's meeting, TPB staff will summarize the findings of the Phase 1 report, which was presented to the Technical Committee in draft form in February and will be used as reference for Phase 2 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=CQBOw%2f9%2bWdI6C3uNhXMwmHK583WxgZ3MnDzxnrC9aXs%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=lXr81RdQN3mqk%2bshOxOy7IpWrxfob7oywjYOo12NYsw%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).

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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%2fYo7kI1bNCWYEItoHU%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)

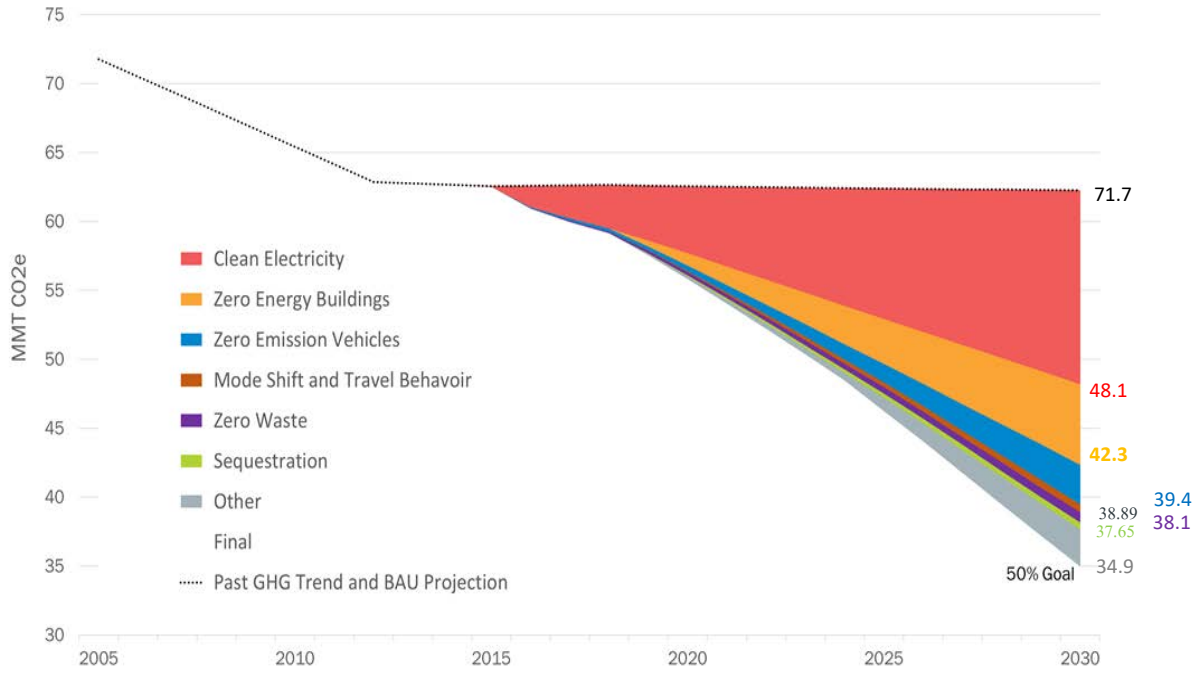
11 Metropolitan Washington Council of Governments. "Metropolitan Washington 2030 Climate and Energy Action Plan Appendices". Washington, D.C. November 2020. https://www.mwcog.org/documents/2020/11/18/metropolitan-washington-2030-climate-and-energy-action-plan/

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 lead 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 though 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.mwcog.org/file.aspx?&A=duwNsxz2%2Fxd%2F2DXHZ14CUvhFvLvEezgHB%2BnzdnNpkvg%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.

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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.mwcog.org/file.aspx?D=Uj%2fOvKporwCjlofmfR2gk7ay5EmBOb9a4UhR7cKKQig%3d&A=ITSIgZNdO1uWwMHJVzfUV1WlPhZ9IDhMGqWIEQSf9CM%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.

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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=vJzRrjiQZi2WIeqwe80MmdahejC9TX0QKKBQJISRWX4%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."

