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TRANSPORTATION PLANNING BOARD MEETING PACKET

September 21, 2022

12:00 P.M. – 2:00 P.M.

Virtual Meeting

National Capital Region
Transportation Planning Board

National Capital Region
Transportation Planning Board

TRANSPORTATION PLANNING BOARD

Wednesday, September 21, 2022
12:00 P.M. - 2:00 P.M.

Virtual Meeting

AGENDA

12:00 P.M. **1. PARTICIPATION PROCEDURES, MEMBER ROLL CALL, AND PUBLIC COMMENT OPPORTUNITY**
Pamela Sebesky, 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 12 P.M. Noon on Tuesday, September 20, 2022 to be relayed to the board at the meeting.

12:15 P.M. **2. APPROVAL OF THE JULY 20, 2022 MEETING MINUTES**
Pamela Sebesky, TPB Chair

12:20 P.M. **3. TECHNICAL COMMITTEE REPORT**
Matt Arcieri, TPB Technical Committee Chair

12:25 P.M. **4. COMMUNITY ADVISORY COMMITTEE REPORT AND ACCESS FOR ALL ADVISORY COMMITTEE REPORT**
Ashley Hutson, 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**
Pamela Sebesky, TPB Chair

ACTION ITEM

12:50 P.M. **7. TPB BYLAWS UPDATE**
Lyn Erickson, Plan Development and Coordination Program Director

The TPB Bylaws will be updated to reflect the Board's interest in continuing to offer virtual participation for future meetings.

Action: Adopt Resolution R2-2023 to approve amendments to the TPB Bylaws.

INFORMATIONAL ITEMS

1:05 P.M. **8. PBPP: DRAFT 2022-2025 REGIONAL TARGETS FOR HIGHWAY SYSTEMS PERFORMANCE AND HIGHWAY ASSETS**
Eric Randall, TPB Transportation Engineer

The board will be briefed on requirements under the federal performance-based planning and programming (PBPP) rulemaking for MPOs to set three targets for highway systems performance and six targets for highway asset condition (bridge and pavement) performance measures, for the period 2022-2025. A draft set of targets developed by staff in coordination with the state DOTs will be presented. In October, the board will be asked to adopt the 2022-2025 highway systems performance and highway assets (bridge and pavement) targets for the region.

1:20 P.M. **9. U.S. DOT SAFE SYSTEMS APPROACH FOR ROADWAY SAFETY**
David Petrucci, Federal Highway Administration

As part of the TPB's focus on safety, the board will be briefed on the U.S. DOT Safe System approach as the guiding paradigm to address roadway safety. The Safe System approach has been embraced by the transportation community as an effective way to address and mitigate the risks inherent in our enormous and complex transportation system. It works by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur. It is a holistic and comprehensive approach that provides a guiding framework to make places safer for people. This is a shift from a conventional safety approach because it focuses on both human mistakes AND human vulnerability, and designs a system with many redundancies in place to protect everyone. The U.S. DOT's National Roadway Safety Strategy and the Department's ongoing safety programs are working towards a future with zero roadway fatalities and serious injuries.

1:40 P.M. **10. BRIEFING ON THE 2022 STATE OF THE COMMUTE SURVEY**
Nicholas Ramfos, TPB Transportation Operations Programs Director

Every three years since 2001, Commuter Connections has conducted a random sample survey of employed persons in the Metropolitan Washington Region to monitor trends in commuting behavior such as mode shares, telecommuting, and distance traveled, as well as attitudes about commuter assistance services. The board will be briefed on the highlights from the 2022 State of the Commute Survey.

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

The next meeting is scheduled for October 19, 2022.

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

TRANSPORTATION PLANNING BOARD
MEETING ATTENDEES
July 20, 2022

VIRTUAL MEETING

MEMBERS AND ALTERNATES PRESENT

Pamela Sebesky, TPB Chair – Manassas
Christina Henderson – DC Council
Ella Hanson – DC Council
Heather Edelman – DC Council
Sakina Khan – DC Office of Planning
Dave Emerine – DC Office of Planning
Lezlie Rupert – DDOT
Mark Rawlings – DDOT
Reuben Collins – Charles County
Patrick Wojahn– College Park
Denise Mitchell – College Park
Jan Gardner – Frederick County
Mark Mishler – Frederick County
Kelly Russell – City of Frederick
David Edmondson – City of Frederick
Neil Harris – Gaithersburg
Dennis Enslinger - Gaithersburg
Gary Erenrich– Montgomery County Executive
Glenn Orlin – Montgomery County Legislative
Victor Weissberg – Prince George's County Executive
Mel Franklin – Prince George's County Legislative
Bridget Newton - Rockville
Kacy Kostiuk – Takoma Park
Marc Korman – Maryland House of Delegates
R. Earl Lewis, Jr. – MDOT
Canek Aguirre – Alexandria
Dan Malouff – Arlington County
Takis Karantonis – Arlington County
Walter Alcorn – Fairfax County Legislative
James Walkinshaw – Fairfax County Legislative
David Snyder – Falls Church
Adam Shellenberger – Fauquier County
Kristen Umstattd – Loudoun County
Jeannette Rishell – Manassas Park
Ann B. Wheeler – Prince William County
Victor Angry – Prince William County
Paolo Belita – Prince William County
David Marsden – Virginia Senate
John Lynch - VDOT
Allison Davis – WMATA
Mark Phillips – WMATA
Sandra Jackson - FHWA
Dan Koenig – FTA
Julia Koster - NCPC
Tammy Stidham - NPS

MWCOG STAFF AND OTHERS PRESENT

Kanti Srikanth
Chuck Bean
Lyn Erickson
Mark Moran
Tim Canan
Andrew Meese
John Swanson
Andrew Austin
Leo Pineda
Stacy Cook
Sergio Ritacco
Deborah Etheridge
Kim Sutton
Rachel Beyerle
Ashley Hutson - CAC
Matt Arcieri – City of Manassas
Kari Snyder - MDOT
Rebecca Schwartzman – DC Office of Planning
Corinna Sigsbury – Loudoun County
Amir Shahpar – VDOT

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

Chair Sebesky called the meeting to order. She said the meeting was being conducted virtually and she reiterated the procedures for conducting virtual meetings.

Ms. Erickson conducted a roll call confirming those participants in the room and those attending remotely. Attendance for the meeting can be found on the first page of the minutes. She confirmed there was a quorum.

Ms. Erickson said that between the June 2022 TPB meeting and noon on Tuesday, July 19, the TPB received two comments. All comments were submitted via email. A memo with a summary of the comments, as well as each comment themself, can be found on the TPB meeting page. She briefly summarized each of the comments.

2. APPROVAL OF THE JUNE 15, 2022 MEETING MINUTES

A motion was made to approve the minutes. The motion was seconded by Ms. Gardner and was approved unanimously.

3. TECHNICAL COMMITTEE REPORT

Referring to the posted material, Mr. Arcieri said that Technical Committee met on July 8 and reviewed material related to the TPB's May agenda, including Car Free Day, the Transportation Alternatives Set-Aside for Maryland, Equity Emphasis Areas, and the proposed bylaws amendments. The committee also received briefings on the 2022 Congestion Management technical report and an update on grant opportunities that are coming out of the federal infrastructure bill.

4. COMMUNITY ADVISORY COMMITTEE REPORT

Chair Sebesky introduced the item, noting that the CAC meeting in July had been a special joint meeting between members of the CAC and the TPB members. She thanked vice chairs Collins and Henderson for participating.

Ms. Hutson gave the CAC report. She said the special joint meeting on July 14 began with presentations from each of the TPB officers in which they described the unique challenges that each of their jurisdictions face. After a full-group discussion, the meeting broke into three state-based breakouts, giving all participants the chance to discuss regional transportation issues that pertain to their own states. When the group came back together, representatives from each state reported on the discussion points from the breakout session. Ms. Hutson reported on those points.

Chair Sebesky thanked for the CAC for the invitation to attend the meeting and for the very interesting discussion. She encouraged TPB members to reach out CAC members.

Mr. Collins expressed his appreciation to the CAC. He said the meeting was a good opportunity to increase his understanding of the CAC and how it works with the TPB.

Ms. Henderson also thanked the committee. She said the meeting provided a good opportunity for cross-jurisdictional information-sharing.

Ms. Kostiuk, who also attended, said the meeting was a great opportunity to think about how the TPB and CAC can work together better.

Mr. Harris noted that Ms. Hutson indicated in her remarks that participants from Virginia expressed interest in an additional river crossing. He asked about the nature of that part of the discussion.

Ms. Hutson said there was consensus in the Virginia breakout session that a bridge is needed. She said there was a lot of excitement around the concept, including discussions of potential endpoints for a new bridge.

5. STEERING COMMITTEE ACTIONS AND REPORT OF THE DIRECTOR

Referring to the posted material, Mr. Srikanth said the Steering Committee met on July 8. He said the committee approved a letter to the Virginia Department of Transportation in support of a list of transportation projects in Northern Virginia that the Northern Virginia TPB member agencies submitted for Virginia Smart Scale funding.

Mr. Srikanth said the posted materials also included a letter from the TPB the Federal Highway Administration which conveyed information from MDOT related to the Final Environmental Impact Statement (FEIS) for the I-495 & I-270 Managed Lanes Study (MLS).

Mr. Srikanth thanked Vice Chair Collins for conducting the Commuter Connections Employers Awards ceremony on June 28.

Mr. Srikanth said the final document for Visualize 2045, as approved in June, is currently being printed.

Mr. Srikanth gave the board advance notice that large amendment to the Transportation Improvement Program would be coming through the Steering Committee in September.

Mr. Snyder asked if Mr. Srikanth knew the date of publication for Visualize 2045.

Mr. Srikanth said the digital version of the plan is already posted online, and the printed version should be available this summer.

Mr. Snyder asked if there is a schedule for follow-up activities related to the plan, including additional discussion at the TPB.

Mr. Srikanth said staff was working to develop follow-up initiatives, including reporting on greenhouse gas emissions. He said he would be reporting back to the TPB on proposed work. He said it appeared that staff would have adequate resources to conduct this work.

Mr. Srikanth said that an email had been received during public comment that forwarded a letter that had recently been sent by Maryland's U.S. Senators to MDOT. The Senators' letter suggested that after the new Nice Bridge is constructed, the old Nice Bridge should be retained as a facility exclusively for bicyclists and pedestrians. He invited Mr. Lewis to respond to this suggestion.

Mr. Lewis said that MDOT was preparing a letter in response to the suggestion regarding the Nice Bridge.

Ms. Kostiuk asked what the timeframe would be for the next update of Visualize 2045, which is planned to be an early update.

Mr. Srikanth said the most recent update took two and a half years. He said the next required update is four years away, but prior to the next update, the TPB has directed staff to develop an additional update. He said that staff is working to develop a schedule for the updates.

Following up on the comment regarding the Nice Bridge Mr. Korman asked if MDOT's response to the senators would be shared with the TPB members.

Mr. Lewis said he was unsure about when the response would be sent, but when it is sent, he said it likely would be publicly released.

Mr. Srikanth said TPB staff would work with MDOT to be sure the letter is provided to TPB members as soon as possible.

6. CHAIR'S REMARKS

Chair Sebesky that she and the two TPB vice chairs had been invited to attend the annual retreat of the COG board of directors later in July. She said she looked forward to the opportunity.

ACTION ITEMS

7. REGIONAL CAR-FREE DAY 2022 PROCLAMATION

Referring to the posted material, Mr. Ramfos gave a briefing on Car Free Day, which is going to be happening on September 22. He described the program's origin, its impact in our region and world-wide, and activities that the TPB undertakes to promote it.

Chair Sebesky acknowledged the importance of this event and noted that in the outer jurisdictions, opportunities to go car-free are limited, but they are increasing as teleworking becomes more common.

Mr. Ramfos thanked Chair Sebesky for signing the proclamation declaring September 22 Car-Free Day.

8. FY 2023 TRANSPORTATION ALTERNATIVES SET-ASIDE PROGRAM FOR MARYLAND TPB JURISDICTIONS

Referring to the posted material, Mr. Swanson briefed the board on the recommendations that a selection panel had made for the use of funding that is suballocated to the TPB from the Maryland portion of the federal Transportation Alternatives Set-Aside Program. He described the program background and the project selection process. He said that seven applications were received for our region. He said a selection panel reviewed the applications.

Mr. Swanson said the TPB's suballocation for Maryland is $5,169,000. He said the selection panel recommended expending the entire amount this year on one application, which is for construction of the Frederick and Pennsylvania Line Rail Trail in Frederick County. He said the panel agreed that this is an excellent project. He also noted that MDOT rules prohibit funding for projects on a partial basis, which limited the panel's ability to fund other applications instead of this one. He noted that the selection panel urged the TPB to encourage MDOT to fund four other projects that the TPB would not be able to fund with its suballocation.

He said the staff was requesting that the TPB approve R1-2023 to provide funding for the Frederick and Pennsylvania Line Rail Trail and to encourage MDOT to use the statewide TA Set-Aside funding to fund four projects: the Twinbrook Safe Routes to School project in Rockville; the West Seventh Street Protected Bicycle Lane project in the City of Frederick; Traffic Calming at the Catoctin Furnace District in Frederick County; and a connectivity study in the City of Frederick.

Ms. Gardner moved approval of the resolution and said she was excited about the project to be funded. The motion was seconded by Ms. Russell.

Mr. Wojahn said he was pleased to see that all the Transportation Alternatives funding for Maryland would be spent this year, unlike in previous years. He also said he was glad to see a great project moving forward. He noted that last year's infrastructure bill included an allowance for states to set aside five percent of TA Set-Aside funds for technical assistance. He asked if the TPB or the state DOTs could comment on how they are planning to use that allowance. He said he would be interested in learning whether those technical assistance funds could be used to ensure that a broad range of project submissions are received.

Mr. Srikanth noted that some enhanced flexibilities were being provided to existing programs through the Infrastructure Investment Jobs Act. He said that staff would be following up on this. He asked the DOT representatives if they had comments.

Mr. Lynch said the office of the Virginia Secretary of Transportation was investigating various opportunities of the new legislation and would be following up.

Ms. Rupert said that DDOT was also in the of determining how to respond to these kinds of questions related to the new legislation.

Mr. Swanson said that he had spoken with MDOT and VDOT staff about the funding allowance that Mr. Wojahn mentioned. He said that at MDOT, he knew that there are discussions about using the funds to do more training and outreach earlier in the TA Set-Aside solicitation process.

Ms. Kostiuk said she wondered about the effectiveness of the MDOT rule prohibiting the partial funding of projects. She said that this year, the outcome was good and she strongly supported the recommended project, but she said she could imagine a situation in the future where this rule could be really limiting. She said she would like to learn more about the origin of the rule and whether it is helping the program meet the goals that it should be seeking to achieve.

Mr. Lewis was still unavailable due to technical difficulties, so Chair Sebesky asked that the vote proceed and that a response to these questions be supplied at a later date.

The motion was passed unanimously.

INFORMATIONAL ITEM

9. ENVIRONMENTAL JUSTICE ANALYSIS PHASE 1: UPDATE EQUITY EMPHASIS AREAS

Mr. Ritacco presented an overview of the informational item on the Environmental Justice Analysis Phase I for the long-range transportation plan, which consists of an update to the Equity Emphasis Areas (EEAs). Mr. Ritacco explained that EEAs are small geographic areas with higher concentrations of low-income, Black or African American, Hispanic or Latino, and Asian populations. He said that the primary purpose of the work is to support the federally required environmental analysis of the long-range plan and to understand the impact of the transportation improvements in the plan. He stated that the actual analysis of the plan is covered in Phase 2.

Mr. Ritacco said that the 2020 update designates 364 of the region's 1,330 tracts as EEAs, which represents a four percent increase in the number of tracts over 2018; although it's a similar share to all tracts because the U.S. Census Bureau has increased the number of tracts in the region by nine percent. He said that TPB planners did not see a dramatic change in the composition of population groups within the EEAs.

Mr. Ritacco discussed the EEAs map, noting that the East West Divide is still predominant, and there are clusters of EEAs in the inner and out suburban parts of the region.

Mr. Ritacco shared a link to an interactive EEAs map that includes layers and activity centers, and the actual EEA index scores and information about income levels and population groups are available in the map's layer tables. He said that map includes data tables for users who want to download the information and conduct their own analysis.

Mr. Ritacco shared additional information from the agenda item and presentation about census tract population figures and changes in the EEAs since 2018. He addressed frequently asked questions using a series of FAQ slides.

Mr. Ritacco said that the next step in the process is Phase 2 which will include analysis of the 2022 Visualize 2045 update and an examination of disproportionately high and significantly adverse impact on low-income and traditionally disadvantaged racial and ethnic population groups. He said that if impact is found, TPB staff would need to look into developing mitigation measures to limit disproportionate and adverse impact. He stated that the results of the analysis will be presented to the TPB in early to late fall 2022.

Chair Sebesky asked Mr. Ritacco to email the interactive map link to the board.

Ms. Sakina Khan said that it is great to see ongoing work with respect to the EEAs, and she looks forward to the next phase of analysis and implications for the District of Columbia. She said that the District uses EEAs as part of planning work to help target certain communities and think about the relationship to the variety planning being conducted and other opportunities such as linkages to infrastructure. She thanked the TPB for continuing to work on EEAs.

Mr. Lewis asked if the TPB had taken any action to develop the screening tool with the University of Maryland Department of Environment.

Mr. Ritacco confirmed that Mr. Lewis was speaking of the EPA's environmental EJ screen, which is a national product. He stated that the TPB screening tool is tailored for the region even though it uses similar data.

Mr. Srikanth added that in addition to the EEAs being drawn from region-specific data for Environmental Justice analysis purposes, the TPB uses it in other ways. As an example, he said the TPB examines the region's roadway safety crash data by overlaying it with the EEAs. He also noted how TPB and COG have a productive partnership where COG has adopted EEAs for other regional planning efforts such as land use, housing, public health, food, and other aspects.

Ms. Russell asked whether it is possible to have the 2018 and 2022 data so that one could see how things have changed.

Mr. Srikanth responded that the there is a technique available within the GIS tool to depict those changes. He cautioned that with the 2020 census updates, the tract boundaries could have changed, so it might not be the exact boundary as in 2018. He stated that a second caution is that even though a geographic area may be identical, it is possible within the new data sets that the population has changed, as a result, in the 2018 set, a tract might be identical to 2022 in shape and area, but the densities could have changed.

Mr. Erenrich asked TPB staff to clarify which road network was used for the GIS layers. He asked that TPB check that the latest network layer is being used.

Mr. Ritacco said that that actual analysis is what was approved for the 2022 update to the Visualize 2045 long-range transportation plan. He said that he would confirm that the road network used reflects the latest dataset.

Mr. Srikanth stated that there continues to be confusion that in the 2022 Visualize 2045 update that the TPB adopted construction of managed lanes on the Maryland portion of the Capital Beltway east of I-270. He said that this is not true. The 2022 plan update does not include managed lanes on the Beltway in Maryland east of I-270; however, the 2018 long-range transportation plan did include that. He stated that the EEAs analysis of 2018 did show the 2018 network; the 2022 EEAs will show the 2022 network.

Ms. Kostiuk asked about the federally required environmental justice analysis occurring after the plan was adopted and what the mitigation steps are if an issue is found. She asked if issues are found, will that information be rolled into the next TIP or long-range plan and how does it help in terms of creating the plan itself.

Mr. Srikanth responded that large projects that require federal approval that rise to the level of requiring environmental impact statements, generally involve analysis and identification of mitigation at the project level. He said that the environmental justice analysis of long range transportation plans looks at all planned projects for highway, transit, and nonmotorized use combined and examines the combined impact on mobility and accessibility for low-income and racial and ethnic minority population groups and whether that impact is disproportionate to that experienced by other population groups.

Mr. Srikanth said that most projects in the plan are not yet built, and as such, assessing the impact of the plan will provide a sense of potential disproportionate impacts on underserved communities before the various projects are implemented so they can be mitigated. He added that the TPB has not yet had a finding to date of disproportionate impacts of the combined plan and that this indicates that the 23 member jurisdictions and their agencies are mindful of this and perhaps projects are conceived with consideration for inequities and addressing inequities.

Mr. Srikanth commented that if the TPB does find disproportionate impacts from this updated plan based on the analysis, the TPB will have a collective discussion on mitigation.

NOTICE ITEM

10. TPB BYLAWS UPDATE

Chair Sebesky announced that the TPB is giving notice of intent to approve updated bylaws at its September meeting and introduced Lyn Erickson, TPB Plan Development and Coordination Program Director, to provide an overview.

Ms. Erickson said that the TPB staff initiated an update to the Bylaws to reflect the virtual options available for the TPB to conduct business after a public health emergency. She said that TPB staff is taking the opportunity to update the Bylaws language to reflect current laws and practices, including referencing the TPB master planning agreement, which covers invoicing, referencing the currently adopted public participation plan, and the TPB's continued use of Robert's Rules of Order, as well as minor editorial updates to bring the Bylaws into the 21st century.

Ms. Erickson referred to the Bylaws memorandum shared with the TPB, stating that the substantive changes pertain to virtual participation options. She said that many members of the board have expressed an interest for in-person meetings based on the view that in-person gatherings build familiarity and better working relationships among members from a geographically diverse region who would otherwise have limited opportunities to meet, interact, and get to know each other's viewpoints better.

Ms. Erickson stated that the complexities of policy matters discussed by the board have periodically led to the need for additional TPB meetings.

Ms. Erickson said that the proposed revisions to the Bylaws state that the TPB shall give preference for in-person meetings over virtual meetings and that when an in-person meeting is scheduled, members may attend the meeting virtually on no more than two occasions in a year. She said that the TPB chair may propose, or upon request from board members, schedule up to three all-virtual meetings in a year. She stated that this means a member may now be able to participate in up to five of 11 meetings virtually.

Ms. Erickson stated that the board has been presented with two versions of the Bylaws to review, one marked with changes and a version with draft changes incorporated. She requested that TPB members send comments to her or Mr. Srikanth by August 26. She said that the current TPB Bylaws state that all amendments must be introduced at one meeting and can be acted on at the next meeting; therefore, the TPB is scheduled to act on changes to the Bylaws at the September 2022 board meeting.

Chair Sebesky said that she travels to the meeting from an outer jurisdiction and travel to TPB meetings becomes a whole day commitment due to the distance. She said that she has found the value of collaboration in being able to get to know people in the District and Maryland and other Virginia jurisdictions. She commented that she is glad that the TPB is looking at the Bylaws and updating them similar to what many organizations and employers are doing.

Ms. Kostiuk said that she shares Chair Sebesky's perspective that it is more effective to be in person and build connections, yet she has concerns about requiring members in the outer jurisdictions whose primary livelihood is not their elected role to travel for in-person meetings because of the time commitment required. She said that she would like to find a solution that is a little more allowable for those who would like to attend virtually if needed. She asked that the TPB look at the time of meetings to potentially allow for an

earlier or later meeting during the day.

Ms. Kostiuk asked whether the chat at virtual meetings becomes part of the public record and part of the minutes.

Mr. Srikanth said that when there are comments and questions as part of the discussion, the TPB staff reflects what is in the chat or follows up by email if a question comes up in a chat.

Mr. Harris said that one of the goals of the TPB is to enable and encourage people to commute less and work virtually. He said that he would prefer to meet in person when possible but does not think it should be a requirement because the commute can be challenging. He said that the TPB should do its best to accommodate members by following the TPB's precepts to not over tax the transportation system when possible.

Mr. Snyder stated that the Virginia Freedom of Information Act language on the topic is complicated. He asked whether the topic has been vetted with a Virginia law expert to make sure that Virginia participants are in compliance with applicable law.

Mr. Snyder asked about public input and how the TPB is receiving input from virtual meetings as well as live meetings. He asked what the public participation rights are for each type of meeting and whether a member of the public can appear virtually and make a presentation or will comments be accepted by email only.

Mr. Snyder stated that he tends to agree with members who want—consistent with applicable law—the maximum degree of flexibility with how people participate virtually or in person.

Mr. Srikanth responded that TPB's attorneys are engaged and part of the review to make sure that the Bylaws are consistent with District, Maryland, and Virginia laws.

11. ADJOURN

Mr. Srikanth stated that there will not be a TPB meeting in August. He said that the COG Board is going on an annual retreat at the end of July and that transportation is part of the discussion. He said that TPB staff have been asked to facilitate a session in coordination with COG's environmental program staff on advancing clean fuel or electric vehicle deployment in the region.

Mr. Lewis said that the Maryland Commission on Climate Change mitigation work group has a similar objective as the TPB to set an aggressive goal, particularly with light-duty vehicle technology.
Chair Sebesky stated that the next TPB meeting will be virtual and held on September 21.

The meeting was adjourned at 1:50 PM.

Meeting Highlights
TPB Technical Committee – September 9, 2022

The Technical Committee met on Friday, September 9, 2022. Meeting materials can be found here: https://www.mwcog.org/events/2022/09/09/tpb-technical-committee-tpb/

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

TPB AGENDA ITEM 7 – FOR BOARD APPROVAL: TPB BYLAWS UPDATE
The TPB Bylaws will be updated to reflect the Board's interest in continuing to offer virtual participation for future meetings. TPB will be asked to approve the Bylaws in September. Board members commented that they wanted more flexibility in virtual participation options, and this information was shared with the committee.

TPB AGENDA ITEM 8 – PBPP: DRAFT 2022-2025 REGIONAL TARGETS FOR HIGHWAY SYSTEMS PERFORMANCE AND HIGHWAY ASSETS
The committee was briefed on requirements under the federal performance-based planning and programming (PBPP) rulemaking for MPOs to set three targets for highway systems performance and six targets for highway asset condition (bridge and pavement) performance measures, for the period 2022-2025. A draft set of targets developed by staff in coordination with the state DOTs was presented. In October, the board will be asked to adopt the 2022-2025 highway systems performance and highway assets (bridge and pavement) targets for the region.

TPB AGENDA ITEM 9 – U.S. DOT SAFE SYSTEMS APPROACH FOR ROADWAY SAFETY
As part of the TPB's focus on safety, the committee was briefed on the U.S. DOT Safe System approach as the guiding paradigm to address roadway safety. The Safe System approach has been embraced by the transportation community as an effective way to address and mitigate the risks inherent in our enormous and complex transportation system. It works by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur. It is a holistic and comprehensive approach that provides a guiding framework to make places safer for people. This is a shift from a conventional safety approach because it focuses on both human mistakes AND human vulnerability, and designs a system with many redundancies in place to protect everyone. The U.S. DOT's National Roadway Safety Strategy and the Department's ongoing safety programs are working towards a future with zero roadway fatalities and serious injuries.

TPB AGENDA ITEM 10 – BRIEFING ON THE 2022 STATE OF THE COMMUTE SURVEY
Every three years since 2001, Commuter Connections has conducted a random sample survey of employed persons in the Metropolitan Washington Region to monitor trends in commuting behavior such as mode shares, telecommuting, and distance traveled, as well as attitudes about commuter assistance services. The committee was briefed on the highlights from the 2022 State of the Commute Survey.

The following items were presented for information and discussion:

2021 STATE OF PUBLIC TRANSPORTATION REPORT
The committee was briefed on the 2021 annual State of Public Transportation report. The purpose of this report is to provide a concise overview of the state of regional public transportation in the National Capital Region.

VISUALIZE 2045 AND THE 2024 PLAN UPDATE
Ms. Cook provided information on Visualize 2045 and reviewed considerations related to the 2024 plan update.

PLANNING CONSIDERATIONS FOR THE ROUND 10 COOPERATIVE FORECASTS
The Committee was briefed on initial activities for the next major update of COG's Cooperative Forecasts, Round 10, including findings from a consultant-led study on key planning considerations for preparing long-range regional forecasts.

PBPP: GHG PROPOSED RULE
On July 15, a Notice of Proposed Rulemaking (NPRM) was published in the Federal Register to add a PBPP Greenhouse Gas (GHG) performance measure and target-setting requirement. The committee was briefed on the proposed rulemaking, which would require State DOTs and MPOs to establish declining CO2 emissions targets to reduce CO2 emissions generated by on-road mobile sources relative to calendar year 2021. Comments on the NPRM are due by October 13, 2022.

OTHER BUSINESS

- Car Free Day September 22: https://www.carfreemetrodc.org/
- COG Retreat Update
- Update on Air Passenger Survey
- On-Call Consultant Contract update
- MWCOG Job Listings – https://www.mwcog.org/about-us/human-resources/job-listings/
- Staff Update

ACCESS FOR ALL ADVISORY COMMITTEE REPORT

September 2, 2022

Canek Aguirre, Chair

The Access for All Advisory Committee (AFA) met virtually on September 2 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.

NATIONAL CAPITAL PLANNING COMMISSION'S PENNSYLVANIA AVENUE INITIATIVE

Julia Koster, TPB Board Member and Director of Planning Research and Policy Division, introduced staff Elizabeth Miller, Director, and Karin Schierhold, Urban Planner, who provided an introduction and overview a new vision and three conceptual approaches for Pennsylvania Avenue NW between the White House and the U.S. Capitol. Discussion following the presentation included:

- Input into existing conditions of the Avenue and their impact on Persons with Disabilities,
- Requests for considering the accessibility needs of certain populations to make it to the Avenue, and
- Next steps for keeping TPB's AFA Committee engaged in the planning process and provide input for the needs of Older Adults and Persons with Disabilities.

ENVIRONMENTAL JUSTICE ANALYSIS PHASE 1: UPDATE EQUITY EMPHASIS AREAS

Sergio Ritacco, TPB Transportation Planner, provided an overview to applying the TPB-approved methodology to update the Equity Emphasis Areas using the most recent Census data, including a review of the resulting maps. Discussion following the presentation predominately surrounded the use and application of EEAs amongst member jurisdictions for their own equity application and considerations.

BRIEFING ON REGIONAL BICYCLE AND PEDESTRIAN PLANNING INCLUDING THE 2022 UPDATE OF THE BICYCLE AND PEDESTRIAN PLAN FOR THE NATIONAL CAPITAL REGION

Michael Farrell, TPB Transportation Planner, provided an overview of the 2022 Update of the Bicycle and Pedestrian Plan for the National Capital Region and discuss ongoing regional Bicycle and Pedestrian Planning activities beyond the recently completed plan, including potential synergies with Access for All Advisory Committee discussions.

OTHER BUSINESS

- Sergio Ritacco and Lyn Erickson provided an update on TPB staffing and it's impact on the update to the Coordinated Plan as well as staffing of the AFA committee.
- Sergio Ritacco provided updated contact information for future Enhanced Mobility questions and grant management needs.
- Yolanda Hipski shared a link on the Rural Maryland Council and Tri-County Council for Southern Maryland's survey to identify strategies for expanding non-emergency medical transportation in Eastern, Western, and Central Maryland.
- Chair Aguirre provided a reminder of remaining 2022 meeting date on December 16.

District of Columbia	**Virginia**	**TPB Staff**
Nechama Masliansky, So Others Might Eat	Ashley Schalick, Arc of Northern Virginia	Kanti Srikanth
Brenda Richardson, Women Like Us	Brittany Voll, DRPT	Lyn Erickson
Maryland	Doris Ray, ENDependence Center of Norther Virginia	Sergio Ritacco
Bill Orleans, member of the public	Emily Braley, NV Rides	Rachel Beyerle
Bong Delrosario, Maryland Department of Disabilities	Karen Smith, Arc of Prince William/INSIGHT, Inc.	Matthew Farrell
Yolanda Hipski, TCCSMD	MaryJo Hensler, Fairfax County Neighborhood & Community Services	
Rob Malone, Arc of Prince William County	Roger Hoskin	**Chair**
Sara Fought, JCA Connect-A-Ride		Canek Aguirre, City of Alexandria Councilmember
Shawn Brennan, Montgomery County Aging & Disability Services		
Regional		
Angela White, National MS Society of Greater DC		
William Clements		
Elizabeth Miller		
Karin Schierhold		
Julia Koster		

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: September 15, 2022

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: September 15, 2022

At its meeting on September 9, 2022, the TPB Steering Committee adopted resolution SR2-2023, supporting the submission of a roadway project on VA Route 7 in the Virginia Department of Transportation's (VDOT) Staunton District, which has several components that extend into neighboring Loudoun County (in the TPB's Planning Area) for inclusion in the Commonwealth of Virginia's SMART SCALE transportation project prioritization process, as requested by VDOT.

Localities, public transportation providers, and other agencies that wish to submit projects for SMART SCALE funding must demonstrate that the projects are included in or are exempt from inclusion in Visualize 2045, or, if the projects are not in the plan, they must be accompanied by a resolution of support from the Metropolitan Planning Organization (MPO) in order to be considered for the SMART SCALE prioritization process. This resolution of support does not in any way constitute a final approval of this project. All projects that are awarded SMART SCALE funding and are not already included in Visualize 2045, as amended or updated, must each be treated as a new project to the TPB's process and will be evaluated accordingly as specified in the TPB's Technical Inputs Solicitation Submission Guide at that time.

The Steering Committee also adopted resolution SR3-2023 which approved regional Congestion Mitigation and Air Quality (CMAQ) Program performance measure targets for 2022-2025 for the Baltimore, Maryland region. Regulations issued by the Federal Highway Administration (FHWA) require that the TPB coordinate with the Baltimore Region Transportation Board (BRTB) to establish two-year and four-year targets for the CMAQ Program performance measures for the Baltimore urbanized area, a portion of which overlaps the TPB metropolitan planning area. TPB and BRTB staff have coordinated on the development of targets for two Traffic Congestion performance measures for the Baltimore urbanized area: Peak Hour Excessive Delay and Mode Share – Non-Single Occupancy Vehicle. The BRTB adopted its regional CMAQ Program performance targets for the Baltimore urbanized area on August 23. This resolution approved identical targets on behalf of the TPB.

Finally, the committee reviewed and adopted three resolutions approving amendments to the FY 2023-2026 Transportation Improvement Program (TIP) as requested by the District Department of Transportation (DDOT), the Washington Metropolitan Area Transit Authority (WMATA), and VDOT, as described in the bullets below:

- TPB SR4-2023, requested by DDOT to add a net total of approximately $175.2 million to 14 projects and programs under TIP Action 23-01.1. Only one project, the East Capitol Street Corridor Mobility & Safety Plan (T6315) is required to be and is included in the air quality conformity analysis of the 2022 Update to Visualize 2045 and the FY 2023-2026 TIP. The remaining 13 projects and programs are exempt from the air quality conformity requirement.

- TPB SR5-2023, requested by WMATA, adds approximately $57.5 million in CMAQ program and flexed state matching funds to the Bus, Bus Maintenance Facilities, and Paratransit Program grouped record (T11589) under TIP Action 23-01.1. This project grouping is exempt from the air quality conformity requirement. This amendment is included under the same TIP Action as DDOT's amendment since WMATA's TIP projects and programs are included with DDOT's in the District's Statewide Transportation Improvement Program (STIP) which is submitted to FHWA and FTA for approval.
- TPB SR6-2023, requested by VDOT, adds a net total of approximately $33 million for 8 projects and programs under TIP Action 23-01.3. Two projects: the VA Route 7/Route 690 Interchange (T6618) and the VA Route 1 (Fraley Blvd.) Widening (T6692) are included in the air quality conformity analysis of the 2022 Update to Visualize 2045 and the FY 2023-2026 TIP (CON IDs 653 and 631 respectively). The remaining 6 projects and programs are exempt from the conformity requirement.

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." The director's report each month and the TPB's review, without objection, shall constitute the final approval of any actions or resolutions approved by the Steering Committee.

Attachments:

- Adopted resolution SR2-2023, supporting one project in VDOT's Staunton District for inclusion in the Commonwealth of Virginia's SMART SCALE transportation project prioritization process, as requested by VDOT.
- Adopted resolution SR3-2023, approving CMAQ Program performance measure targets for 2022–2025 for the Baltimore, Maryland urbanized area.
- Adopted resolution SR4-2023, approving amendments to the FY 2023-2026 TIP which adds funding for 14 projects and programs under TIP Action 23-01.1, as requested by DDOT.
- Adopted resolution SR5-2023, approving an amendment the FY 2023-2026 TIP which adds funding for the Bus, Bus Maintenance Facilities, and Paratransit Program under TIP Action 23-01.1, as requested by WMATA
- Adopted resolution SR6-2023, approving amendments to the FY 2023-2026 TIP which adds funding for 8 projects and programs under TIP Action 23-01.3, as requested by VDOT.

TPB Steering Committee Attendance – September 9, 2022
(only voting members listed)

TPB Chair/ VA rep.:	Pamela Sebesky
DC rep.:	Heather Edelman
MD rep.:	Jason Groth
DDOT:	Mark Rawlings
VDOT:	Amir Shahpar
WMATA:	Mark Phillips
Technical Committee Chair:	Matthew Arcieri

TPB SR2-2023
September 9, 2022

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

A RESOLUTION OF SUPPORT FOR SUBMISSION OF NORTHERN VIRGINIA PROJECTS FOR THE COMMONWEALTH OF VIRGINIA'S SMART SCALE TRANSPORTATION PROJECT PRIORITIZATION PROCESS

WHEREAS, the National Capital Region Transportation Planning Board (TPB), as the federally designated metropolitan planning organization (MPO) for the Washington region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act, reauthorized November 15, 2021 when the Infrastructure Investment and Jobs Act (IIJA) was signed into law, for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the metropolitan area; and

WHEREAS, on June 15, 2022, the TPB approved the 2022 Update to Visualize 2045, the long-range transportation plan for the National Capital Region, which was developed as specified in the Federal Planning Regulations and is the MPO's long-range plan of record; and

WHEREAS, localities, agencies and public transportation providers that wish to submit projects for the Commonwealth of Virginia SMART SCALE funding must demonstrate that the project is included in or is exempt from inclusion in the MPO's long-range transportation plan, or, if the project is not in the plan, the project must have an MPO resolution of support, in order to be considered for the SMART SCALE prioritization process; and

WHEREAS, the Virginia Department of Transportation (VDOT) receives all highway and transit SMART SCALE project submissions, has transmitted the attached project list, and has worked with TPB staff in reviewing the highway and transit project submissions for submission eligibility; and

WHEREAS, absent a determination by TPB staff that a project is already included in the approved plan, submission of projects for SMART SCALE funding requires a resolution of support by the TPB; and

WHEREAS, submission of projects to the Commonwealth for the SMART SCALE process does not infer nor commit TPB to include any project into its long-range plan; and

WHEREAS, all projects that are awarded SMART SCALE funding and are not already included in Visualize 2045, as amended or updated, must each be treated as a new project to the TPB's process and will be evaluated accordingly as specified in the TPB's Technical Inputs Solicitation Submission Guide; and

WHEREAS, VDOT will provide the TPB with a list of projects that were submitted, and will also provide TPB with the list of projects that were awarded funding.

NOW, THEREFORE, BE IT RESOLVED THAT the National Capital Region Transportation Planning Board supports submission of the following Northern Virginia project to the Commonwealth of Virginia SMART SCALE Project Prioritization Process as listed in the attached materials.

Adopted by the TPB Steering Committee at its meeting on Friday, September 9, 2022.

COMMONWEALTH of VIRGINIA
DEPARTMENT OF TRANSPORTATION
811 COMMERCE ROAD
STAUNTON, VIRGINIA 24401-9029
www.VirginiaDOT.org

Stephen Brich, P.E.
Commissioner

8/25/2022

The Honorable Pamela Sebesky
Chair, National Capital Regional Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capital Street, N.E., Suite 300
Washington, DC 20002-4201

RE: VDOT Staunton District – Clarke County SMART SCALE application – TPB resolution of support to apply for funding

Dear Chair Sebesky:

The Virginia Department of Transportation (VDOT) Staunton District seeks the National Capital Region Transportation Planning Board's (TPB) approval of a resolution of support for submission of a Clarke County SMART SCALE project that extends into Loudoun County on Route 7 and is not currently in the recently adopted update of the TPB's Constrained Long-Range Plan (CLRP), Visualize 2045.

The Clarke County SMART SCALE application will address safety and operational issues at the Route 7 and Route 601 intersection located on the border of Clarke and Loudoun County. Route 601, Blue Ridge Mountain Road weaves back and forth between the two counties, but falls under the maintenance responsibility of the VDOT Staunton District. VDOT Staunton District Planning conducted a transportation study at the intersection in cooperation with staff from both counties and VDOT Northern Virginia District. Several innovative intersection concepts where considered for improving safety and operations, with a Restricted Crossing U-turn (RCUT) intersection being identified as a potential solution. Based on public feedback and project cost related to SMART SCALE application competitiveness, the preferred alternative developed by VDOT to advance as an application consists of a second northbound Route 601 intersection approach as a designated right turn lane to eastbound Route 7. The project also includes the extension of existing left turn lanes along Route 7 at the primary intersection and downstream intersections at Route 679 in Clarke County and Route 734 in Loudoun County. These improvements will provide immediate operational benefits during peak travel periods for the higher traffic volumes on the southern leg of Route 601 at the intersection. The improvements will maintain full access at the intersection, while making voluntary U-turn movements more attractive and safer. Finally, the project accommodates the potential implementation of a full RCUT intersection in the future.