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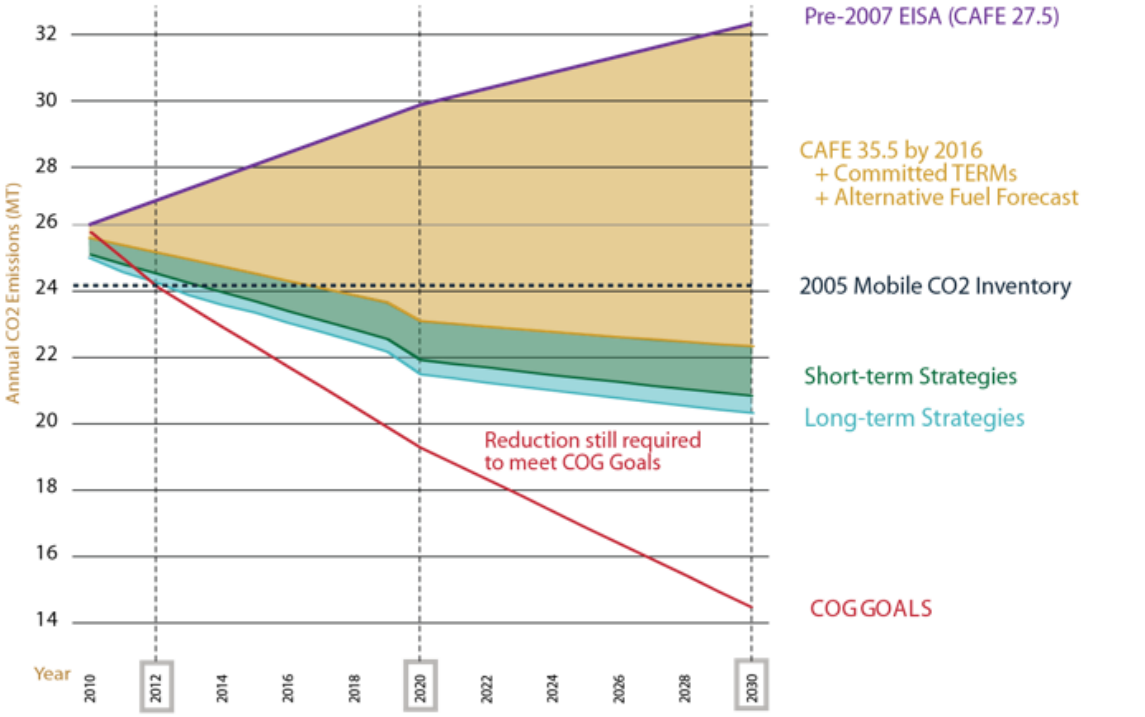
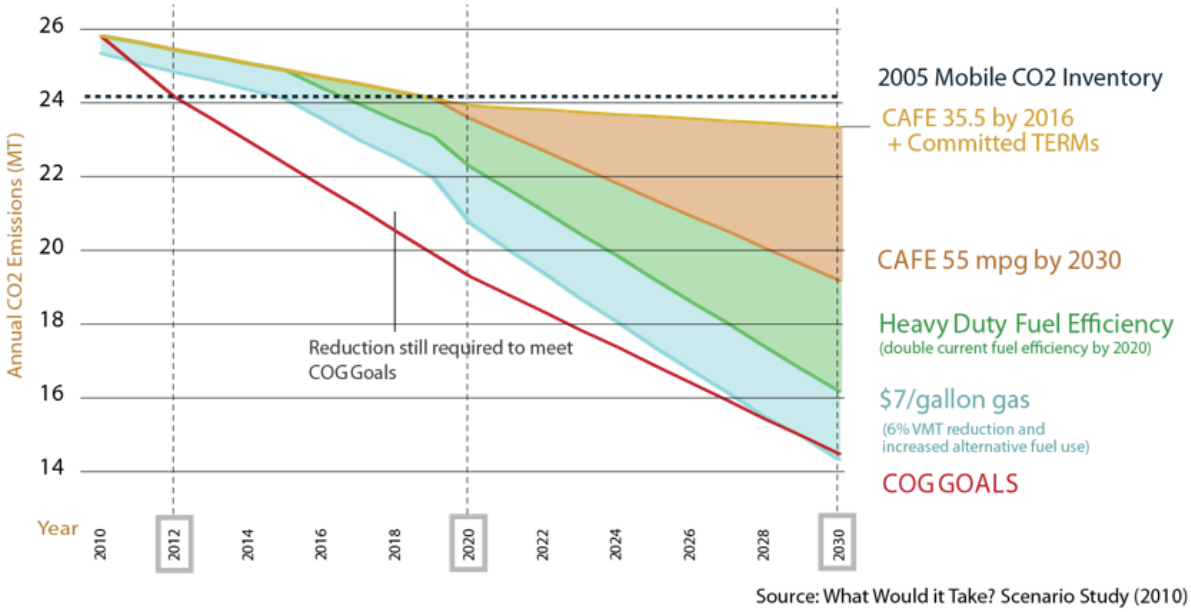
31 Final Report: What Would It Take? Transportation and Climate Change in the National Capital Region. Washington, D.C.: Metropolitan Washington Council of Governments. May 18, 2010. https://www.mwcog.org/documents/2010/05/18/what-would-it-take-scenario-land-use-projects/