As part of the SMART SCALE prioritization process, Virginia law requires that SMART SCALE applicants that wish to submit projects for funding consideration within a Metropolitan Planning Organization (MPO) must show that the project is included in the CLRP. If the project is not included in the current MPO CLRP, the applicant

must request a resolution of support from the MPO. As the MPO representing Loudoun County, VDOT Staunton District is requesting consideration and approval by the TPB of a resolution of support for the Clarke County SMART SCALE Route 7 and Route 601 application. This resolution acts as a TPB endorsement of the project, meeting SMART SCALE eligibility requirements for scoring and prioritization. If the project is successful in being awarded funding, it will then re-enter the TPB process as a new project and will be evaluated accordingly as specified in the TPB Technical Solicitation Submission Guide. With the first year of available funding being FY2026 for the current round of SMART SCALE, there will be sufficient time for awarded projects to be incorporated into Visualize 2045.

We appreciate your consideration in this matter. Should you have any additional questions, please contact Adam Campbell, VDOT Staunton District Planner at (540)-332-9067 or via email at AdamF.Campbell@vdot.virginia.gov.

Sincerely,

Randy S. Kiser, P.E.
Staunton District Administrator

CC: Edwin Carter, Edinburg Residency Administrator, VDOT Staunton District
Darin Simpson, District Traffic Engineer, VDOT Staunton District
Chris Boies, County Administrator, Clarke County

TPB SR3-2023
September 9, 2022

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

RESOLUTION TO ADOPT REGIONAL CONGESTION MITIGATION AND AIR QUALITY (CMAQ) PROGRAM PERFORMANCE MEASURE TARGETS FOR 2022-2025 FOR THE BALTIMORE, MARYLAND REGION

WHEREAS, the National Capital Region Transportation Planning Board (TPB), as the federally designated metropolitan planning organization (MPO) for the Washington region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act, reauthorized November 15, 2021 when the Infrastructure Investment and Jobs Act (IIJA) was signed into law, for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the metropolitan area; and

WHEREAS, the provisions of the federal surface transportation acts continue the implementation of performance-based planning and programming to achieve desired performance outcomes for the multimodal transportation system, including the setting of targets for future performance by States and metropolitan planning organizations (MPOs); and

WHEREAS, the Federal Highway Administration issued a rulemaking for state departments of transportation (DOTs) and MPOs to quadrennially establish data-driven targets for the CMAQ Program performance measures and for MPOs to work in coordination with state DOTs in the development of two-year and four-year targets; and

WHEREAS, the TPB metropolitan planning area includes a portion of the Baltimore, MD urbanized area and the Baltimore Region Transportation Board (BRTB) and the TPB closely coordinate on the planning of transportation projects for this portion of the metropolitan panning area, and

WHEREAS, BRTB and the TPB are required to establish unified two-year and four-year targets for the Washington-DC-VA-MD urban area for the CMAQ Program performance measures of Peak Hour Excessive Delay (PHED) and Mode Share – Non-Single Occupancy Vehicle (Non-SOV); and

WHEREAS, TPB staff have coordinated with BRTB staff to develop regional CMAQ Program performance targets that are evidence based, consistent with the targets submitted by each member state DOT, and reflective of the outcomes expected through the implementation of funded projects, programs, and policies; and

WHEREAS, on August 23, the BRTB formally adopted regional CMAQ Program performance targets for the Baltimore urbanized area that are evidence based, consistent with the targets submitted by each member state DOT, and reflective of the outcomes expected through the implementation of funded projects, programs, and policies.

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board adopts the following set of two-year and four-year CMAQ Program: Traffic Congestion targets for the period 2022-2025 for the Baltimore urbanized area, identical with those adopted by the BRTB, as shown in the following table.

CMAQ Program: Traffic Congestion

Performance Measure for the Baltimore MD Urbanized Area	2-year Target CY 2022 – 2023	4-year Target CY 2022 – 2025
Peak Hour Excessive Delay (PHED) – Annual hours of peak hour excessive delay per capita	**n/a**	**15.7 Hours**
Mode Share - Percent of Non-SOV Travel on the National Highway System (NHS)	**25.3%**	**25.5%**

Adopted by the TPB Steering Committee at its meeting on Friday, September 9, 2022.

TPB SR4-2023
September 9, 2022

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

RESOLUTION ON AN AMENDMENT TO THE FY 2023-2026 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY CONFORMITY REQUIREMENT TO INCLUDE TIP ACTION 23-01.1 WHICH ADDS FUNDING FOR FOURTEEN PROJECTS AND PROGRAMS, AS REQUESTED BY THE DISTRICT DEPARTMENT OF TRANSPORTATION (DDOT)

WHEREAS, the National Capital Region Transportation Planning Board (TPB), as the federally designated metropolitan planning organization (MPO) for the Washington region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act, reauthorized November 15, 2021 when the Infrastructure Investment and Jobs Act (IIJA) was signed into law, 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 June 15, 2022 the TPB adopted the FY 2023-2026 TIP; and

WHEREAS, DDOT has requested an amendment to the FY 2023-2026 TIP to include TIP Action 23-01.1 which adds a net total of $175.2 million to 14 projects and programs listed at the end of this resolution, and as described in the attached materials; and

WHEREAS, the attached materials include: Attachment A) a Project Overview report showing how the projects and programs will appear in the TIP following approval, Attachment B) an Amendment Summary report showing the changes in four-year program total, reason for the amendment, and a Change Summary providing line-item changes to every programmed amount by fund source, fiscal year, and project phase, and Attachment C) a letter from DDOT dated August 26, 2022 requesting the amendments; and

WHEREAS, these projects and programs have been updated in the TPB's Project InfoTrak database under TIP Action 23-01.1, creating the first amended version of the FY 2023-2026 TIP, which supersedes all previous versions of the TIP and can be found online at www.mwcog.org/ProjectInfoTrak; and

WHEREAS, the East Capitol Street Corridor Mobility & Safety Plan (T6315) is included in the air quality conformity analysis of the 2022 Update to Visualize 2045 and the FY 2023-2026 TIP (CON ID 567) and the other 13 projects and programs are exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012; and

WHEREAS, this resolution and the amendments to the FY 2023-2026 TIP shall not be considered final until the Transportation Planning Board has had the opportunity to review and accept these materials at its next full meeting.

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2023-2026 TIP to include TIP Action 23-01.1 which adds a net total of $175.2 million to 14 projects and programs listed below, and as described in the attached materials.

TIP ID	PROJECT TITLE	ADDITIONAL/ NEW FUNDING
Bridge Preventative Maintenance/Rehabilitation/Replacement Projects		
T11605*	South Capitol Street Bridge Asset Management	$900,000
T2927	Highway Structures Preventive Maintenance and Repairs	$801,944
T11592	I-395 Southbound Exit Ramp to Southwest Freeway	$25,395,000
T6804	I-66 Ramp to Whitehurst Frwy and K Street NW Bridge over Whitehurst Freeway Ramp	$27,851,500
T6428	Anacostia Ave NE over Anacostia River Outlet Bridge Rehabilitation	$5,534,500
T3193	11th Street Bridges SE, Replace and Reconfigure	$3,441,100
Bicycle and Pedestrian Projects		
T6315	East Capitol Street Corridor Mobility & Safety Plan	$22,067,299
T2796	National Recreational Trails	$1,872,000
T6516	Pedestrian Bridge over Arizona Ave NW and Connecting Trail Rehabilitation	$2,850,000
Environmental, Freight, Road Resurfacing, Bus Transit, and Operations/Maintenance		
T5322	Environmental Management System	$1,794,250
T2633	Size and Weight Enforcement Program	$7,215,250
T3215	Pavement Restoration - STBG Streets	$20,731,000
T11604*	DC Circulator Bus Procurement	$51,436,209
T6610	Citywide Large Guide Sign Maintenance	$3,310,250

Adopted by the TPB Steering Committee at its meeting on Friday, September 9, 2022.

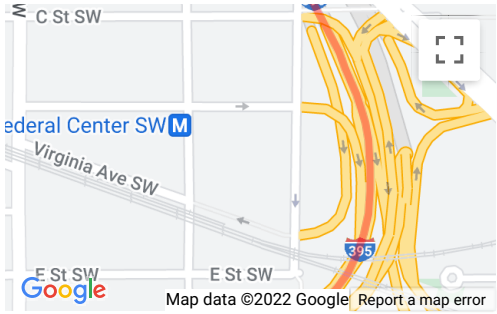
National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T11592	*Lead Agency*	District Department of Transportation	*Project Type*	Bridge - Rehab
Project Name	I-395 Southbound Exit Ramp to Southwest Freeway	*County*	Washington	*Total Cost*	$27,293,750
Project Limits		*Municipality*	District of Columbia	*Completion Date*	2030
		Agency Project ID			

Description Replace bridge deck; repair/repaint structural steel; replace bearings; repair spalls/seal cracks in substructure; upgrade approach guiderail and transition; address maintenance and rehabilitation recommendations in the inspection report.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	BFP	-	-	$2,083,200	-	-	-	$2,083,200	$2,083,200
PE	STATE	-	-	$520,800	-	-	-	$520,800	$520,800
Total PE		-	-	$2,604,000	-	-	-	$2,604,000	$2,604,000
CON	BFP	-	-	-	-	$19,751,800	-	$19,751,800	$19,751,800
CON	STATE	-	-	-	-	$4,937,950	-	$4,937,950	$4,937,950
Total CON		-	-	-	-	$24,689,750	-	$24,689,750	$24,689,750
Total Programmed		-	-	$2,604,000	-	$24,689,750	-	$27,293,750	$27,293,750



Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s), Programming Update

Funding Change(s):
Total project cost increased from $1,898,750 to $27,293,750

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T11604	*Lead Agency*	District Department of Transportation	*Project Type*	Transit - Bus
Project Name	DC Circulator Bus Procurement	*County*	Washington	*Total Cost*	$51,436,209
Project Limits		*Municipality*	District of Columbia	*Completion Date*	2028
		Agency Project ID			

Description Purchase of new battery electric bus vehicles (BEB), to replace the oldest diesel vehicles in the fleet and increase the spare ratio. DDOT plans to replace its full diesel fleet of 44 vehicles and add additional spares as electrical infrastructure and facilities become available.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
OTHER	SECT. 5339 (C)	$2,600,000	$5,150,000	$9,590,000	-	-	-	$14,740,000	$17,340,000
OTHER	STATE	$26,731,176	$3,296,000	$4,069,033	-	-	-	$7,365,033	$34,096,209
Total Other		$29,331,176	$8,446,000	$13,659,033	-	-	-	$22,105,033	$51,436,209
Total Programmed		$29,331,176	$8,446,000	$13,659,033	-	-	-	$22,105,033	$51,436,209

*Not Location Specific

Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-01.1	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - New project

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T11605	*Lead Agency*	District Department of Transportation	*Project Type*	Bridge - Preventive Maintenance
Project Name	South Capitol Street Bridge Asset Management	*County*	Washington	*Total Cost*	$900,000
Project Limits		*Municipality*		*Completion Date*	2045
		Agency Project ID			

Description Preventative maintenance for the new Frederick Douglass Memorial Bridge.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
CON	STATE	-	-	$60,000	$60,000	$60,000	-	$180,000	$180,000
CON	STBG	-	-	$240,000	$240,000	$240,000	-	$720,000	$720,000
	Total CON	-	-	$300,000	$300,000	$300,000	-	$900,000	$900,000
Total Programmed		-	-	$300,000	$300,000	$300,000	-	$900,000	$900,000

Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-01.1	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - New project

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T2633	*Lead Agency*	District Department of Transportation	*Project Type*	Freight Movement
Project Name	Size and Weight Enforcement Program	*County*	Washington	*Total Cost*	$8,359,750
Project Limits		*Municipality*	District of Columbia	*Completion Date*	2045
		Agency Project ID	CI029A, CI053A		

Description This project provides trained personnel to enforce size and weight regulations, as well as increase the number of portable scales at Weigh in Motion sites on and off the Federal-aid System. This project will facilitate reducing weight violations and preventing premature deterioration of pavements and structures in the District, and in turn provide a safe driving environment. a. Weigh in Motion Operations Support b. Weigh in Motion Upgrade and Repair c. Upgrade Existing I-295 SB Weigh Station in the Freight Plan

Phase	Source	FY2023	FY2024	FY2025	FY2026	4 Year Total	Total
CON	NHFP	$6,228,000	$156,000	$151,900	$151,900	$6,687,800	$6,687,800
CON	State (NM)	$38,000	$39,000	-	-	$77,000	$77,000
CON	STATE	$1,519,000	-	$37,975	$37,975	$1,594,950	$1,594,950
	Total CON	$7,785,000	$195,000	$189,875	$189,875	$8,359,750	$8,359,750
	Total Programmed	$7,785,000	$195,000	$189,875	$189,875	$8,359,750	$8,359,750

*Map Has Not Been Marked

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*
23-02	Amendment 2023-2026	*Pending*	N/A	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s), Programming Update

Funding Change(s):
Total project cost increased from $1,144,500 to $8,359,750

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T2796	*Lead Agency*	District Department of Transportation	*Project Type*	Bike/Ped
Project Name	National Recreational Trails	*County*	Washington	*Total Cost*	$3,472,000
Project Limits		*Municipality*	District of Columbia	*Completion Date*	
		Agency Project ID	AF066A		

Description Programs associated with the Recreational Trails Program a program established to develop and maintain recreational trails and trail-related facilities. Mostly small projects; often grants to local groups. Through the D.C. Recreational Trails Program Advisory Committee, the District Department of Transportation will provide or grant funding to non-profits to provide the following services for District trails: maintain and restore existing trails; develop and rehabilitate trailside and trailhead facilities and trail linkages; purchase and lease trail construction and maintenance equipment; construct new trails; acquire easements or property for trails; assess trail conditions for accessibility and maintenance; develop and disseminate publications and operate educational programs to promote safety and environmental protection related to trails (including supporting non-law enforcement trail safety and trail use monitoring patrol programs, and providing trail-related training). a. Friends of Kenilworth Aquatic Gardens b. Student Conservation Association

Phase	Source	FY2023	FY2024	FY2025	FY2026	4 Year Total	Total
PE	CRP	-	$374,400	$374,400	$374,400	$1,123,200	$1,123,200
PE	NRT	$694,400	$320,000	$320,000	$320,000	$1,654,400	$1,654,400
PE	STATE	$173,600	$173,600	$173,600	$173,600	$694,400	$694,400
	Total PE	$868,000	$868,000	$868,000	$868,000	$3,472,000	$3,472,000
	Total Programmed	$868,000	$868,000	$868,000	$868,000	$3,472,000	$3,472,000

*Various Locations

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s)

Funding Change(s):
Total project cost increased from $1,600,000 to $3,472,000

National Capital Region
Transportation Planning Board

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TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
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Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T2927	*Lead Agency*	District Department of Transportation	*Project Type*	Bridge - Preventive Maintenance
Project Name	Highway Structures Preventive Maintenance and Repairs	*County*	Washington	*Total Cost*	$29,886,193
Project Limits		*Municipality*	District of Columbia	*Completion Date*	2045
		Agency Project ID	CD036A, CD042A, CD061		

Description This project provides a two-year base contract with two option years for the performance of preventive maintenance activities and initiating emergency repairs on highway structures on an as needed basis. The work includes concrete deck repair, replacement of expansion joints, repair or replacement of beams, girders and other structural steel, maintenance painting, application of low slump concrete overlays on bridge decks, concrete repair, underpinning and shoring of deficient bridge elements, jacking beams and restoring bearings, repair or replacement of bridge railings, guiderails and fencing, cleaning bridge scuppers and drain pipes, graffiti removal and other miscellaneous repair work on various highway structures.

Phase	Source	FY2023	FY2024	FY2025	FY2026	4 Year Total	Total
PE	NHPP	$88,115	$88,115	$88,115	$88,115	$352,460	$352,460
PE	STATE	$22,029	$22,029	$22,029	$22,029	$88,116	$88,116
	Total PE	$110,144	$110,144	$110,144	$110,144	$440,576	$440,576
CON	NHPP	$5,075,133	$5,075,133	$5,075,133	$5,075,133	$20,300,532	$20,300,532
CON	STATE	$1,472,252	$1,472,252	$1,472,252	$1,472,252	$5,889,008	$5,889,008
CON	STBG	$814,018	$814,018	$814,020	$814,021	$3,256,077	$3,256,077
	Total CON	$7,361,403	$7,361,403	$7,361,405	$7,361,406	$29,445,617	$29,445,617
Total Programmed		$7,471,547	$7,471,547	$7,471,549	$7,471,550	$29,886,193	$29,886,193

*Various Locations

Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption	2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s), Programming Update

Funding Change(s):
Total project cost increased from $29,084,249 to $29,886,193

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T3193	*Lead Agency*	District Department of Transportation	*Project Type*	Road - Other Improvement
Project Name	11th Street Bridges SE, Replace and Reconfigure	*County*	Washington	*Total Cost*	$43,142,100
Project Limits		*Municipality*	District of Columbia	*Completion Date*	2026
		Agency Project ID	CD056A		

Description To replace existing structure with new structures and provide direct access from I-295 to Downtown DC (via I-395). To include work for: a. I-695 Eastbound D4 Ramp Design

*Map Has Not Been Marked

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	NHPP	$4,980,000	-	-	-	-	-	-	$4,980,000
PE	STATE	$1,020,000	-	-	-	-	-	-	$1,020,000
	Total PE	$6,000,000	-	-	-	-	-	-	$6,000,000
CON	NHPP	$25,730,000	-	$4,912,880	-	-	-	$4,912,880	$30,642,880
CON	STATE	$5,270,000	-	$1,229,220	-	-	-	$1,229,220	$6,499,220
	Total CON	$31,000,000	-	$6,142,100	-	-	-	$6,142,100	$37,142,100
	Total Programmed	$37,000,000	-	$6,142,100	-	-	-	$6,142,100	$43,142,100

Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-01.1	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s), Programming Update

Funding Change(s):

Total project cost increased from $39,701,000 to $43,142,100

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T3215	*Lead Agency*	District Department of Transportation	*Project Type*	Road - Resurface
Project Name	Pavement Restoration - STBG Streets	*County*	Washington	*Total Cost*	$52,731,000
Project Limits		*Municipality*	District of Columbia	*Completion Date*	2045
		Agency Project ID	SR092A		

Description Citywide pavement and resurfacing/restoration, upgrading of sidewalk, curb and gutter, and wheelchair ramps.

*Map Has Not Been Marked

Phase	Source	FY2023	FY2024	FY2025	FY2026	4 Year Total	Total
CON	STATE	$2,614,850	$2,636,550	$2,647,400	$2,647,400	$10,546,200	$10,546,200
CON	STBG	$10,459,400	$10,546,200	$10,589,600	$10,589,600	$42,184,800	$42,184,800
Total CON		$13,074,250	$13,182,750	$13,237,000	$13,237,000	$52,731,000	$52,731,000
Total Programmed		$13,074,250	$13,182,750	$13,237,000	$13,237,000	$52,731,000	$52,731,000

Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption	2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s)

Funding Change(s):
Total project cost increased from $32,000,000 to $52,731,000

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
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TIP ID	T5322	*Lead Agency*	District Department of Transportation	*Project Type*	Environmental Only Project
Project Name	Environmental Management System	*County*	Washington	*Total Cost*	$4,394,250
Project Limits		*Municipality*	District of Columbia	*Completion Date*	2045
		Agency Project ID	CM085A		

Description EMS Program involves the oversight and implementation of programmatic agreements with FHWA and other Federal agencies for compliance with NEPA and Section 106 of the NHPA; implementation of MOU between DDOT and DC SHPO for a state funded historic preservation staff; air quality planning and environmental coordination under the Clean Air Act; ensuring compliance with the Transportation Performance Management requirements for the CMAQ program; and updating DDOT's environmental processes, policies, guidance, and training.

Phase	Source	FY2023	FY2024	FY2025	FY2026	4 Year Total	Total
PE	STATE	$218,085	$219,170	$220,255	$221,340	$878,850	$878,850
PE	STBG	$872,340	$876,680	$881,020	$885,360	$3,515,400	$3,515,400
	Total PE	$1,090,425	$1,095,850	$1,101,275	$1,106,700	$4,394,250	$4,394,250
	Total Programmed	$1,090,425	$1,095,850	$1,101,275	$1,106,700	$4,394,250	$4,394,250

*Map Has Not Been Marked

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s)

Funding Change(s):
Total project cost increased from $2,600,000 to $4,394,250

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T6315	*Lead Agency*	District Department of Transportation	*Project Type*	Bike/Ped
Project Name	East Capitol Street Corridor Mobility & Safety Plan	*County*	Washington	*Total Cost*	$49,967,299
Project Limits	40th Street NE to Southern Ave NE	*Municipality*	District of Columbia	*Completion Date*	2027
		Agency Project ID	SR086A		

Description Design and construct pedestrian safety and traffic operations improvements

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	HSIP	$1,710,000	-	-	-	-	-	-	$1,710,000
PE	STATE	$390,000	$455,700	-	-	-	-	$455,700	$845,700
PE	STBG	$800,000	$1,822,799	-	-	-	-	$1,822,799	$2,622,799
Total PE		$2,900,000	$2,278,499	-	-	-	-	$2,278,499	$5,178,499
CON	STATE	-	-	$2,985,920	$2,985,920	$2,985,920	-	$8,957,760	$8,957,760
CON	STBG	-	-	$11,943,680	$11,943,680	$11,943,680	-	$35,831,040	$35,831,040
Total CON		-	-	$14,929,600	$14,929,600	$14,929,600	-	$44,788,800	$44,788,800
Total Programmed		$2,900,000	$2,278,499	$14,929,600	$14,929,600	$14,929,600	-	$47,067,299	$49,967,299

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s), Programming Update

Funding Change(s):

Total project cost increased from $27,900,000 to $49,967,299

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
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TIP ID	T6428	*Lead Agency*	District Department of Transportation	*Project Type*	Bridge - Rehab
Project Name	Anacostia Ave NE over Anacostia River Outlet Bridge Rehabilitation	*County*		*Total Cost*	$17,734,500
Project Limits		*Municipality*	District of Columbia, Region-wide	*Completion Date*	2026
		Agency Project ID			

Description The existing bridge (No. 78) needs total rehabilitation to become efficient and structurally sound as part of the roadway network and enhancing traffic movement through the corridor. The rehabilitation includes total replacement of the deck, the compression joint seals over both abutments and the pier.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	NHPP	$560,000	-	-	-	-	-	-	$560,000
PE	STATE	$140,000	-	-	-	-	-	-	$140,000
	Total PE	$700,000	-	-	-	-	-	-	$700,000
CON	STATE	-	$2,700,000	$706,900	-	-	-	$3,406,900	$3,406,900
CON	STBG	-	$10,800,000	$2,827,600	-	-	-	$13,627,600	$13,627,600
	Total CON	-	$13,500,000	$3,534,500	-	-	-	$17,034,500	$17,034,500
	Total Programmed	$700,000	$13,500,000	$3,534,500	-	-	-	$17,034,500	$17,734,500

Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-01.1	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s), Programming Update, Schedule Change(s)

Funding Change(s):

Total project cost increased from $12,200,000 to $17,734,500

National Capital Region
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Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T6516	*Lead Agency*	District Department of Transportation	*Project Type*	Bike/Ped
Project Name	Pedestrian Bridge over Arizona Ave NW and Connecting Trail Rehabilitation	*County*	Washington	*Total Cost*	$13,460,000
Project Limits	Nebraska Ave NW to Galena Pl NW	*Municipality*	District of Columbia	*Completion Date*	2027
		Agency Project ID			

Description The project area includes a rehabilitation and pavement of the 0.65-mile section of the trails at Arizona Ave from Nebraska Avenue, NW to Galena Place, NW including missing sections of the trail and rehabilitation/ reconstruction Substructure and Superstructure of approximately 110-foot long Pedestrian Bridge over Arizona Ave connecting both sides of Arizona Ave trails including pedestrian access ramp.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	CMAQ	$2,088,000	$347,200	-	-	-	-	$347,200	$2,435,200
PE	STATE	$522,000	$86,800	-	-	-	-	$86,800	$608,800
	Total PE	$2,610,000	$434,000	-	-	-	-	$434,000	$3,044,000
CON	CMAQ	-	-	$7,464,800	$868,000	-	-	$8,332,800	$8,332,800
CON	STATE	-	-	$1,866,200	$217,000	-	-	$2,083,200	$2,083,200
	Total CON	-	-	$9,331,000	$1,085,000	-	-	$10,416,000	$10,416,000
	Total Programmed	$2,610,000	$434,000	$9,331,000	$1,085,000	-	-	$10,850,000	$13,460,000

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s), Programming Update, Schedule Change(s)

Funding Change(s):
Total project cost increased from $10,610,000 to $13,460,000

National Capital Region
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TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
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TIP ID	T6610	*Lead Agency*	District Department of Transportation	*Project Type*	Transportation Operations
Project Name	Citywide Large Guide Sign Maintenance	*County*	Washington	*Total Cost*	$14,810,250
Project Limits		*Municipality*	District of Columbia	*Completion Date*	2045
		Agency Project ID	CFPID170319		

Description Repair and replacement of damaged overhead/oversized signage, primarily located along Interstate system. This project will facilitate replacement of damaged signs that are too large to fabricate and install in-house. a. Citywide Large Guide Sign Maintenance b. Sign Structure Upgrade and Replacement

Phase	Source	FY2023	FY2024	FY2025	FY2026	4 Year Total	Total
PE	STATE	-	$227,850	-	-	$227,850	$227,850
PE	STBG	-	$911,400	-	-	$911,400	$911,400
	Total PE	-	$1,139,250	-	-	$1,139,250	$1,139,250
CON	STATE	$1,367,100	-	$1,367,100	-	$2,734,200	$2,734,200
CON	STBG	$5,468,400	-	$5,468,400	-	$10,936,800	$10,936,800
	Total CON	$6,835,500	-	$6,835,500	-	$13,671,000	$13,671,000
	Total Programmed	$6,835,500	$1,139,250	$6,835,500	-	$14,810,250	$14,810,250

*Map Has Not Been Marked

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s), Programming Update

Funding Change(s):
Total project cost increased from $11,500,000 to $14,810,250

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the District Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T6804	*Lead Agency*	District Department of Transportation	*Project Type*	Bridge - Rehab
Project Name	I-66 Ramp to Whitehurst Frwy and K Street NW Bridge over Whitehurst Freeway Ramp	*County*	Washington	*Total Cost*	$32,336,250
Project Limits		*Municipality*	District of Columbia	*Completion Date*	2045
		Agency Project ID			

Description In conjunction with the Asset Management Division recommendation, it is apparent that to maintain the structural integrity and reduce further damage from the continued deterioration and aging of the I-66 Ramp to the Whitehurst Freeway and the K Street NW Bridge over Ramp to the Whitehurst Freeway, repair and restoration of the bridge substructures and superstructure is required.(Bridge #1303 and Bridge # 1304)The primary goal of the project is to perform repairs and rehabilitation of all deficient bridge components to extend the service life of the structure.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	NHPP	$1,200,000	-	-	$2,604,000	-	-	$2,604,000	$3,804,000
PE	State (NM)	$300,000	-	-	-	-	-	-	$300,000
PE	STATE	-	-	-	$651,000	-	-	$651,000	$651,000
	Total PE	$1,500,000	-	-	$3,255,000	-	-	$3,255,000	$4,755,000
CON	NHPP	$2,983,750	-	-	-	-	$19,678,000	-	$22,661,750
CON	STATE	-	-	-	-	-	$4,919,500	-	$4,919,500
	Total CON	$2,983,750	-	-	-	-	$24,597,500	-	$27,581,250
	Total Programmed	$4,483,750	-	-	$3,255,000	-	$24,597,500	$3,255,000	$32,336,250

Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption	2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*
23-02	Amendment	2023-2026	*Pending*	N/A	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Cost change(s), Programming Update

Funding Change(s):
Total project cost increased from $4,484,750 to $32,336,250

Attachment B: Amendment Summary Report for
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by District Department of Transportation

TIP ID	PROJECT TITLE	COST BEFORE	COST AFTER	COST CHANGE	% CHANGE	CHANGE REASON	CHANGE SUMMARY
T2796	National Recreational Trails	$1,600,000	$3,472,000	$1,872,000	117	Cost change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): Changed AQ Confirm: - from "" to "No" LOCAL ► Delete funds in FFY 23 in PE for $80,000 ► Delete funds in FFY 24 in PE for $80,000 ► Delete funds in FFY 25 in PE for $80,000 ► Delete funds in FFY 26 in PE for $80,000 DC:t48943, DC:t48943 ► Add funds in FFY 24 in PE for $374,400 ► Add funds in FFY 25 in PE for $374,400 ► Add funds in FFY 26 in PE for $374,400 STATE ► Add funds in FFY 23 in PE for $173,600 ► Add funds in FFY 24 in PE for $173,600 ► Add funds in FFY 25 in PE for $173,600 ► Add funds in FFY 26 in PE for $173,600 NRT + Increase funds in FFY 23 in PE from $320,000 to $694,400 *Total project cost increased from $1,600,000 to $3,472,000*
T6516	Pedestrian Bridge over Arizona Ave NW and Connecting Trail Rehabilitation	$10,610,000	$13,460,000	$2,850,000	27	Cost change(s), Programming Update, Schedule Change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): Changed Trans System: - from "Non-Infrastructure" to "Local" Changed Location Type: - from "Other" to "Trail/Path Segment" Changed AQ Confirm: - from "" to "No" TBD ► Delete funds in FFY 27 in CON for $8,000,000 STATE ► Add funds in FFY 23 in PE for $86,800 ► Add funds in FFY 24 in CON for $1,866,200 ► Add funds in FFY 25 in CON for $217,000 CMAQ ► Add funds in FFY 23 in PE for $347,200 ► Add funds in FFY 24 in CON for $7,464,800 ► Add funds in FFY 25 in CON for $868,000 *Total project cost increased from $10,610,000 to $13,460,000*

Attachment B: Amendment Summary Report for
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by District Department of Transportation

TIP ID	PROJECT TITLE	COST BEFORE	COST AFTER	COST CHANGE	% CHANGE	CHANGE REASON	CHANGE SUMMARY
T6315	East Capitol Street Corridor Mobility & Safety Plan	$27,900,000	$49,967,299	$22,067,299	79	Cost change(s), Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): TBD ► Delete funds in FFY 27 in PE for $25,000,000 STATE ► Add funds in FFY 23 in PE for $455,700 ► Add funds in FFY 24 in CON for $2,985,920 ► Add funds in FFY 25 in CON for $2,985,920 ► Add funds in FFY 26 in CON for $2,985,920 STBG ► Add funds in FFY 23 in PE for $1,822,799 ► Add funds in FFY 24 in CON for $11,943,680 ► Add funds in FFY 25 in CON for $11,943,680 ► Add funds in FFY 26 in CON for $11,943,680 *Total project cost increased from $27,900,000 to $49,967,299*
T2927	Highway Structures Preventive Maintenance and Repairs	$29,084,249	$29,886,193	$801,944	3	Cost change(s), Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): LOCAL ► Delete funds in FFY 22 in PE for $20,000 CON for $1,073,949 STATE ► Delete funds in FFY 22 in CON for $700,000 + Increase funds in FFY 23 in PE from $0 to $22,029 + Increase funds in FFY 23 in CON from $1,005,726 to $1,472,252 + Increase funds in FFY 24 in PE from $0 to $22,029 + Increase funds in FFY 24 in CON from $1,005,726 to $1,472,252 + Increase funds in FFY 25 in PE from $0 to $22,029 + Increase funds in FFY 25 in CON from $1,005,726 to $1,472,252 + Increase funds in FFY 26 in PE from $0 to $22,029 + Increase funds in FFY 26 in CON from $1,005,726 to $1,472,252 NHPP ► Delete funds in FFY 22 in PE for $80,000 CON for $5,622,068 + Increase funds in FFY 23 in PE from $0 to $88,115 + Increase funds in FFY 23 in CON from $2,668,121 to $5,075,133 + Increase funds in FFY 24 in PE from $0 to $88,115 + Increase funds in FFY 24 in CON from $2,668,121 to $5,075,133 + Increase funds in FFY 25 in PE from $0 to $88,115 + Increase funds in FFY 25 in CON from $2,668,121 to $5,075,133 + Increase funds in FFY 26 in PE from $0 to $88,115 + Increase funds in FFY 26 in CON from $2,668,121 to $5,075,133 STBG ► Delete funds in FFY 22 in CON for $1,473,728 - Decrease funds in FFY 23 in CON from $1,354,779 to $814,018 - Decrease funds in FFY 24 in CON from $1,354,779 to $814,018
T11605	South Capitol Street Bridge Asset Management	$0	$900,000	$900,000	0	New project	PROJECT CHANGES (FROM PREVIOUS VERSION): STATE ► Add funds in FFY 24 in CON for $60,000 ► Add funds in FFY 25 in CON for $60,000 ► Add funds in FFY 26 in CON for $60,000 STBG ► Add funds in FFY 24 in CON for $240,000 ► Add funds in FFY 25 in CON for $240,000 ► Add funds in FFY 26 in CON for $240,000 *Total project cost $900,000*

Attachment B: Amendment Summary Report for
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by District Department of Transportation

TIP ID	PROJECT TITLE	COST BEFORE	COST AFTER	COST CHANGE	% CHANGE	CHANGE REASON	CHANGE SUMMARY
T11592	I-395 Southbound Exit Ramp to Southwest Freeway	$1,898,750	$27,293,750	$25,395,000	1,337	Cost change(s), Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): Changed AQ Confirm: - from "" to "No" DC:t48941, DC:t48941 ► Add funds in FFY 24 in PE for $2,083,200 ► Add funds in FFY 26 in CON for $19,751,800 STATE ► Add funds in FFY 24 in PE for $520,800 ► Delete funds in FFY 25 in PE for $108,500 - Decrease funds in FFY 26 in PE from $271,250 to $0 + Increase funds in FFY 26 in CON from $0 to $4,937,950 NHPP ► Delete funds in FFY 25 in PE for $434,000 ► Delete funds in FFY 26 in PE for $1,085,000 *Total project cost increased from $1,898,750 to $27,293,750*
T6804	I-66 Ramp to Whitehurst Frwy and K Street NW Bridge over Whitehurst Freeway Ramp	$4,484,750	$32,336,250	$27,851,500	621	Cost change(s), Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): Title changed from "I-66 Ramp Ramp to Whitehurst Frwy and K Street NW Bridge over Whitehurst Freeway Ramp" to "I-66 Ramp to Whitehurst Frwy and K Street NW Bridge over Whitehurst Freeway Ramp" TBD ► Delete funds in FFY 27 in STATE ► Add funds in FFY 25 in PE for $651,000 ► Add funds in FFY 27 in CON for $4,919,500 NHPP ► Add funds in FFY 25 in PE for $2,604,000 ► Add funds in FFY 27 in CON for $19,678,000 *Total project cost increased from $4,484,750 to $32,336,250*
T6428	Anacostia Ave NE over Anacostia River Outlet Bridge Rehabilitation	$12,200,000	$17,734,500	$5,534,500	45	Cost change(s), Programming Update, Schedule Change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): Changed Trans System: - from "" to "Local" Changed Location Type: - from "" to "Bridge" Changed AQ Confirm: - from "" to "No" Changed Bridge #: - from "" to "78" Changed Project Type: - from "" to "Bridge - Rehab" STATE ► Add funds in FFY 23 in CON for $2,700,000 - Decrease funds in FFY 24 in CON from $1,955,000 to $706,900 STBG ► Add funds in FFY 23 in CON for $10,800,000 ► Add funds in FFY 24 in CON for $2,827,600 HBRRP ► Delete funds in FFY 24 in CON for $9,545,000 *Total project cost increased from $12,200,000 to $17,734,500*

Attachment B: Amendment Summary Report for
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by District Department of Transportation

TIP ID	PROJECT TITLE	COST BEFORE	COST AFTER	COST CHANGE	% CHANGE	CHANGE REASON	CHANGE SUMMARY
T5322	Environmental Management System	$2,600,000	$4,394,250	$1,794,250	69	Cost change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): LOCAL ► Delete funds in FFY 23 in PE for $130,000 ► Delete funds in FFY 24 in PE for $130,000 STATE ► Add funds in FFY 23 in PE for $218,085 ► Add funds in FFY 24 in PE for $219,170 + Increase funds in FFY 25 in PE from $130,000 to $220,255 + Increase funds in FFY 26 in PE from $130,000 to $221,340 STBG + Increase funds in FFY 23 in PE from $520,000 to $872,340 + Increase funds in FFY 24 in PE from $520,000 to $876,680 + Increase funds in FFY 25 in PE from $520,000 to $881,020 + Increase funds in FFY 26 in PE from $520,000 to $885,360 *Total project cost increased from $2,600,000 to $4,394,250*
T2633	Size and Weight Enforcement Program	$1,144,500	$8,359,750	$7,215,250	630	Cost change(s), Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): Changed AQ Confirm: - from "" to "No" STATE ► Add funds in FFY 23 in CON for $1,519,000 ► Delete funds in FFY 27 in CON for $37,975 ► Delete funds in FFY 28 in CON for $37,975 NHFP + Increase funds in FFY 23 in CON from $152,000 to $6,228,000 ► Delete funds in FFY 27 in CON for $151,900 ► Delete funds in FFY 28 in CON for $151,900 *Total project cost increased from $1,144,500 to $8,359,750*
T3193	11th Street Bridges SE, Replace and Reconfigure	$39,701,000	$43,142,100	$3,441,100	9	Cost change(s), Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): Changed Highway #: - from "" to "I 695" Changed Location Type: - from "" to "Bridge" Changed MAP21 GOALS: - from "BLANK" to "Washington" Changed Capacity Inc: - from "Yes" to "No" STATE + Increase funds in FFY 24 in CON from $1,000 to $1,229,220 ► Delete funds in FFY 25 in CON for $459,000 NHPP ► Add funds in FFY 24 in CON for $4,912,880 ► Delete funds in FFY 25 in CON for $2,241,000 *Total project cost increased from $39,701,000 to $43,142,100*

Attachment B: Amendment Summary Report for
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by District Department of Transportation

TIP ID	PROJECT TITLE	COST BEFORE	COST AFTER	COST CHANGE	% CHANGE	CHANGE REASON	CHANGE SUMMARY
T3215	Pavement Restoration - STBG Streets	$32,000,000	$52,731,000	$20,731,000	65	Cost change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): STATE + Increase funds in FFY 23 in CON from $1,600,000 to $2,614,850 + Increase funds in FFY 24 in CON from $1,600,000 to $2,636,550 + Increase funds in FFY 25 in CON from $1,600,000 to $2,647,400 + Increase funds in FFY 26 in CON from $1,600,000 to $2,647,400 STBG + Increase funds in FFY 23 in CON from $6,400,000 to $10,459,400 + Increase funds in FFY 24 in CON from $6,400,000 to $10,546,200 + Increase funds in FFY 25 in CON from $6,400,000 to $10,589,600 + Increase funds in FFY 26 in CON from $6,400,000 to $10,589,600 *Total project cost increased from $32,000,000 to $52,731,000*
T11604	DC Circulator Bus Procurement	$0	$51,436,209	$51,436,209	0	New project	PROJECT CHANGES (FROM PREVIOUS VERSION): STATE ► Add funds in FFY 22 in OTHER for $26,731,176 ► Add funds in FFY 23 in OTHER for $3,296,000 ► Add funds in FFY 24 in OTHER for $4,069,033 SECT. 5339 (C) ► Add funds in FFY 22 in OTHER for $2,600,000 ► Add funds in FFY 23 in OTHER for $5,150,000 ► Add funds in FFY 24 in OTHER for $9,590,000 *Total project cost $51,436,209*

Attachment B: Amendment Summary Report for
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by District Department of Transportation

TIP ID	PROJECT TITLE	COST BEFORE	COST AFTER	COST CHANGE	% CHANGE	CHANGE REASON	CHANGE SUMMARY
T6610	Citywide Large Guide Sign Maintenance	$11,500,000	$14,810,250	$3,310,250	29	Cost change(s), Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): LOCAL ► Delete funds in FFY 21 in PE for $200,000 CON for $260,000 ► Delete funds in FFY 22 in CON for $260,000 STATE ► Delete funds in FFY 22 in CON for $108,000 + Increase funds in FFY 23 in CON from $368,000 to $1,367,100 + Increase funds in FFY 24 in PE from $0 to $227,850 - Decrease funds in FFY 24 in CON from $368,000 to $0 + Increase funds in FFY 25 in CON from $368,000 to $1,367,100 ► Delete funds in FFY 26 in CON for $368,000 NHPP ► Delete funds in FFY 21 in CON for $1,040,000 ► Delete funds in FFY 22 in CON for $1,472,000 ► Delete funds in FFY 23 in CON for $1,472,000 ► Delete funds in FFY 24 in CON for $1,472,000 ► Delete funds in FFY 25 in CON for $1,472,000 ► Delete funds in FFY 26 in CON for $1,472,000 STBG ► Delete funds in FFY 21 in PE for $800,000 ► Add funds in FFY 23 in CON for $5,468,400 ► Add funds in FFY 24 in PE for $911,400 ► Add funds in FFY 25 in CON for $5,468,400 *Total project cost increased from $11,500,000 to $14,810,250*

Government of the District of Columbia
Department of Transportation

August 26, 2022

The Honorable Pamela Sebesky, Chair
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street N.E., Suite 300
Washington, DC 20002-4290

Dear Chair Sebesky,

The District Department of Transportation (DDOT) requests that the FY 2023-2026 Transportation Improvement Program (TIP) be amended for 14 projects as detailed below.

1. **Highway Structures Preventive Maintenance and Repair (TIP ID: T-2927)**
    a. Increase BFP funding for Construction by $11,837,039 in FY 2022
    b. Increase NHPP funding for PE by $110,144 in FY 2023
    c. Increase NHPP funding for PE by $110,144 in FY 2024
    d. Increase NHPP funding for PE by $110,144 in FY 2025
    e. Increase NHPP funding for PE by $110,144 in FY 2026
    f. Increase NHPP funding for Construction by $3,008,765 in FY 2023
    g. Increase NHPP funding for Construction by $3,008,765 in FY 2024
    h. Increase NHPP funding for Construction by $3,008,765 in FY 2025
    i. Increase NHPP funding for Construction by $3,008,765 in FY 2026
    j. Decrease STBG funding for Construction by $675,951 in FY 2023
    k. Decrease STBG funding for Construction by $675,950 in FY 2024
    l. Decrease STBG funding for Construction by $675,949 in FY 2025
    m. Decrease STBG funding for Construction by $675,948 in FY 2026

2. **Circulator Bus Procurement (TIP ID: T-11604)**
    a. Add project.
    b. Increase Sec. 5339c funding for Other by $2,600,000 in FY 2022
    c. Increase DCSTATE funding for Other by $26,731,176 in FY 2022
    d. Increase Sec. 5339c funding for Other by $5,510,000 in FY 2023
    e. Increase DCSTATE funding for Other by $3,296,000 in FY 2023
    f. Increase Sec. 5339c funding for Other by $9,590,000 in FY 2024
    g. Increase DCSTATE funding for Other by $4,069,033 in FY 2024

3. **Citywide Sign Structure Upgrade and Replacement (TIP ID: T-6610a)**
    a. Decrease NHPP funding for Construction by $1,840,000 in FY 2023
    b. Decrease NHPP funding for Construction by $1,840,000 in FY 2024
    c. Decrease NHPP funding for Construction by $1,840,000 in FY 2025
    d. Decrease NHPP funding for Construction by $1,840,000 in FY 2026
    e. Increase STBG funding for PE by $1,139,250 in FY 2024
    f. Increase STBG funding for Construction by $6,835,500 in FY 2023
    g. Increase STBG funding for Construction by $6,835,500 in FY 2025

4. **East Capitol Street Corridor Mobility and Safety Plan (TIP ID: T-6315)**
    a. Increase STBG funding for PE by $2,278,499 in FY 2023
    b. Increase STBG funding for Construction by $14,929,600 in FY 2024
    c. Increase STBG funding for Construction by $14,929,600 in FY 2025
    d. Increase STBG funding for Construction by $14,929,600 in FY 2026
    e. Decrease STBG funding for Construction by $25,000,000 in FY 2027

5. **Environmental Management System (TIP ID: T-5322)**
    a. Increase STBG funding for PE by $ 440,425 in FY 2023
    b. Increase STBG funding for PE by $445,850 in FY 2024
    c. Increase STBG funding for PE by $451,275 in FY 2025
    d. Increase STBG funding for PE by $456,700 in FY 2026

6. **I-395 SB Entrance Ramp Bridge over SB Mall Tunnel Exit Ramp to WB S.W. Freeway (TIP ID: T-11592)**
    a. Decrease NHPP funding for PE by $542,500 in FY 2025
    b. Decrease NHPP funding for PE by $1,356,250 in FY 2026
    c. Increase BFP funding for PE by $2,604,000 in FY 2024
    d. Increase BFP funding for Construction by $24,689,750 in FY 2026

7. **I-66 Ramp to Whitehurst Frwy and K Street NW Bridge over Whitehurst Freeway Ramp (TIP ID: T-6804)**
    a. Increase NHPP funding for PE by $3,255,000 in FY 2025
    b. Increase NHPP funding for Construction by $24,597,500 in FY 2027

8. **I-695 Eastbound D4 Ramp (TIP ID: T-T3193a)**
    a. Increase NHPP funding for Construction by $3,441,100 in FY 2024
    b. Decrease NHPP funding for Construction by $2,700,000 in FY 2025

9. **Pavement Restoration - STBG Streets (TIP ID: T-3215)**
    a. Increase STBG funding for Construction by $5,074,250 in FY 2023
    b. Increase STBG funding for Construction by $5,182,750 in FY 2024
    c. Increase STBG funding for Construction by $5,237,000 in FY 2025
    d. Increase STBG funding for Construction by $5,237,000 in FY 2026

10. **Reconstruction of Anacostia Ave. over Anacostia River Outlet (Bridge # 78) (TIP ID: T-6428)**
    a. Decrease BRRP funding for Construction by $11,500,000 in FY 2024
    b. Increase STBG funding for Construction by $13,500,000 in FY 2023
    c. Increase STBG funding for Construction by $3,534,000 in FY 2024

11. **Recreational Trails Program - Maintenance (TIP ID: T-2796)**
    a. Increase NRT funding for PE by 400,000 in FY 2023
    b. Increase CRP funding for PE by 468,000 in FY 2024
    c. Increase CRP funding for PE by 468,000 in FY 2025
    d. Increase CRP funding for PE by 468,000 in FY 2026

12. **Rehabilitation of Pedestrian Bridge and Connecting Trail over Arizona Avenue, NW (TIP ID: T-6516)**
    a. Decrease funding for Construction by $8,000,000 in FY 2027
    b. Increase CMAQ funding for Construction by $9,331,000 in FY 2024
    c. Increase CMAQ funding for Construction by $1,085,000 in FY 2025
    d. Increase CMAQ funding for PE by $434,000 in FY 2023

13. **295 Weigh Station Upgrade (TIP ID: T-2633b)**
    a. Increase NHFP funding for Construction by $7,595,000 in FY 2023

14. **South Capitol Street Bridge Asset Management (TIP ID: T-11605)**
    a. Add project.
    b. Increase STBG funding for Construction by $300,000 in FY 2024
    c. Increase STBG funding for Construction by $300,000 in FY 2025
    d. Increase STBG funding for Construction by $300,000 in FY 2026

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 September 9th 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, please feel free to contact me directly.

Sincerely,

Saesha Carlile
Chief Administrative Officer
District Department of Transportation
Saesha.carlile@dc.gov

TPB SR5-2023
September 9, 2022

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

RESOLUTION ON AN AMENDMENT TO THE FY 2023-2026 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY CONFORMITY REQUIREMENT TO INCLUDE TIP ACTION 23-01.1 WHICH ADDS FUNDING FOR THE BUS, BUS MAINTENANCE FACILITIES AND PARATRANSIT PROGRAM, AS REQUESTED BY THE WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA)

WHEREAS, the National Capital Region Transportation Planning Board (TPB), as the federally designated metropolitan planning organization (MPO) for the Washington region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act, reauthorized November 15, 2021 when the Infrastructure Investment and Jobs Act (IIJA) was signed into law, 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 June 15, 2022 the TPB adopted the FY 2023-2026 TIP; and

WHEREAS, WMATA has requested an amendment to the FY 2023-2026 TIP to include TIP Action 23-01.1 which adds approximately $57.5 million in local, Congestion Mitigation and Air Quality (CMAQ) program, and flexed state match funding to the Bus, Bus Maintenance Facilities, and Paratransit program (TIP ID 11589), as described in the attached materials; and

WHEREAS, the attached materials include: Attachment A) a Project Overview report showing how the program will appear in the TIP following approval, Attachment B) an Amendment Summary report showing the changes in four-year program total, reason for the amendment, and a Change Summary providing line-item changes to every programmed amount by fund source, fiscal year, and project phase, and Attachment C) a letter from WMATA dated August 26, 2022 requesting the amendment; and

WHEREAS, this program has been updated in the TPB's Project InfoTrak database under TIP Action 23-01.1, creating the first amended version of the FY 2023-2026 TIP, which supersedes all previous versions of the TIP and can be viewed online at www.mwcog.org/ProjectInfoTrak; and

WHEREAS, this program is exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012; and

WHEREAS, this resolution and amendment to the FY 2023-2026 TIP shall not be considered final until the Transportation Planning Board has had the opportunity to review and accept these materials at its next full meeting.

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2023-2026 TIP to include TIP Action 23-01.1 which adds approximately $57.5 million in local, CMAQ program, and flexed state match funding to the Bus, Bus Maintenance Facilities, and Paratransit program (TIP ID 11589), as described in the attached materials.

Adopted by the TPB Steering Committee at its meeting on Friday, September 9, 2022.

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.1 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the Washington Metropolitan Area Transit Authority
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T11589	*Lead Agency*	Washington Metropolitan Area Transit Authority	*Project Type*	Transit - Maintenance
Project Name	Bus, Bus Maintenance Facilities and Paratransit	*County*		*Total Cost*	$1,001,467,063
Project Limits		*Municipality*		*Completion Date*	
		Agency Project ID			

Description a) Bus replacements, scheduled bus preventive maintenance, rehabilitation and overhauls and repairs. Replacement or repair of equipment (security, fare boxes, bike racks, ADA, etc.) b) Purchase replacement or expansion of Metro Access vehicles. c) Purchase of non-revenue service vehicles. d) Rehabilitation or replacement, expansion or redesign of bus garages and maintenance facilities to meet storage, maintenance needs, and diversification of fleet transition to zero emission buses.

Phase	Source	FY2023	FY2024	FY2025	FY2026	4 Year Total	Total
OTHER	CMAQ	$3,505,635	$3,413,169	$2,725,958	$3,467,710	$13,112,472	$13,112,472
OTHER	LOCAL	$40,884,071	$42,200,000	$43,800,000	$43,800,000	$170,684,071	$170,684,071
OTHER	LOCAL (NM)	$55,000,000	-	-	-	$55,000,000	$55,000,000
OTHER	SECT. 5307	$229,942,401	$158,400,000	$164,800,000	$164,800,000	$717,942,401	$717,942,401
OTHER	SECT. 5339	$10,250,000	$10,400,000	$10,400,000	$10,400,000	$41,450,000	$41,450,000
OTHER	URBAN FLEX	$876,409	$853,292	$681,490	$866,928	$3,278,119	$3,278,119
Total Other		$340,458,516	$215,266,461	$222,407,448	$223,334,638	$1,001,467,063	$1,001,467,063
Total Programmed		$340,458,516	$215,266,461	$222,407,448	$223,334,638	$1,001,467,063	$1,001,467,063

*Not Location Specific

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.1	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Programming Update

Funding Change(s):
Total project cost increased from $943,910,800 to $1,001,467,063

Attachment B: Amendment Summary Report for TIP Action 23-01.1 Formal Amendment to the FY 2023-2026 Transportation Improvement Program Requested by Washington Metropolitan Area Transit Authority							
TIP ID	**PROJECT TITLE**	**COST BEFORE**	**COST AFTER**	**COST CHANGE**	**% CHANGE**	**CHANGE REASON**	**CHANGE SUMMARY**
T11589	Bus, Bus Maintenance Facilities and Paratransit	$943,910,800	$1,001,467,063	$57,556,263	6	Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): LOCAL (NM) ► Add funds in FFY 23 in OTHER for $55,000,000 URBAN FLEX + Increase funds in FFY 23 in OTHER from $646,000 to $876,409 + Increase funds in FFY 24 in OTHER from $626,952 to $853,292 + Increase funds in FFY 25 in OTHER from $601,714 to $681,490 + Increase funds in FFY 26 in OTHER from $763,001 to $866,928 CMAQ + Increase funds in FFY 23 in OTHER from $3,230,000 to $3,505,635 + Increase funds in FFY 24 in OTHER from $2,507,806 to $3,413,169 + Increase funds in FFY 25 in OTHER from $2,406,854 to $2,725,958 + Increase funds in FFY 26 in OTHER from $3,052,001 to $3,467,710 *Total project cost increased from $943,910,800 to $1,001,467,063*

August 26, 2022

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

RE: FY2023 TIP Amendment Request (FY23-01) for the Washington Metropolitan Area Transit Authority

Dear Chairman Sebesky:

The Washington Metropolitan Area Transit Authority (WMATA) requests the FY2023 Transportation Improvement Program (TIP) be amended to reflect recently adjusted CMAQ allocations for FY2023 through FY2026 to support WMATA bus replacement program. This amendment also reflects recent board action to provide $55 million for the future replacement of the Western Bus Garage. This allocation of non-matching local funds may be used toward acquisition, planning, and environmental planning. This project is expected to be federally funded in the future. Both modifications will be reflected in TIP-T11589.

TIP-T11589 – Bus, Bus Maintenance Facilities and Paratransit. This program funds the ongoing revenue and non-revenue vehicle replacement, vehicle preventive maintenance/rehabilitation, and the rehabilitation or replacement, expansion or redesign of bus garages and maintenance facilities to meet storage, maintenance needs, and diversification of fleet transition to zero emission buses.

Fiscal Year	Programmed Federal	**Revised Federal**	Programmed Local	**Revised Local**	**Revised Total**
CMAQ FUNDING					
FFY23	$3,230,000	**$3,505,635**	$646,000	**$876,409**	$4,382,064
FFY24	$2,507,806	**$3,413,169**	$626,952	**$853,292**	$4,266,461
FFY25	$2,406,854	**$2,725,958**	$601,714	**$681,490**	$3,407,448
FFY26	$3,052,001	**$3,467,710**	$763,001	**$866,928**	$4,334,638
Total	$11,196,661	**$13,112,490**	$2,637,667	**$3,278,121**	$16,390,611
NON-Matching Local					
FFY23	0	0	0	$55,000,000	$55,000,000

This TIP program is increased from $943 million to $1,001 million. The proposed amendment does not add additional capacity for motorized vehicles and does not require air quality conformity analysis.

Washington Metropolitan Area Transit Authority

300 7th Street, SW
Washington, DC 20024
202-962-1234

wmata.com

A District of Columbia, Maryland and Virginia Transit Partnership

WMATA hereby requests the Transportation Planning Board (TBP) Steering Committee consider this amendment for approval at September 9th, 2022 meeting. Upon approval of the amendment WMATA will submit its request for inclusion in the District of Columbia's STIP. Thank you for your continued support of WMATA.

Sincerely,

Patrick W. Bailey
Director, Funds and Grants Management
Office of Capital and Financial Management
Department of Strategy, Planning and Program Management
Washington Metropolitan Area Transit Authority

TPB SR6-2023
September 9, 2022

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

RESOLUTION ON AN AMENDMENT TO THE FY 2023-2026 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) THAT IS EXEMPT FROM THE AIR QUALITY CONFORMITY REQUIREMENT TO INCLUDE TIP ACTION 23-01.1 WHICH ADDS FUNDING FOR EIGHT PROJECTS AND PROGRAMS, AS REQUESTED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)

WHEREAS, the National Capital Region Transportation Planning Board (TPB), as the federally designated metropolitan planning organization (MPO) for the Washington region, has the responsibility under the provisions of the Fixing America's Surface Transportation (FAST) Act, reauthorized November 15, 2021 when the Infrastructure Investment and Jobs Act (IIJA) was signed into law, 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 June 15, 2022 the TPB adopted the FY 2023-2026 TIP; and

WHEREAS, VDOT has requested an amendment to the FY 2023-2026 TIP to include TIP Action 23-01.3 which adds a net total of $33 million to eight projects and programs listed at the end of this resolution, and as described in the attached materials; and

WHEREAS, the attached materials include: Attachment A) a Project Overview report showing how the projects and programs will appear in the TIP following approval, Attachment B) an Amendment Summary report showing the changes in four-year program total, reason for the amendment, and a Change Summary providing line-item changes to every programmed amount by fund source, fiscal year, and project phase, and Attachment C) a letter from VDOT dated August 26, 2022 requesting the amendments; and

WHEREAS, these projects and programs have been updated in the TPB's Project InfoTrak database under TIP Action 23-01.3, creating the first amended version of the FY 2023-2026 TIP, which supersedes all previous versions of the TIP and can be found online at www.mwcog.org/ProjectInfoTrak; and

WHEREAS, the Route 7/Route 690 Interchange SMART18 (T6618) and Route 1 Widening (Fraley Blvd.) (T6692) projects are included in the air quality conformity analysis of the 2022 Update to Visualize 2045 and the FY 2023-2026 TIP (CON IDs 653 and 631 respectively) and the other six projects and programs are exempt from the air quality conformity requirement, as defined in Environmental Protection Agency's (EPA) Transportation Conformity Regulations as of April 2012; and

WHEREAS, this resolution and the amendments to the FY 2023-2026 TIP shall not be considered final until the Transportation Planning Board has had the opportunity to review and accept these materials at its next full meeting.

NOW, THEREFORE, BE IT RESOLVED THAT the Steering Committee of the National Capital Region Transportation Planning Board amends the FY 2023-2026 TIP to include TIP Action 23-01.3 which adds a net total of $33 million to 8 projects and programs listed below, and as described in the attached materials.

TIP ID	PROJECT TITLE	ADDITIONAL/NEW FUNDING
T11607*	Sycolin Road Widening Project (PE Only)	$3,878,437
T6692	Route 1 Widening (Fraley Blvd)	($4,234,546)
T6618	Route 7/Route 690 Interchange Smart18	$0
T8605	Van Buren Road Extension Project (PE Only)	$6,200,000
T6630	Bus Replacement (Omniride Express Commuter Buses)	$3,806,590
T4506	PRTC - Bus Acquisition / Replacement Program	$1,012,324
T4534	Rolling Stock Acquisition	$14,696,318
T11606*	VRE Fredericksburg Station Rehabilitation	$7,704,496
	TOTAL AMOUNT ADDED	$33,063,619

* Indicates new project

Adopted by the TPB Steering Committee at its meeting on Friday, September 9, 2022.

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the Virginia Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T11606	*Lead Agency*	Virginia Department of Transportation	*Project Type*	Transit - Passenger Facilities
Project Name	VRE Fredericksburg Station Rehabilitation	*County*		*Total Cost*	$7,704,496
Project Limits		*Municipality*		*Completion Date*	2024
		Agency Project ID			

Description This project provides for the upgrades and improvements to the Fredericksburg Station. The state of good repair activities (SGR) at Fredericksburg Station include rehabilitation of approximately 125 feet of existing side platforms adjacent to both Track 2 and Track 3. This portion of the platform is currently in poor repair and is unused. VRE will lengthen existing platforms from approximately 400 feet to have a functional boarding length of approximately 525 feet, to better accommodate loading and unloading of passengers. Amtrak trains also currently serve this station. In addition to platform rehabilitation, a set of stairs at the south end of the station will be added to improve access to the rehabilitated platform. The stairs will extend from the southern end of the rehabilitated Track 2 platform down the slope to an adjacent parking lot.The stairs will allow passengers to cross over Princess Anne Street without having to cross the street at grade. Additional rehabilitation work includes concrete repairs to the bridges over city streets (Charles, Princess Anne, Caroline and Sophia), signage, sidewalks, lighting, and painting of canopies and other VRE facilities.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
CON	SECT. 5337-SGR	$7,704,496	-	-	-	-	-	-	$7,704,496
	Total CON	$7,704,496	-	-	-	-	-	-	$7,704,496
	Total Programmed	$7,704,496	-	-	-	-	-	-	$7,704,496

Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-01.3	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - New project

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the Virginia Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T11607	*Lead Agency*	Virginia Department of Transportation	*Project Type*	Preliminary Engineering/Environmental Analysis
Project Name	Sycolin Road Widening Project (PE Only)	*County*	Loudoun	*Total Cost*	$3,878,437
Project Limits	Loudoun Center Place to Crosstrail Blvd	*Municipality*		*Completion Date*	
		Agency Project ID			

Description Preliminary engineering for the Sycolin Road widening project between Loudoun Center Place and Crosstrail Blvd, to a 4-lane roadway and will include 16 median, share use path, access management improvements to Leesburg Airport and park and ride lot.

*Map Has Not Been Marked

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	STATE	$3,878,437	-	-	-	-	-	-	$3,878,437
	Total PE	$3,878,437	-	-	-	-	-	-	$3,878,437
	Total Programmed	$3,878,437	-	-	-	-	-	-	$3,878,437

Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-01.3	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - New project

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the Virginia Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T4506	*Lead Agency*	Virginia Department of Transportation	*Project Type*	Transit - Bus
Project Name	PRTC - Bus Acquisition / Replacement Program	*County*	Prince William	*Total Cost*	$1,862,324
Project Limits	NOVA Districtwide	*Municipality*		*Completion Date*	
		Agency Project ID	PRTC005 (T158)		

Description Ongoing replacement of commuter buses that have reached the end of their useful life.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
CON	LOCAL	-	$170,000	-	-	-	-	$170,000	$170,000
CON	SECT. 5339	-	$680,000	-	-	-	-	$680,000	$680,000
Total CON		-	$850,000	-	-	-	-	$850,000	$850,000
OTHER	SECT. 5339	$162,324	-	$850,000	-	-	-	$850,000	$1,012,324
Total Other		$162,324	-	$850,000	-	-	-	$850,000	$1,012,324
Total Programmed		$162,324	$850,000	$850,000	-	-	-	$1,700,000	$1,862,324

*Not Location Specific

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.3	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Programming Update

Funding Change(s):
Total project cost increased from $850,000 to $1,862,324

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the Virginia Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T4534	*Lead Agency*	Virginia Department of Transportation	*Project Type*	Transit - Capital
Project Name	Rolling Stock Acquisition	*County*		*Total Cost*	$78,511,451
Project Limits	Systemwide	*Municipality*		*Completion Date*	2045
		Agency Project ID	111654		

Description This project includes funding for procurement of additional VRE rolling stock to support fleet expansion and fleet replacement and debt service for rolling stock acquisition. It includes 21 coaches plus options under a current contract with Alstom.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
CON	LOCAL	-	$1,424,980	-	-	-	-	$1,424,980	$1,424,980
CON	SECT. 5307	$4,192,108	$17,768,097	-	-	-	-	$17,768,097	$21,960,205
CON	SECT. 5337-SGR	$10,504,210	-	-	-	-	-	-	$10,504,210
CON	STATE	-	$4,569,445	-	-	-	-	$4,569,445	$4,569,445
CON	STBG	-	$6,209,600	-	-	-	-	$6,209,600	$6,209,600
Total CON		$14,696,318	$29,972,122	-	-	-	-	$29,972,122	$44,668,440
OTHER	LOCAL	-	$734,714	$245,034	$206,236	$167,736	-	$1,353,720	$1,353,720
OTHER	SECT. 5307	-	$4,191,257	$1,398,167	$1,396,744	$1,397,801	-	$8,383,969	$8,383,969
OTHER	SECT. 5337-SGR	-	$10,503,017	$3,502,519	$2,727,984	$1,956,921	-	$18,690,441	$18,690,441
OTHER	STATE	-	$2,938,854	$980,137	$824,946	$670,944	-	$5,414,881	$5,414,881
Total Other		-	$18,367,842	$6,125,857	$5,155,910	$4,193,402	-	$33,843,011	$33,843,011
Total Programmed		$14,696,318	$48,339,964	$6,125,857	$5,155,910	$4,193,402	-	$63,815,133	$78,511,451

*Not Location Specific

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.3	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Programming Update

Funding Change(s):
Total project cost increased from $63,815,133 to $78,511,451

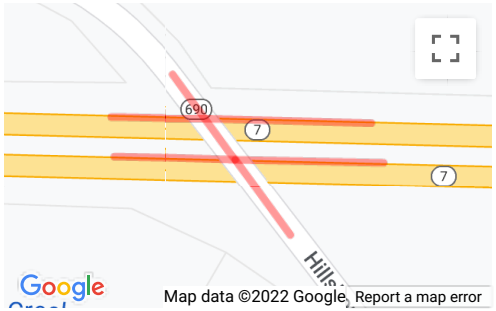
National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the Virginia Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T6618	*Lead Agency*	Virginia Department of Transportation	*Project Type*	Road - Interchange improvement
Project Name	ROUTE 7/ROUTE 690 INTERCHANGE SMART18	*County*	Loudoun	*Total Cost*	$52,685,000
Project Limits	VA 690 Hillsboro Road	*Municipality*		*Completion Date*	2025
		Agency Project ID	111666		

Description This new Interchange at RT 7 and RT 690 will include a shared use path and four ramps.

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	EB/MG	$20,711	-	-	-	-	-	-	$20,711
PE	NHPP	$4,759,808	-	-	-	-	-	-	$4,759,808
PE	STBG	$686,589	-	-	-	-	-	-	$686,589
	Total PE	$5,467,108	-	-	-	-	-	-	$5,467,108
ROW	NHPP	$3,664,359	-	-	-	-	-	-	$3,664,359
	Total ROW	$3,664,359	-	-	-	-	-	-	$3,664,359
OTHER	TBD	-	-	-	-	-	$43,553,533	-	$43,553,533
	Total Other	-	-	-	-	-	$43,553,533	-	$43,553,533
Total Programmed		$9,131,467	-	-	-	-	$43,553,533	-	$52,685,000



Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.3	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Programming Update

Funding Change(s):
Total project cost stays the same $52,685,000
* ACCP is not part of the Total

National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the Virginia Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T6630	*Lead Agency*	Virginia Department of Transportation	*Project Type*	Transit - Bus
Project Name	BUS REPLACEMENT (OMNIRIDE EXPRESS COMMUTER BUSES)	*County*		*Total Cost*	$6,806,590
Project Limits		*Municipality*		*Completion Date*	2025
		Agency Project ID	T21459		

Description BUS REPLACEMENT (OMNIRIDE EXPRESS COMMUTER BUSES)

Phase	Source	FY2023	FY2024	FY2025	FY2026	4 Year Total	Total
OTHER	CMAQ	$5,006,590	$1,200,000	-	-	$6,206,590	$6,206,590
OTHER	STATE	$300,000	$300,000	-	-	$600,000	$600,000
	Total Other	$5,306,590	$1,500,000	-	-	$6,806,590	$6,806,590
	Total Programmed	$5,306,590	$1,500,000	-	-	$6,806,590	$6,806,590

*Map Has Not Been Marked

Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.3	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Programming Update

Funding Change(s):
Total project cost increased from $3,000,000 to $6,806,590

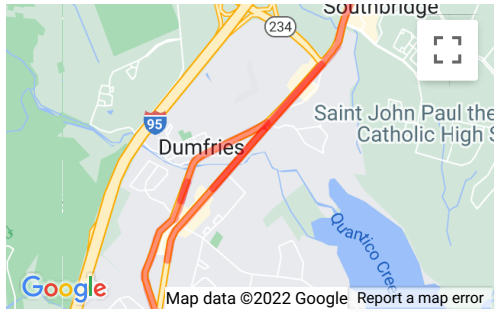
National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the Virginia Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T6692	*Lead Agency*	Virginia Department of Transportation	*Project Type*	Road - Add Capacity/Widening
Project Name	Route 1 Widening (Fraley Blvd)	*County*	Prince William	*Total Cost*	$177,035,188
Project Limits	Brady's Hill Road to Dumfries Road	*Municipality*	Town of Dumfries	*Completion Date*	2028
		Agency Project ID	119481		

Description Project will widen Rte 1 northbound so both northbound and southbound traffic will be on the northbound alignment. - PE linked under UPC 90339. FROM: 0.1 Mi S. of Brady's Hill Road TO: .2 Mi. N. of Dumfries Road (Route 234) (2.1490 MI)

Phase	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	NVTA	$3,388,455	$569,545	-	-	-	-	$569,545	$3,958,000
Total PE		$3,388,455	$569,545	-	-	-	-	$569,545	$3,958,000
ROW	NVTA	-	-	$44,290,455	-	-	-	$44,290,455	$44,290,455
Total ROW		-	-	$44,290,455	-	-	-	$44,290,455	$44,290,455
CON	HPP	-	-	$7,070,958	$8,266,405	$24,912,935	-	$40,250,298	$40,250,298
CON	NVTA	-	-	-	$78,000,000	-	-	$78,000,000	$78,000,000
Total CON		-	-	$7,070,958	$86,266,405	$24,912,935	-	$118,250,298	$118,250,298
OTHER	TBD	-	-	-	-	-	$10,536,435	-	$10,536,435
Total Other		-	-	-	-	-	$10,536,435	-	$10,536,435
Total Programmed		$3,388,455	$569,545	$51,361,413	$86,266,405	$24,912,935	$10,536,435	$163,110,298	$177,035,188



Version History

TIP Document		*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-00	Adoption 2023-2026	06/15/2022	08/25/2022	08/25/2022
23-01.3	Amendment 2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Programming Update

Funding Change(s):
Total project cost decreased from $181,269,734 to $177,035,188

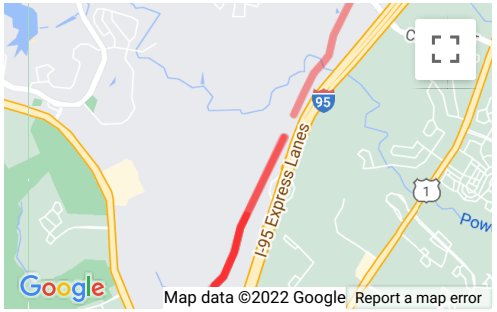
National Capital Region
Transportation Planning Board

Attachment A: Project Overview Report
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by the Virginia Department of Transportation
Approved by the TPB Steering Committee on September 9, 2022

TIP ID	T8605	*Lead Agency*	Virginia Department of Transportation	*Project Type*	Study/Planning/Research
Project Name	Van Buren Road Extension Project (PE Only)	*County*	Prince William	*Total Cost*	$8,000,000
Project Limits	VA 234 Dumfries Road to VA 610 Cardinal Drive	*Municipality*		*Completion Date*	2030
		Agency Project ID			

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	Source	Prior	FY2023	FY2024	FY2025	FY2026	Future	4 Year Total	Total
PE	NVTA	-	-	$4,000,000	$4,000,000	-	-	$8,000,000	$8,000,000
	Total PE	-	-	$4,000,000	$4,000,000	-	-	$8,000,000	$8,000,000
	Total Programmed	-	-	$4,000,000	$4,000,000	-	-	$8,000,000	$8,000,000



Version History

TIP Document			*MPO Approval*	*FHWA Approval*	*FTA Approval*
23-01.3	Amendment	2023-2026	09/21/2022	*Pending*	*Pending*

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Programming Update, Scope Change(s)

Funding Change(s):
Total project cost increased from $1,800,000 to $8,000,000

Attachment B: Amendment Summary Report for
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by Virginia Department of Transportation

TIP ID	PROJECT TITLE	COST BEFORE	COST AFTER	COST CHANGE	% CHANGE	CHANGE REASON	CHANGE SUMMARY
T4506	PRTC - Bus Acquisition / Replacement Program	$850,000	$1,862,324	$1,012,324	119	Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): SECT. 5339 ► Add funds in FFY 22 in OTHER for $162,324 ► Add funds in FFY 24 in OTHER for $850,000 *Total project cost increased from $850,000 to $1,862,324*
T4534	Rolling Stock Acquisition	$63,815,133	$78,511,451	$14,696,318	23	Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): SECT. 5337-SGR ► Add funds in FFY 22 in CON for $10,504,210 SECT. 5307 ► Add funds in FFY 22 in CON for $4,192,108 *Total project cost increased from $63,815,133 to $78,511,451*
T6618	ROUTE 7/ROUTE 690 INTERCHANGE SMART18	$52,685,000	$52,685,000	$0	0	Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): TBD ► Delete funds in FFY 27 in ► Add funds in FFY 30 in OTHER for $43,553,533 STBG ► Delete funds in FFY 21 in ROW for $1,617,000 BLANK ► Delete funds in FFY 21 in ROW for $565,896 *Total project cost stays the same $52,685,000*
T6630	BUS REPLACEMENT (OMNIRIDE EXPRESS COMMUTER BUSES)	$3,000,000	$6,806,590	$3,806,590	127	Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): + Increase funds in FFY 23 in OTHER from $1,200,000 to $5,006,590 *Total project cost increased from $3,000,000 to $6,806,590*

Attachment B: Amendment Summary Report for
TIP Action 23-01.3 Formal Amendment to the
FY 2023-2026 Transportation Improvement Program
Requested by Virginia Department of Transportation

TIP ID	PROJECT TITLE	COST BEFORE	COST AFTER	COST CHANGE	% CHANGE	CHANGE REASON	CHANGE SUMMARY
T6692	Route 1 Widening (Fraley Blvd)	$181,269,734	$177,035,188	($4,234,546)	-2	Programming Update	PROJECT CHANGES (FROM PREVIOUS VERSION): HPP ► Delete funds in FFY 21 in PE for $100,000 ► Add funds in FFY 24 in CON for $7,070,958 ► Add funds in FFY 25 in CON for $8,266,405 - Decrease funds in FFY 26 in CON from $26,450,235 to $24,912,935 ► Delete funds in FFY 27 in CON for $24,336,498 STATE ► Delete funds in FFY 21 in PE for $67,468 STBG ► Delete funds in FFY 21 in PE for $146,224 RSTP ► Delete funds in FFY 21 in PE for $58,848 ROW for $143,066 ► Delete funds in FFY 22 in ROW for $156,622 NVTA ► Delete funds in FFY 21 in PE for $6,907,395 ROW for $39,609,000 + Increase funds in FFY 22 in PE from $0 to $3,388,455 - Decrease funds in FFY 22 in ROW from $5,290,156 to $0 ► Add funds in FFY 23 in PE for $569,545 ► Add funds in FFY 24 in ROW for $44,290,455 ► Add funds in FFY 25 in CON for $78,000,000 TBD ► Delete funds in FFY 27 in CON for $78,004,222 ► Add funds in FFY 30 in OTHER for $10,536,435 *Total project cost decreased from $181,269,734 to $177,035,188*
T8605	Van Buren Road Extension Project (PE Only)	$1,800,000	$8,000,000	$6,200,000	344	Programming Update, Scope Change(s)	PROJECT CHANGES (FROM PREVIOUS VERSION): Title changed from "Van Buren Road Extension (Study Only)" to "Van Buren Road Extension Project (PE Only)" LOCAL ► Delete funds in FFY 22 in NVTA ► Add funds in FFY 24 in PE for $4,000,000 ► Add funds in FFY 25 in PE for $4,000,000 Total project cost increased from $1,800,000 to $8,000,000
T11606	VRE Fredericksburg Station Rehabilitation	$0	$7,704,496	$7,704,496	0	New project	PROJECT CHANGES (FROM PREVIOUS VERSION): SECT. 5337-SGR ► Add funds in FFY 22 in CON for $7,704,496 *Total project cost $7,704,496*
T11607	Sycolin Road Widening Project (PE Only)	$0	$3,878,437	$3,878,437	0	New project	PROJECT CHANGES (FROM PREVIOUS VERSION): STATE ► Add funds in FFY 22 in PE for $3,878,437 *Total project cost $3,878,437*
		COST BEFORE	**COST AFTER**	**COST CHANGE**			
	GRAND TOTALS:	$303,419,867	$336,483,486	$33,063,619			

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

September 12, 2022

The Honorable Pamela Sebesky
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 2023-2026 Transportation Improvement Program (TIP) Amendments and New TIP Projects:

Dear Chair Sebesky:

The Virginia Department of Transportation (VDOT) requests the following project amendments and new projects be added to the FY 2023-2026 Transportation Improvement Program (TIP).

Projects Requests for TIP Amendments

Route 7/Route 690 Interchange Project TIP ID T6618

This new interchange at Route 7 and Route 690 will include a shared use path and four ramps. This project will help with safety and congestion and is included in the air quality conformity analysis. The proposed amendment will:

- Move $4,448,896 (STP/STBG) and Add $20,711 (EB/MG) FY21
- Add $656,589 (STP/STBG) and $4,759,808 (NHPP) for FY22 for PE Phase
- Move $1,051,104 (STP/STBG) and $565,896 (AC-STP/STBG) FY21
- Move $565,896 (ACC-STP/STBG) and Add $3,664,359 (NHPP) FY22 for RW Phase

Route 1 (Fraley Blvd) Widening Project TIP ID T6692

This project will widen Route 1 northbound so both northbound and southbound traffic will be on the northbound alignment. It will enhance traffic safety and congestion in the Dumfries, VA area and is included in the air quality conformity analysis. The proposed amendment will:

- Remove $100,000 (HPP) FY21 PE Phase
- Add $7,070,958 FY24 (HPP) and $8,266,405 (HPP) FY25 CN Phase
- Decreased HPP funds in FY26 CN Phase from $26,450,235 to $24,912,935
- Remove $24,336,498 (HPP) FY27 CN Phase
- Remove $67,468 (State) FY21 PE Phase
- Remove $146,224 (STBG) FY21 PE Phase
- Add $143,066 (RSTP) FY21 ROW Phase
- Add $156,622 (RSTP) FY22 ROW Phase
- Remove $6,907,395 (NVTA) FY21 PE Phase and $39,609,000 (NVTA) FY21 ROW Phase

- Add $3,388,455 (NVTA) FY22 PE Phase
- Decrease $5,290,156 (NVTA) FY22 ROW Phase
- Add $569,545 (NVTA) FY23 PE Phase
- Add $44,290,455 (NVTA) FY24 ROW Phase
- Add $78,000,000 (NVTA) FY25 CN Phase
- Add $10,536,435 (TBD) FY30 Other Phase

Van Buren Road Project TIP ID: T8605

This project was identified in the TIP as a study. As the NEPA process nears completion, FHWA requires that additional project phases are funded in order to move forward. The proposed amendment will:

- Add $4,000,000 (NVTA) FY 24 for PE Phase
- Add $4,000,000 (NVTA) FY 25 for PE Phase

VRE Rolling Stock Acquisition TIP ID: T4534

This project provides for the debt service on rail cars and the purchase of rail cars and locomotives. The proposed amendment will:

- Add $4,192,108 (Federal Section 5307 Debt Service) FY22 for CN Phase
- Add $10,504,210 (Federal Section 5337 SGR) FY22 for CN Phase

PRTC Bus Acquisition/Replacement TIP ID: T4506 (STIP ID: PRTC005)

This project will allow for the replacement of OmniRide Local Buses. The proposed amendment will:

- Add $162,324 (Bus and Bus Facilities Section 5339) FY22 for Other Phase
- Add $850,000 (Bus and Bus Facilities Section 5339) FY24 for Other Phase

OmniRide Bus Replacement TIP ID: T6630 (STIP ID: PRTC008)

This proposed amendment will add funding for commuter bus replacement.

- Add $3,806,590 (CMAQ) FY23 for Other Phase

New Projects Requests Added to TIP

Sycolin Road Widening Project

This project will widen Sycolin Road between Loudoun Center Place and Crosstrail Blvd, to a 4-lane roadway and will include 16' median, share use path, access management improvements to Leesburg Airport and park and ride lot. It is in the Air Quality Conformity (#335) and helps with the safety of travelers and enhances the integration and connectivity of the transportation network system with more access for travelers. Funding request for this project is as follows:

- Add $3,878,437 (Other State) FY22 for PE Phase

VRE Fredericksburg Station Rehabilitation

This project provides for the upgrades and improvements to the Fredericksburg Station. The proposed amendment will:

- Add $7,704,496 (Federal Section 5337 Rail SGR) FY22 for CN phase

VDOT requests approval of the update to the TIP Amendments and new TIP projects by the Transportation Planning Board's Steering Committee that was originally approved at its meeting on September 9, 2022. VDOT's representative will be available to answer any questions about the amendments and new TIP project requests.

Thank you for your consideration of this matter.