Figure 3: GHG Reductions from Local/State/Regional Strategies (as defined in WWIT Study)



Source: What Would it Take? Scenario Study (2010)

Figure 4: GHG Reductions from "High Federal Role" Strategies (as defined in WWIT study)



Source: What Would it Take? Scenario Study (2010)

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 MMTCO2e 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 MMTCO2e 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 ($MMTCO_2e$)				
	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
Total Impacts of New Regional Strategies	--	--	*-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

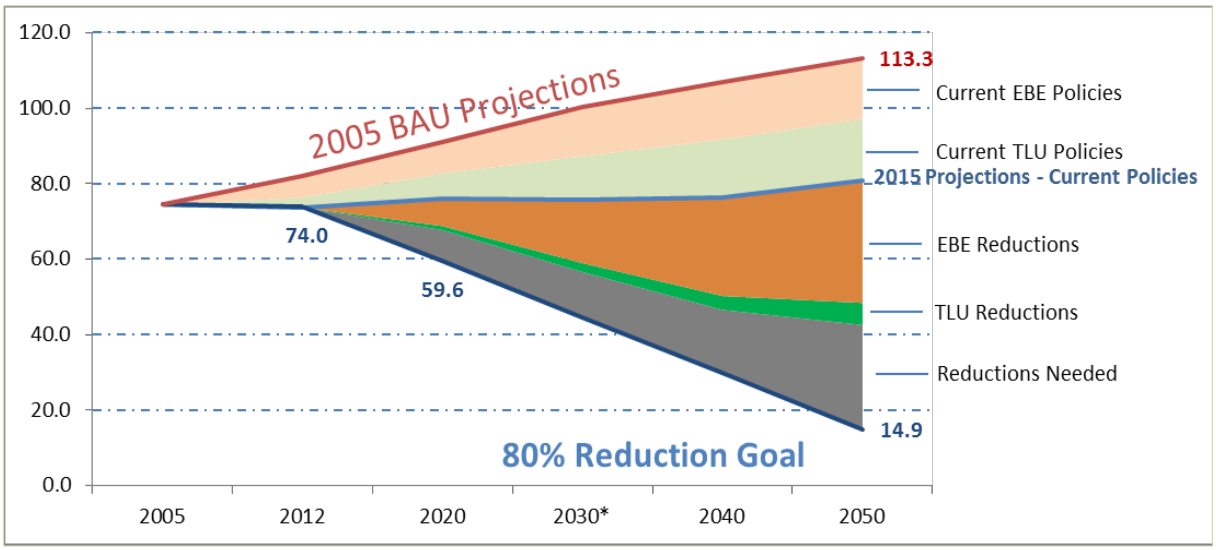


Table 2: Estimated GHG Reductions from Potential Future Regional Strategies (in Descending Order of GHG benefits in 2050) from MSWG Study

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 CO2e 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					
*Increased emissions from electricity consumption**			*0.13*	*0.72*	*1.26*
Carbon sequestration benefits			*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 Report[33] 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
Fuel Efficiency: 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
Alternative Fuels: 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.
Travel Efficiency: 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
Fuel Efficiency: 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.
Fuel Efficiency: 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
Alternative Fuels and Travel Efficiency: 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 10th St and 23rd 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)

TLU-2: Sustainable development patterns and urban design, including bicycle/pedestrian enhancements	• 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.
TLU-3: Improve fuel economy of light-duty vehicle fleet	• 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)
TLU-4: Increase alternative fuels in public sector fleets	• 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.
TLU-5: Truck stop electrification (TSE)	• 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.
TLU-6: Low carbon fuel standard	• 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%.

TLU-7: Enhancing system operations	• 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).
TLU-8: Reduce speeding on freeways	• 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)
TLU-9: Travel Demand Management	• 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.
TLU-10: Transit enhancements	• 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%.
TLU-11: Transit incentives/ Fare reductions	• 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.
TLU-12: Road pricing	• 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	• 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	• 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	• 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	• 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	• 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	• 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	• 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	• 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	• 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	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: • 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 Region[34]

Final Technical Report: What Would It Take? Transportation and Climate Change in the National Capital Region[35]

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.

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[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 Region[36]

Recommendation of the Multi-Sector Working Group[37]

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. 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=NQRpyfkLR1A9O4KiCx0%2bhAVEs%2fYo7kI1bNCWYEltoHU%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 Force[39]

R-8 2018: TPB Resolution endorsing initiatives recommended by the LRPTF[40]

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
April 21, 2021

Agenda Item #10

National Capital Region
Transportation Planning Board

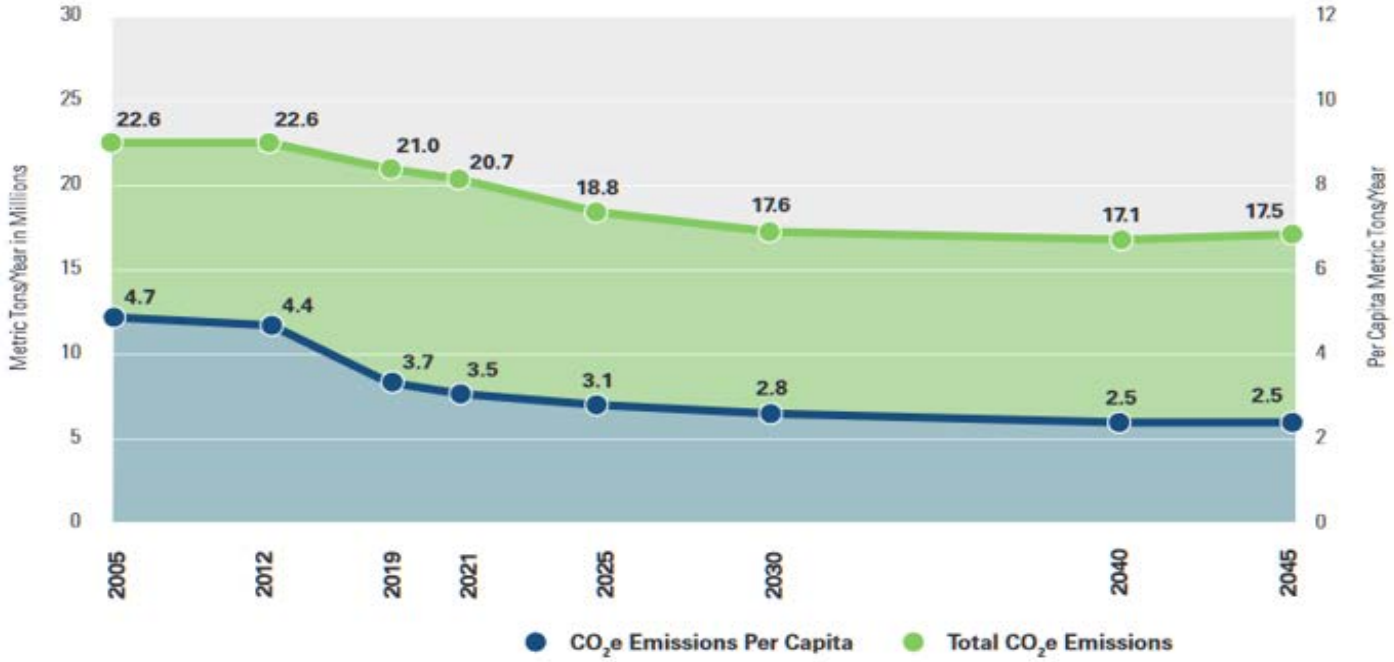
Findings from Past Studies

- "What Would it Take?" Scenario Study (WWIT) *(TPB, May 2010)*
- Multi-Sector Working Group (MSWG) *(TPB/MWAQC/CEEPC, Jan. 2017)*
- Long Range Plan Task Force (LRPTF) Study *(TPB, Dec. 2017)*
- Metropolitan Washington 2030 Climate and Energy Action Plan (CEAP) *(CEEPC, Nov. 2020)*

Background: Climate Change Reduction Goals

- The Metropolitan Washington Council of Governments (COG) Board of Directors adopted, and National Capital Region Transportation Planning Board (TPB) affirmed, 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