Sincerely,

John D. Lynch, P.E.
Northern Virginia District Engineer

Cc: Ms. Maria Sinner, P.E., NOVA Assistant District Administrator for PIM
Mr. Amir Shahpar, P.E., NOVA District Transportation Planning Director

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Letters Sent/Received
DATE: September 15, 2022

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

National Capital Region
Transportation Planning Board

July 28, 2022

Randy Clarke
General Manager
Washington Metropolitan Area Transit Authority
300 7th Street SW
Washington, D.C. 20024

Re: Street Smart FY 2023 Funding

Dear Mr. Clarke:

On behalf of the Transportation Planning Board (TPB) I am happy to inform you that the TPB will be renewing its "Street Smart" Pedestrian and Bicycle Safety Campaign in federal FY 2023. This region-wide campaign promotes safety for Pedestrians and Bicyclists including WMATA's transit riders as they walk or bike to and from bus stops and Metrorail stations. The campaign is funded by DDOT, the Maryland Highway Safety Office, the Virginia Highway Safety Office, and WMATA. I am now asking that you consider renewing WMATA's contribution of $150,000 for FY 2023.

The Street Smart campaign cautions drivers to slow down and watch out for people walking and biking. Messages are delivered in both English and Spanish via online media, news stories, on-the-ground outreach, and outdoor media, including transit ads.

WMATA is a valued partner and funder of the campaign. WMATA's financial contribution of $150,000 accounted for 18% of the FY 2022 budget of $820,000. WMATA also ran pro bono transit advertising when space was available. For the Fall 2021 campaign wave WMATA hosted a video testimonial wall at two Metro stations – Springfield and Anacostia. WMATA staff also served on the advisory committee and helped shape the development of the video testimonials which were launched in Fall 2019.

The Street Smart campaign benefits to WMATA include passenger safety messaging, advertising revenue, and partnership in a major public service program. The Street Smart campaign places advertising on WMATA buses, often in corridors with heavy pedestrian activity. See the attached Fall 2021 Summary and the FY 2021 Annual Report for more details.

The Street Smart campaign has been successful in terms of increasing public awareness of the consequences of unsafe behaviors, changing reported pedestrian and motorist behavior, and leveraging earned media and local law enforcement. The transit advertising has been particularly effective.

As a unified regional campaign, Street Smart benefits from economies of scale in production and purchase of advertising, greater leveraging of federal funding from multiple recipients, and greater media attention than would be possible for an individual agency safety campaign.

For funds to be available for the Fall 2022 campaign wave, funding commitment letters should be sent to Director of Transportation Planning, Kanti Srikanth, at the address below by August 31,

2022. In addition, please also email a copy of the funding commitment letter to ksrikanth@mwcog.org.

Should you have any questions about the campaign or the requested voluntary contribution, please contact Kanti Srikanth at (202) 962-3257. Thank you for your participation in this program that addresses one of our region's most critical needs: pedestrian and bicyclist safety.

Sincerely,

Pamela Sebesky

Pamela Sebesky
Chair, National Capital Region
Transportation Planning Board

cc: Kanti Srikanth, Director of Transportation Planning, MWCOG
James Wojciechowski, Vice President and Assistant Chief Safety Officer, WMATA
John Tygret, Office of Planning, WMATA
Chimere Lesane-Matthews, Environmental Planner, WMATA

National Capital Region
Transportation Planning Board

August 8, 2022

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

Re: FY 2022 Bridge Investment Program Grant Application by the District of Colombia for the Theodore Roosevelt Memorial Bridge Project

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 the District of Colombia Department of Transportation (DDOT) for a Bridge Investment Program (BIP) grant to fund the rehabilitation of the Theodore Roosevelt Memorial Bridge carrying Interstate-66 between Virginia and the District of Columbia.

The Theodore Roosevelt Memorial Bridge project seeks to repair and improve this critical bridge serving the residents of the National Capital Region. Carrying an average of 95,000 vehicles per day in 2019, the bridge is in poor condition and requires deck replacement and major structural repairs to extend the service life of the structure. In addition, the project would also include sidewalk widening to better accommodate pedestrians and cyclists as well as safety improvements, including the replacement of a traffic barrier and old and/or outdated pedestrian railing, highway signage, roadway stripping, and street lighting,

This bridge 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 investment in keeping the region's existing transportation network in a state of good repair as well as pedestrian and safety improvements. This grant would advance the region's long-term transportation priorities in accordance with the TBP's Vision and Regional Transportation Priorities Plan.

The TPB requests your favorable consideration of this request by the District of Colombia. I anticipate that upon a successful BIP 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,

Pamela Sebesky

Pamela J. Sebesky
Chair, National Capital Region Transportation Planning Board

Cc: Everett Lott, Director, District Department of Transportation

National Capital Region
Transportation Planning Board

July 19, 2022

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

Re: FY 2022 Pilot Program for Transit Oriented Development Planning Grant Application by Maryland Department of Transportation for the Purple Line Corridor

Dear Administrator 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 for the proposal entitled *Building an equitable transit-oriented Purple Line Corridor through comprehensive planning for affordable housing, mixed-use development, and bicycle and pedestrian accessibility*, submitted by the Maryland Department of Transportation, Maryland Transportation Administration (MDOT-MTA) and partners to the FY 2022 Pilot Program for Transit-Oriented Development Planning (TOD Pilot Program)

The TOD Planning Pilot grant would fund the Purple Line Corridor Mobility, Economic Development and TOD Implementation Plan. Funding for this proposal will enable a multi-sector partnership, convened through the Purple Line Corridor Coalition, to address economic development and land use opportunities at this critical time with construction underway on the Purple Line. In particular, this work would address increased transportation access to environmental justice populations, equity-focused community outreach and public engagement of underserved communities and adoption of equity-focused policies, reduction of greenhouse gas emissions, and the effects of climate change.

The work 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; improved access to transit is one of the seven Aspirational Initiatives of the plan. In July 2021 the TPB adopted a resolution that identified equity as a fundamental value and integral part of all of the board's work activities; this grant would directly support such regional activities. The TPB has long supported investment in our public transportation system and in pedestrian infrastructure to provide a broad range of equitable and affordable transportation choices for our region.

As such the TPB appreciates your favorable consideration of the Maryland Department of Transportation's application. 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 this project.

Sincerely,

Pamela Sebesky

Pamela J. Sebesky
Chair, National Capital Region Transportation Planning Board

Cc: Mr. James F. Ports, Jr., Secretary, MDOT
Ms. Holly Arnold, Administrator, MDOT MTA

National Capital Region
Transportation Planning Board

July 20, 2022

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

Re: US DOT Bridge Investment Program Grant
The Prince George's County Connecting Communities Bundled Bridge Replacement Project

Dear Mr. Buttigieg:

On behalf of National Capital Region Transportation Planning Board (TPB), I am writing to express my support for the Prince George's County Department of Public Works and Transportation (DPW&T) application under the U.S. Department of Transportation 2022 Bridge Investment Program (BIP) Grants Program.

The Prince George's County Connecting Communities Bundled Bridge Replacement Project seeks $560,000 in federal funds, with a $140,000 local contribution, to provide planning-level funding in support of this vital public safety improvement project along two critical corridors in Prince George's County, Maryland. Both projects will ultimately lead to the full replacement of two bridges, which are currently rated in poor condition per the National Bridge Inventory (NBI) condition rating system. Ensuring the safety and soundness of these two bridges are both fully consistent with the TPB's Performance Based Planning and Programming elements and the goals and aspirations of the region's long-range transportation plan, Visualize 2045. The project is consistent with the recently approved FY 2023-2026 Transportation Improvement Program (TIP) under the Prince George's County Bridge Replacement Federal Aid Program (TIP ID # T5401).

The TPB understands that the Prince George's County Connecting Communities Bundled Bridge Replacement Project will provide residents with improved amenities and contribute to their quality of daily life with road safety improvements, multi-modal enhancements, and direct connection to the County's extensive trail network that provide options for active recreation and commuting. These improvements to safety, travel options and connecting communities are all part of the TPB's regional goals and planning priorities. The TPB acknowledges that investing in such connections will continue to strengthen the areas' travel and recreation amenities, economic competitiveness, and access to employment and residential resources.

The TPB requests your favorable consideration of this request by Prince George's 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,

Pamela Sebesky

Pamela Sebesky
Chair, Transportation Planning Board

cc: Angela Jones, Agreement Specialist, Office of Acquisition and Grants Management, FHWA, US DOT
Robin Hobbs, Team Leader, Office of Acquisition and Grants Management, FHWA, US DOT
Michael Johnson, Acting Director, Prince George's County Department of Public Works and Transportation
Kanti Srikanth, Director, Transportation Planning Board
Oluseyi Olugbenle, Deputy Director, Prince George's County DPW&T
Kate Mazzara, P.E., Associate Director, Office of Engineering and Project Management, DPW&T
Erv T. Beckert, P.E., Chief, Highway and Bridge Design Division, DPW&T
Victor Weissberg, Major Projects Manager/Special Assistant to the Director, DPW&T
Andrea Lasker, Vision Zero Prince George's County Program Coordinator/Special Assistant to the Director, DPW&T

National Capital Region
Transportation Planning Board

August 23, 2022

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

Re: FY 2022 Bridge Investment Program Grant Application by the District of Colombia for the I-395 Northbound Bridge Project

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 the District of Colombia Department of Transportation (DDOT) for a Bridge Investment Program (BIP) grant to advance the rehabilitation of the I-395 Northbound Bridge carrying Interstate-395 (Arland D. Williams, Jr. Memorial Bridge) between Virginia and the District of Columbia.

The I-395 Northbound Bridge is an integral link for access to the Nation's Capital carrying close to 100,000 vehicles per day. Recent inspection reports show several bridge elements with significant deterioration, in particular the main bascule span (non-functional). Additionally, the existing steel barriers are considered structurally deficient with areas of 100% section loss. To protect the traveling public, temporary barriers have been placed on the bridge which eliminated the roadway shoulders.

The project will extend the service life of the bridge by at least 50 years, reducing maintenance costs and impacts to the region. To replace the bascule span, innovative accelerated bridge construction (ABC) techniques will be used to fabricate a new bridge span off-site and quickly lift the span segment(s) into place. Additionally, the existing traffic barriers will be replaced with crash tested parapets that meet current AASHTO criteria to improve safety on the bridge.

This bridge 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 investment in keeping the region's existing transportation network in a state of good repair as well as safety improvements. This grant would advance the region's long-term transportation priorities in accordance with the TBP's Vision and Regional Transportation Priorities Plan.

The TPB requests your favorable consideration of this request by the District of Colombia. I anticipate that upon a successful BIP 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,

Pamela Sebesky

Pamela J. Sebesky
Chair, National Capital Region Transportation Planning Board

Cc: Everett Lott, Director, District Department of Transportation

National Capital Region
Transportation Planning Board

August 23, 2022

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

Re: FY 2022 Bridge Investment Program Grant Application by the District of Colombia for the SE/SW Freeway (I-695) Bridges Center Leg Interchange Project

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 the District of Colombia Department of Transportation (DDOT) for a Bridge Investment Program (BIP) grant to advance the rehabilitation of the SE/SW Freeway (I-695) Bridges Center Leg interchange.

The interchange, comprised of the elevated interstate of I-695 over South Capitol Street, New Jersey Avenue SE, and Virginia Avenue SE/2nd Street SE, along with the associated ramps, is an integral link for access to the Nation's Capital and to the U.S. Capitol complex, carrying an average of over 126,000 vehicles per day in 2019. The network of bridges and ramps included in this project is comprised of a variety of complex structures, many with fracture-critical elements currently in poor condition and requires major rehabilitation to extend the service life of the structures.

Rehabilitating the bridges to improve their condition is imperative to maintaining the safety of the drivers on the interstate and is a critical ink in the region's highway network. The rehabilitation project will extend service life by at least 50 years, reducing maintenance cost and impacts to the region.

This bridge 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 investment in keeping the region's existing transportation network in a state of good repair as well as safety improvements. This grant would advance the region's long-term transportation priorities in accordance with the TBP's Vision and Regional Transportation Priorities Plan.

The TPB requests your favorable consideration of this request by the District of Colombia. I anticipate that upon a successful BIP 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,

Pamela Sebesky

Pamela J. Sebesky
Chair, National Capital Region Transportation Planning Board

Cc: Everett Lott, Director, District Department of Transportation

National Capital Region
Transportation Planning Board

August 23, 2022

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

Re: FY 2022 Bridge Investment Program Grant Application by Prince George's County, Maryland for the Protecting and Connecting Communities Bridge Preservation Project

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 George's County, Maryland for a Bridge Investment Program (BIP) grant to advance the rehabilitation of seventeen bridges in the county as part of the Protecting and Connecting Communities Bridge Preservation Project.

The Prince George's County Protecting and Connecting Communities Bridge Preservation Project involves the repair and painting of seventeen steel beam and steel girder bridge structures to extend the service life of these valuable structures. The execution of this comprehensive bridge preservation project will improve the fair condition of the bridges, which are at a high risk of falling into a poor condition. These bridges, located in communities and municipalities throughout the county, are important connectors for the residents, many of which are African American, Latino and other minority populations from historically disadvantaged communities.

This bridge preservation 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 investment in keeping the region's existing transportation network in a state of good repair. This grant would advance the region's long-term transportation priorities in accordance with the TBP's Vision and Regional Transportation Priorities Plan.

The TPB requests your favorable consideration of this request by Prince George's County, Maryland. I anticipate that upon a successful BIP 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,

Pamela Sebesky

Pamela J. Sebesky
Chair, National Capital Region Transportation Planning Board

Cc: Mr. Michael Johnson, Acting Director, Prince George's County Dept of Public Works & Transportation
Ms. Oluseyi Olugbenle, Deputy Director, Prince George's County Dept of Public Works & Transportation

National Capital Region
Transportation Planning Board

August 23, 2022

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

Re: FY 2022 Safe Streets and Roads for All Program Grant Application by Prince George's County, Maryland for the Multimodal Safety Improvements along the High Injury Network

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 George's County, Maryland for a Safe Streets and Roads for All (SS4A) Program grant to provide planning level and implementation for vital public safety improvements along critical corridors in the county.

The Multimodal Safety Improvements along the High Injury Network projects will help build a multimodal network that will connect critical economic development hubs in the county, including the US 1 corridor, the College Park Metro Station, and the University of Maryland's Discovery District. The projects will provide road safety improvements, multimodal enhancements, safer connections to transit – including Metrorail and the under-construction light rail Purple Line – as well as direct connections to the County's extensive trail network.

This portfolio of safety projects 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 investment in safety improvements and in pedestrian and bicycling infrastructure and active transportation options to provide a broad range of transportation choices for our region. This grant would advance the region's long-term transportation priorities in accordance with the TBP's Vision and Regional Transportation Priorities Plan.

The TPB requests your favorable consideration of this request by Prince George's County, Maryland. I anticipate that upon a successful SS4A 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,

Pamela Sebesky

Pamela J. Sebesky
Chair, National Capital Region Transportation Planning Board

Cc: Mr. Michael Johnson, Acting Director, Prince George's County Dept of Public Works & Transportation
Ms. Oluseyi Olugbenle, Deputy Director, Prince George's County Dept of Public Works & Transportation

National Capital Region
Transportation Planning Board

August 30, 2022

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

Re: FY 2022 Safe Streets and Roads for All (SS4A) Program Grant Application by Montgomery County, Maryland for the Germantown Safe Roads for All project

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 Montgomery County, Maryland for a Safe Streets and Roads for All (SS4A) Program grant to implement a roadway safety program in Germantown Town Center.

The Germantown Safe Roads for All project will add new sidewalks, crosswalks and bike lanes; make accessibility improvements and add better lighting for bus stops; and implement speed control safety measures to the roads in to improve safety, mobility, and accessibility for all users. The project is part of the County's Vision Zero effort to eliminate all traffic fatalities and serious injuries.

This portfolio of safety projects 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 investment in safety improvements and in pedestrian and bicycling infrastructure and active transportation options to provide a broad range of transportation choices for our region. This grant would advance the region's long-term transportation priorities in accordance with the TBP's Vision and Regional Transportation Priorities Plan.

The TPB requests your favorable consideration of this request by Montgomery County, Maryland. I anticipate that upon a successful SS4A 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,

Pamela Sebesky

Pamela J. Sebesky
Chair, National Capital Region Transportation Planning Board

Cc: Mr. Chris Conklin, Director, Montgomery County Department of Transportation

National Capital Region
Transportation Planning Board

August 30, 2022

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

Re: FY 2022 Bridge Investment Program Grant Application by the Virginia Department of Transportation (VDOT) for the I-395 Ramp Replacement Project

Dear Secretary Buttigieg:

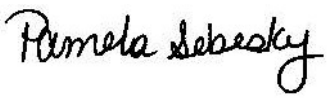
I am writing to express the support of the National Capital Region Transportation Planning Board (TPB), the Metropolitan Planning Organization (MPO) for the National Capital Region, for an application by the Virginia Department of Transportation (VDOT) for a Bridge Investment Program (BIP) grant for the replacement of the I-395 Ramp carrying southbound traffic from I-395 to Route 1 in Arlington County.

The I-395 Ramp Replacement Project will replace an existing fracture-critical, structurally deficient bridge nearing the end of its life with an at-grade intersection. By converting the I-395 ramp from a grade-separated highway to an at-grade intersection, speeds along the ramp will be reduced which will enhance safety. In addition, the replacement of the ramp will remove a physical barrier to walking and biking and strengthen community connectivity and is a critical step towards transforming the Route 1 corridor from an elevated freeway to an at-grade urban boulevard linking Crystal City's east and west neighborhoods.

This bridge 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 investment in keeping the region's existing transportation network in a state of good repair as well as safety improvements. This grant would advance the region's long-term transportation priorities in accordance with the TBP's Vision and Regional Transportation Priorities Plan.

The TPB requests your favorable consideration of this request by VDOT. I anticipate that upon a successful BIP 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,



Pamela J. Sebesky
Chair, National Capital Region Transportation Planning Board

Cc: W. Sheppard Miller III, Secretary, Virginia Department of Transportation

National Capital Region
Transportation Planning Board

September 7, 2022

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

Re: FY 2022 Safe Streets and Roads for All (SS4A) Program Grant Application by the City of Manassas Park, Virginia for the development of a Comprehensive Safety Action Plan

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 the City of Manassas Park, Virginia for a Safe Streets and Roads for All (SS4A) Program grant for the development of a Comprehensive Safety Action Plan.

Though development of the Plan, the City of Manassas Park will undertake a comprehensive evaluation of safety along the Manassas Drive corridor, examining specific areas that are lacking infrastructure (e.g. sidewalks, streetlights, pedestrian crossings, etc.), The city will engage in a detailed process for community engagement and collaboration, along with equity analysis and evidence-based safety analysis to ensure optimal solutions for traditionally underserved groups. The Action Plan, along with the adoption of a Vision Zero plan, will identify potential policy and process changes to the existing Transportation Program to ensure best practices and streamlining of priorities.

This safety planning effort 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 investment in safety improvements in our region. This grant would advance the region's long-term transportation priorities in accordance with the TBP's Vision and Regional Transportation Priorities Plan.

The TPB requests your favorable consideration of this request by the City of Manassas Park, Virginia. I anticipate that upon a successful SS4A 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,

Pamela Sebesky

Pamela J. Sebesky
Chair, National Capital Region Transportation Planning Board

Cc: Mr. Calvin O'Dell, Director, City of Manassas Park Division of Public Works

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
FROM: Kanti Srikanth, TPB Staff Director
SUBJECT: Announcements and Updates
DATE: September 15, 2022

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: Stacy Cook, TPB Transportation Planner, Long-Range Transportation Plan Program Manager

SUBJECT: Status Report on the Visualize 2045 Update

DATE: September 15, 2022

BACKGROUND

To ensure federal funds for transportation continue to flow through the region, a critical requirement is the approval of the Air Quality Conformity Determination of the Visualize 2045 update and the FY 2023-FY 2026 Transportation Improvement Program (TIP). The federal government requires the TPB to conduct an in-depth analysis to ensure projected emissions generated by users of the region's future transportation system will not exceed (or "conforms to") the air quality emissions budgets set forth in the region's air quality plans. This is known as air quality conformity. Based on the results of the analysis, a determination is made to confirm conformity. The federally approved conformity determination from 2018 had to be updated in 2022.

The members of the TPB, since kick off of the plan update in December of 2020, worked together diligently to ensure that the TPB could maintain the schedule for conformity approval. On August 25, 2022, the TPB's federal partners approved the conformity determination for the Visualize 2045 update and the FY 2023-FY 2026 TIP (see attached letter). This is the portion of the plan that receives official "approval;" the remaining federal requirements are reviewed during the quadrennial certification review. The TPB is recognized for fulfilling its important role in ensuring that the National Capital Region's Metropolitan Planning Organization complies with its responsibilities to meet federal requirements.

The 2022 conformity approval "resets the clock" and the TPB must obtain the same federal approval for the conformity determination for the next quadrennial plan no later than 4-years from that date (by August 25, 2026). The plan and TIP can, and will, be updated sooner. At a future meeting, the TPB's staff will present a schedule for the 2024 update to the region's long-range transportation plan and FY 2025- FY 2028 TIP.

Like plans that came before, the update to Visualize 2045 and the process used by the TPB to develop the plans must meet an array of federal requirements, including but not limited to compliance with performance-based planning rules, consideration of the ten federal planning factors, conducting a congestion management process, engaging in public participation, responding to concerns of non-discrimination and equity, and others. The federal agencies review the planning process as part of their Federal Certification Review, every four years. This review will begin this fall.

U.S. Department
of Transportation

Federal Transit Administration
Region III
1835 Market Street, Suite 1910
Philadelphia, PA 19103
215-656-7100

Federal Highway Administration
DC Division
1200 New Jersey Avenue, SE (E61-205)
Washington, DC 20590
202-493-7020

The Honorable Pamela Sebesky, Chairperson
National Capital Region Transportation Planning Board
c/o, Mr. Kanti Srikanth, Director Department of Transportation Planning
Metropolitan Washington Council of Governments
777 North Capital Street, NW, Suite 300
Washington, D.C. 20002-4201

Re: Air Quality Conformity Determination of the 2022 Update to the Visualize 2045 Long-Range Transportation Plan and The FY 2023-2026 Transportation Improvement Program

Dear Chairwoman Sebesky:

The 1990 Amendments to the Clean Air Act (CAA) require transportation air quality conformity determinations for Metropolitan Transportation Plans, Transportation Improvement Programs (TIP), sections of a State Transportation Improvement Program (STIP) covering rural nonattainment/maintenance areas, and projects in areas that are designated as air quality nonattainment and maintenance areas. Section 176(d) of the CAA establishes priority requirements for programs supported by the Federal government that target nonattainment or maintenance areas to provide for timely implementation of eligible portions of air quality plans.

On August 16, 2022, in an e-mail to the Federal Highway Administration's (FHWA) District of Columbia Division, the Environmental Protection Agency (EPA) concurred that the conformity determination met the requirements of the CAA. EPA's review considered the 2008 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) and the 2015 8-Hour Ozone NAAQS Conformity Determinations for the Fiscal Year (FY) 2023-2026 Transportation Improvement Program (TIP) and the Visualize 2045 Long Range Transportation Plan (LRTP) for the Metropolitan Washington Region as adopted by the National Capital Region Transportation Planning Board (TPB).

FTA and FHWA are jointly making this air quality conformity determination. FTA and FHWA find the planning process to be continuing, cooperative, and comprehensive transportation planning carried on cooperatively by the TPB, the Washington Metropolitan Area Transit Authority (WMATA), the states of Maryland and Virginia, and the District of Columbia in accordance with the requirements of 23 USC 134 and 49 USC and Section 5303.

Based on our transportation planning regulatory requirements, our day-to-day involvement, and extensive review of technical analysis reports, and in accordance with the provisions of Section 134(h)(2)(B), Title 23 USC, FTA and FHWA find the financial information needed to support our fiscal constraint determination is complete.

Any questions concerning this determination should be directed to Ms. Sandra Jackson, Community Planner of the FHWA District of Columbia Division, at (202) 493-7031 or Daniel Koenig, Community Planner of the FTA Region 3 Office, at (202) 366-8224.

Sincerely,

Digitally signed by THERESA GARCIA CREWS
Date: 2022.08.25 15:40:11 -04'00'

Terry Garcia Crews
Regional Administrator
Federal Transit Administration

JOSEPH C LAWSON
Digitally signed by JOSEPH C LAWSON
Date: 2022.08.25 20:29:40 -04'00'

Joseph C. Lawson
DC Division Administrator
Federal Highway Administration

Enclosure: EPA Technical Support Documentation

cc: Kwame Arhin, FHWA, MD
Ivan Rucker, FHWA, VA
Ryan Long, FTA
Ed Sundra, FHWA, VA

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board

FROM: TPB Staff (Kanti Srikanth, Mark Moran, Dusan Vuksan, Eric Randall, and Erin Morrow)

SUBJECT: FHWA Notice of Proposed Rulemaking for Greenhouse Gas Emissions Measure

DATE: September 15, 2022

On Friday, July 15, 2022, the Federal Highway Administration (FHWA) issued a Notice of Proposed Rulemaking (NPRM) to establish a performance measure for greenhouse gas (GHG) emissions as part of the National Highway Performance Program (NHPP). The public comment period ends on October 13, 2022. A draft of the staff developed comments providing feedback on technical aspects of the rule is attached.

The proposed rule would require state DOTs and MPOs to set declining targets for carbon dioxide (CO2) emissions on the Interstate and non-Interstate National Highway System (NHS) to support the national goals of reducing economy-wide GHG emissions by 50%-52% below 2005 levels by 2030 and net zero by 2050. State DOTs would be required to set two- and four-year targets and MPOs would be required to set four-year targets, as part of the performance-based planning process (PBPP). The GHG measure would be added to other existing measures in performance areas such as highway safety and highway assets. The proposed performance measure would be a percent change in tailpipe CO2 emissions on the NHS, compared to a reference year of 2021. State DOTs would measure emissions reductions for their state using a prescribed formula; MPOs could use the same formula or have the flexibility to use other technical methods through agreement with the DOTs.

The proposed rule does not dictate the levels for the targets, but rather that "state DOTs and MPOs would have flexibility to set targets that are appropriate for their communities and that work for their respective climate change and other policy priorities, as long as the targets would reduce emissions over time." As with many of the PBPP targets, the proposed rule does not establish penalties for failing to meet the tailpipe CO2 reduction targets.

On June 15, 2022, the TPB adopted GHG emissions reduction goals for the on-road transportation sector of 50% below 2005 levels by 2030 and 80% below 2005 levels by 2050. It is important to note that the target setting and performance measurement for this requirement will look different from the TPB's goals and previous reporting of GHG emissions as part of the long-range transportation plan, due to various factors, including different pollutants (type and scope), different reference years, and a different methodology used for calculations.

TPB staff are participating in discussions with the region's state DOTs and with the Association of Metropolitan Planning Organizations (AMPO) regarding the proposed rule. The letter developed by staff is supportive of the establishment of a GHG measure, notes the TPB's adoption of greenhouse gas reduction goals, and encourages FHWA to keep the proposed flexibility for MPOs to use their own processes in establishing and reporting targets. The letter expresses concern that the proposed October 1, 2022, deadline for the state DOTs to submit targets takes place before the end of the public comment period and does not allow enough time for discussions and collaboration. The letter

also expresses opposition to the use of the Urbanized Area (UZA) as a geography for setting targets in addition to the MPO planning area, since TPB staff view these processes as duplicative.

Please submit any feedback on the draft comment letter to Kanti Srikanth (KSrikanth@mwcog.org) by September 28, 2022.

National Capital Region
Transportation Planning Board

September XX, 2022

Stephanie Pollack
Acting Administrator
Federal Highway Administration
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Comments on "National Performance Management Measures; Assessing Performance of the National Highway System, Greenhouse Gas Emissions Measure" [Docket No. FHWA–2021–0004]

Dear Administrator Pollack:

The National Capital Region Transportation Planning Board (TPB), the metropolitan planning organization (MPO) for the metropolitan Washington region, appreciates your efforts and those of Federal Highway Administration (FHWA) staff to provide opportunities for commenting on the National Performance Management Measures; Assessing Performance of the National Highway System, Greenhouse Gas Emissions Measure. Our comments on the Notice of Proposed Rulemaking (NPRM) to reinstitute the Greenhouse Gas (GHG) performance measure and target-setting are provided for your consideration below.

The TPB supports enacting the GHG measure. The TPB believes that this rule will increase the accountability and transparency of the Federal-aid highway program and add to the existing framework for improving transportation investment decision making through a focus on performance-based outcomes for key national transportation goals. On June 15, 2022, the TPB adopted regional, voluntary, on-road, transportation-sector-specific goals to reduce GHG emissions 50% below 2005 levels by 2030 and 80% below 2005 levels by 2050. A set of strategies to move the region towards achieving those goals was also adopted, while other strategies have been identified for further consideration towards implementation. The TPB's efforts will be well complemented by enacting a federal rule establishing the performance measure known as "Percent Change in Tailpipe Carbon Dioxide Emissions on the National Highway System" (also known as the GHG performance measure), under the federally-required transportation performance management system.

The TPB has the following comments on the proposed GHG performance measure for your consideration:

1. **The TPB recommends against reporting of the proposed GHG performance measures for the Urbanized Area (UZA), and instead strongly endorses using the metropolitan planning area as the area of measurement and target-setting.** The UZA does not align with jurisdictional boundaries, which, in most places, is where preliminary transportation project planning and programming decisions are made. Furthermore, the basic unit used for developing UZAs, Census blocks, differs from the basic unit used by MPOs. As all UZAs are covered by MPO planning areas, requiring measurement and target setting for both areas will be redundant and the effort required would be disproportionate to the benefit for transportation planning. Finally, the Census Bureau should be releasing new UZA boundaries based on the 2020

Census soon, which would complicate comparability of the GHG performance measure from the selected base year of 2021 going forward.

2. **The TPB appreciates the additional flexibility afforded to MPOs, as compared to state DOTs, to measure performance and establish targets following their own processes as described in Section 490.511 of the proposed rule.** The TPB encourages this flexibility extend to having the option to develop the GHG performance measure for all public roads, rather than being limited to roads in the NHS.
3. **The TPB does not believe that the October 1, 2022, deadline for states to submit targets is appropriate or feasible.** First, the comment period for the NPRM will still be open. Second, collaboration between state DOTs, MPOs, and other stakeholders takes time. While the TPB appreciates that FHWA wants to have the GHG measure as part of the 2022-2025 four-year performance period, the work to set targets should not be rushed. A deadline of six to nine months after the rule is finalized would be more appropriate.
4. **The TPB notes that additional resources may be needed for measuring GHG emissions performance each year.**

The FHWA invited comments on the following questions:

1. In instances that MPOs are establishing a joint urbanized area target, should FHWA require that the individual MPO-wide targets be the same as the jointly established urbanized area target?

Although TPB recommends against the establishment of an urbanized area target, in the event that urbanized area GHG emissions targets are required, all MPOs whose planning area overlaps the urbanized area should coordinate on the adoption of an identical target for the urbanized area. This would be consistent in practice with the existing requirements for establishment of targets for the Non-Single Occupancy Vehicle (SOV) Travel performance measure and Peak Hour Excessive Delay performance measure.

2. Should MPOs that establish a joint urbanized area target be exempt from establishing individual MPO-level targets, and instead only be required to adopt and support the joint urbanized area target?

As above, TPB recommends against the establishment of an urbanized area target. The TPB will continue to report on GHG emissions for its metropolitan planning area and, consistent with the intent of this proposed rule, will likely establish targets for this metric regardless of any urbanized area target-setting requirement.

3. In cases where there are multiple MPOs with boundaries that overlap any portion of an urbanized area, and that urbanized area contains NHS mileage, should each of those MPOs establish their own targets, with no requirement for a joint urbanized area target?

As per the response to Question 1 above, in the event urbanized area GHG emissions targets are required, all MPOs whose planning area overlaps the urbanized area should coordinate on the adoption of an identical target for the urbanized area. This would be consistent in practice with the existing requirements for establishment of targets for the Non-Single Occupancy Vehicle (SOV) Travel performance measure and Peak Hour Excessive Delay performance measure

4. Are there other approaches to target setting in urbanized areas served by multiple MPOs that would better help MPOs reach net-zero emissions?

Adding a per-capita GHG measure and target would allow for changes in population, metropolitan area planning boundaries, and urbanized area boundaries over time and would effectively add a "rate" measure for performance, consistent with many of the other federally-required performance measures (e.g., highway safety, transit assets, etc.). This would improve comparability across States and MPOs and aid in the identification of more effective strategies for reducing GHG emissions.

Please feel free to contact me at ksrikanth@mwcog.org or 202-962-3257 if there is any additional information or support that the TPB can provide in the development and implementation of the performance-based planning and programming regulations.

Sincerely,

Kanathur Srikanth
TPB Staff Director

cc:

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board

FROM: John Swanson, Transportation Planner

SUBJECT: Solicitation in the District of Columbia for Applications for the Transportation Alternatives Set-Aside Program

DATE: September 15, 2022

The application period for the Transportation Alternatives Set-Aside (TA Set-Aside) Program for the District of Columbia is now open. The application deadline is November 1. Potential applicants are encouraged to submit a 1-3 paragraph abstract by September 22 as part of an optional pre-application opportunity.

For details about the program, see ddot.dc.gov/page/transportation-alternatives-program.

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/.

Under federal law, project selection for the program is shared between state DOTs and large MPOs, including the TPB. The TPB is expected to approve funding for projects in D.C. on December 21.

Eligible applicants for the program include local governments; regional transportation authorities; transit agencies; natural resource or public land agencies; school districts, local education agencies, or schools; tribal governments; and any other local or regional governmental entity with responsibility for oversight of transportation or recreational trails (other than a metropolitan planning organization or a State agency). Nonprofit 501 (c) organizations are also eligible to apply to be Project Advocates, if there is a partnership with an eligible agency that is willing to act as the official Project Sponsor.

State DOTs are typically considered ineligible to apply for TA Set-Aside funding. However, as DC government is the only local government within the District of Columbia, the District Department of Transportation (DDOT) qualifies as a local government entity.

DDOT is moving to a two-year solicitation cycle for the TAP program. This means projects for both FY23 and FY24 will be selected through this fall's application cycle.

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).

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board

FROM: John Swanson, Transportation Planner

SUBJECT: Follow-up information regarding the Transportation Alternatives Set-Aside Program

DATE: September 15, 2022

At the TPB meeting on July 20, Chair Pam Sebesky asked staff to provide written follow-up in response to questions that were raised regarding the Transportation Alternatives Set-Aside Program (TA Set-Aside). The questions were directed to our state DOT members, so we solicited the answers below from them via email:

1. Question for all DOTs: Patrick Wojahn, from College Park, noted that the Infrastructure Investment and Jobs Act (IIJA) of 2021 allows states to take 5% of the state's allocations for the TA Set-Aside Program for the purposes of technical assistance in program administration. These funds can be used by the states to provide assistance to local governments during the application development period and during project implementation, as well as for other purposes. Mr. Wojahn asked how the state DOTs in our region plan to use those funds. He said he would specifically like to see the funds used to solicit more applications from more jurisdictions.

Answer from MDOT (received 9/12/22):

> "In response to similar questions Mayor Wojahn raised at the MML [Maryland Municipal League] Summer Conference this past June, MDOT SHA wrote Mayor Wojahn that IIJA allows the state to use up to five percent of suballocated TA set-aside funding for program administration and technical assistance. MDOT SHA will use this portion of TA set-aside funding to fund staff resources to administer the TA Program on behalf of the Federal Highway Administration, enabling MDOT SHA to better assist project sponsors and ensure projects smoothly progress from award to closeout."

Answer from VDOT (received 8/22/22):

> "VDOT is using the additional 5% TAP funds (from IIJA) as follows:
> 1)- Support for VDOT staff to work on localities' application validations.
> 2)- Training modules directed to all localities for the quality of applications as well as more participation.
> 3)- There is an under-utilized portion of the TAP program dedicated for small communities (5K or less) due to lack of participation. Funds will be used to work with those smaller communities to incentivize more participation."

Answer from DDOT (received 9/15/22):

> "DDOT does not intend to exercise the allowance to utilize up to 5% of the state's TAP allocation for program administration. DDOT performs program TAP administration, including assistance during the application process and during project implementation."

2. Question for MDOT: Kacy Kostiuk, from Takoma Park, called attention to the MDOT rule that prohibits MPOs from funding TA Set-Aside projects on a partial basis, in most cases. Under this rule, the only way a project can be partially funded by an MPO is if it is the only project the MPO selects that year (this is what happened at the TPB in July). In such cases, MDOT agrees to pick up the remainder of the requested funding using statewide TA Set-Aside funds. Ms. Kostiuk said that this year, she thought the outcome for Maryland was good and she strongly supported the recommended project, but she said she could imagine a situation in the future where this rule could be too limiting. She said she would like to learn more about the origin of the rule and whether it is helping the program meet the goals that it should be seeking to achieve.

Answer from MDOT (received 9/12/22):

> "The change made in 2019 where MPOs are not allowed to fund TA projects on a partial basis was put in place so projects would not receive partial funding, which led on multiple occasions to projects that were not able to be completed or delayed for lack of funding. Delays arose as sponsors/local public agencies (LPAs) were forced to find additional funding they needed to provide necessary resources to advance projects. In these situations, MDOT SHA frequently received requests from sponsors/LPAs for additional funding after the MPO chose to award only partial funding. In the worst cases, sponsors/LPAs chose to withdraw projects from the TA Program and return TA funds since they couldn't complete the project as proposed in the application."

TPB staff welcomes the new funding opportunity from IIJA that will allow state DOTs to provide more technical assistance to help local governments develop high-quality applications and ensure the effective and timely implementation of projects. In the coming year, we look forward to working with our state DOT partners to encourage broader participation by TPB members in the TA Set-Aside Program.

Resolution R40-2022
September 14, 2022

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
777 NORTH CAPITOL STREET, NE
WASHINGTON, DC 20002

RESOLUTION ENDORSING EFFORTS TO SUPPORT ELECTRIC VEHICLE DEPLOYMENT

WHEREAS, in 2019, the Intergovernmental Panel on Climate Change updated its guidance to recognize that the world is already experiencing the impacts of global warming and to avoid most severe climate impacts greenhouse gas emissions must fall by at least 45 percent from 2010 levels by 2030 and to carbon neutrality by 2050; and

WHEREAS, metropolitan Washington is already experiencing the impacts of a changing climate, including increases in temperature and precipitation; and

WHEREAS, COG's Region Forward Vision includes a sustainability goal that calls for a significant decrease in greenhouse gas emissions, with substantial reductions from the built environment and transportation sector; and

WHEREAS, in October 2020 the Board adopted Resolution R45-2020 endorsing an interim 2030 climate mitigation goal of 50 percent greenhouse gas reduction below 2005 and climate resilience goals of becoming a Climate Ready Region by 2030 and Climate Resilient Region by 2050; and

WHEREAS, CEEPC recognizes that strong actions are still needed to avoid the most severe climate impacts and developed the 2030 Climate and Energy Action Plan to include recommended actions to meet the region's climate mitigation and resiliency goals; and

WHEREAS, the plan facilitates an equitable transition toward zero emission vehicles, in addition to zero energy buildings, zero waste, and assessing the region's climate hazards and vulnerabilities; and

WHEREAS, as discussed at the 2022 COG Leadership Retreat, Electric Vehicle (EV) planning and deployment is a priority for the region and COG's member governments; and

WHEREAS, increased collaboration to support EV plans, programs, and policies within local governments and as a region is necessary to transition towards zero emission vehicles and meet our regional goals outlined in the 2030 Climate and Energy Action Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS THAT:

1. COG's Climate, Energy and Air Program will establish and maintain an Electric Vehicle (EV) Deployment Clearinghouse. This clearinghouse will provide members information on: (1) local EV Plans (government and community-wide), (2) local planning, zoning, permitting, and incentive polices related to EVs and EV infrastructure; (3) local EV and EV charging station related procurement and installation/operations support agreements; and (4) grant and partnership opportunities for EVs and EV charging stations.

2. Establish a Regional EV Deployment Working Group under COG's Climate, Energy and Environment Policy Committee (CEEPC), to serve as a forum for members to collaborate and coordinate actions related to deploying EVs and EV infrastructure. The working group will focus on: (1) information sharing and collaborating on local EV deployment plans; (2) developing templates for policies pertaining to local planning, zoning, and permitting to bring efficiencies to the process of EV infrastructure installation; (3) developing model partnership agreements (for site hosting, O&M of charging stations, etc.) for use by member governments; (4) developing white papers on "deal structures" for local governments to consider when working within the industry to build EV charging infrastructure, prioritizing equity emphasis areas; (5) developing model incentive programs for consideration by members to expedite EV purchase and/or EV infrastructure installation ensuring that equity emphasis areas are considered; (6) identifying and supporting opportunities to pursue regional grants for EV and/or EV infrastructure.

I HEREBY CERTIFY THAT the foregoing resolution was adopted by the COG Board of Directors September 14, 2022
Janele Partman
COG Communications Specialist

Lyn Erickson

Subject: FW: Officials endorse new EV planning initiatives

Metropolitan Washington Council of Governments

NEWS RELEASE

Area officials endorse new regional electric vehicle planning initiatives

COG to establish an EV Deployment Working Group and Clearinghouse

Washington, D.C. (September 14, 2022) – At its monthly meeting, the Metropolitan Washington Council of Governments (COG) Board of Directors adopted a resolution to establish an Electric Vehicle (EV) Deployment Clearinghouse and an EV Deployment Working Group to help expand EV infrastructure and increase the use of EVs regionwide.

Under COG's Climate, Energy, and Environment Policy Committee (CEEPC), the working group will bring together representatives from local jurisdictions and other public and private sector partners. It will provide members with an opportunity to coordinate actions and develop an EV infrastructure deployment plan for metropolitan Washington that will enhance the region's ability to transition to electric vehicles at scale. The group will prioritize information sharing, developing templates for policies and practices, regional partnerships, and identifying opportunities for funding support.

The clearinghouse will focus on keeping members informed on local EV planning, zoning, permitting, and incentive policies, as well as charging station procurements and installation/operation support agreements. These initiatives will help area officials assess the number and type of EV charging stations that will be needed in the future as well as optimal locations for these stations.

"Collaborative opportunities like the working group and clearinghouse will help us create a more consistent and coordinated network in our multi-state region," said COG Board Chair and Arlington County Board Vice Chair

Christian Dorsey. “We will put ourselves in a better position to pursue potential cooperative purchases as well as state and federal grants, especially new funding related to the Infrastructure Investment and Jobs Act and Inflation Reduction Act.”

Since the adoption of the *2030 Climate and Energy Action Plan,* COG has been helping its member governments advance the region’s climate goals by assisting on local jurisdictions’ climate and energy action plans and EV fleet policies and plans.

The number of registered battery electric and plug-in hybrid electric vehicle owners increased by more than 300% between 2016 and 2020. As of 2020, the region had more than 33,000 electric vehicle owners that account for 1.7 percent of all light duty vehicles. Regionally, the total number of electric vehicle charging station plugs has increased from just over 300 in 2012 to more than 3,500 in 2021. Charging stations that can fully charge an EV in as little as 20 minutes have expanded from zero in 2012 to 475 charging plugs in 2021.

The EV initiatives support COG’s overarching planning priorities highlighted in the *Region United: Metropolitan Washington Planning Framework for 2030*, including a regional goal for a 50 percent reduction in greenhouse gas emissions below baseline levels by 2030. Staff continue to track the adoption of EVs and the progress of EV infrastructure in the region and will work with local governments to build a robust, sustainable network.

MORE: Resolution R40-2022 – Endorsing efforts to support Electric Vehicle Deployment

CONTACT:
Janele Partman; jpartman@mwcog.org; (202) 962-3250

The Council of Governments is an independent, nonprofit association where area leaders address regional issues affecting the District of Columbia, suburban Maryland, and Northern Virginia.

Lyn Erickson

Subject: Residents to celebrate Car Free Day on Sept. 22

Metropolitan Washington Council of Governments

NEWS RELEASE

Take the Pledge and Go Car Free with Commuter Connections

Registrants can enter to win prizes and free bikeshare rides when they take the pledge to go car free or car-lite for a day

Washington, DC – (September 15, 2022) – Metropolitan Washington is gearing up for Car Free Day, an annual event that aims to reduce traffic congestion and bring awareness to more sustainable ways of traveling. Commuter Connections is encouraging residents to go car free or car-lite in celebration of Car Free Day on Thursday, September 22. By choosing to walk, bike, scooter, carpool, vanpool, or take the bus or train, commuters can use Car Free Day as an opportunity to focus on improving their physical health as well as the air quality of the region. Those teleworking on Car Free Day are also prize eligible by taking the pledge.

Each person who takes the free online pledge will receive a $30 Nift Gift app credit to spend at participating local businesses, along with a special promo code for free 45-minute rides with Capital Bikeshare and a free cup of drip coffee at Bus Boys and Poets. Participants will also be entered into a raffle for other great prizes, including a Samsung Galaxy tablet, gift cards from local businesses, and more.

“Car Free Day presents an exciting opportunity for the region to come together and support more sustainable ways of travel,” said Commuter Connections Director Nicholas Ramfos. “Promoting alternative commuter choices goes a long way in encouraging D.C. area residents and travelers to make decisions that benefit the community.”

Join thousands who have already signed up and take the pledge to go Car Free on September 22 at carfreemetrodc.org. Stay up to date on Car Free

Day by following @CarFreeMetroDC on Facebook and Twitter and using the official #CarFreeDay hashtag across social media platforms.

MORE: Learn more and take the free pledge.

CONTACT: Janele Partman: jpartman@mwcog.org, (202) 962-3250
Tia Williams: twilliams@asc-pr.com, (503) 856-5573

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

MARYLAND DEPARTMENT OF TRANSPORTATION

2022 SCHEDULE
ANNUAL CONSULTATION MEETING
Full Draft CTP or www.ctp.maryland.gov

Day	Date	County	Time	Location
F	9/16/22	Cecil	10:00 AM	County Administration Building, Elk Room, 200 Chesapeake Boulevard, Elkton, MD 21921 **Watch** live at: www.ccgov.org/council
		Baltimore CITY	3:30 PM	City Hall, Board of Estimates Room, 2nd Floor, 100 N. Holliday Street, Baltimore, MD 21202 **Join** the Webex meeting, or **Dial** (US Toll): 1-408-418-9388 Webinar Number: 2348 353 3029, Password: Public (782542 from phones)
T	9/20/22	Kent	6:00 PM	400 High Street, Chestertown, MD 21620 **Watch** live at: https://www.kentcounty.com/commissioners/meeting-live-video
W	9/21/22	Charles	3:00 PM	Charles County Government Building, 200 Baltimore Street, LaPlata, MD 20646 **Watch** live at: www.CharlesCountyMD.gov/our-county/ccgtv-live-stream or **listen** live at: 301-645-0500
Th	9/22/22	Wicomico	7:00 PM	Wicomico County Civic Center, DaNang Room, 500 Glen Avenue, Salisbury, MD 21804 **Watch** live at: http://www.pac14.org/
M	9/26/22	Harford	1:00 PM	Harford County Council Chambers, 212 S. Bond Street, Bel Air, MD 21014
T	9/27/22	St. Mary's	9:00 AM	Commissioners Meeting Room, Chesapeake Building, 41770 Baldridge Street, Leonardtown, MD 20650 **Watch** live at: https://www.youtube.com/user/StMarysCoMDGov
Th	9/29/22	Prince George's	10:00 AM	Wayne K. Curry Administration Building, 1st Floor Council Hearing Room, 1301 McCormick Drive, Largo, MD 20774 **Watch** live at: https://pgccouncil.us/LIVE Persons wishing to speak should register on the Council's Public Hearings/Sign-up to Speak page: https://pgccouncil.us/Speak and the meeting link will be sent to them in advance of the meeting
		Howard	6:00 PM	G. Howard Bldg., 3430 Court House Drive, Ellicott City, MD 21043 **Watch** live at: https://cc.howardcountymd.gov/Online-Tools/Watch-Us
T	10/4/22	Worcester	10:00 AM	Worcester County Government Center, One West Market Street, Snow Hill, MD 21863-1195 **Watch** live at: http://www.co.worcester.md.us/event/commissioners-meeting-october-4
		Talbot	3:00 PM	Talbot County Community Center, Wye Oak Room, 10028 Ocean Gateway, Easton, MD 21601 **Join** the Zoom meeting Or **Dial**: 301-715-8592 Meeting ID: 895 8609 8500, Passcode: 570973
T	10/11/22	Anne Arundel	10:00 AM	Anne Arundel County Council Chambers, 44 Calvert Street, 1st Floor, Annapolis, MD 21401 **Watch** live on local cable channels or via Arundel TV, visit: www.aacounty.org/services-and-programs/government-television For concerns with accessibility, contact the Administrative Officer at least 72 hours in advance of the meeting: CouncilAdmin@aacounty.org or by phone 410-222-1401
		Montgomery County	7:00 PM	Montgomery Council Office Building, 100 Maryland Avenue, 3rd Floor Council Hearing Room, Rockville, MD 20850 **Watch** live at: https://www.youtube.com/channel/UCbZz9T0h3xWo2ZWaEveO-9g?view_as=subscriber

MARYLAND DEPARTMENT OF TRANSPORTATION

2022 SCHEDULE
ANNUAL CONSULTATION MEETING
Full Draft CTP or www.ctp.maryland.gov

W	10/12/22	Baltimore COUNTY	2:00 PM	Tradepoint Atlantic, 6995 Bethlehem Boulevard, Suite 100, Sparrows Point, MD 21219 **Watch** live at: https://www.youtube.com/user/BaltimoreCounty
Th	10/13/22	Carroll	2:00 PM	County Office Building, Reagan Room #003, 225 N. Center Street, Westminster, MD 21157 **PHOTO ID REQUIRED TO ENTER BUILDING** **Watch** live at: Carroll County Government YouTube Channel or through the Carroll County Government Meeting Portal
M	10/24/22	Frederick	7:00 PM	Winchester Hall, 1st Floor Hearing Room, 12 E. Church Street, Frederick, MD 21701 To **join by phone, dial** 855-925-2801, Meeting Code: 8774 **Join** the meeting at: https://publicinput.com/C0230
T	10/25/22	Calvert	10:00 AM	Commissioners Hearing Room, 175 Main Street, Prince Frederick, MD 20678 **Join** the Zoom meeting Meeting ID: 899-4188-8251, Passcode: # Or **Dial** 301-715-8592, Meeting ID: 899-4188-8251
		Queen Anne's	3:00 PM	Queen Anne's County Commissioners Meeting Room, Liberty Building, 107 N. Liberty Street, Centreville, MD 21617 **Join** the Zoom meeting Meeting ID: 337 639 6733, Passcode: Studio7 Or **Dial**: 201-715-8592 Meeting ID: 337 639 6733, Passcode: 440058
T	11/1/22	Caroline	9:00 AM	Caroline County Board of Education, 204 Franklin Street, Denton, MD 21629 **Listen** live at: https://us06web.zoom.us/s/300062187
		Somerset	2:00 PM	11916 Somerset Avenue, Room 111, Princess Anne, MD 21853 **Virtual link to be provided in the near future.**
		Dorchester	7:00 PM	County Office Building, Room 110, 501 Court Lane, Cambridge, MD 21613 **Listen** live to the meeting, **Dial**: 701-802-5222 When prompted enter the Pin number: 873725#
Th	11/3/22	Washington	10:00 AM	Washington County Public Safety Training Center, 1850 Public Safety Place, Hagerstown, MD 21740 **Watch** live at: https://www.facebook.com/WashingtonCountyMD/
		Allegany	2:00 PM	LaVale Library, 815 National Highway, LaVale, MD 21502 **Join** the Zoom Meeting Or **Dial**: 301-715-8592 Meeting ID: 876 2110 8608
F	11/4/22	Garrett	10:00 AM	Frederick A. Thayer III Courthouse, Room 209, 203 South Fourth Street, Oakland, MD 21550 **Watch** live at: https://www.facebook.com/garrettcountygovernment/

Please note that these are County meetings, and the County decides the meeting format. As always, these meetings are subject to change. Please check back closer to the meeting you plan to attend to ensure the meeting is still in-person and/or the meeting date/time hasn't changed.

Items highlighted in YELLOW are changes to the date, time, or location

July 21, 2022

BEN
The Honorable Benjamin L. Cardin
U.S. Senate
509 Hart Senate Office Building
Washington DC 20510

CHRIS
The Honorable Chris Van Hollen
U.S. Senate
110 Hart Senate Office Building
Washington DC 20510

STENY
The Honorable Steny H. Hoyer
U.S. House of Representatives
H-107 The Capitol
Washington DC 20515

Dear Senator Van Hollen, Senator Cardin, and Congressman Hoyer:

Thank you for your recent correspondence regarding the existing Nice/Middleton Bridge and its possible retention and use as a future shared use (bicycle/pedestrian) facility. As the Chairman of the Maryland Transportation Authority (MDTA), I am honored to respond.

Based on the MDTA analysis, we estimated $46.7 million in 2015 dollars is necessary to maintain the existing bridge for bicycle and pedestrian use for a 30-year time horizon. Based on recent inflation, maintenance costs are now anticipated to be considerably higher. Furthermore, this does not include cost impacts now that the new bridge design is complete and construction is nearing completion. For example, MDTA would require permit modifications to retain the existing bridge to account for the additional stormwater management impervious area impacts and account for the loss of mitigation provided by existing bridge demolition materials for artificial reef habitat enhancement. Furthermore, the current contract has no provisions for tying in the newly aligned approach roadways with the existing bridge, where portions of the existing roadway and bridge must be removed to accommodate the new roadway slopes. The redesign and added construction costs, along with contractor delay costs, were not included in the 2015 analysis, but further demonstrate that retaining the existing bridge would be a significant negative cost impact to the MDTA.

The concept of retaining the existing bridge was also evaluated by the MDTA numerous times in response to inquiries by other groups and entities considering taking ownership. In each case, however, the costs associated with maintaining a 1.9-mile complex bridge (over 80-years-old) made retaining the bridge unfeasible. Additionally, the cost estimates for the modifications to the bridge to make it safe and viable as a shared-use pathway are also substantial. Early in the project development, the MDTA offered for Charles County to take ownership of the existing bridge because they claimed that it would enhance economic development. The county independently concluded that it was not affordable to retain the existing bridge.

Following the early request from Charles County, Virginia and King George County separately requested information about options to keep all or portions of the existing bridge. Both chose not to pursue retaining the existing bridge due to the future facility maintenance costs. Virginia independently investigated retaining all or portions of the existing bridge. Among other challenges, the Virginia Department of Transportation (VDOT) summarized the anticipated ownership costs as follows:

- "A biennial bridge safety inspection for a structure of this size is estimated to cost around $1 million, using 2021 dollars. Every four years, an underwater bridge inspection and hydrographic surveys would be needed, which are estimated to cost an additional $125,000."
- "Initial maintenance activities would be needed to open the structure as a recreational facility. These activities may include cleaning the deck, beams, and piers to remove chlorides; minimal deck patching; and placing epoxy waterproofing. This list is not all-inclusive. These initial maintenance activities are estimated to cost in the $3.3 million to $3.5 million range, using 2021 dollars."
- "Looking at average bridge maintenance costs over the past 10 years, MDTA has invested an average of $313,376 annually for routine upkeep. The annual cost fluctuates significantly depending on the specific tasks performed over a 12-month period and has ranged from no cost in one year to a peak of $1.5 million. This estimated cost also does not reflect seasonal maintenance activities such as snow removal."
- "The bridge would need to remain able to accommodate the weight of vehicles for emergency, maintenance, and inspection purposes. The existing bridge barrier railing is lower than what is currently required to safely protect pedestrians and bicyclists. A taller barrier railing or an attached pedestrian railing would likely need to be installed for the length of the bridge. This would be an initial cost that is estimated to range from $6 million to $6.5 million in 2021 dollars, depending on the height of the railing and the materials used. The bridge would need to be handicapped-accessible and comply with the Americans with Disabilities Act."

VDOT independently expected the upfront costs to retain the existing bridge at approximately $9.3 million to $10 million plus over $800,000 annually to maintain the existing bridge. The cost estimate excludes major rehabilitation activities that are likely, as the bridge further ages. VDOT's cost investigation reasonably aligned with MDTA's and neither estimate includes:

- Inflationary costs, especially if maintenance is deferred;
- Costs for operational maintenance, such as trash and snow removal, etc.;
- Costs for lighting, fencing, and ITS, and/or other means for controlling bridge access;
- Security and vagrancy management costs, which may be necessary as King George County has noted significant historical challenges at Dahlgren Wayside Park; and
- Costs to the existing Contract and the MDTA for the items noted above (e.g., scope not in Contract, Contractor delays, and environmental mitigation).

Based on their independent cost investigation, Virginia is no longer pursuing taking ownership of the structure. This is partly due to the unaffordability of maintaining the existing bridge, but also includes their other concerns, including "The grade of the Nice/Middleton Bridge is quite steep at the navigation channel and may not be appropriate for many recreational users."

In addition to the cost feasibility, there are physical challenges with retaining the existing bridge related to the scouring of the river bottom around the bridge foundations, resulting from the interaction of scouring mechanisms between the two structures. The new bridge was designed with the understanding that the existing bridge would be demolished at the end of this year. Based on recent renewed requests to retain the existing bridge, we performed an extensive scour analysis to determine the impact on the new bridge foundations from leaving the existing bridge piers in place. The results of these analyses, which were presented to the participating federal agencies, concluded that leaving the existing bridge foundations is a safety threat to the new bridge based on FHWA guidelines for evaluating scour at bridges. Based on this finding, leaving the existing bridge foundations in place is not an option.

For the reasons above, maintaining the 80-year-old existing Nice/Middleton Bridge is not an option. Therefore, we will continue with the permitted plan to demolish the existing bridge and use the demolition materials for enhancing artificial reef habitat. While the existing bridge does not support bikes today, the new Nice/Middleton Bridge project includes several bicycle safety improvements within the project area, such as active timed warning beacons, bicycle traversable bridge joints, and bicycle signing that will allow for lane sharing on the new bridge for possible connections to potential future trail network(s) around the Potomac River. Since there are no existing trails leading up to the bridge, lane sharing on the new bridge will also effectively tie into the lane sharing utilized today on the approach roadways.

Thank you again for contacting me. I appreciate hearing from you. If you have further questions, please contact MDTA's Project Director, Brian Wolfe, PE, at 410-537-8200 or bwolfe3@mdta.state.md.us. Mr. Wolfe will be happy to assist you. Of course, you may always contact me directly.

Sincerely,

P.S. HOPE YOU ALL ARE HAVING A GREAT SUMMER!

James F. Ports, Jr.
Chairman

cc: William Pines, PE, Executive Director, MDTA
Brian Wolfe, PE, Director of Project Development, MDTA

RAISE Grants Recently Awarded in Our Region

SOUTH CAPITOL STREET TRAIL

RAISE AWARD AMOUNT: $10,000,000

APPLICANT: DISTRICT DEPARTMENT OF TRANSPORTATION

STATE: DISTRICT OF COLUMBIA

URBAN

Project Description: The project in the District's Ward 8 will construct a 10-foot-wide walking and biking trail of approximately 3.8 miles starting at the South Capitol Street and Firth Sterling Avenue SE intersection and ending at the Oxon Hill Farm Trail along DC Village Lane. The trail will extend the Anacostia Riverwalk Trail network into the southernmost areas of the District.

Project Benefits: Introducing this trail link will provide pedestrians and cyclists with a safe, off- street transportation alternative that connects to a broader public transit system and could provide more transportation options. It particularly serves overburdened and disadvantaged communities by filling in a missing trail link, which will provide new commuting options to employment centers, the District's Downtown, and recreational parks. In addition, the trail will provide a safe, convenient area for residents to integrate walking and cycling into their daily lives, which will offer health and fitness benefits to residents that reside in Wards 7 and 8. There are strong workforce elements in this project -- over half of worked hours must be performed by residents of the District of Columbia and 20 percent of work under the project is reserved for journey-level positions.

NEW CARROLLTON MULTI-MODAL TRANSPORTATION STATION PROJECT

RAISE AWARD AMOUNT: $20,500,000

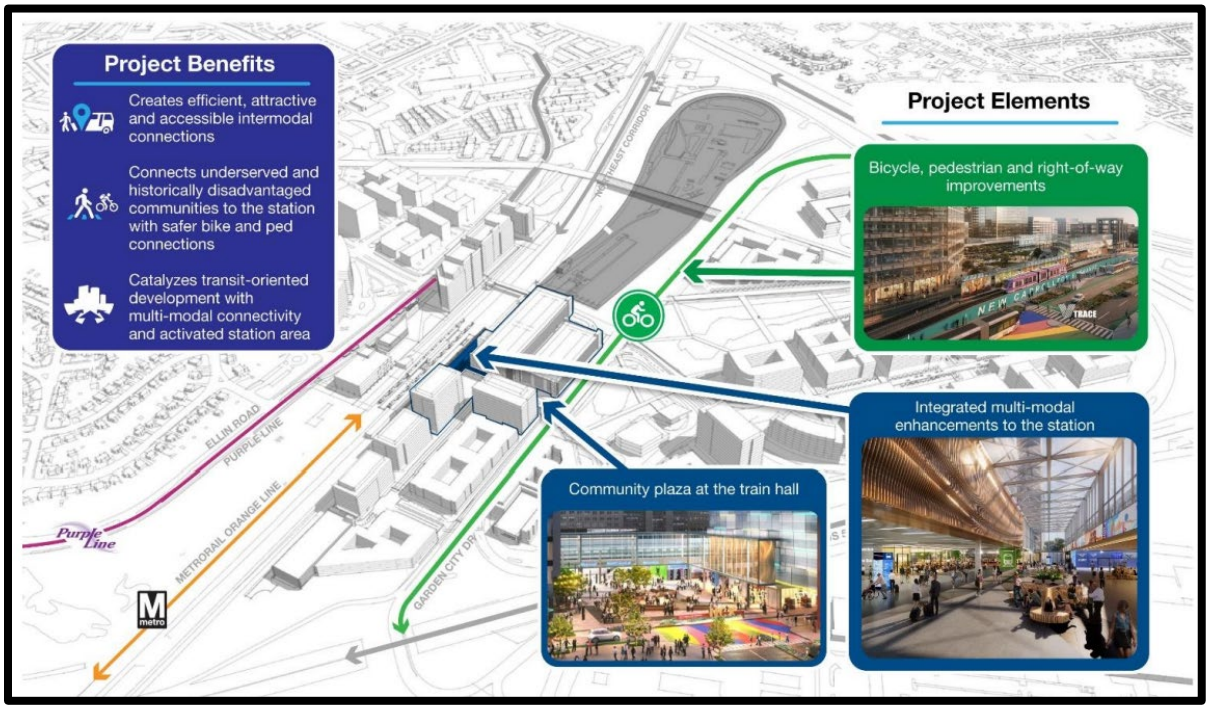
APPLICANT: PRINCE GEORGE'S COUNTY

STATE: MARYLAND

URBAN

Project Description: The project will construct multimodal transit station improvements for New Carrollton Station. The project includes a new Train Hall for the existing MARC, Metrorail, and Amtrak service, incorporating connections to Metrobus, TheBus, and Greyhound bus services and the future Maryland Purple Line light rail. It will also make new sidewalks, bike lanes, lighting, signalization, and traffic calming improvements on Garden City Drive to access the station, and improve the Train Hall plaza space to be more welcoming to users.

Project Benefits: According to the applicant, there have been more than 150 crashes, 2 fatalities, and 50 injuries in the last three years on Garden City Drive near the station. The project will improve safety by adding striped bicycle lanes, bicycle boxes, wider sidewalks and safer pedestrian crossings, and a center median on the road. The project supports transit-oriented development in the area, including access to new residential and office space that is currently under development and expected to increase ridership at the station. The project makes transit a more attractive option, particularly for the underserved community in the area, by facilitating non-motorized first/last mile access to the station.



LONG BRIDGE BICYCLE AND PEDESTRIAN CROSSING PROJECT

RAISE AWARD AMOUNT: $20,000,000

APPLICANT: VIRGINIA PASSENGER RAIL AUTHORITY

STATE: VIRGINIA

URBAN

Project Description: The project will create a new approximately 2,300-foot-long bicycle-pedestrian bridge that crosses the Potomac River between Long Bridge Park in Arlington, VA and East and West Potomac Parks in Washington, DC.

Project Benefits: The project will reduce crashes by adding protected and separated facilities for bicycles and pedestrians. The project will create an accessible and more affordable way for the community to connect to the surrounding Virginia and District of Columbia areas through a network of bicycle and pedestrian improvements.

ITEM 7 – Action
September 21, 2022

TPB Bylaws Update

Action: Adopt Resolution R2-2023 to approve amendments to the TPB Bylaws.

Background: The TPB Bylaws will be updated to reflect the Board's interest in continuing to offer virtual participation for future meetings.

Package 1: Resolution R2-2023 with TPB Bylaws

Package 2: Background/Options Memo

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board
FROM: Lyn Erickson, Plan development and Coordination Program Director
SUBJECT: Draft TPB Bylaws Comments and Options
DATE: September 15, 2022

A TPB Bylaws update has been initiated to accurately reflect the virtual options available for TPB to conduct business after the public health emergency ends. The language was also updated to reflect current laws and practices, and minor editorial revisions were introduced to bring the Bylaws up to the 21st century. Comments were requested at the July TPB meeting and the TPB is scheduled to adopt Resolution R3-2023 to approve the changes at the September meeting.

Five comments were received on the Draft TPB Bylaws. A few technical edits were identified and corrected, and there was one general substantive comment. Members asked for more flexibility in virtual participation options for the in-person meetings.

This memo provides additional information about virtual participation in the board meetings and provides choices for addressing the comment about more flexibility to participate virtually. The first section summarizes the drafted language provisions regarding virtual participation. Staff also asked several agencies in the region what their participation options/policies are for comparison purposes, and the second section contains that information. The third section provides additional options that could provide more virtual participation flexibility.

VIRTUAL PARTICIPATION OPTIONS AS DRAFTED

Virtual participation options can be found in page 5 Section VI Time and Place of Meeting, included at the end of this memo for reference. As written in the attached Bylaws draft, members could participate virtually up to 5 times a year under certain circumstances. Here are the highlights (the numbering here does not correspond with the numbering in the bylaws):

1. The TPB shall give preference for in-person meetings over virtual meetings. Members will be expected to participate in the in-person meetings in person, unless exempted as per the provisions.
2. When an in-person meeting is scheduled, members may attend the meeting virtually on no more than two (2) occasions in a year. The member wishing to participate virtually shall give at least three (3) days' notice to the Director. (*optional virtual participation*)
3. The Chair may propose and or upon request by and discussion among members, schedule a limited number of all virtual meetings in a year. Such virtual meetings will be limited to no more than three (3) meetings in a year. (*these meetings are considered 100% virtual*)
4. The Chair may determine that no electronic attendance is permitted at certain meetings of the TPB.

In summary, when optional virtual participation is combined with the scheduled 100% virtual meetings, a member could potentially participate virtually up to 5 of the 11 meetings per year (5 = 2 optional as defined in #2 plus 3 scheduled as defined in #3).

OTHER AGENCY/BOARD/MEMBER VIRTUAL POLICIES

Staff informally asked a handful of member agency staffs and COG what their participation procedures and policies are. Due to the timing of the ask, this is the information that was provided to date:

- COG Board (policy updated April 2022)
  - There is unlimited remote participation for board members upon giving 5 days' notice. There are no restrictions on the number of 100% virtual meetings, at the discretion of the Executive Committee with 3 days notice to board members. The Chair may determine that no virtual participation or limited virtual participation is permitted at certain in-person meetings.

- Fredericksburg Area MPO (resolution dated March 16, 2020)
  - Policy Committee members may participate remotely up to 2 times per year, but permitted reasons are limited to: (i) a personal matter, (ii) a temporary or permanent disability or other medical condition that prevents the member's physical attendance, or (iii) such member's principal residence is more than 60 miles from the meeting location. The specific nature of the reason and the remote location from which the Committee member participated shall be recorded in the minutes of the meeting. They must notify the Chair in writing and yes their remote vote does count. The Chair can opt to not approve the request and that will be recorded in the minutes.
  - A quorum must be physically present.

- Baltimore Regional Transportation Board (the Baltimore MPO)
  - BRTB is still operating under emergency procedures and they expect to revisit their bylaws soon. The Board and Technical Committee meet in person every other month and the expectation is for all to be present. However, since they are still operating under emergency procedures, there is a lot of virtual participation even when they are expected to be present,

- Northern Virginia Transportation Authority (NVTA) – Policy 26 found here updated September 8, 2022
  - 100% Virtual meetings can be scheduled about 3 times per year: the greater of two (2) meetings or 25% of total number of meetings in the calendar year.
  - Optional virtual participation can occur about 3 times per year: greater of two (2) meetings or 25% of total number of meetings in the calendar year (Since there are usually 11 scheduled Authority meetings every year, this will make it possible for a member to go virtually 3 times a year). If an Authority member is also a member of Committees, the attendance is counted separately for the Authority and each Committee.
  - In summary, when optional virtual participation is combined with the scheduled 100% virtual meetings, a member could potentially participate virtually up to 6 of the 11 meetings per year (6 = 3 optional participation plus 3 100% virtual meetings).

- WMATA (Board's bylaws, last updated in June 2018)
    - There are no limits on virtual participation. There are quorum requirements for Board and committee meetings, but virtual participation counts. Here is the most relevant text from the bylaws:
        - *8. Quorum. A quorum requires the presence of four Directors, including one appointed by each of the District of Columbia, Maryland and Virginia. A Director may participate in any meeting of the Board of Directors by means of conference telephone or other communications equipment by means of which all persons participating therein can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.*

- National Capital Planning Commission (amended Bylaws 2020)
    - Virtual participation and online meetings are allowed, with some language related to weather, public health and the chair's discretion. The Commission meeting room is under construction, so all meetings are currently virtual. The discussion around in-person/hybrid/online and Commission attendance will begin soon.

OPTIONS ALLOWING FOR MAXIMUM PARTICIPATION FLEXIBILITY

While not an exhaustive survey, the above section depicts varying approaches to balance the desires to meet in-person and provide virtual participation in board meetings. Members of the board have noted that given the dispersed multi-state area the TPB develops regional plans for, periodic in-person meetings allow for elected and senior appointed officials from different states / jurisdictions to meet to develop a better understanding of each other's perspectives and priorities when developing regional plans and policy priorities. Members have also noted that virtual participation provides significant time savings for members, helps minimize scheduling conflicts, and increases participation in the meetings.

Should the board wish to make changes allowing for more virtual participation, some options to change the draft text include:

1. Change the proposed limit on optional virtual participation in "in-person" meetings from 2 to 4. This together with the anticipated 3 all virtual meetings would allow members to participate virtually in 7 of the 11 annual board meetings.
2. Change the proposed limit on the optional 2 virtual participations to a requirement for 2 in-person participations. This would mean members would be required to participate in 2 of the 11 annual meetings in-person, and therefore could participate in up to 9 meetings virtually.
3. Drop the limitation on virtual participation altogether and not include any requirement for in-person participation. This would provide maximum flexibility to members on how they would participate in the board meetings.

SECTION VI CUT AND PASTED FROM BYLAWS

IV. TIME AND PLACE OF MEETING

1. The TPB shall hold regular meetings, preferably monthly, with a minimum of one meeting each quarter. While the month of August would be exempt from this requirement the Chair of the TPB could convene a special meeting in August as outlined below. Special meetings may be called by the Chair at any time on ten (10) days' notice in writing of the time, place, and general business to be transacted. The Chair shall call a special meeting of the TPB on the request of not less than one-third of the voting members of the TPB, or as required under Section VII.a(7). Insofar as possible, all matters requiring a vote shall be proposed in writing and furnished to members at least three (3) days prior to the meeting or at the time of notice of the meeting, whichever is earlier. The vote on any such matter shall be conducted in accordance with the requirements of Section VI.

   The TPB shall give preference for in-person meetings over virtual meetings unless there is a local, regional, or federal order or pronouncement of emergency conditions that affect public safety or health and where public in-person gatherings are discouraged or restricted.

   Members will be expected to participate in the in-person meetings in person, unless exempted as per the provisions below.

2. Virtual participation in an in-person meeting: When an in-person meeting is scheduled, a member may attend the meeting virtually (through electronic communication means) from a remote location, on no more than two (2) occasions in a year. The member wishing to participate virtually, shall give at least three (3) days' notice to the Director or designated staff by either email or telephone. The Chair shall announce the names of the members participating virtually at the beginning of the meeting.

   Electronic participation is contingent upon the ability of COG staff to make the necessary arrangements for the audio and or visual communications between the TPB meeting locations and the remote location of the member participating virtually.

3. Virtual meetings due to an emergency: In the event of a state, local or federal order or pronouncement of emergency conditions that affect public safety or health, meetings may be held by telephone conference call, videoconference, or online video/telephone call combination ("virtual meetings"), at the direction of the Chair or a Vice Chair, if the Chair is not available, after consulting with the other Vice Chairs, if possible, and the COG Director of Transportation Planning. If possible, three (3) days' notice shall be given to the members by either email or telephone, which notice shall include the specific steps necessary to access the meeting. Such direction shall only be given upon a determination that a face-to-face meeting is precluded by a state, local or federal order or pronouncement of emergency conditions affecting public safety or public health.

4. Virtual meetings not due to an emergency: The Chair may propose and or upon request by and discussion among members schedule a limited number of all virtual meetings in a year, when there is no state, local or federal order or pronouncement of emergency conditions that affect public safety or health. Such virtual meeting(s) would, among others things, advance travel demand management strategy of reducing travel to support regional goals including reducing congestion, and reducing use of fossil fuel and improving air quality. Notice of such an all virtual meeting will be provided no less than ten (10) days in advance of the scheduled meeting. Such virtual meetings will be limited to no more than three (3) meetings in a year.

5. The Chair may determine that no electronic attendance is permitted at certain meetings of the TPB.

6. The following procedures shall apply when a member is attending electronically:
    a. The member shall verbally identify at the beginning of the meeting that the member is present electronically; and announce, verbally or electronically, if the member is departing from the meeting, unless the meeting has adjourned;
    b. The member shall, verbally or electronically, ask for recognition from the Chair if the member desires to speak;
    c. The member attending electronically shall indicate his/her vote verbally when requested by the Chair or staff;
    d. The member attending electronically shall not have a right to attend any executive session or closed meeting during the meeting but may be included if arrangements can be readily made and the confidentiality of the meeting ensured;
    e. All other Bylaw provisions apply.

ITEM 7 – Action
September 21, 2022

TPB Bylaws Update

Action: Adopt Resolution R2-2023 to approve amendments to the TPB Bylaws.

Background: The TPB Bylaws will be updated to reflect the Board's interest in continuing to offer virtual participation for future meetings.

Package 1: Resolution R2-2023 with TPB Bylaws

Package 2: Background Memo

TPB R2-2023
September 21, 2022

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

RESOLUTION TO AMEND THE TPB BYLAWS TO SPECIFY VIRTUAL MEETING PROVISIONS

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 TPB is governed by its Bylaws which, as last amended on April 15, 2020, provide for the operation and framework for the TPB while defining its Functions; Relationship with the Metropolitan Washington Council of Governments; Membership and Terms; Time and Place of Meeting; Officers; Quorum and Voting Procedures; Committees; Staff; Public Participation and process for the Amendments of Bylaws; and

WHEREAS, the TPB Bylaws were last amended in April 2020 to provide provisions to hold a virtual (wholly electronic) board meeting for the participation of its Board members or their alternates during a public health emergency; and

WHEREAS, the Board desires to expand and provide provisions that would define the circumstances under which virtual meetings and virtual participation can occur; and

WHEREAS, the Bylaws were also reviewed and updated to reflect current laws and practices, and minor editorial revisions were included; and

WHEREAS, on July 20, 2022, the TPB reviewed and gave public notice of proposed amendments to its Bylaws that would provide for a virtual meeting provision.

NOW, THEREFORE, BE IT RESOLVED THAT the National Capital Region Transportation Planning Board amends the TPB Bylaws to reflect the changes as described and adopts the attached Bylaws as amended September 21, 2022.

BYLAWS OF THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

As Amended September 21, 2022

National Capital Region
Transportation Planning Board

I. FUNCTIONS

The National Capital Region Transportation Planning Board (TPB) is the federally designated metropolitan planning organization (MPO) for metropolitan Washington. The TPB is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area.

Consistent with federal law, 23 USC § 134 and 49 USC § 5303 et seq., the TPB was designated as the MPO by the Governors of the State of Maryland, the Commonwealth of Virginia, and the Mayor of the District of Columbia with the agreement of units of general purpose local government that together represented at least 75 percent of the affected population (including the largest incorporated city [based on population] as determined by the Bureau of the Census) in accordance with procedures established by applicable State or local law. Consistent with the requirements of applicable federal statutes and regulations the TPB has been designated as a transportation management area (TMA) since the urbanized area served by the TPB has a population greater than 200,000. The transportation planning area of the TPB, as of July 2022, is depicted in Figure 1.

Figure 1 – TPB Planning Area

The TPB, serving as the MPO for the metropolitan Washington area, shall be responsible for the development of policies of regional significance (having "significant" interjurisdictional effects in terms of financing, transportation service, location, staging, and/or socio-economic, land use, or environmental impacts), and necessary procedures for the effective implementation of a metropolitan transportation planning process. The TPB's functions include, but are not limited to, organization and management direction of the planning process, actions related to securing of Federal aid funding for the metropolitan planning process and matching funding by the signatories of the Master Funding Agreement of record, and associated administrative and management responsibilities including the publication of progress reports describing the time, cost, and technical detail of the planning program, and distribution of summaries of the TPB's proceedings.

II. RELATIONSHIP WITH THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS

The Metropolitan Washington Council of Governments (COG) entered into a contract[1] to have COG serve as the administrative and fiscal agent of the TPB. Thus, the TPB is staffed by COG's Department of Transportation Planning. In July 1966, the TPB and the COG jointly adopted a plan[2] for associating the two organizations, under which the TPB may also serve as the transportation policy committee of COG. The purpose of the plan is to improve coordination between the TPB's transportation planning process and COG's comprehensive regional planning process, and to achieve economies and efficiencies through joint staffing and administration of these two activities. Under this arrangement, COG serves as the administrative and fiscal agent for the TPB and the TPB uses COG's forecasts of land use, population, and employment as the basis for developing transportation plans and programs consistent with the area's growth policies. This association does not in any way impinge upon the basic responsibilities of the TPB as the designated MPO for transportation planning in the Washington Metropolitan Area.

III. MEMBERSHIP AND TERMS

23 USC § 134 and 49 USC § 5303 et seq. prescribe the structure and membership of MPOs. Consistent with these requirements, TPB membership is made up of local elected officials from each local government within the urbanized area served by the TPB, the appropriate State officials (both branches of the state and federal city legislatures) and officials of public agencies that administer or operate major modes of transportation in the metropolitan area (the state and District of Columbia Departments of Transportation, DOT), including representation by providers of public transportation (the Washington Metropolitan Area Transit Authority (WMATA)). Additionally, the TPB membership includes ex-officio or non-voting members, as noted below.

Further, consistent with regulations to consider the equitable and proportional representation of the population of the metropolitan planning area, the number of members from a jurisdiction is related to the population within the jurisdiction. Table 1 lists the jurisdictions and agencies, or entities represented on the TPB.

[1] February 9, 1966, " Contract By And Between Metropolitan Washington Council Of Governments And Government Of The District Of Columbia Virginia Department Of Highways, And Maryland State Roads Commission.

[2] July 14, 1966, "Resolution Adopting The Plan For Associating The Metropolitan Washington Council Of Governments With The National Capital Region Transportation Planning Board".

Table 1: Jurisdictions and Organizations Represented on the TPB

DISTRICT OF COLUMBIA	**VIRGINIA**
District Council	Arlington County
District Department of Transportation	Fairfax County
District Department of Planning	Fauquier County
	Loudoun County
	Prince William County
MARYLAND	City of Alexandria
Charles County	City of Fairfax
Frederick County	City of Falls Church
Montgomery County	City of Manassas
Prince George's County	City of Manassas Park
City of Bowie	Virginia General Assembly
City of College Park	Virginia Secretary of Transportation
City of Frederick	
City of Gaithersburg	
City of Greenbelt	**EX OFFICIO MEMBERS**
City of Laurel	Federal Highway Administration
City of Rockville	Federal Transit Administration
City of Takoma Park	National Capital Planning Commission
Maryland General Assembly	National Park Service
Maryland Secretary of Transportation	Metropolitan Washington Airports Authority
Washington Metropolitan Area Transit Authority	

The TPB shall be composed as follows:

1. One (1) elected member from each of the local governing bodies of the cities and counties in Maryland and Virginia contained within the urbanized area served by the TPB and the appropriate state officials[3]. In addition, membership may include one (1) elected member from the governing body of any other city or county outside of the TPB's planning area recommended for membership by a majority vote of the TPB based on the substantial interests such jurisdiction has in the metropolitan planning process. Participation of such members shall be conditioned on such jurisdiction contributing to the financial support of the planning process in an amount determined by the TPB.
2. Those cities or counties of Maryland and Virginia that participate in the TPB and which have a population greater than 400,000 shall have one (1) additional member selected as follows:
    A. The County Executive or his designated representative, if the form of government includes an elected County Executive, or;
    B. One (1) additional elected member of the local governing body, if the form of government does not include an elected County Executive.
3. Four (4) members from the Government of the District of Columbia, two (2) of whom shall be members of the Council, and two (2) from the executive branch. One (1) of the executive branch members shall be from the District DOT.
4. One (1) member from each of the DOT of Maryland and Virginia, and one (1) member representing the Washington Metropolitan Area Transit Authority (WMATA).
5. One (1) member each from the House and Senate of the Maryland and Virginia General Assemblies, respectively, and one (1) additional member from the Council of the District of Columbia. Such members and their alternates shall be selected from the members of the General Assemblies representing portions of the Washington Metropolitan Area, and the

[3] Membership in COG is not a requirement for TPB members.