On-road Greenhouse Gas Emissions



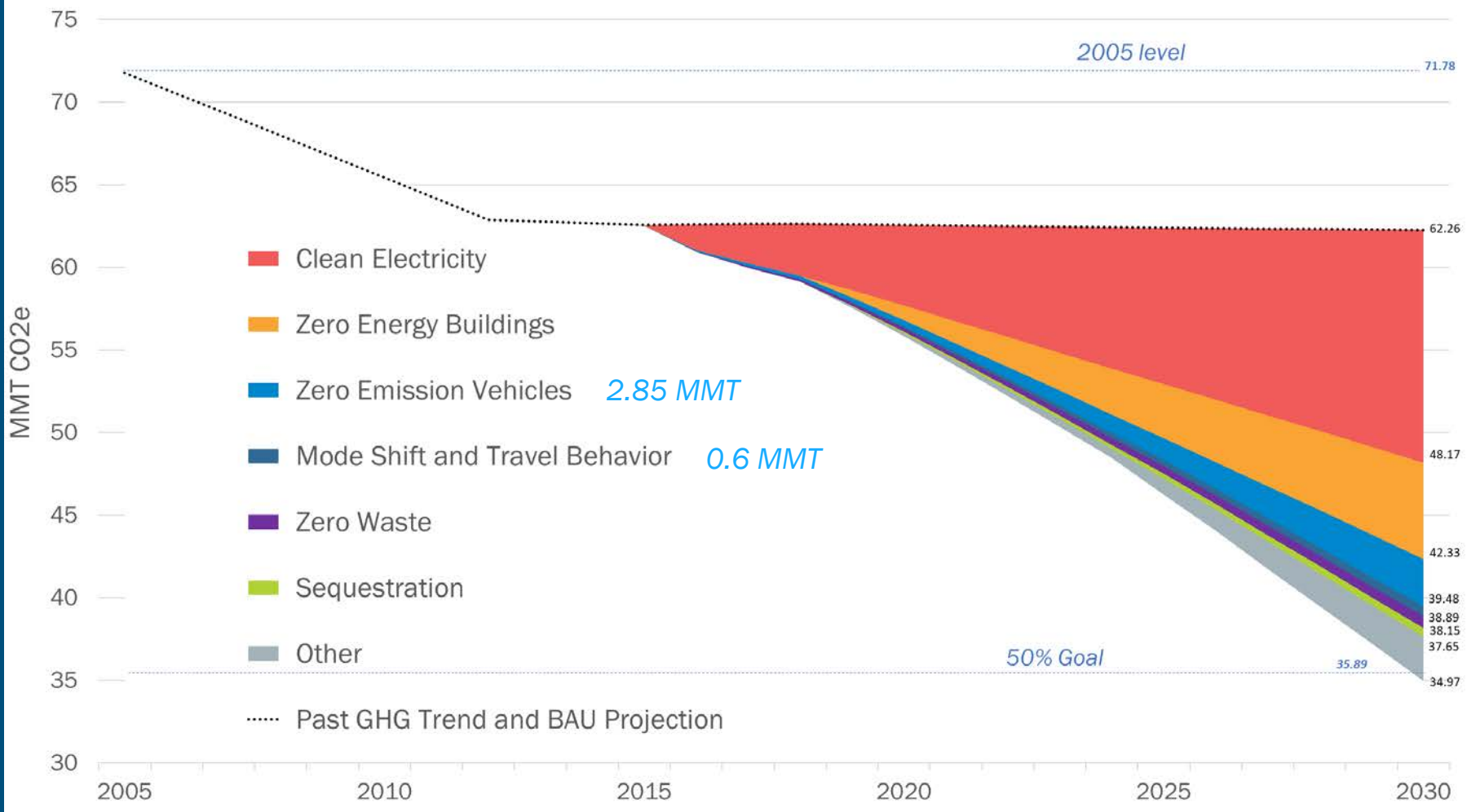
Visualize 2045 (2018):

- 1.3M more people and 1M more jobs (2019-2045)
- Percent growth in walk/bike and transit trips greater than auto trips
- Percent growth in VMT less than in previous LRPs
- VMT per capita reduced (Region Forward Target)
- GHG emissions 23% below 2005 levels in 2045

2030 Climate Energy Action Plan (CEAP)

- Plan is fully compliant with Global Covenant of Mayors for Climate and Energy (GCoM) global standards of best practices for climate planning
- 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
- 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



Reducing GHG Emissions from On-Road Transportation

1. Reduce fossil fuels consumed by vehicles
   - Improve vehicle fuel efficiency
   - Convert fleet to less-carbon intense fuel
2. Reduce vehicle travel (VT or VMT)
   - Provide alternatives to single-occupant vehicle (SOV) travel (new transportation projects or service)
   - Disincentivize SOV travel or incentivize non-SOV travel (policies or programs)
   - Locate housing, employment, and other activities closer together
3. Reduce inefficiencies in vehicle travel
   - Invest in programs to reduce non-recurring congestion
   - Target capital improvements to reduce recurring congestion

Findings: Most Effective Strategies (In Descending Order of Effectiveness)

1. Fuel efficiency, fuel content, and vehicle technology
    - Greatest potential to reduce GHG emissions (e.g., stricter fuel economy and GHG vehicle emissions standards, higher rates of electric vehicle market penetration)
    - GHG reduction potential takes years to be fully realized
    - Equity implications of policies should be considered
    - Actions can be implemented outside the Long-Range Plan