Council of the District of Columbia, respectively. Alternates for these members shall also be members of the General Assemblies or the Council of the District of Columbia, respectively.

6. One (1) member each from the National Capital Planning Commission, the Metropolitan Washington Airports Authority, the Federal Highway Administration, the Federal Transit Administration, the Federal Aviation Administration, and the National Park Service. Each member in this category shall be non-voting but shall be entitled to offer and second motions and resolutions and otherwise enter deliberations of the TPB.

Designated alternate representatives of the local government representatives must be appointed by their local governing body. Such appointment must be made and communicated to the TPB staff by an authorized representative of the governing body or entity. If the designated alternate representative is not an elected official or an employee of the participating jurisdiction's government, then the participating jurisdiction's governing body must adopt a resolution appointing the "external candidate" based on his/her qualifications and expertise to adequately represent the jurisdiction as an alternate representative. Designated alternate representatives of the DOT must be appointed by their respective Departments. Designated alternate representatives of WMATA must be appointed by the Board of Directors.

Members shall serve until replaced by the organization which they represent. Changes in jurisdictional membership (but not individual appointments of the jurisdictions) shall be based on changes to the urbanized area boundaries and the planning area of the TPB, consistent with federal MPO regulations.

IV. TIME AND PLACE OF MEETING

1. The TPB shall hold regular meetings, preferably monthly, with a minimum of one meeting each quarter. While the month of August would be exempt from this requirement the Chair of the TPB could convene a special meeting in August as outlined below. Special meetings may be called by the Chair at any time on ten (10) days' notice in writing of the time, place, and general business to be transacted. The Chair shall call a special meeting of the TPB on the request of not less than one-third of the voting members of the TPB, or as required under Section VII.a(7). Insofar as possible, all matters requiring a vote shall be proposed in writing and furnished to members at least three (3) days prior to the meeting or at the time of notice of the meeting, whichever is earlier. The vote on any such matter shall be conducted in accordance with the requirements of Section VI.

   The TPB shall give preference for in-person meetings over virtual meetings unless there is a local, regional, or federal order or pronouncement of emergency conditions that affect public safety or health and where public in-person gatherings are discouraged or restricted.

   Members will be expected to participate in the in-person meetings in person, unless exempted as per the provisions below.

2. Virtual participation in an in-person meeting: When an in-person meeting is scheduled, a member may attend the meeting virtually (through electronic communication means) from a remote location, on no more than two (2) occasions in a year. The member wishing to participate virtually, shall give at least three (3) days' notice to the Director or designated staff by either email or telephone. The Chair shall announce the names of the members participating virtually at the beginning of the meeting.

Electronic participation is contingent upon the ability of COG staff to make the necessary arrangements for the audio and or visual communications between the TPB meeting locations and the remote location of the member participating virtually.

3. Virtual meetings due to an emergency: In the event of a state, local or federal order or pronouncement of emergency conditions that affect public safety or health, meetings may be held by telephone conference call, videoconference, or online video/telephone call combination ("virtual meetings"), at the direction of the Chair or a Vice Chair, if the Chair is not available, after consulting with the other Vice Chairs, if possible, and the COG Director of Transportation Planning. If possible, three (3) days' notice shall be given to the members by either email or telephone, which notice shall include the specific steps necessary to access the meeting. Such direction shall only be given upon a determination that a face-to-face meeting is precluded by a state, local or federal order or pronouncement of emergency conditions affecting public safety or public health.

4. Virtual meetings not due to an emergency: The Chair may propose and or upon request by and discussion among members schedule a limited number of all virtual meetings in a year, when there is no state, local or federal order or pronouncement of emergency conditions that affect public safety or health. Such virtual meeting(s) would, among others things, advance travel demand management strategy of reducing travel to support regional goals including reducing congestion, and reducing use of fossil fuel and improving air quality. Notice of such an all virtual meeting will be provided no less than ten (10) days in advance of the scheduled meeting. Such virtual meetings will be limited to no more than three (3) meetings in a year.

5. The Chair may determine that no electronic attendance is permitted at certain meetings of the TPB.

6. The following procedures shall apply when a member is attending electronically:
    a. The member shall verbally identify at the beginning of the meeting that the member is present electronically; and announce, verbally or electronically, if the member is departing from the meeting, unless the meeting has adjourned;
    b. The member shall, verbally or electronically, ask for recognition from the Chair if the member desires to speak;
    c. The member attending electronically shall indicate his/her vote verbally when requested by the Chair or staff;
    d. The member attending electronically shall not have a right to attend any executive session or closed meeting during the meeting but may be included if arrangements can be readily made and the confidentiality of the meeting ensured;
    e. All other Bylaw provisions apply.

V. OFFICERS

Officers of the TPB shall consist of a Chair and two Vice Chairs who are voting members. Terms of office shall be for one year, from January 1 to December 31. Election of officers shall take place at a regular meeting no later than December of the year. Neither the Vice Chairs nor Chair shall be a

representative of the same State or agency. If a vacancy occurs in the office of any of the officers, their successor shall be elected from the same State to complete the unexpired term, such election to be held at any regular meeting of the TPB.

DUTIES OF OFFICERS

The Chair of the TPB shall preside at all meetings and appoint all committees and shall perform such other duties as the TPB may, from time to time, order.

Vice Chairs shall assist the Chair and either Vice Chair shall preside at meetings in the absence of the Chair, and either Vice Chair shall act in the absence of the Chair.

The TPB staff shall be Secretary of the TPB. The staff shall be the custodian of all records of the TPB and shall keep an action summary of the meetings of the TPB. Minutes of the TPB shall be disseminated to members of the TPB and their alternates as well as to non-member jurisdictions in the region. The staff shall, on behalf of the TPB, certify, when required, copies of records, and shall perform such other duties as may be directed by the TPB. The staff shall also maintain the official copy of the Bylaws of the TPB, and shall enter upon such official copy all duly adopted modifications and amendments.

VI. QUORUM, VOTING PROCEDURES, AND RULES

a. Ten (10) voting members or their alternates, to include at least one (1) voting member or alternate representing the District of Columbia, Maryland, and Virginia, shall constitute a quorum of the TPB. Member presence at the meeting includes virtual and in person.

b. Each representative from the State Departments of Transportation (including the District of Columbia), the WMATA, the General Assemblies of Maryland and Virginia and the Council of the District of Columbia appointed under Section III.d., and the participating local governments shall be entitled to cast one (1) vote, except on any matter for which the alternate voting procedure provided for under Section VI.d. is invoked, in which case only the votes of the representatives designated under Section VI.d. shall be counted.

c. Except for amendments to the Bylaws, which require a majority vote of all the voting members of the TPB, whether taken on a regular or proportional voting basis, all actions, including all actions decided on the basis of the alternate voting procedure provided for in Section VI.d., shall be by a majority vote of those present and voting, provided that the extent of financial participation by any jurisdiction, agency or public body shall be determined only with the concurrence of that jurisdiction, agency, or public body.

d. Any voting member may require that the vote on any matter brought before the TPB be decided on a proportional voting basis provided for in this Section VI.d. A proportional vote may be called for either instead of voting on a regular basis as provided in Section VI.b. or subsequent to a vote taken in accordance with Section VI.b., provided, however, that such a subsequent vote shall be at the same meeting. For this purpose, five (5) votes each shall be assigned to Maryland, Virginia and the District of Columbia; such votes shall be distributed by first assigning one (1) vote each to the Maryland DOT, the Virginia DOT and the District of Columbia DOT. The remaining four (4) votes each allocated to Maryland, Virginia and the District shall be apportioned as follows:

i. Three (3) votes shall be allocated to the participating local governments in each of the Maryland and Virginia portions of the Metropolitan Area as follows: each participating local government from Maryland and Virginia shall have one (1) share for each 50,000 population and the next major succeeding portion thereof, except that each jurisdiction having a population of less than 50,000 shall have one (1) share. Populations assigned to the participating local governments shall be the most recent population estimates approved by COG. The total weighed vote cast by the participating local governments in each of the Maryland and Virginia portions of the Metropolitan Area shall be tabulated by determining the percentage of the four (4) total shares of those present and voting cast in each of the Maryland and Virginia portions for and against the question and multiplying the resultant percentage by three. Those jurisdictions, which have a population of over 400,000, shall have their weighted vote based on population divided equally between the legislative and executive branch representatives or designated alternates present and voting. If only one representative is present, that jurisdiction's representative will be given the full weighted vote to which that jurisdiction is otherwise entitled.

ii. Each member from the House and Senate of the Maryland and Virginia General Assemblies present and voting shall be allocated one-half (0.5) of a weighted vote.

iii. Each member from the District of Columbia present and voting, or his alternate in his absence, shall be allocated one (1) of the four (4) remaining District votes.

e. If the total weighted vote of those present and voting within any one of the Maryland, Virginia, or District of Columbia portions of the Metropolitan Area is less than five (5), the weighted vote for each of the representatives present and voting for that portion of the Metropolitan Area shall be increased proportionally to insure a total of five (5) votes. The final vote on the question shall then be determined by adding the total votes cast in each of the Maryland, Virginia and District of Columbia portions of the Metropolitan Area together to arrive at the votes for or against the question. The question shall carry if it receives a majority of the proportional votes cast in accordance with the above procedure.

f. Meetings shall be conducted in accordance with the most recent version of Robert's Rules of Order.

VII. COMMITTEES

a. Steering Committee

There shall be a Steering Committee to facilitate work program planning and management of the transportation planning process. The Committee's responsibilities include:

1. Working with the staff in developing the annual transportation planning work;
2. Programing and budgeting for consideration by the TPB;
3. Reviewing monthly recommendations from the staff and Technical Committee on technical procedures, work program progress and the overall technical conduct of the planning process;
4. Working with the TPB Chair and the staff in developing recommendations for the TPB on revisions to the adopted regional transportation plan and transportation improvement program, and on major transportation planning policies;
5. Review and adopt criteria, developed by the state DOTs in consultation with the representatives of the FHWA and FTA, for grouping by function, geographic area, and work

type those non-regionally significant projects that are not of appropriate scale for individual identification in the Transportation Improvement Program (TIP).

6. Providing a mechanism to assist the TPB Chair in preparing for meetings and working with other COG Policy Committees.
7. Acting on behalf of the TPB on proposed amendments to the Unified Planning Work Program (UPWP) or to the annual element of the TIP and advise the TPB of such action. Notice of proposed amendments to the UPWP or the TIP shall be given to the full TPB at least five (5) days prior to action by the Steering Committee.

   If a voting member objects in writing to action by the Steering Committee, the proposed amendment shall be considered by the full TPB. The member objecting to the amendment shall have the option to have the Chair call a special meeting of the TPB to consider the amendment or agree to hold the amendment over to the next regular TPB meeting. Notwithstanding the above, the Committee shall have the full authority to approve non-regionally significant items, and advise the TPB of its action.

The Steering Committee shall be composed of ten (10) members of the TPB as follows: the TPB Chair and immediate past Chair, one (1) local government representative of the District of Columbia, one (1) elected local government representative of Maryland, one (1) elected local government representative of Virginia, one (1) representative each of the State DOT one (1) representative of WMATA, and the Chair of the Technical Committee. The Steering Committee shall be chaired by the current TPB Chair and shall meet, in-person or virtually, on a regular basis or as determined by the Chair.

b. Technical Committee

There shall be a Technical Committee to advise and assist the TPB in the technical actions of the planning process, to review the cost and content of the work program, to review methodology and procedures, and to review plans and programs. Members of the Committee shall be appointed by the TPB from persons nominated by the various jurisdictions, public agencies, and private organizations in the region having cognizance over transportation matters or an interest or special competence in the field of transportation. The Technical Committee shall make recommendations to the TPB concerning data collection procedures to ensure coordination of procedures and standards between city, county, State and local planning agencies and the metropolitan transportation planning process, and shall consider and make recommendations concerning any other matters referred to it by the TPB. The Technical Committee shall elect such officers as may be appropriate. The Committee shall meet once each month or on an as-needed basis as determined by the Technical Committee Chair.

c. Advisory Committees and Task Forces

The development, maintenance and updating of the Metropolitan Area's transportation plans and programs require an assessment of contemporary viewpoints on critical issues, needs, values and priorities. To assist the TPB in ascertaining such views, the TPB may establish special Advisory Committees and Task Forces for such purpose.

Such Advisory Committees and Task Forces shall be established by resolution of the TPB, and such resolution shall include a mission statement. The Chair of the TPB shall appoint the members of the Advisory Committees and Task Forces from a broad cross-section of elected and appointed officials, and civic, business, environmental and other relevant community interests in the region. Appointments shall be subject to the review and approval of the TPB.

VIII. STAFF

The COG Director of Transportation Planning and his designees shall serve as staff to the TPB in the conduct of the transportation planning process.

IX. PUBLIC PARTICIPATION

The TPB will develop a Public Participation Plan outlining the process and adhere to the Plan in engaging the public in its metropolitan planning activities. In order to foster greater participation by community, transportation, environmental, and other advocacy groups in the transportation planning process, the TPB will set aside a period of time at each of its regularly scheduled meetings to receive input from representatives of recognized regional groups. At the discretion of the TPB Chair, individuals may also be recognized and given the opportunity to speak within the allotted public comment period.

Individuals or representatives of such groups desiring to speak before the TPB are requested to notify the Director that they wish to appear before TPB. Such representatives should speak on topics of current interest to the TPB. Presentations to the TPB shall be limited to up to three (3) minutes. A written copy of the remarks and any additional information should be provided when members of the public appear before the TPB.

In the event that a meeting is held virtually, pursuant to Section IV, and or if the number of people present at the meeting location has to be limited due to safety and or public health concerns, the Director shall make reasonable efforts to inform the public that the TPB will receive public input virtually (in writing, by phone, or email), and shall provide notice on the website.

Special meetings of the TPB may be scheduled to hear individual and special interest group input on topics of special interest as decided by the TPB, and community members may be invited to participate in Advisory Groups and Task Forces established under Section VII.c.

X. AMENDMENTS OF BYLAWS

These Bylaws may be amended pursuant to the following procedures:

a. With the approval of the majority of those voting members of the TPB present (physically or electronically) and voting, a proposal to amend the Bylaws introduced at any regular meeting of the TPB, shall be recorded in the minutes, and

b. A special written notice setting forth such proposal shall be mailed or emailed to every member of the TPB at least ten (10) days before the next regular meeting.

The amendment shall be acted upon at the regular meeting next following the meeting at which it was proposed. A majority vote of the voting members of the TPB shall be required for adoption.

ITEM 8 – Information
September 21, 2022

PBPP: Draft 2022-2025 Regional Targets for Highway Systems Performance and Highway Assets

Background:

The board will be briefed on requirements under the federal performance-based planning and programming (PBPP) rulemaking for MPOs to set three targets for highway systems performance and six targets for highway asset condition (bridge and pavement) performance measures, for the period 2022-2025. A draft set of targets developed by staff in coordination with the state DOTs will be presented. In October, the board will be asked to adopt the 2022-2025 highway systems performance and highway assets (bridge and pavement) targets for the region.

National Capital Region
Transportation Planning Board

MEMORANDUM

TO: Transportation Planning Board

FROM: Eric Randall, TPB Transportation Engineer

SUBJECT: Performance-Based Planning and Programming (PBPP) Highway Asset and Highway Travel Reliability - DRAFT Targets for 2022-2025

DATE: September 15, 2022

This memorandum provides an update on implementation of the federal performance-based planning and programming (PBPP) target-setting requirements for performance measures of the Highway Asset area and the Highway Systems Performance: Travel Reliability area. State DOTs are required to establish two-year and four-year targets for performance measures in these areas as applicable. MPOs then have up to 180 days following to set their own four-year targets or adopt the state DOTs' targets.

New targets are required to be set for the 2022 through 2025 performance period. Reports on performance vs. the 2018-2021 targets and on the new 2022-2025 targets are due to FHWA by October 1, 2022 from the State DOTs.

The following draft targets have been developed by TPB staff in close coordination with the District, Maryland, and Virginia DOTs.

REGIONAL HIGHWAY ASSET TARGETS – DRAFT 2022-2025

Using methodologies generally consistent with those used in 2018, TPB staff have developed a draft set of highway asset targets for the 2022-2025 four-year period, below.

Pavement Condition

Performance Measure for the NCR	4-year Target 2022 – 2025
(1) Percentage of pavements on the **Interstate** System in **Good** condition	**44.8%**
(2) Percentage of pavements on the **Interstate** System in **Poor** condition	**1.6%**
(3) Percentage of pavements on the **NHS** (excl. Interstate) in **Good** condition	**26.3%**
(4) Percentage of pavements on the **NHS** (excl. Interstate) in **Poor** condition	**7.3%**

Bridge Condition

Performance Measure for the NCR	4-year Target 2022 – 2025
(5) Percentage of NHS **Bridges** Classified as in **Good** Condition	**25.7%**
(6) Percentage of NHS **Bridges** Classified as in **Poor** Condition	**4.2%**

HIGHWAY SYSTEMS PERFORMANCE TRAVEL TIME RELIABILITY TARGETS – DRAFT 2022-2025

Using methodology consistent with that in 2018, TPB staff have developed a draft set of highway asset targets for the 2022-2025 four-year period, below.

Performance Measure for the NCR	4-year Target 2022 – 2025
Travel Time Reliability (TTR) – Interstate	**61.1%**
Travel Time Reliability (TTR) – Non-Interstate NH	**78.6%**
Truck Travel Time Reliability (TTTR) Index	**2.56**

NEXT STEPS

Comments on the above draft targets are requested by September 26. The TPB will be briefed on these draft targets on September 21. Following comment and any additional information received, the final draft targets will be developed for TPB approval on October 19.

Following the approval of the 2022-2025 Highway Asset and Highway System Performance targets, TPB staff intended to prepare a revised Visualize 2045 LRTP System Performance Report with information on performance vs the 2018-2021 targets and with the approved 2022-2025 targets ahead of the federal certification review anticipated in early 2023.

PERFORMANCE BASED PLANNING & PROGRAMMING

Draft 2022-2025 Targets:

- Highway Assets (Pavement & Bridge Condition)
- Highway System Performance: Travel Time Reliability

Eric Randall, TPB Transportation Engineer

Transportation Planning Board
September 21, 2022

Agenda Item 8

National Capital Region
Transportation Planning Board

Contents of Presentation

- Action Items for TPB 2022-2025 Target Adoption
- Highway Asset Target Development
  - Methodology
  - Performance and Forecasts
  - Four-year Targets
- Highway System Performance: Travel Time Reliability Target Development
  - Methodology
  - Performance and Forecasts
  - Four-year Targets
- Next Steps

Performance Based Planning and Programming

- Federal surface transportation regulations require the implementation of performance based planning and programming (PBPP) by State DOTs, MPOs, and transit agencies

  "transition to a performance-driven, outcome-based program that provides for a greater level of transparency and accountability, improved project decision-making, and more efficient investment of federal transportation funds."

- State DOTs, MPOs, and providers of public transportation must link investment priorities to the achievement of performance targets in the TIP and the long-range transportation plan

4-Year Target reporting and setting in 2022

- Next round of 4-year targets for the two areas of Highway Assets and Highway Systems Performance for the period 2022-2025 must be set by State DOTs by **October 1, 2022**
  - State DOTs must submit information on actual performance vs. targets for years 2018 through 2021 to the FHWA by October 1, 2022 in a *Full Period Performance Progress Report*
  - State DOTs must develop and formally adopt new targets for years 2022 through 2025, and submit these targets to the FHWA by October 1, 2022 in a *Baseline Period Performance Progress Report*

- Some 2021 data for performance still pending
- Federal evaluation of performance vs. targets is based on latest information available
- MPOs have up to 180 days afterwards to set targets
  - No consequences for MPOs

Action Items – Accomplished / In-Progress

- Coordination on the PBPP requirements with the three DOTs: DDOT, MDOT, VDOT
  - Validation of recent actual performance data
  - Discussed methodology for forecasting future performance and setting targets
- Developed draft MPO regional targets for Highway Asset (Pavement and Bridge Condition) measures and for Highway Systems Performance: Travel Time Reliability measures
  - Adoption of 2022-2025 targets
  - Report on performance vs 2018-2021 targets to DOTs
    - Plan to update Visualize 2045 LRTP System Performance Report (~Dec 2022) ahead of FHWA/FTA certification review of MPO (early 2023)

Highway Asset: Pavement & Bridge Condition Performance Measures

Interstate Pavement	CY 2018 – 2021 Four Year Target	Actual Performance	
(1) Percentage of pavements on the **Interstate** System in **Good** condition	*52.7%*	**49.4%** (2020)	X
(2) Percentage of pavements on the **Interstate** System in **Poor** condition	*1.7%*	**0.2%** (2020)	√
NHS (Non-Interstate) Pavement			
(3) Percentage of pavements on the **NHS** (excl. Interstate) in **Good** condition	*31.1%*	**25.4%** (2020)	X
(4) Percentage of pavements on the **NHS** (excl. Interstate) in **Poor** condition	*7.0%*	**4.0%** (2020)	√
Bridges			
(5) Percentage of **NHS Bridges** Classified as in **Good** Condition	*29.4%*	**39.4%** (2021)	√
(6) Percentage of **NHS Bridges** Classified as in **Poor** Condition	*3.9%*	**1.7%** (2021)	√

Targets set by the TPB on July 18, 2018

2022-2025 Highway Asset Target Methodology

- TPB staff used same general methodology as used in 2018

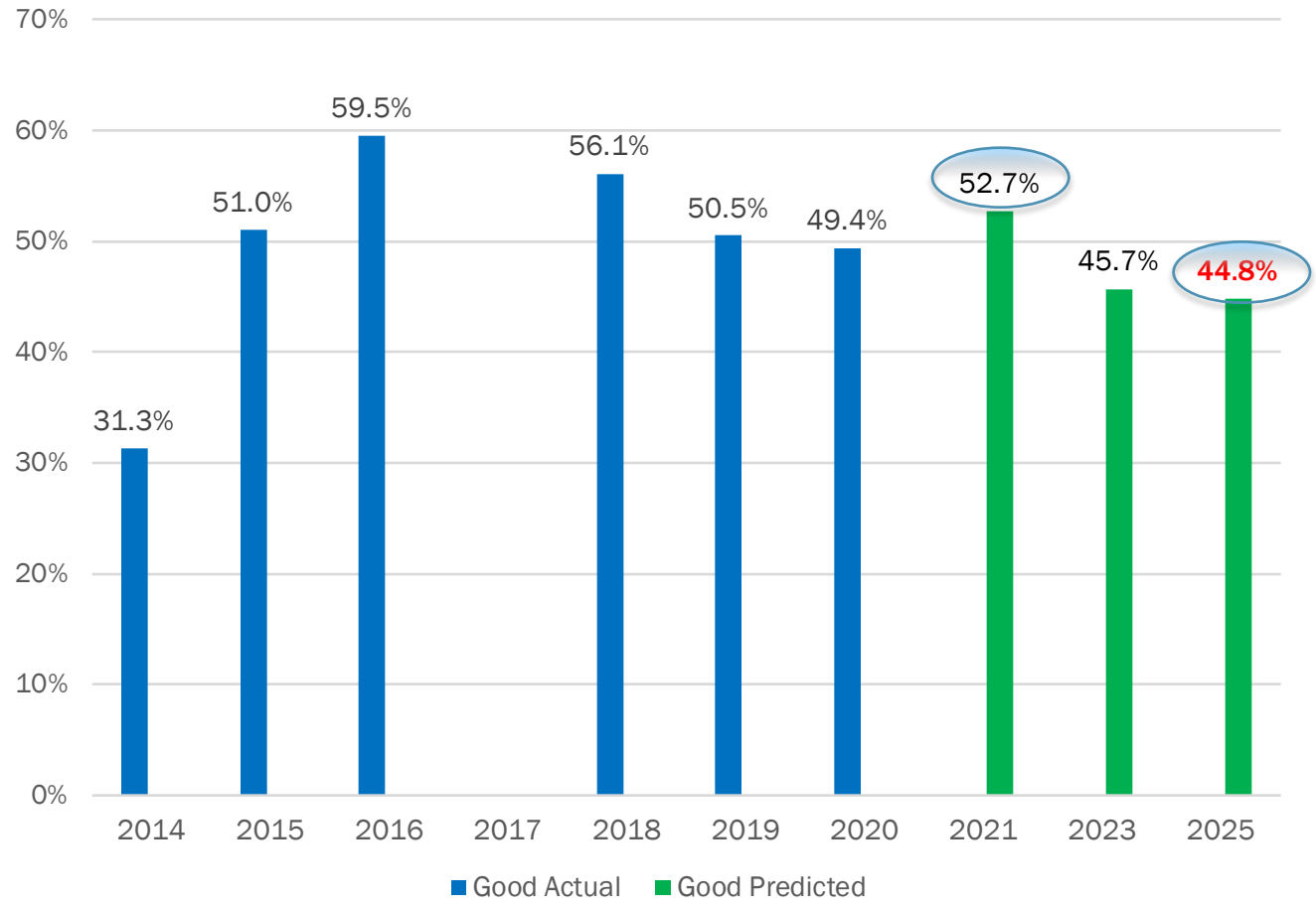
➢ Apply DOT forecasts (targets) to respective sub-region

  - ➢ Apply DDOT forecasts in entirety
  - ➢ Apply MDOT forecast for the four MD counties in the TPB planning area
  - ➢ Apply VDOT statewide forecast to conditions in TPB area

❖ In general, DOTs planning for slowly degrading asset condition

  - ❖ Decreased focus on Interstate "good" condition
  - ❖ Increased focus on other NHS and on other state-maintained roads
  - ❖ Constrained budgets vs increasing costs
  - ❖ IIJA federal funds have increased but there is uncertainty with discretionary grant awards

Interstate Pavement: Performance vs. Targets (Good Condition)



Desired Direction

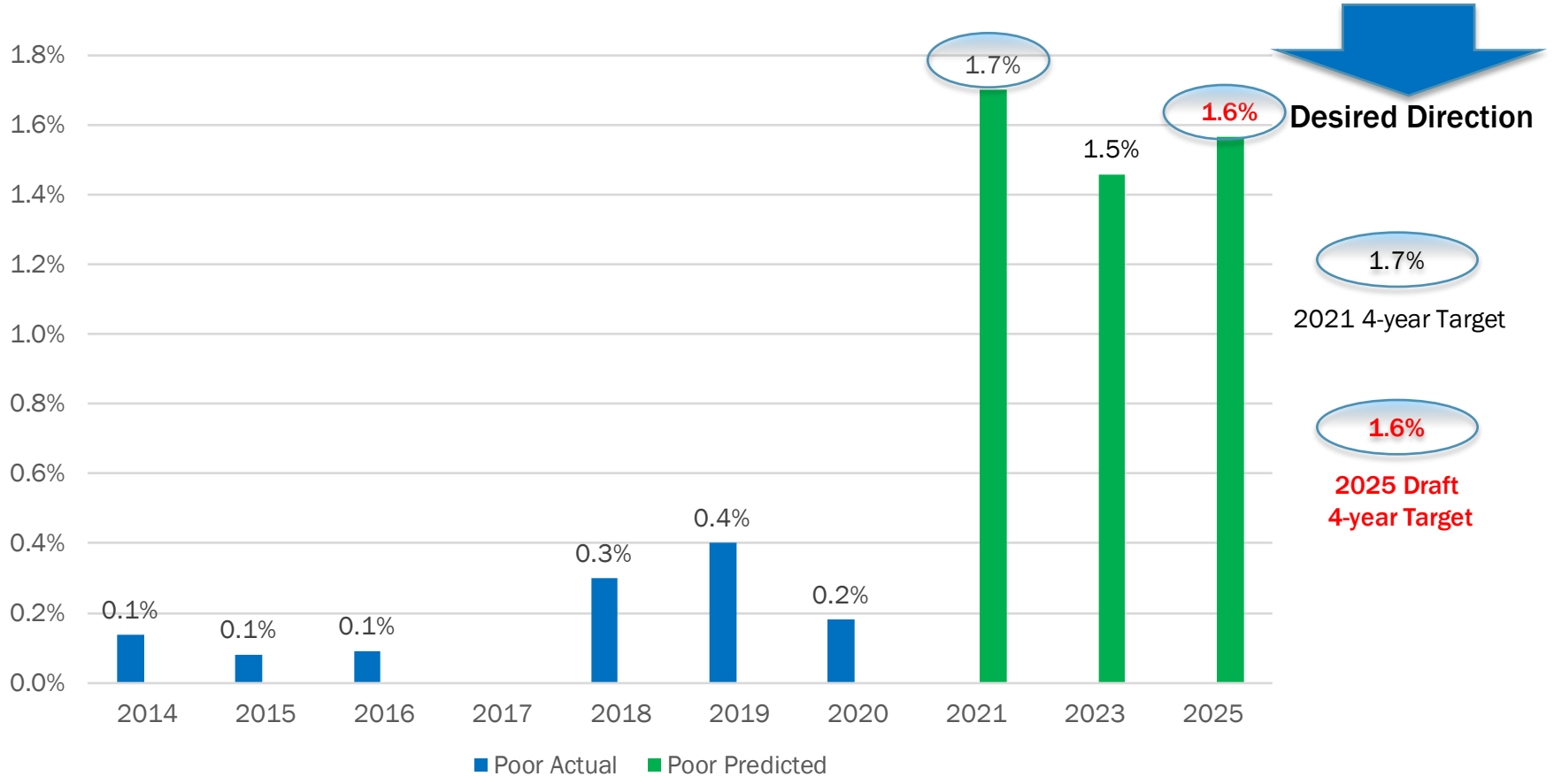
52.7%

2021 4-year Target

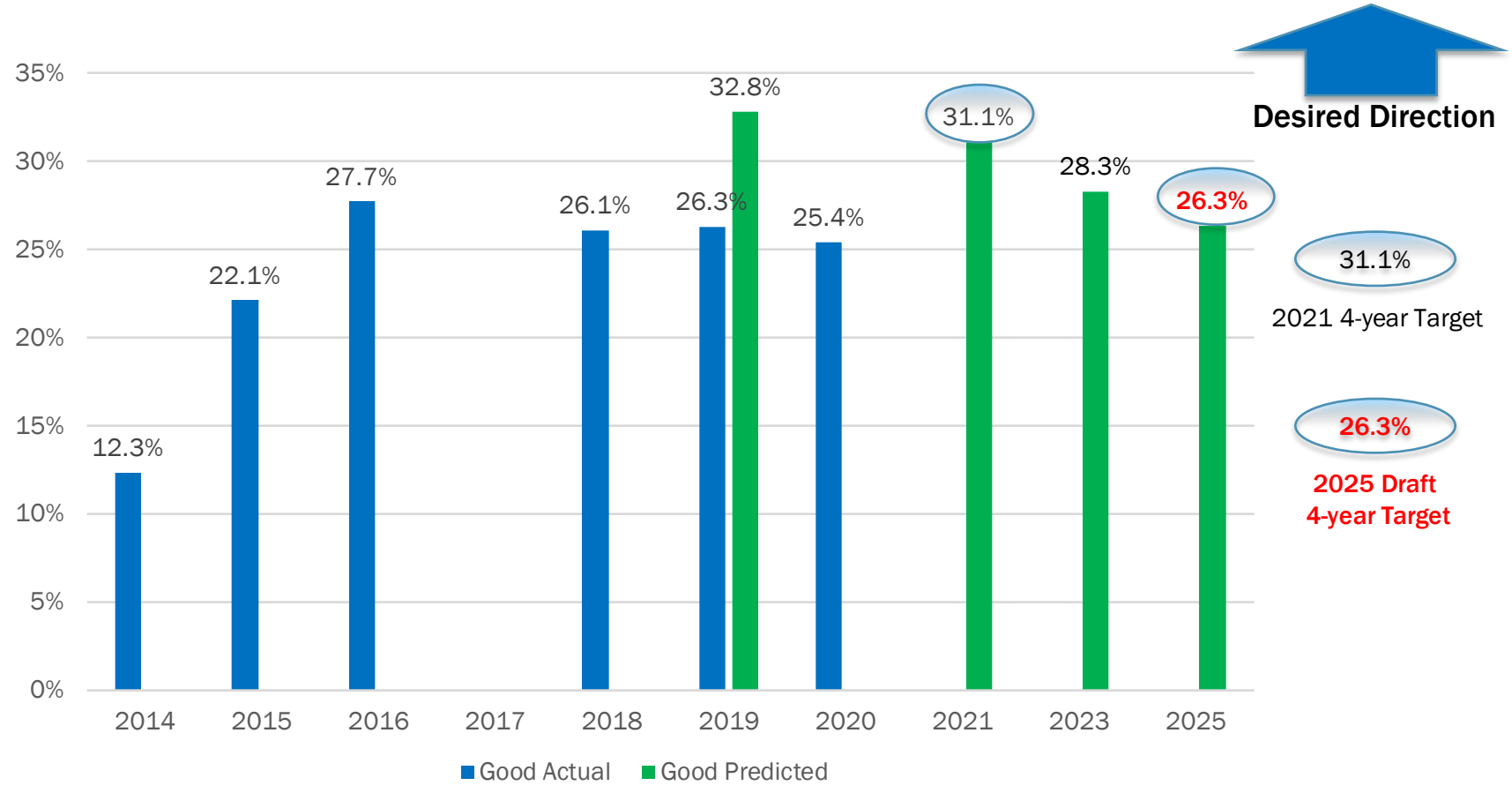
44.8%

2025 Draft 4-year Target

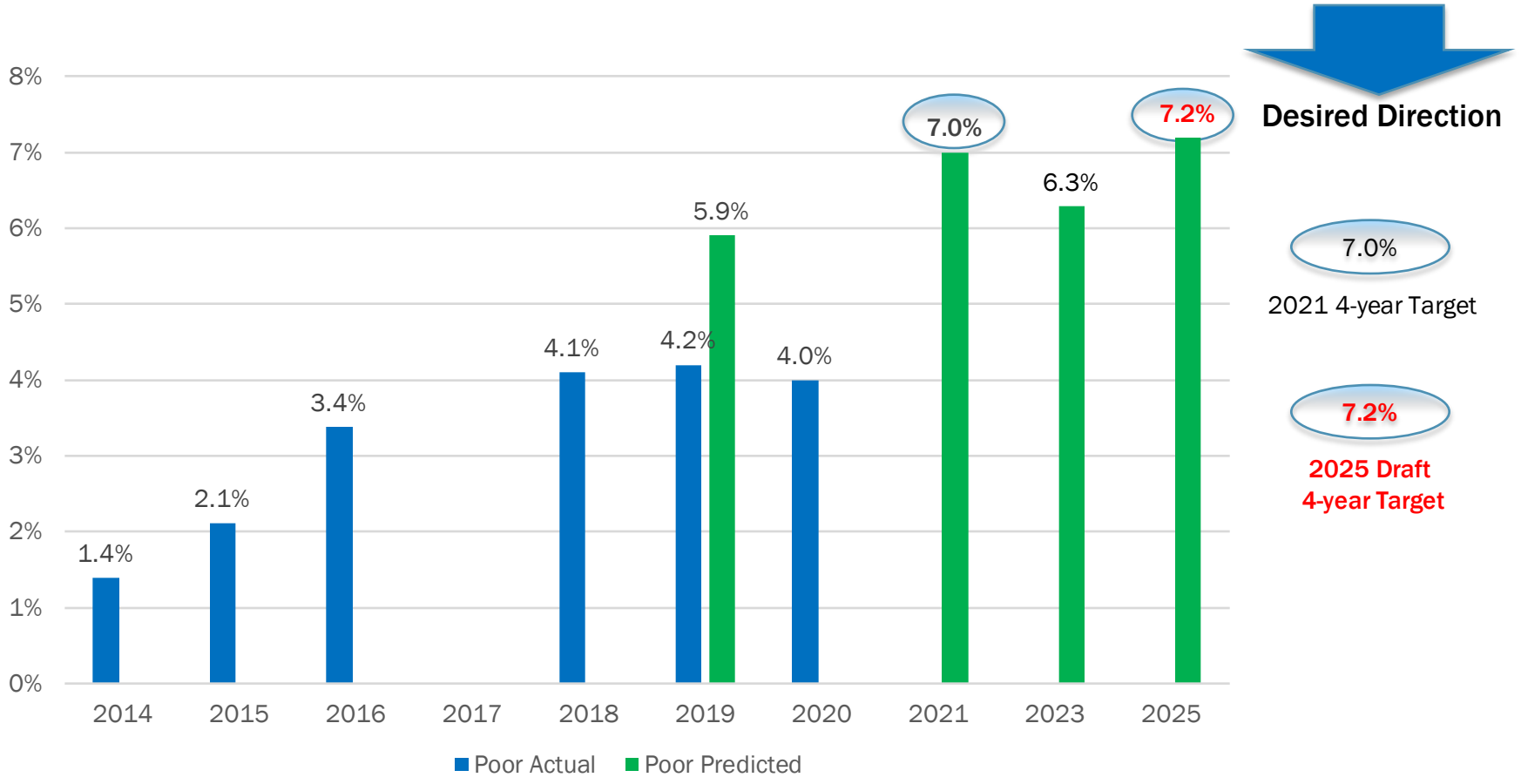
Interstate Pavement: Performance vs. Targets (Poor Condition)



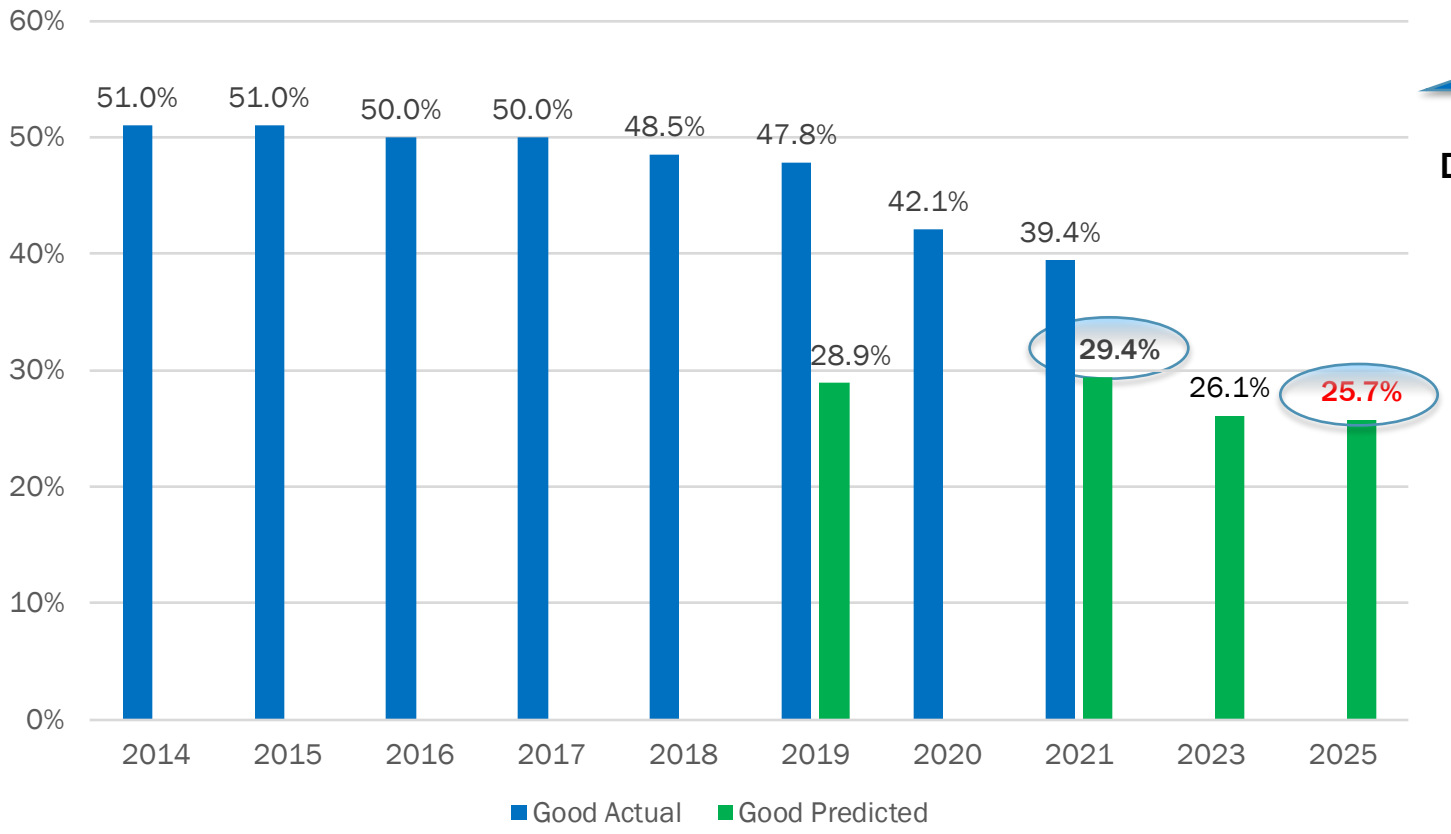
NHS (Non-Interstate) Pavement: Performance vs. Targets (Good)



NHS (Non-Interstate) Pavement: Performance vs. Targets (Poor)



Bridges: Performance vs. Target (Good)



Desired Direction

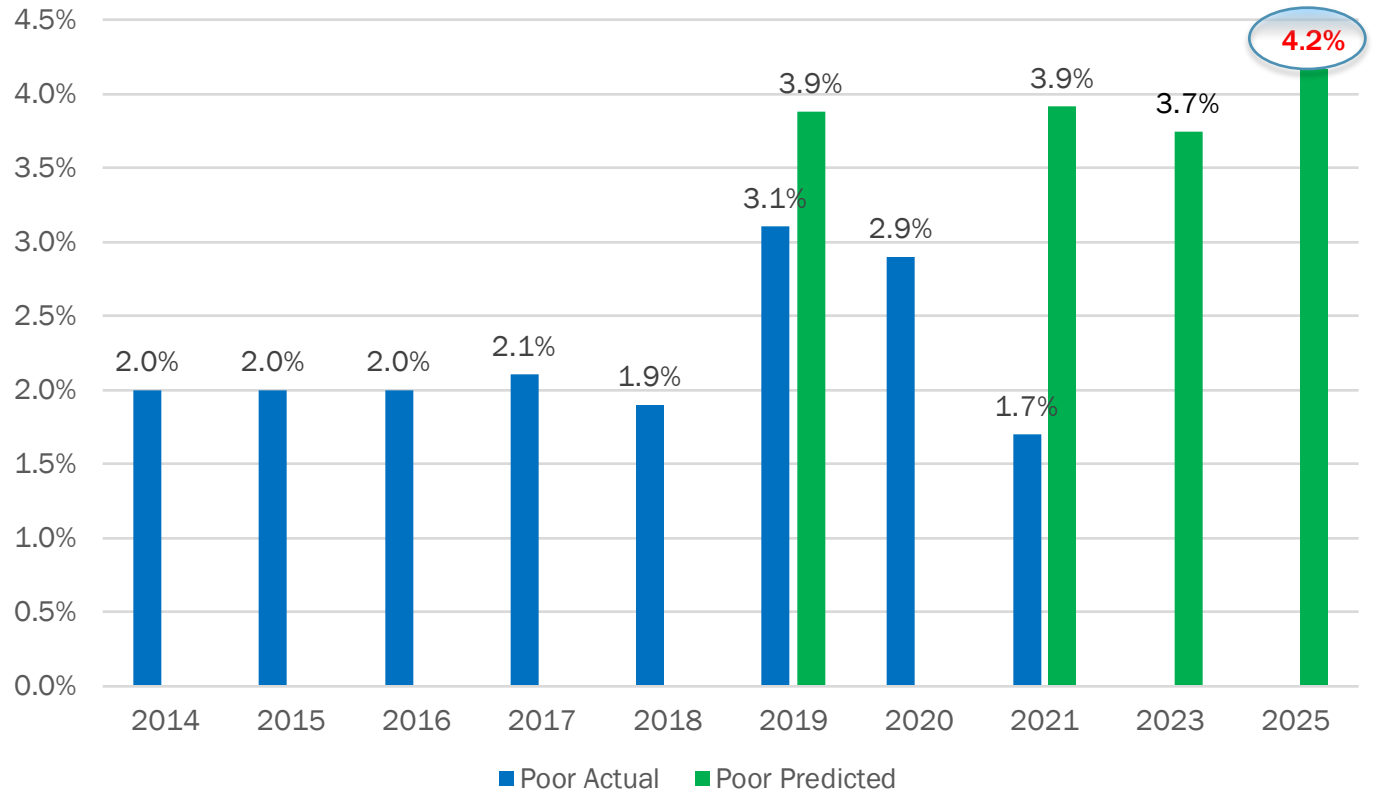
29.4%

2021 4-year Target

25.7%

2025 Draft 4-year Target

Bridges: Performance vs. Target (Poor)



Desired Direction

3.9%

2021 4-year Target

4.2%

2025 Draft 4-year Target

Highway Asset DRAFT 2022-2025 Targets for the NCR

Interstate Pavement	2022 – 2025 Four Year Target
(1) Percentage of pavements on the **Interstate** System in **Good** condition	**44.8%**
(2) Percentage of pavements on the **Interstate** System in **Poor** condition	**1.6%**
NHS (Non-Interstate) Pavement	
(3) Percentage of pavements on the **NHS** (excl. Interstate) in **Good** condition	**26.3%**
(4) Percentage of pavements on the **NHS** (excl. Interstate) in **Poor** condition	**7.3%**
Bridges	
(5) Percentage of **NHS Bridges** Classified as in **Good** Condition	**25.7%**
(6) Percentage of **NHS Bridges** Classified as in **Poor** Condition	**4.2%**

Highway System Performance: Travel Time Reliability Targets

Highway System Performance: Travel Time Reliability Performance Measures

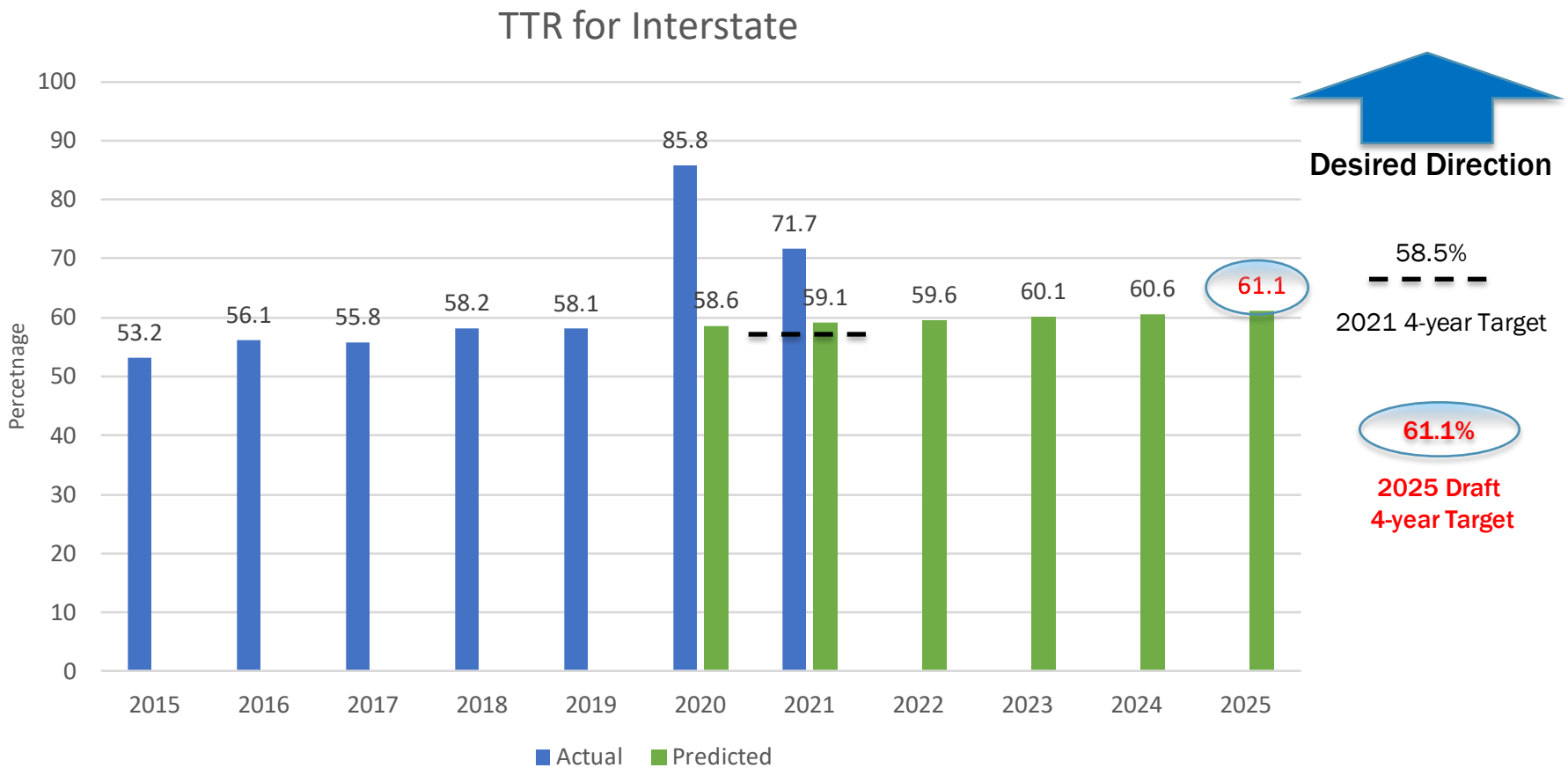
- Three performance measures:

	CY 2018 – 2021 Four Year Target	2021 Actual Performance	
Travel Time Reliability (TTR) – Interstate Percent of person-miles traveled on the Interstate System that are reliable	*58.5%*	71.7%	√
Travel Time Reliability (TTR) – Non-Interstate NHS Percent of person-miles traveled on the non-Interstate NHS that are reliable	*72.7%*	91.2%	√
Truck Travel Time Reliability (TTTR) Index Ratio of the Interstate System Mileage providing for Reliable Truck Travel Times	*2.12*	2.30	X

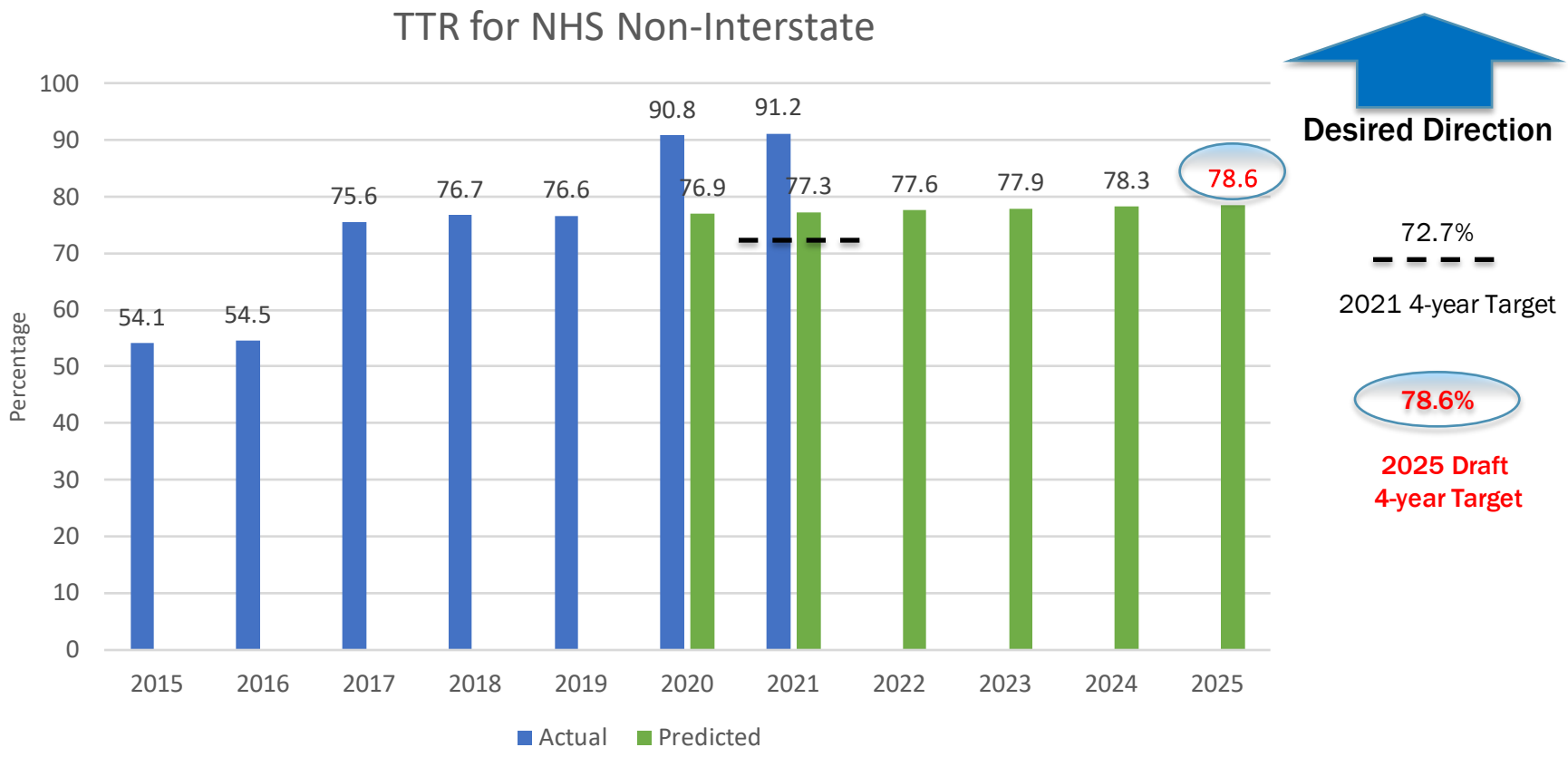
Highway System Performance: Travel Reliability 2022-2025 Target Methodology

- Use same general methodology as used in 2018
  - Average of observed trends and short-term predictions of TPB travel demand model
    - Observed trends captured recent influences
    - Model captures the impacts of increased population and travel demand vs. road and transit changes
      - ➢ Understandable and defensible methodology
    - Exclude data from pandemic years (2020, 2021)
    - Use trend data leading up through 2019 and extrapolate from 2019
  - ❖ Both trends and model project small reductions in congestion >> slight improvements in travel reliability

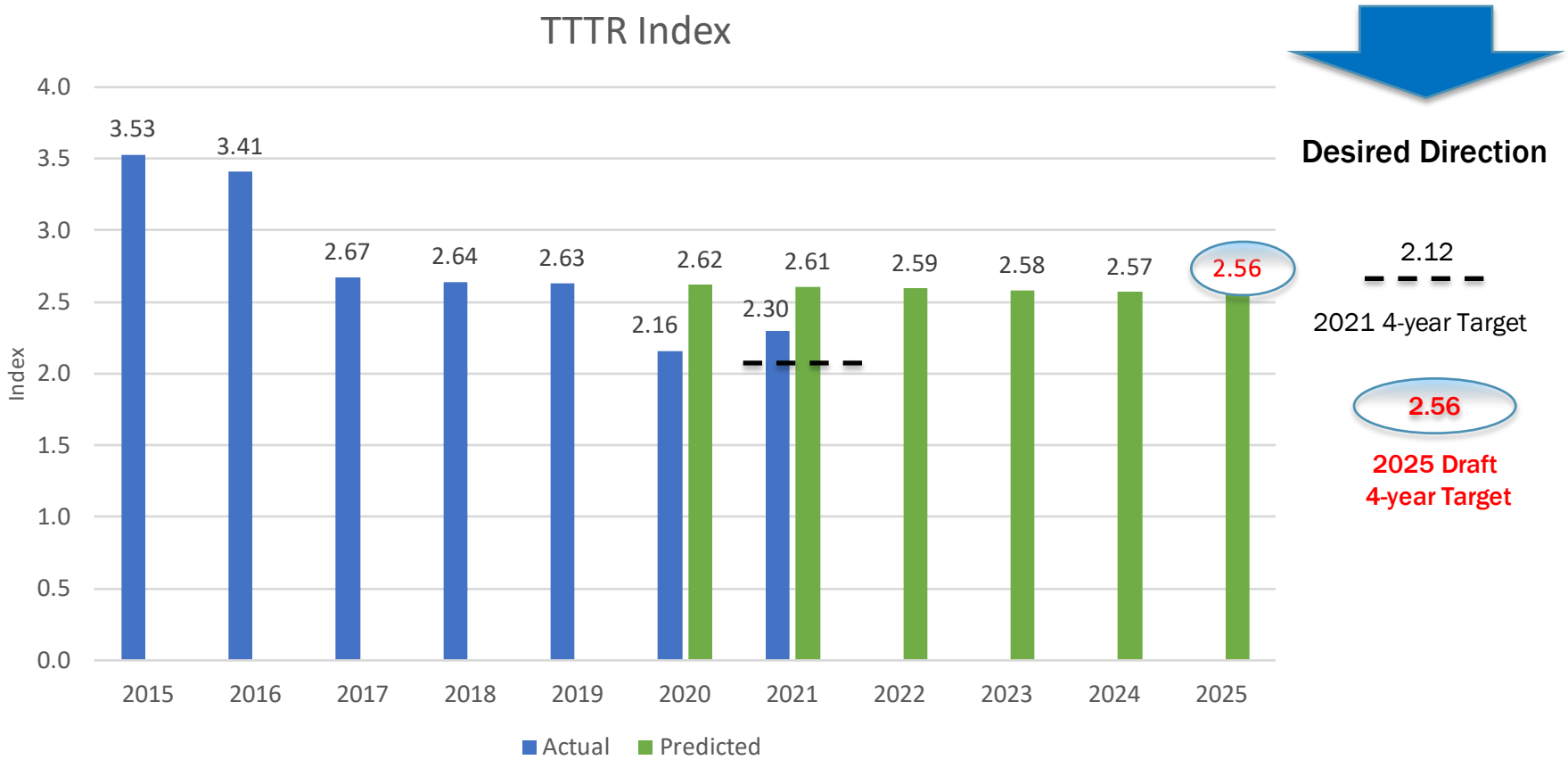
2022-2025 Draft TTR (Interstate) Graph and Target



2022-2025 Draft TTR (NHS Non-Interstate) Graph and Target



2022-2025 Draft TTTR Index Graph and Target



Highway System Performance: Travel Time Reliability
DRAFT 2022-2025 Targets for the NCR

Highway System Performance: Travel Time Reliability for the NCR	2022 – 2025 Four Year Target
Travel Time Reliability (TTR) – Interstate	61.1%
Travel Time Reliability (TTR) – Non-Interstate NHS	78.6%
Truck Travel Time Reliability (TTTR) Index	2.56

Next Steps

- Collect comments on the Draft 2022-2025 targets just presented
- Any final data and target updates from the state DOTs, as well as supplemental information, including state Transportation Asset Management Plans
- TPB approval of final targets - October 19
- Prepare revised Visualize 2045 LRTP System Performance Report with performance vs 2018-2021 targets and with the approved 2022-2025 targets ahead of federal certification review

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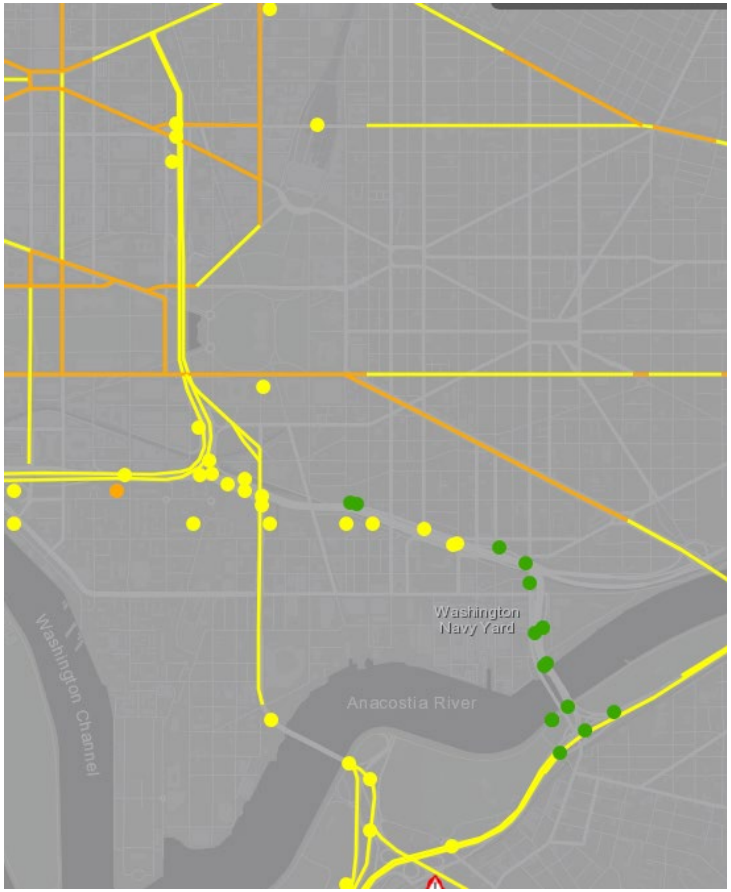
National Capital Region
Transportation Planning Board

Highway Condition Performance Measures

Performance Measure	Data
(1) Percentage of pavements on the **Interstate** System in **Good** condition	*four metrics:* • IRI (International Roughness Index) • Cracking Percent • Rutting (*asphalt only*) • Faulting (*jointed concrete only*) *three types of pavements:* • Asphalt pavements • Continuously Reinforced Concrete Pavement (CRCP) • Jointed Concrete Pavements
(2) Percentage of pavements on the **Interstate** System in **Poor** condition	
(3) Percentage of pavements on the **NHS** (excl. Interstate System) in **Good** condition	
(4) Percentage of pavements on the **NHS** (excl. Interstate System) in **Poor** condition	
(5) Percentage of **NHS Bridges** Classified as in **Good** Condition	*four condition ratings:* • Deck • Superstructure • Substructure • Culverts
(6) Percentage of **NHS Bridges** Classified as in **Poor** Condition	

Pavement and Bridge Measures – Data

- Pavement: data is reported annually by State DOTs into the Highway Performance Monitoring System (HPMS)
- Bridge: data is reported annually by State DOTs into the National Bridge Inventory (NBI)
- TPB staff accessed this data to determine performance for the region for the pavement and bridge performance measures



- Map for the 2017 pavement and 2018 bridge conditions: https://gis.mwcog.org/webmaps/tpb/pbpp/pavement_bridge/

Travel Time Reliability (TTR) & Truck Travel Time Reliability (TTTR) Data

- Data is collected through the National Performance Management Research Data Set (NPMRDS)
  - Procured and sponsored by the Federal Highway Administration (FHWA), this is the designated source for TTR/TTTR data
  - It is an archived speed and travel time data set (including associated location data) covering the National Highway System (NHS)
  - Data available at 5 minute intervals for Passenger vehicles, Trucks, and Trucks and Passenger vehicles combined
- Travel Time Reliability (TTR): the percent of person-miles for which the ratio of a longer travel time (80th percentile) to a "normal" travel time (50th percentile) is < 1.5 for the reporting segment
- Truck Travel Time Reliability (TTTR) Index: the ratio of a longer travel times (95th percentile) to a "normal" travel time (50th percentile)

TTR & TTTR Data Collection

- Data was collected using NPRDMS and MAP-21 widgets created by RITIS for the TPB metropolitan planning area
  - A set of Dashboard widgets developed to help set targets, understand baseline conditions, and assess progress toward achieving the goals associated with the measures
- Available currently:
  - Interstate Travel time reliability (TTR)
  - Non-interstate NHS TTR
  - Truck TTR Index
  - Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita

ITEM 10 – Information
September 21, 2022

Briefing on the 2022 State of the Commute Survey

Background:

Every three years since 2001, Commuter Connections has conducted a random sample survey of employed persons in the Metropolitan Washington Region to monitor trends in commuting behavior such as mode shares, telecommuting, and distance traveled, as well as attitudes about commuter assistance services. The board will be briefed on the highlights from the 2022 State of the Commute Survey.

National Capital Region
Transportation Planning Board
COMMUTER CONNECTIONS PROGRAM

2022 State of the Commute Survey
Technical Survey Report - Draft

Prepared for:

Metropolitan Washington Council of Governments
777 North Capitol Street, NE, Suite 300
Washington, DC 20002-4290

Prepared by:

LDA Consulting

In association with:

WBA Research, Inc.
Eric N. Schreffler, Transportation Consultant
and
Center for Urban Transportation Research (University of South Florida)

September 20, 2022

EXECUTIVE SUMMARY

Introduction

This report presents the results of the State-of-the-Commute (SOC) survey conducted for the Commuter Connections program of the Metropolitan Washington Council of Governments (COG).[1] Commuter Connections provides a wide range of transportation information and assistance services in the Washington metropolitan area to inform commuters of the availability and benefits of alternatives to driving alone and to assist them to find alternatives that fit their commute needs. COG administers Transportation Demand Management (TDM) services as part of a regional effort to reduce vehicle trips, vehicle miles of travel, and emissions resulting from commute travel, as well as to support other regional transportation goals.

The 2022 survey was conducted as an Internet survey of employed adult residents. The survey used an address-based sampling (ABS) method to select a random sample of potential respondents, a postcard survey invitation delivered through the U.S. mail to selected addresses, and a respondent-administered Internet interview format for respondents to complete the survey. To boost survey response rate, survey respondents who completed the survey were offered the opportunity to participate in a random drawing for one of fifty $250 Amazon gift cards. A total of 8,396 interviews were collected. Upon completion of the interviews, the survey responses were expanded to represent the employed population of the jurisdictions that make up the Washington metropolitan region. The results also were adjusted to align survey results to known U.S. Census race/ethnicity and age distributions, an adjustment that also had been applied in the 2016 and 2019 SOC surveys.

As its name indicates, the survey is designed to examine commuting, defined as travel to and from work, for the Washington metropolitan region. First, the SOC survey documents trends in commuting patterns – where, how, and when workers travel and why they choose or avoid certain travel modes. Second, it explores workers' awareness and use of regional transportation infrastructure and information and assistance services offered to facilitate commuting. Third, the survey explores commuters' opinions about current transportation initiatives. Finally, the SOC survey collects data needed to estimate, as part of a triennial analysis, the travel and air quality impacts of commute alternative programs and commute marketing and outreach efforts undertaken by Commuter Connections to support and influence commute travel behavior of workers in the region.

2022 SOC Survey Report in the Context of the Coronavirus Pandemic

The 2022 SOC survey was the eighth SOC survey, with previous surveys conducted triennially since 2001. Each SOC survey represents a profile of commuting at the point in time when the data were collected. Analysis and explanation of changes in commuting from one survey to the next has always been an important element of the SOC survey and as much as possible, SOC questions have been retained from survey to survey to allow for trend analysis.

This straightforward approach to collecting, analyzing, and reporting commute data was complicated in 2022 by the coronavirus pandemic. Pandemic stay-at-home directives were implemented throughout the Washington metropolitan region in March 2020, closing many worksites and disrupting typical commutes for many workers. Commute and employment surveys conducted during 2020 and 2021 by

[1] Commuter Connections is administered through the National Capital Region Transportation Planning Board (TPB) at COG and funded through the District Department of Transportation, the Maryland Department of Transportation, and the Virginia Department of Transportation, with state and federal funds.

various researchers showed that many employees shifted to working from home, some employees lost jobs or changed jobs, and some who continued commuting changed their commute modes.[2]

In the early months of the pandemic, workplace and commuting adjustments were anticipated to be temporary. However, as the pandemic continued into 2021 and, to a lesser but still notable extent, into 2022, it became clear that work and commuting patterns remained unsettled. For this reason, questions were added to the 2022 SOC interviews to examine commute patterns at the time of the survey (January – March 2022) and in February 2020, just prior to the start of the pandemic. SOC survey reports have typically presented comparisons of the subject year with the results from the previous survey, in this case, results from 2019. Collecting data on this immediate pre-pandemic point would enable comparisons between 2022 and 2019 data to be interpreted more clearly.

Questions also were added to the survey to examine telework/work from home experience and the wording of some existing questions was modified to be relevant both to workers who worked from home and those who traveled to outside workplaces. These question modifications are described in the report to assist readers to interpret changes in travel patterns between 2019 and 2022.

Comparison of results for 2022 with those from past SOC survey also required additional analysis. When deeper examination of SOC sub-populations data supported or refuted possible interpretations for findings, these results are described in the appropriate section. But a myriad of factors influence commute patterns and attitudes and even with the extensive SOC dataset, it was sometimes impossible to draw a definitive conclusion. In these cases, the report presents factors that might be relevant.

Finally, the SOC survey presents commuting at a point in time. Despite the pronounced changes described in the report, some extreme impacts that might have been observed had this survey been conducted in 2020 or 2021 likely have abated. Additionally, the survey interviewed only residents who were employed at the time of the survey and asked about their "current" commute. So, residents who lost jobs during the pandemic and had not returned to work were not interviewed. And the survey does not presume that the commute defined in this report will be durable. But the pandemic has upended many aspects of commuting and 2022 will serve as an interesting new baseline for future SOC surveys.

Highlights of Results

Following is a summary of key findings. This section starts with findings that appear most related to the pandemic. Following that overview are specific results on the following additional topics:

- Commute patterns
- Commute changes, commute ease, and commute satisfaction
- Telework
- Availability of and attitudes toward transportation options
- Awareness and impacts of commute advertising
- Awareness and use of commuter assistance resources
- Employer-provided commuter assistance services
- Technology-based applications and driverless cars

[2] In a survey of 180 employers conducted by MWCOG in June 2020, eight in ten employers reported that some or all their employees were working remotely, compared with about one in three employees pre-pandemic. *(Source: MWCOG, Commuter Connections, 2020 Employer Telework Survey, June 30, 2020).* A VDOT survey of nearly 5,500 Virginia workers conducted in July 2020 showed that more than three-quarters were teleworking from home full-time. *(Source: VDOT Virginia Commuter Survey, July 2020; https://www.virginiadot.org/travel/commuter-survey.asp).*

Findings Related to the Coronavirus Pandemic

- ***Commute disruptions were widespread*** – Three quarters of all workers experienced some disruption to their pre-pandemic commute patterns. Six in ten started or increased their use of telework; 32% shifted to full-time telework, eliminating all their commute trips, and 28% increased the number of days they teleworked. Workers also reported making other commute and work situation changes; 16% were working for a different employer or different job, 13% were working different days or hours, and 9% had shifted to a different type of transportation for their commute. The SOC survey interviewed only residents who were employed at the time of the survey. It is likely some residents who lost jobs during the pandemic had not yet returned to work but these job and commute disruptions are not included in the results.
- ***Both the percentage of workers who teleworked and the average frequency of telework were dramatically higher in 2022 than in 2019*** – In 2022, 66% of regional commuters were teleworking at least occasionally, nearly a doubling of the 2019 percentage of 35%. The 2022 teleworkers represented 2.14 million regional workers. The average telework frequency also rose, nearly tripling from the 2019 average of 1.2 telework days per week to 3.37 telework days per week in 2022.
- ***Telework replaced nearly half of daily commute trips in 2022*** – The combination of high percentage of workers teleworking and high frequency of telework produced a nearly five-fold increase in the percentage of commute trips replaced by telework in 2022, compared with 2019. In 2022, telework accounted for 48% of commute trips, compared with about one in ten trips in 2019. On a typical workday in 2022, nearly 1.5 million workers teleworked, eliminating 2.9 million daily commute trips.
- ***Most teleworkers rated their teleworking as a positive experience and most wanted to telework in the future*** – When asked how much they agreed with statements about telework, 86% agreed that they were productive while they were teleworking and 80% agreed that they were able to coordinate with co-workers while they were working at home. Two-thirds (66%) agreed that they were better able to concentrate on work tasks while teleworking. More than nine in ten (92%) respondents who were teleworking at the time of the survey said they would want to telework at least one day per week and 39% said they would want to telework all their workdays.
- ***Driving alone accounted for a higher share of trips that were made to outside work locations in 2022*** – The analysis examined commute patterns both with and without telework. When telework was excluded from the mode distribution, the resulting mode splits for trips made to outside work locations showed a statistical increase of nearly 14 percentage points in the drive alone mode share between 2019 and 2022 (2019 64.6%, 2022 78.4%). These trips were shifted from train (10.0 percentage points), carpool/vanpool (1.8 points), and bus (1.7 points), all of which lost mode share between 2019 and 2022.
- ***Transit mode share declined across all geographic and demographic commuter populations*** – The analysis also examined commute patterns across a range of commuter characteristics. When telework was excluded, relative patterns of mode use were generally similar in 2022 as in 2019. For example, transit use in 2022 was higher among workers who lived and/or worked in the Core area, younger workers, Non-Hispanic Black respondents, and respondents who had limited access to a personal vehicle; these groups also had been above average users of transit in 2019. But even for commuting populations for which transit was a common mode, transit use declined between 2019 and 2022. For example, in 2019, three in ten workers under 45 years old had primarily used transit; in 2022, only 16% used transit as their primary mode. And in all cases, the lost transit mode share was shifted to driving alone.

- ***Commuting got easier for some workers and more difficult for others but overall commute satisfaction was about the same in 2022 as in 2019*** – One-quarter (26%) of respondents who were traveling to an outside work location said their commute was more difficult than one year ago but 24% said their commute was easier. The percentage who had a more difficult commute was about the same as in 2019 but the 24% of workers with an easier commute was higher than the 15% who reported easier commutes in 2019. The percentage of respondents who were satisfied with their commute was about the same in 2022 (52%) as in 2019 (50%).
- ***Transit riders were more likely to report commute difficulty and less commute satisfaction than were other mode users*** – Respondents who primarily teleworked, carpooled/vanpooled, or drove alone to work were particularly likely to report an easier commute than last year. This likely reflected the fact that while commute distances were about the same in 2022 as in 2019, commute travel times had declined, due to fewer vehicles on the road. More difficult commutes were far more common among train riders (50%) and bus commuters (42%). Transit riders also gave lower ratings for commute satisfaction; 46% of Metrorail riders and 44% of bus commuters reported being satisfied with their commute, compared with about half of carpoolers/vanpoolers (52%) and drive alone commuters (51%). Transit riders also were less satisfied in 2022 than they had been in 2019; perhaps due to transit service disruptions during the pandemic and riders' concerns with the potential exposure to coronavirus.
- ***Workers were less aware of commute advertising and commute resources in 2022*** - About 27% of all respondents said they had seen, heard, or read advertising about commuting in the year prior to the survey, a considerably lower percentage than estimated in the 2019 (45%) survey. This is likely due in part to lower exposure to advertising. Workers who teleworked most or all their workdays would have fewer opportunities to see or hear advertising during their commute and perhaps noticed it less because it was not relevant to their current work situation. But some organizations that sponsor commute advertising paused their mass media and worksite outreach, so it also is likely that fewer ads were even available for commuters to notice. Awareness of regional and local commuter assistance services also fell; awareness of Commuter Connections dropped from 48% in 2019 to 40% and five of the ten local jurisdiction commute assistance programs experienced lower name recognition in 2022 than in 2019.
- ***But respondents continued to report access to workplace commute services at nearly as high a rate in 2022 as in 2019*** – Fifty-six percent of respondents said their employers offered one or more commuter benefits or services at the worksite; this was a slight decrease from the 60% rate estimated in the 2019 SOC survey. This could suggest some employers discontinued commute services because many employees were working from home during the pandemic. However, working from home could have limited employees' exposure to information or services they might have noticed if they were working at their usual work location. Transit subsidies and commute information continued to be the most common worksite services and employees who had access to the services were as likely to use them in 2022 as they had been in 2019.

Commute Patterns

In 2022, 48% of weekly commute days were telework (work from home). This was vastly different than in 2019, when telework accounted for just 10% of weekly commute days. But even controlling for the growth in telework, for commute trips made to outside work locations, use of drive alone increased and alternative modes fell as a share of commute trips.

- Two modes, driving alone and telework, accounted for nearly nine in ten commute days in 2022. Workers teleworked for 47.6% of their commute days/trips and made 41.2% of commute trips by driving alone (including taxi/ride-hail service). The remaining commute days/trips were divided into 7.8% transit, 1.7% carpool/vanpool, and 1.7% bike/walk.
- The 2022 mode split was dominated by the pandemic-related increase in telework. Excluding telework from the total reveals the distribution of modes used on days workers traveled to outside work locations. Driving alone accounted for about 78% of commute trips to outside locations and alternative modes made up the balance; 15.0% transit, 3.3% carpool/vanpool, and 3.3% bike/walk.
- Comparison of the "outside commuting" mode splits for 2022 and 2019 showed a statistical increase of nearly 14 percentage points in the drive alone share of commute trips (2019 64.6%, 2022 78.4%). These trips were shifted from train (10.0 percentage points), carpool/vanpool (1.8 points), and bus (1.7 points) all of which lost mode share. Bike/walk mode share remained essentially unchanged, when telework is excluded.
- Carpooling declined as a share of weekly commute trips but among those who were carpooling in 2022, about three-quarters said they carpooled with family members. This was a significant increase over the 56% of "household carpools" reported in 2019. By contrast, the share of carpoolers who said they used casual carpools or "slug" carpools declined from 20% in 209 to just 4% in the 2022 survey. The coronavirus pandemic could have had two impacts on casual carpooling. First, the shift of many workers to work from home/telework would have reduced the number of potential slug drivers and riders. The second possible factor is commuters' desire to minimize their risk of contracting coronavirus by avoiding travel with commuters whose virus and or vaccination status they did not know.

Alternative mode use fell across all geographic and demographic characteristics but remained higher for respondents who lived and/or worked in the central portion of the region than for those who lived/worked outside the regional core.

- When telework is excluded from the mode distribution, only about half (49%) of commuters who lived in the Core area (Alexandria, Arlington, and District of Columbia) drove alone. This was much lower than the 81% drive alone rate for the Middle Ring (Fairfax, Montgomery, and Prince George's counties) and the 88% rate for the Outer Ring (Calvert, Charles, Frederick, Loudoun, and Prince William counties). The mode pattern for employment area was similar; about six in ten (59%) commuters who worked in the Core area drove alone, dramatically lower than the drive alone rates for Middle Ring workers (88%) and Outer Ring workers (93%).

The average commute distance of respondents who commuted to outside work locations declined slightly from 17.1 miles in 2019 to 16.9 miles in 2022.

- The 2022 survey asked respondents the distance from their home to their work location. Respondents who teleworked full-time were asked the distance to the location where they would work if they were not teleworking. Respondents who were commuting to an outside location traveled 16.9 miles one way, essentially the same as the 17.1 miles average measured in the 2019

survey. Full-time teleworkers reported their average travel distance would be 16.3 miles if they were not teleworking. Across all workers, the average commute distance would be 16.7 miles.

- Respondents who were traveling to an outside work location commuted an average of 37 minutes one-way, a notably shorter time than that reported in 2019 (43 minutes). This could be related to the slight drop in commute distance, but it is likely the elimination of commute trips due to expanded telework was the more significant factor. One-third of workers were teleworking full-time at the time of the survey and another one-third were teleworking at least occasionally. This would have removed a much larger number of commuting trips from the peak period in 2022 than in 2019.

Commuters who used alternative modes recognized personal benefits of choosing these modes.

- When alternative mode users were asked what personal benefits they receive from using these modes, 94% named at least one benefit, a slightly higher share than in 2019 (89%). Saving money topped the list of personal benefit, mentioned by 32%. Respondents also cited benefits with a connection to quality of life, such as getting exercise or health benefit (20%), avoiding traffic (17%), and helping them avoid stress or relax while commuting (14%). Fourteen percent said they could save time or travel more quickly and 13% said they could use their travel time productively when they used an alternative mode. Over one in ten said it was a convenient/easy way to travel (11%) and 10% benefitted by not needing to find or pay for parking.

Commute Changes, Commute Ease, and Commute Satisfaction

While many commuters were long-time users of their mode, commuters continued to shift modes.

- Commuters who drove alone to work had used this mode an average of 6.4 years and 30% had been driving alone for 10 years or more. Four in ten (39%) started driving alone within the past three years. By contrast, 45% of train riders, 53% of bike/walk commuters, 58% of bus riders, and 65% of carpoolers adopted these modes within the past three years.
- Commuters who shifted to alternative modes within the past three years did so primarily to save money (11%), because the new mode was more convenient (9%), or because they had a change in their personal circumstances, such as changing jobs or work hours (21%) or moving to a new residence (20%).
- Respondents who started driving alone to work in the past three years gave some of the same reasons for switching modes as did alternative mode users; changing jobs or work hours (16%), moving to a new residence (8%), saving time (7%), and ease or convenience (6%). These results suggest both drive alone and alternative mode shifts are made to respond to changing personal circumstances. But respondents who started driving alone reported greater concerns about coronavirus than did alternative mode users; 11% of commuters who started driving alone said they wanted to avoid getting COVID-19 and 7% simply said “coronavirus pandemic.” Twelve percent switched due to reduced or unreliable transit service and 7% said they lost a carpool partner; these also could have been pandemic-related.