Findings: Most Effective Strategies (In Descending Order of Effectiveness)

2. Aggressive federal/local transportation and land use policy actions that could have a significant impact on travel behavior **(i.e., VMT)**
    - Significant potential, but have not been implemented in the region at levels needed to achieve significant GHG reductions (e.g., large increases in price of gasoline, VMT tax, cordon and parking pricing, significant land use shifts, travel demand management, including telework)
    - Could be implemented in a shorter timeframe contributing to critical near-term GHG reductions
    - Equity implications of policies should be considered
    - Actions can be implemented outside the Long-Range Plan

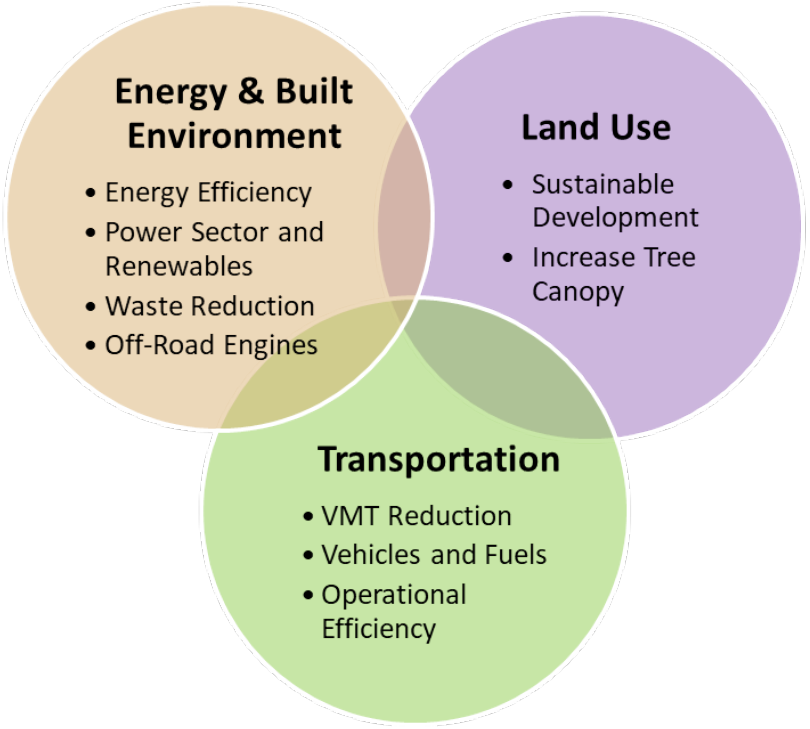
Findings: Most Effective Strategies (In Descending Order of Effectiveness)

3. Operational efficiency and new transportation projects
    - Operational Efficiency
        - The findings on operational efficiency strategies are mixed, likely due to different assumptions in MSWG and LRPTF; plan to further examine in Phase 2 of Climate Change Mitigation Study of 2021
    - New Transportation Projects (e.g., Long-Range Plan)
        - Important projects to implement from equity and livability perspective
        - Have the least significant potential for GHG emissions reductions (even some ambitious packages of projects show low potential for GHG emissions reductions based on past studies)

Sample of Findings

- Results from two studies shown for illustration
  - Multi-Sector Working Group (MSWG) Transportation Sector Analysis
  - Long Range Plan Task Force (LRPTF) Study

2017: Multi-Sector Work Group (MSWG)



- Existing policies/plans analyzed for potential 2040/2050 reductions
- Additional strategies analyzed at “viable” and “stretch” levels for 2040/2050 reductions

MSWG: Transportation and Land Use Results

On-Road Transportation Combustion Emissions	GHGs ($MMTCO_2e$)			
	2005	2020	2040	2050
2005 "Business as Usual" Projections	**22.58**	**28.14**	**33.13**	**35.00**
2015 Current Policies Projections *(includes 2011 CAFE standards, 2012 medium- and heavy-duty fuel efficiency standards)*	**22.58**	**21.54**	**17.80**	**18.64**
Projected Reductions from 2005 Levels (%) (2015 Current Policies)	*-*	*5%*	*21%*	*17%*
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
Projected Reductions from 2005 Levels (%) (MSWG Strategies)	*-*	*5%*	*19%*	*30%*
Net Projected Emissions (2015 Current Policies + MSWG Strategies)	**22.58**	**20.35**	**13.50**	**11.86**
Projected Reductions from 2005 levels (%) (2015 Current Policies + MSWG Strategies)		*10%*	*40%*	*47%*
Impacts to Other GHG Source Categories				
*Increased emissions from electricity consumption**		*0.13*	*0.72*	*1.26*
Carbon sequestration benefits		*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 Energy and Built Environment strategies. Also note that the total does not equal the sum of the individual types of strategies due to off-setting effects

MSWG Actions: Vehicles and Fuel

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 Actions: Travel Efficiency

2040

- Regionwide operational improvements; 80% of drivers adopt "eco-driving" practices

2050

- Regionwide operational improvements; 100% of drivers adopt "eco-driving" practices

MSWG Actions: Reduce Vehicle Travel

2040

- Reallocate future growth within jurisdictions to maximize concentration within Activity Centers and near premium transit (i.e., Metrorail, commuter rail, LRT, or BRT)
- $50/month transit subsidy for 80% of employers
- Reduce transit fares by 25% regionally
- Reduce transit travel times by 15% and reduce headways (wait time) by 15%
- Increased parking charges in 90% of Activity Centers
- $5 cordon pricing entering downtown DC

2050

- Reallocate future growth across jurisdictions to maximize concentration within Activity Centers and near premium transit
- $80/month transit subsidy for 100% of employers
- Reduce transit fares by 40% regionally
- Reduce transit travel time by 20% and reduce headways (wait time) by 20%
- Increased parking charges in 100% of Activity Centers
- $5 cordon pricing entering downtown DC
- $0.10/mile VMT charge

2017: Long Range Plan Task Force (LRP-TF)

Multimodal	Transit	Policy-Focused
1. Regional Express Travel Network	4. Regionwide High-Capacity Transitways	8. Optimize Regional Land Use Balance
2. Operational Improvements & Hotspot Relief	5. Regional Commuter Rail Enhancements	9. Transit Fare Policy Changes
3. Additional Northern Bridge Crossing/Corridor	6. Metrorail Regional Core Capacity Improvements	10. Amplified Travel Demand Management (for commute trips)
	7. Transit Rail Extensions	

- 10 Alternative scenarios of land use and transportation projects/programs/policies evaluated
- To identify potential long-term improvements in the multi-modal system performance outcomes *(not Climate Change focused)*
- Scenario evaluation metrics included changes in VMT, VHD, and GHG emissions

2017: LRP-TF Study 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%

LRPTF Case Study 1: Amplified Employer-Based Travel Demand Mgmt

Transit/Vanpool Subsidy: Transit subsidies averaging $50 per month for 80% of employees

Parking Pricing Increase: Charge for 90% of parking for work-trips in Activity Centers with average parking costs of $6 per day (higher in the core and lower in areas not currently charging for parking)

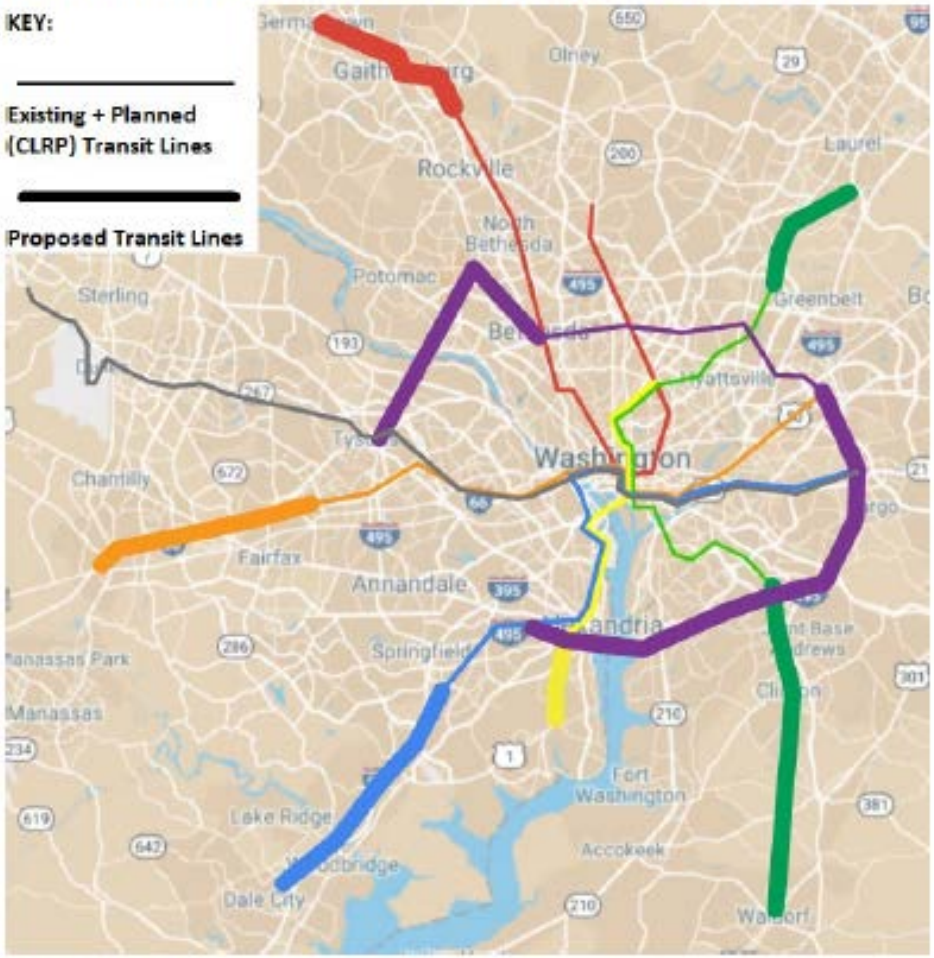
Land-Use Assumptions: 2040 CLRP Round 9.0 Cooperative Land-Use Forecasts were used without any change

Increase in telework: Regional reduction in the number of commute trips for all modes to achieve a 20% telecommute rate

This initiative resulted in a VMT decrease of 6%, VHD decrease of 24%, and GHG decrease of 7% relative to the 2040 Baseline

LRPTF Case Study 2: Transit Rail Extensions

Figure 12: Existing Metrorail and Proposed Extensions



Source: ICF

LRPTF Case Study 2: Transit Rail Extensions

Transit Rail Extensions:

Metrorail: Centreville/Gainesville, Hybla Valley/Potomac Mills, Germantown, and Laurel

Purple Line: Tysons (west) and Eisenhower Avenue (east)

Southern Maryland Rapid Transit: between Branch Avenue and Charles County

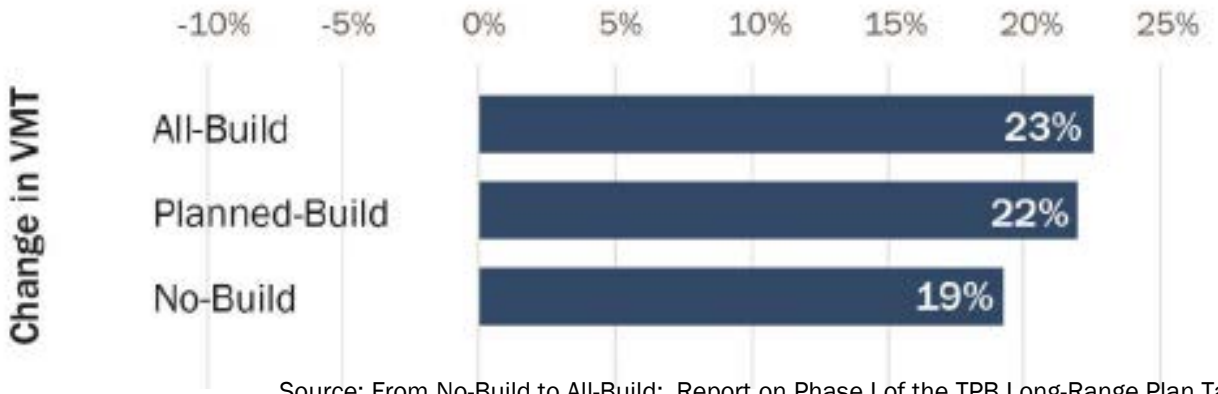
Land-use Assumptions: Jobs and households were shifted to Activity Centers in the corridor

This initiative, which included an expansion of the transit system with 62 new stations, resulted in a VMT decrease of 1%, VHD decrease of 3%, and GHG decrease of 1% relative to the 2040 Baseline

Challenges of Regional Growth on Mobility and Emissions

VMT Growth: Population vs. Projects

VMT Growth (2015 – 2040) based on the 2015 CLRP Amendment



Source: From No-Build to All-Build: Report on Phase I of the TPB Long-Range Plan Task Force (December 2016)

- Population growth 24% and employment growth 36% in all scenarios
- No Build adds no new transportation projects from 2015-2040; Planned-Build adds 372 new projects; All-Build adds an additional 550 new projects
- How the region approaches growth will have impact on VMT and GHG emissions

Next Steps

- **Phase 2: Pathways to Greenhouse Gas (GHG) Reductions**
  - Literature review
    - State and local climate planning
    - Climate planning in other regions
    - National policies
  - Technical Analysis
    - Mode Shift and Travel Behavior (VMT and Trip Reduction)
    - Vehicle Fuel, Fuel Efficiency, and Vehicle Technology
    - Operational Efficiency

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