Half of commuters were satisfied with their current commute, about the same percentage as in 2019 but transit commuters gave notably lower ratings for satisfaction in 2022 than in 2019.

- Half (52%) of commuters rated their commute satisfaction as a 4 or 5 on a 5-point scale, where 5 meant very satisfied. Two in ten (20%) rated their commutes as a 1 (not at all satisfied) or 2. Commute satisfaction in 2022 was statistically the same as in 2019, when 50% were satisfied.

- Nine in ten bicycle/walk commuters were satisfied with their commutes. By contrast, only about half of carpoolers/vanpoolers (52%) and drive alone commuters (51%) reported being satisfied. Transit riders reported lower satisfaction; half (49%) of commuter rail riders also were satisfied but only 46% of Metrorail riders and 44% of bus commuters rated their commute satisfaction as a 4 or 5.
- Satisfaction among carpool/vanpool commuters and drive alone commuters increased slightly in 2022. These mode users are most affected by traffic congestion and these changes could reflect a lessening of congestion in 2022, as fewer workers traveled to outside job locations. Commute satisfaction declined between 2019 and 2022 among users of all three transit modes: commuter rail (56% in 2019 to 49% in 2022), Metrorail (56% in 2019 to 46% in 2022), and bus (62% in 2019 to 44% in 2022). The 2022 declines in satisfaction for the three transit options likely are at least somewhat related to transit service disruption during the pandemic and riders' concerns with the potential exposure to coronavirus.
- Commute satisfaction also differed by where the respondent lived and worked. Respondents who lived in the Core were more satisfied (60% satisfied) than were respondents who lived in the Middle Ring (54%) or Outer Ring (45%). Conversely, a much higher share of respondents who worked in the Outer Ring (66%) were satisfied than was the case for Core (50%) and Middle Ring (53%) workers.
- Commute satisfaction declined dramatically as commute length increased. Nine in ten (91%) respondents who commuted 10 minutes or less gave a 4 or 5 rating for satisfaction. When the commute was between 21 to 30 minutes, satisfaction dropped to 59% and when travel time exceeded 60 minutes, only 17% rated their commute a 4 or 5.

Commuting got more difficult in the past year for one-quarter of commuters but a nearly equal share had an easier commute. Many respondents considered commuting factors when making job or home location decisions and took actions to improve their commutes.

- Twenty-six percent of respondents said their commute was more difficult than one year ago but 24% said their commute was easier. Respondents who primarily teleworked, carpooled/vanpooled, or drove alone to work, and those whose commutes were short were particularly likely to report an easier commute than last year. More difficult commutes were far more common among train riders (50%), bus commuters (42%), and those who commuted more than 45 minutes to work (39%).
- Respondents' commute satisfaction was influenced by the ease of the commute. Two-thirds (66%) of respondents who had an easier commute than last year and 60% whose commutes had not changed were satisfied with their commute, compared with only 26% who said their commutes had become more difficult.
- Nearly four in ten respondents said they made either a work or home location change in the past two years; 19% changed their work location and 28% changed moved their residence.[3] The work change percentage was about the same as the 20% who reported a work location change in 2019. But the 2022 home move percentage was well above the 18% who reported a home location change in the 2019 survey.
- Respondents who made a home or work location change in the past year were more likely to report an easier commute (27%) than were commuters who did not make a move (22%). This suggests a move could have played a role in improving the commute.

[3] 9% of workers changed both home and work. Workers who started teleworking full-time due to the pandemic were not counted in work location changes but were included in the home location changes if they moved to a different residence..

- Two-thirds (67%) of respondents who made a location change said they considered a commuting factor, such as the length, ease, or cost of commuting to/from the new location, when making their location decision. Nearly one-third (28%) said commute ease was more important than other factors and 1% said it was the only factor in their decisions.
- More than half (52%) of respondents who made a home or work location change considered how close their new location would be to transportation services such as Park & Ride lots, HOV/Express Lanes, protected bike lanes, transit stations/stops, and bikeshare and carshare services. Despite the higher incidence of home location changes in 2022 compared with 2019, the percentage of respondents who considered their transportation access at the new location was the same in 2022 as in 2019 (52%). And most individual services were named by similar percentages of respondents in 2022 as in 2019.

Telework

The percentage of workers who telework exploded between 2019 and 2022, in response to the pandemic. In 2022, 2.14 million regional workers teleworked at least occasionally. This represented a near doubling of regional teleworkers.

- Two-thirds (66%) of regional commuters said they teleworked at least occasionally. "Commuters" were defined as workers who were not self-employed and would otherwise travel to a worksite outside their homes if not teleworking. These teleworkers represented 2,137,000 regional workers.
- The 66% telework percentage represents a near doubling of the 2019 percentage of 35%. Telework incidence grew in every demographic and occupational segment.
- Even with the dramatic telework increase in 2022, the survey showed that an additional 9% of all commuters "could and would" telework if given the opportunity (295,000 workers). These respondents said they did not telework but could perform some or all their job responsibilities at a location away from the main workplace and they would like to telework. In fact, many of these workers did occasionally work remotely, although they did not consider it as "telework;" 73% said they worked from home all day during their regular work hours as least one day in the past year and 27% worked from home at least one day per month. But they worked from home infrequently; on average just 13.5 days per year or about 0.27 days per week.

In early 2022, 1,455,700 workers (44% of all regional workers) were teleworking/working from home on a typical workday. This action eliminated nearly 3 million commute trips each work day.

- The average telework frequency also rose between 2019 and 2022. Nearly four in ten teleworkers were teleworking all their workdays in 2022 and 32% teleworked three or four days per week. When averaged across all teleworkers, this resulted in an average of 3.37 telework days, nearly a tripling of the average 1.2 days per week frequency in 2019.
- When the average 3.37 days per week telework frequency for teleworkers and the 0.27 days per week work-at-home frequency of non-teleworkers are applied across the region, it equates to approximately 1,455,700 regional workers teleworking/working at home on a typical workday, or about 44% of all regional workers. Assuming two commute trips per day, these workers eliminate nearly three million work trips each workday.

Most teleworkers reported that telework had a positive impact on their ability to do their work and most teleworkers wanted to continue teleworking in the future.

- More than nine in ten (92%) respondents who were teleworking at the time of the survey said they would want to telework at least one day per week and 39% said they would want to telework all their workdays. Only 2% of teleworkers were not interested in continuing to telework at all.
- Teleworkers were shown four statements about their experience with telework and were asked to rate their level of agreement with each statement on a five-point scale. Nearly nine in ten (86%) agreed (rating of 4 or 5-strongly agree) with the statement that they were productive while they were teleworking and 80% agreed that they were able to coordinate with co-workers while they were working at home. Two-thirds (66%) agreed that they were better able to concentrate on work tasks while teleworking. Conversely, when asked if they found it difficult to unplug from work while teleworking, nearly half (45%) agreed. But more than one-third either disagreed or strongly disagreed, suggesting that it was not universally a concern.

The percentage of teleworkers who worked under "formal" telework arrangements was more than twice as high as the percentage who teleworked under informal arrangements with supervisors.

- Half (50%) of all respondents (both teleworkers and non-teleworkers) said their employer had a formal telework program and 21% said telework was permitted under informal arrangements between a supervisor and employee. Formal programs were most common at Federal agencies and among respondents who worked for large employers.
- The 50% share of workers who reported a formal telework arrangement at work was a considerable increase over the 34% who reported formal telework in 2019. It is possible that employers' opening telework to a much greater number and wider range of employees to respond to the pandemic prompted some employers to formalize telework policies and replace informal agreements that had been sufficient for use with selected employees before the pandemic.

Availability of and Attitudes Toward Transportation Options

Most respondents reported access to some transit service in their home area.

- More than four in ten (44%) respondents said they lived less than one-half mile from a bus stop and 53% said they lived less than one mile away. Train station access was less convenient; only 19% lived less than one mile from a train station. About one-quarter of respondents said they did not know how far they lived from the bus stop and train station.
- Among respondents who could provide a distance, the average distances were 1.1 miles to the nearest bus stop and 4.4 miles to the nearest train station. But respondents who lived in the Core area said the closest bus stop was an average of 0.4 miles away and a train station was 1.2 miles away. Three-quarters (78%) of Core area residents lived less than one-half mile from a bus stop.
- At the time of the survey, one in ten respondents who were commuting to outside work locations used transit for their commute. Among those who were not riding transit to work, 31% said they had done so within the past three years. When asked why they stopped riding, 68% cited the coronavirus pandemic as a reason and half said it was an important factor in their decision to change commute modes. But access to transit also was a factor for former riders. About two in ten said transit was less available because they had changed their work location or schedule (12%) or moved to a home area where transit was not available or convenient (5%), and 13% said transit service or schedule was limited. Former riders also noted some transit service characteristics as

barriers to transit use, particularly that transit "takes too much time" (14%), "could be unreliable" (8%), and expensive (5%), or that they did not feel safe on transit (5%).

One in ten commuters region-wide had used an HOV lane for their trip to work and 14% had used an Express/Toll Lane. But more than three-quarters of commuters who used the Express/Toll Lanes said they typically drove alone while using the lane. Thus, these lanes offer only modest benefits for congestion relief along those corridors.

- Three in ten (31%) respondents said there was an HOV lane along their route to work and one-third of these respondents, equating to about 9% of all commuters, had used the lanes. Fewer respondents (26%) had access to Express/Toll Lanes, which are open to drive alone commuters for a fee. But more than half of respondents who had an Express/Toll Lane available had used it, representing 14% of all commuters region-wide.
- More than three-quarters (77%) of Express/Toll Lane users said they typically drove alone while riding in the lanes. But commuters who carpooled, vanpooled, or rode transit buses in Express/Toll Lanes used the lanes more frequently. One-third (33%) of commuters who typically rode in a carpool/vanpool or bus on an Express/Toll Lane used the lanes three or more days per week; only 14% of commuters who drove alone in an Express/Toll Lane used the lanes this frequently.

More than four in ten commuters who used an HOV lane (HOV lane only or HOV and Express/Toll lanes) made a travel change influenced by availability of the lanes. Among those who used only the Express/Toll Lanes, 24% made a change influenced by the lane availability.

- More than one-third (35%) of respondents who used both HOV and Express/Toll Lanes said they made an alternative mode change to be able to use the lanes (18% started carpooling/vanpooling, 8% added another rider to a carpool/vanpool, and 9% started riding transit). Among respondents who used only HOV lanes, 13% made one of these alternative mode changes to use the lanes. Some HOV respondents said they changed their work schedule to avoid the restricted hours (HOV only 11%, HOV/Express 18%). Respondents who used only Express/Toll Lanes were less likely to have made alternative mode travel changes; only small percentages started ridesharing (3%) or riding transit (1%) to use the lanes. One in ten (13%) changed their work schedule to avoid the time restriction and 5% started or increased driving alone, presumably shifting from alternative modes.
- Respondents who used an HOV/Express Lane for commuting estimated that they saved an average of 16 minutes for each one-way trip when they used the lanes. HOV/Express Lane users who lived in the Outer Ring jurisdictions saved an average of 20 minutes one-way.

Awareness and Impact of Commute Advertising

General awareness of commute information fell between 2019 and 2022 but it is not clear if this is the result of lower recall or lower exposure to advertising.

- About 27% of all respondents had seen, heard, or read advertising for commuting in the year prior to the survey, a considerably lower percentage than estimated in 2019 (45%). Increased use of telework might have been a factor in the decline. Workers who teleworked most or all their workdays would have fewer opportunities to see or hear advertising during their commute and perhaps noticed it less because it was not relevant to their current work situation. But Commuter Connections and some other organizations that sponsor commute advertising paused their mass media and worksite outreach in 2020, so it also is likely that fewer ads were available for commuters to notice.

- Forty-five percent of respondents who recalled advertising could cite a specific advertising message. Nearly three in ten respondents who had heard or seen a message reported a message related to transit service, with most recall focused on the Washington Metropolitan Area Transit Authority (WMATA, Metro). Nearly one in ten (9%) respondents reported a message about WMATA and coronavirus cleaning or safety. Six percent named a message about WMATA service improvements and 3% said it was about WMATA service cuts or changes. Eight percent recalled a message about ridesharing and 3% recalled a message to contact Commuter Connections.
- Four in ten (41%) respondents who had heard ads could name the sponsor. WMATA was named by 25% as the advertising sponsor. Commuter Connections/MWCOG was named by 6%, lower than the 10% who named Commuter Connections in 2019.

Commute advertising appeared to influence commuters' consideration of travel options.

- Two in ten (17%) respondents who saw or heard advertising said they were more likely to consider ridesharing or public transportation after seeing or hearing the advertising. This was about the same percentage (18%) as was estimated in the 2019 survey.
- But about one-third of respondents who recalled an advertising message and who were commuting to an outside work location at least one day per week said they took some action after hearing the ad to try to change their commute. And 35% of respondents who took an action to change their commute said the advertising they saw or heard encouraged the action.
- Many respndents who took an action sought more information, from the Internet, a personal referral, or from a commute or transit service. But almost half who took an action tried or started using an alternative mode for commuting. While these respondents equaled just 1.9% of all regional respondents, they represent nearly 40,000 commuters region-wide.

Awareness and Use of Commute Assistance Resources

About one-third of regional commuters were aware of commute information and assistance resources.

- About one-third (32%) of respondents said they knew of a telephone number or web site they could use to obtain commute information. Awareness of regional commute information resources was the same as noted in the 2019 SOC survey.
- Awareness of commute resources was substantially higher among respondents who saw or heard commute advertising in the past year (43%) than for respondents who did not recall advertising (26%). And commuters who had heard of Commuter Connections reported higher awareness of regional commute resources (43%) than did commuters who were not aware of Commuter Connections (24%).
- About one-third of respondents who said they knew of a specific number or web site had used it; these respondents represented about 11% of all regional commuters, about the same percentage as in 2019 (12%). Respondents named more than 40 numbers, websites, or mobile apps that they had used, indicating commuters seek information from a wide range of resources. Five percent named a Metro/WMATA resource, about 1% mentioned a resources offered by a county transit, commuter, or transportation agency; less than 0.5% named a phone number or website administered by Commuter Connections.

Four in ten regional commuters had heard of Commuter Connections.

- In 2022, 40% of all regional commuters said they had heard of an organization in the Washington region called Commuter Connections. This was a smaller percentage than knew about the program in previous SOC survey years (2019 – 48%, 2016 - 61%, 2013 - 62%, 2010 - 64%), but still represented a high level of general population awareness.
- Five percent of respondents who knew of Commuter Connections had contacted the program or visited a Commuter Connections or MWCOG website in the past year. These commuters represented about 2% of all employed residents of the region.

Most local jurisdiction services were known to at least a quarter of their target populations.

- Respondents were asked about local commute assistance services provided in the jurisdictions where they lived and worked. Awareness of these programs ranged from 9% to 53% of respondents who were asked the questions. Two of the ten local programs were known to at least half of the target respondents and three other programs were known to about three in ten target respondents.
- Use of the services ranged from 1% to 8% of the target audience. Use was generally higher for programs in outer jurisdictions and for programs associated with transit agencies or with a strong transit component. The relationship to the location in region was likely because outer jurisdiction commuters encountered more congestion in their travel and had longer commute times and distances, which could encourage them to seek options for travel to work.

Employer-provided Commuter Assistance Services

Availability of worksite commute assistance services declined slightly between 2019 and 2022, perhaps because many employees were working from home.

- Fifty-six percent of respondents said their employers offered one or more alternative mode benefits or services to employees at their worksites. This was a slight decline from the 2019 percentage (60%) but about the same as percentages noted in the 2016 (55%) and 2013 (57%) surveys. The drop from 2019 could suggest some employers suspended some commute services because many employees were working from home during the pandemic. However, the percentage represents employees' perceptions or awareness of service availability; the fact that many employees worked from home some or all their workdays could have limited their exposure to services they might have noticed if they were working at their usual work location.
- The most common services were SmarTrip/subsidies for transit/vanpool, available to 43% of respondents, and information on commuter transportation options, available to 23% of respondents. Two in ten (23%) respondents said their employers offered services for bicyclists and walkers and 15% said their employers offered preferential parking for carpools and vanpools.
- Respondents who worked for Federal agencies were most likely to have benefits/services available (81%), compared with 42% to 60% of respondents who worked for other types of employers. Respondents who worked for large employers also reported greater access to benefits/services than did respondents who worked for small firms. Benefits/services were far more common among respondents who worked in the Core area; 72% of these respondents had access to services compared with 46% who worked in the Middle Ring and 28% who worked in the Outer Ring.
- SmartBenefit transit/vanpool subsidies and information on commute options were the most widely used commuter assistance services, used by 56% and 34%, respectively, of respondents who had

access to the services. Two in ten respondents who had access to carpool subsidies (19%) and bicycle/walking support (18%0 had used these services.

Seven in ten commuters reported having free worksite parking.

- The majority of respondents (69%) said their employers offered free, on-site parking to all employees in 2022. This was a substantial increase from the 60% who reported free parking in 2019. Four percent of workers who had free parking said parking was not free before the pandemic, so this result could indicate employers expanded availability of free parking to the reduced population of workers who continued working at the main workplace.
- Respondents who worked for non-profit organizations and Federal agency workers were least likely to have free parking at work; only 55% of non-profit workers and 59% of Federal workers had free parking, compared with seven in ten workers who worked for private firms or state/local governments. Free parking also was much less common in the Core; only 37% of Inner Core workers had free parking, compared with 81% of Middle Ring workers and 87% of Outer Ring workers.
- The availability of commute benefits/services was inversely related to the availability of free parking at the worksite. Only 40% of respondents who said free parking was offered to all employees said their employers also offered commute benefits/services that would encourage or help them use alternative modes for commuting. By contrast, 66% of respondents who said free parking was not available reported having access to commute benefits/services at work.

Worksite commuter assistance services appeared to encourage use of alternative modes.

- Driving alone was less common for respondents who had access to benefits. Only 67% of respondents with these services drove alone to work, compared with 87% of respondents whose employers did not provide these services.
- Respondents whose employers did not offer free parking also used alternative modes at much higher rates. Six in ten (60%) respondents who did not have free parking drove alone, compared with 87% of respondents who had free parking.

Technology-based Applications, and Driverless Cars

More than eight in ten respondents had used travel/trip information mobile application.

- Eighty-four percent of all respondents had used at least one of nine travel/trip information apps/services. Six in ten (60%) had used wayfinding or mapping apps, such as Google Maps and Waze, and 50% had used traffic alerts delivered via text message or other means. Forty-six percent had used an application for a ride-hail service such as Uber, Lyft, or Via and 37% had used an application that tracked transit schedules or provided “next bus/train” information on arrival time.
- Use of travel/trip information applications was similar among respondents who were younger than 55 years, with about 85% saying they used apps. Use dropped among older respondents; 82% who were between 55 and 64 years and 77% of those who were 65 years or older had used an app.
- Respondents who were younger than 45 years were particularly more likely to have used bikeshare, carshare, and e-scooter service apps but younger respondents also were less likely to have access to a personal vehicle and more likely to live in the Core area, where these services are more widely available. The pattern for use of ridehail services and wayfinding applications declined through all four age groups, with each age group using the application less than did the next younger group.

Commuters in the region have only a modest understanding of the concept of driverless cars. Two-thirds of respondents cited concerns about the concept.

- Three in ten (31%) respondent said they were "very familiar" with the concept of driverless cars; they had heard or read a lot about them. The largest share, 58%, of respondents said they were only "somewhat familiar" with the concept of driverless cars; they had heard or read something about them but did not know much about them. The remaining one in ten either were "not at all familiar" (7%) or were not sure what they knew (4%). Awareness does not appear to have grown recently; these percentages mirror nearly exactly the awareness reported in the 2019 survey.
- General awareness was similar among most demographic groups, but higher shares of men (42%), Non-Hispanic White (35%) and Asian (34%) respondents, and respondents with household incomes above $160,000 (37%) said they were "very familiar" with the concept.
- Two-thirds (66%) of respondents cited a concerns that they had with driverless cars. Nearly half (48%) were concerned that driverless cars could reduce the safety of driving or increase driving crashes, and 25% expressed a concern that the technology was not yet reliable enough.

Nearly four in ten respondents said they were at least somewhat interested in using a driverless car, but only about three in ten were interested in buying a driverless car.

- When asked how interested they would be in buying a driverless car or riding in a driverless taxi/ride-hail vehicle, a driverless bus/shuttle, or driverless carpool/vanpool, 38% of respondents rated their interest as a 4 or 5 (very interested) for at least one of the scenarios presented.
- About one-quarter of respondents said they were at least somewhat interested in four of the five scenarios, with 13% or 18% saying they were very interested. Interest was slightly lower for riding in a driverless carpool or vanpool; 21% were at least somewhat interested and 13% were very interested. The relatively modest interest reported for using driverless vehicles could be related to the low level of familiarity many respondents indicated and the concerns that many respondents have about safety and reliability.
- Interest was notably higher among respondents who were more familiar with driverless cars. Nearly six in ten (57%) respondents who said were very familiar with the concept expressed interest in using them. Among respondents who said they had read or heard about driverless cars but did not know much about them, only 31% were interested. Interest was lower still for those who said they hadn't heard of driverless cars; only 19% were interested in using one.
- Interest also was notably higher among respondents who were younger than 45 years (under 35 years – 49% and 35-44 years – 42%), male respondents (48%), and respondents with incomes greater than $80,000 ($80,000-$179,999 – 40% and $180,000 or more – 46%).

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SECTION 1 – INTRODUCTION

Purpose of the State of the Commute (SOC) Survey

This report presents the results of the State-of-the-Commute (SOC) survey conducted for the Commuter Connections program of the Metropolitan Washington Council of Governments (COG).[4] Commuter Connections provides a wide range of transportation information and assistance services in the Washington metropolitan area to inform commuters of the availability and benefits of alternatives to driving alone and to assist them to find options that fit their commute needs. COG administers Transportation Demand Management (TDM) services as part of a regional effort to reduce vehicle trips, vehicle miles of travel, and emissions resulting from commute travel, as well as to support other regional transportation goals.

In 1997, Commuter Connections established an evaluation framework that outlined a methodology and data collection activities to evaluate the effectiveness of its commuter services programs. This framework was updated and revised eight times, in 2001, 2004, 2007, 2010, 2013, 2016, 2019, and 2022 to incorporate improvements to the evaluation methodology.[5] A major addition to the 2001 framework was the State of the Commute (SOC) survey, a random sample survey of employed persons in the Washington metropolitan non-attainment region. This survey collects commute data from the general commuting public in addition to data collected from users of Commuter Connections services. Subsequent evaluation frameworks also included the SOC survey as a major data collection effort for the regional Commuter Connections TDM evaluation and the SOC survey has been conducted every three years since 2001, most recently in 2022, with a sample of 8,396 respondents.

The SOC survey serves several purposes. First, it documents trends in commuting patterns, such as commute mode shares and distance traveled, and use of and prevalent attitudes about transportation services that are available in the region. Wherever possible, questions used in previous SOC surveys were replicated to allow for trend analysis. Second, the survey examines how commute alternative programs and marketing efforts might influence commute travel behavior of workers in the region. In particular, the SOC survey collects data needed to estimate, as part of a triennial analysis, the travel impacts of several such services offered by Commuter Connections. Finally, the survey explores commuters' opinions about and interest in current transportation initiatives.

Summary of Survey Methodology

The geographic scope of COG's responsibility encompasses the 11 independent cities and counties that make up the Washington metropolitan non-attainment region. All employed residents who lived within this geographic area and who were 18 years of age or older were eligible for selection in the study. Following is summary of the interview, sampling, and weighting methodologies used for the survey. Appendix A provides additional details of the sampling and survey administration. Appendix B provides details of the data weighting/expansion procedures.

[4] Commuter Connections is administered through the National Capital Region Transportation Planning Board (TPB) at COG and funded through the District Department of Transportation, the Maryland Department of Transportation, and the Virginia Department of Transportation, with state and federal funds.

[5] For more information on the evaluation framework in effect at the time of this survey, readers may refer to *Transportation Demand Management Program Elements Revised Evaluation Framework – FY2021 –FY2023*, available from COG (https://www.commuterconnections.org/wp-content/uploads/2021-2023-FINAL-TDM-Evaluation-Framework-Document-031522.pdf).

ABS Sample with Internet Interview Method

The 2022 survey was conducted as an Internet survey of employed adult residents. The survey used an address-based sampling (ABS) method to select a random sample of potential respondents, a postcard survey invitation sent through postal mail to selected addresses, and a respondent-administered Internet interview format for respondents to complete the survey. The postcards invited employed persons 18 years of age or older to participate in the survey by accessing the survey website link, www.TraveltoWork2022.org and entering a password printed on the card. Two passwords were provided to permit two adults in the household to participate. Appendix C presents the questionnaire.

To boost survey response rates, survey respondents were offered the opportunity to participate in a drawing for one of fifty $250 Amazon gift cards. When interviewing was completed, names of winners were randomly selected from among respondents who chose to participate in the drawing. Each winner was emailed a gift card voucher. Ninety-three percent of respondents requested to participate.

Survey Sample

At the start of the project, the research team set a soft target for 8,000 completed interviews; this region-wide target was consistent with the sample size from the 2019 survey (8,246). Minimum targets of 600 completed interviews were set for each of the 11 jurisdictions, with higher individual targets established for larger jurisdictions and for jurisdictions that were closest to the center of the region. Additionally, the research team attempted to achieve jurisdiction level samples that approximated the numbers of interviews collected for those jurisdictions in the 2019 SOC survey.

A total of 8,396 interviews were completed for the survey. On the base of 446,208 postcards that were distributed, this resulted in an initial response rate for the Internet survey of 1.88%. The confidence interval for the regional sample was 95% +/- 1.1 percentage points. Individual samples collected for each of the 11 jurisdictions ranged from a low of 518 to a high of 981. The confidence interval for the smallest jurisdiction sub-sample (518 interviews) was 95% +/- 4.3 percentage points.

Weighting of Survey Data

Because the jurisdiction-level samples were not collected proportionately, the survey results were expanded at the jurisdiction level to match counts of employed residents in each sample jurisdiction. The results also were adjusted to align survey results to known race/ethnicity and age distributions, an adjustment that also was applied in the 2016 and 2019 SOC surveys. Analysis of the 2016 survey results showed a significant over-collection of older age groups and an under-collection of younger age groups. The 2019 and 2022 surveys also over-represented older respondents and under-represented young respondents, but to a much lesser extent than in 2016; the ABS sample frame and Internet survey captured a larger share of young respondents. For this reason, the age adjustment, while still necessary in 2019 and 2022, was less extensive than had been needed in 2016.

Population statistics from the U.S. Census Bureau's American Community Survey (ACS) for combinations of employment status, race/ethnicity, and age were used to calculate expansion values for jurisdictions in the survey sample. Age categories included 18-34 years, 35-44 years, 45-54 years, and 55 years and older. Race/ethnicity categories included Hispanic, Non-Hispanic Black, Non-Hispanic White, and Other. Details of the weighting/expansion process are found in Appendix B. This methodology was the same as had been used for the 2019 and 2016 SOC surveys, however it replaced use of employment numbers obtained from the Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS) that had been used in the 2013 SOC and earlier SOC surveys. The need for available employment statistics broken down by race/ethnicity and by age groups was the reason for the change from LAUS to ACS figures.

Conventions Used in Presentation of Results

The sections following this introduction present key findings of the survey. As noted in the description of the survey weighting, the data were expanded to represent the number of employed residents of the metropolitan region and to correct for under- or over-representation of some racial/ethnic groups and age groups in the sample. The expansion methodology allows the proper representation of employed residents in each of the 11 jurisdictions in the survey area and in the region. Each table and figure in the results sections shows the raw number of respondents (e.g., *n*= ##) who answered the question, but the percentage results presented in the tables and figures are percentages expanded to the total working population for the geographic areas referenced.

Note also that the term "respondent," when used in the text of the document, refers to expanded data, unless otherwise noted. Other terms, such as "commuter," "employee," "worker," and "resident" also are used, when it is necessary or helpful to distinguish subsets of the total surveyed population. The term "alternative mode" refers to any non-drive alone mode of travel, including public transit (bus, Metrorail, commuter train), carpool (traditional carpool, casual carpool/slug), vanpool, bicycle/bike/scooter/e-scooter, and walk. In some analyses, telework and compressed work schedules also are considered alternative modes, because they eliminate commute trips.

Where relevant, survey results are compared for sub-groups of respondents. Data also are compared against results from past SOC surveys, when these data were available and notable. Sub-group and year-to-year results that are statistically different from those of other groups/years are highlighted.[6] Appendix D also presents 2022 results compared with those of SOC surveys beginning with 2010.

Geographic Analysis

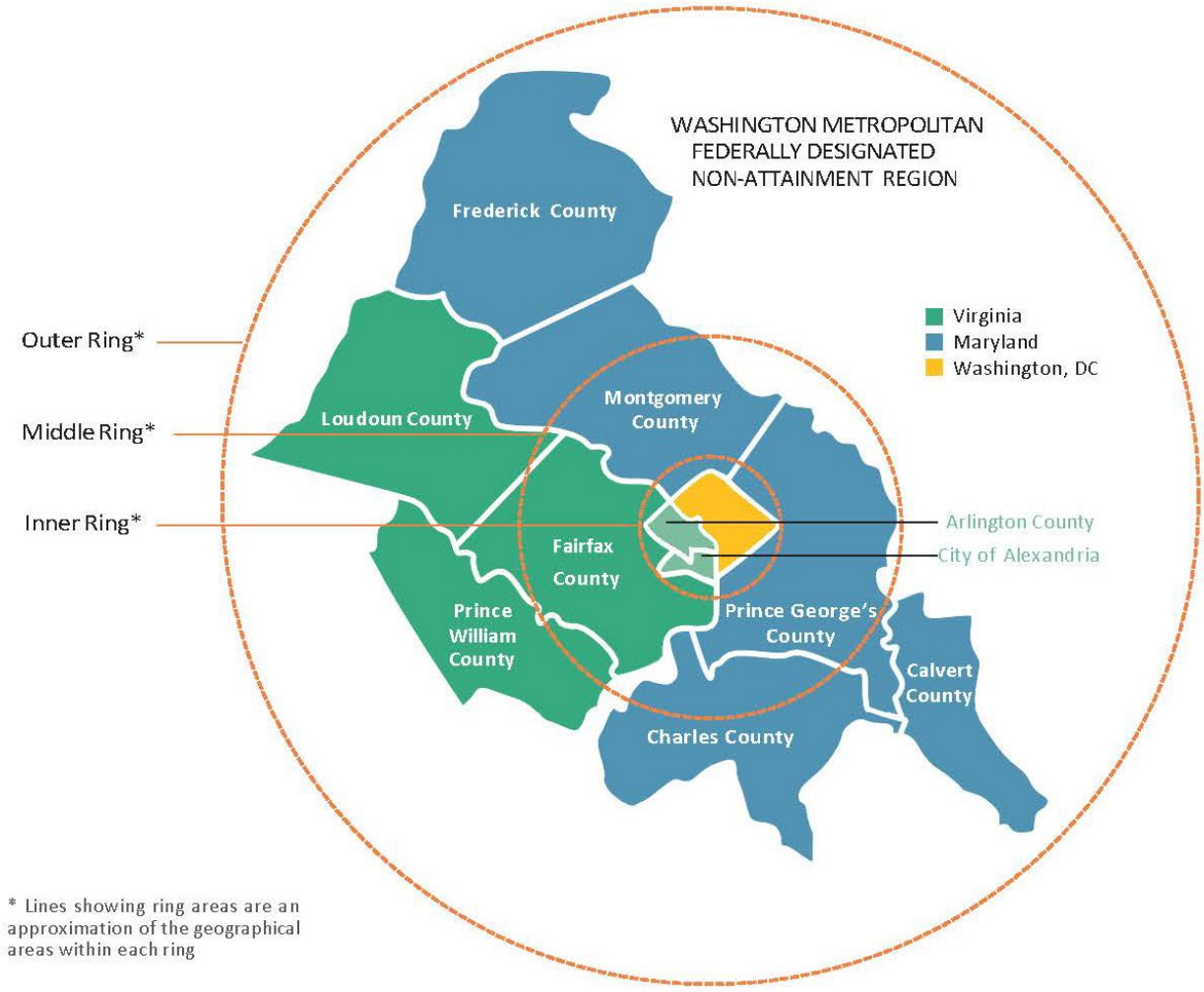
The SOC analysis focused primarily on the region. However, the survey collected robust samples for each of the 11 jurisdictions in the region, to enable analysis at multiple geographic levels. For some questions, the analysis examined results for individual jurisdictions or for other geographic sub-areas of the region. Datasets for individual jurisdictions also will be provided to transportation agencies in their respective areas, for additional analysis to be conducted locally.

A primary sub-area categorization used in the analysis divided the region into three categories roughly representing concentric rings around the central core (Figure 1). The Inner Ring or "Core" area includes the City of Alexandria (VA), Arlington County (VA), and the District of Columbia. The Middle Ring, surrounding the core, includes Fairfax County (VA), Montgomery County (MD), and Prince George's County (MD). The Outer Ring includes Calvert County (MD), Charles County (MD), Frederick County (MD), Loudoun County (VA), and Prince William County (VA).

Past SOC surveys have shown that the Core, Middle Ring, and Outer Ring groupings aggregate jurisdictions with roughly similar travel patterns and similar transportation infrastructure. These aggregate groupings result in excellent sample sizes, facilitating analysis of many regional and sub-regional transportation planning topics.

[6] Statistical differences noted in tables or figures were measured using the t-test, with a significance threshold set at $p < .05$. For simplicity, values that are significantly higher in value are indicated by shading or other highlighting.

Figure 1
Geographic Sub-Areas – Core (Inner Ring), Middle Ring, Outer Ring



Organization of Survey Results

The remaining sections of the report present key survey findings:

- Section 2 Commute patterns
- Section 3 Recent commute changes, commute ease, and commute satisfaction
- Section 4 Telework
- Section 5 Availability of/attitudes toward transportation options
- Section 6 Awareness and impact of commute advertising
- Section 7 Awareness and use of commuter assistance resources
- Section 8 Employer-provided commuter assistance services
- Section 9 Technology-based applications and driverless cars
- Section 10 Characteristics of the sample

Sections 2 through 9 present results on commute travel and respondents' awareness, attitudes, and opinions on various transportation topics. These topics were the focus of the analysis. Section 10 details demographic characteristics of the survey sample. At the end of the survey interview, respondents were asked a series of questions about their age, race/ethnicity, gender, income, household size, vehicle ownership, home and work locations, type of employer, size of employer, and occupation. These sample characteristics are referenced throughout the findings of Sections 2 through 9 when the analysis indicated relevant and practical differences among sub-groups of respondents.

Following these main sections are four appendices dealing with survey procedures and methodology:

Appendix A – Survey and Sampling Methodology

Appendix B – Survey Data Weighting and Expansion

Appendix C – Survey Questionnaire

Appendix D – Comparison of Key 2022 SOC Results with 2019, 2016, 2013, and 2010 SOC Results

SECTION 2 – COMMUTE PATTERNS

An early section of the survey inquired about respondents weekly commute patterns. Commute questions in the survey included:

- Number of days worked per week, work schedules, and work location
- Current commute mode
- Length of commute
- Alternative mode characteristics

A primary objective of the State of the Commute Survey is to document trends in regional commute trip patterns. These data were obtained in the 2022 SOC and in past SOC surveys by asking respondents about their commute "in a typical week" at the time of the survey. These results could be analyzed for sub-groups of workers, compared to previous SOC survey data to define commute trends, and through additional analysis, examine awareness and opinions of commuters who use different commute modes.

This straightforward approach to collecting and reporting commute data was complicated in 2022 by the coronavirus pandemic. Pandemic stay-at-home directives were implemented in March 2020, disrupting typical commutes for many workers. Many employees shifted to working remotely, some changed jobs, and some workers who commuting changed their commute mode.[7]

In the early months of the pandemic, workplace and commuting adjustments were anticipated to be temporary. However, as the pandemic continued into 2021 and, to a lesser but still notable extent, into 2022, it became clear that work and commuting patterns remained unsettled. For this reason, questions were added to the 2022 SOC questionnaire to examine commute patterns at the time of the survey and in February 2020, just prior to the start of the pandemic. Several new questions were added to examine telework/work from home experience. Additionally, the wording of some existing questions was modified to be relevant both to workers who were working from home and those who were traveling to outside workplaces. Throughout this section and subsequent sections, these question modifications are described to assist readers to interpret changes in reported travel patterns between 2019 and 2022.

Number of Days Worked Per Week and Work Schedules

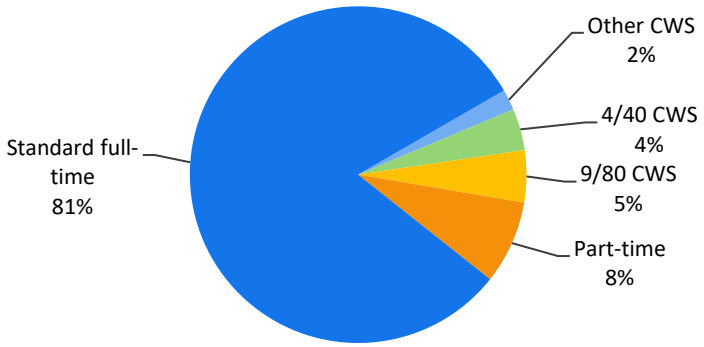
Workdays and Non-standard Work Schedules

Eight in ten (81%) respondents worked five weekdays (Monday through Friday) per week. Seven percent worked four weekdays, 6% worked three weekdays, and 5% worked one or two weekdays. A very small share (1%) of respondents worked all their work days on weekends. On average, respondents were assigned to work 4.6 weekdays per week. The average was less than five days per week because some respondents worked part-time and some worked one or more of their work days on the weekend.

Eight in ten (81%) respondents worked a "standard" full-time schedule, defined as five or more days per week (Figure 2). Eight percent worked part-time and 11% worked a compressed work schedule, in which they worked a full-time week in fewer than five days per week. Five percent worked a 9/80 schedule (80 hours over nine days in two weeks), 4% worked a 4/40 schedule, with four 10-hour days per week, and 2% worked another compressed schedule. The share of respondents who worked a compressed schedule in 2022 was about the same as the 12% who reported compressed schedules in 2019.

[7] *MWCOG, Commuter Connections, 2020 Employer Telework Survey, June 30, 2020. VDOT Virginia Commuter Survey, July 2020; https://www.virginiadot.org/travel/commuter-survey.asp.*

Figure 2
Schedule Types Used
(n = 8,289)



Availability of Flexible Work Schedules

Some employers also permit employees to work a "flexible" work schedule, in which they can choose their work start and end times, so long as they meet a minimum number of weekly or daily work hours. About half (51%) of commuters said their employers offered some work schedule flexibility and 78% of respondents who had access to a flexible schedule had used it, about the same as the 81% who used flexible schedules in 2019.

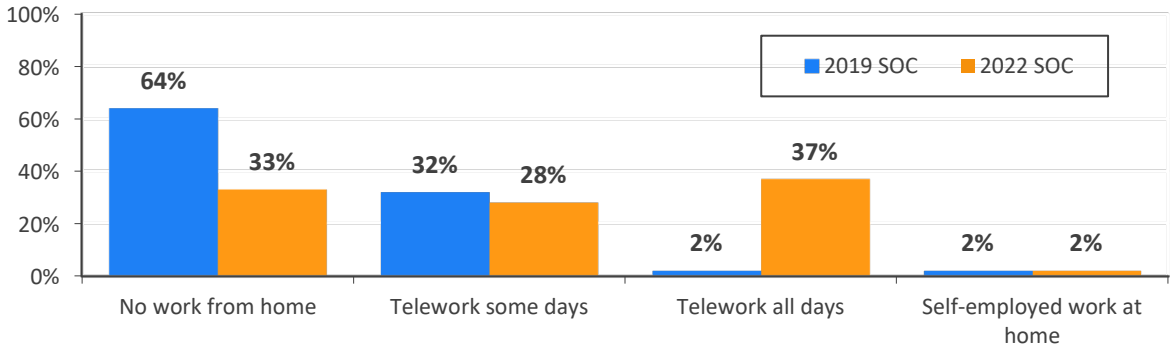
Work From Home

Because it was anticipated that many respondents could be working remotely, in response to the coronavirus pandemic, respondents were asked if they worked from home any of their workdays at the time of the survey. Two-thirds of all workers said they worked from home at least occasionally; 28% worked from home some of their days and four in ten worked from home all their workdays (37% full-time telework and 2% self-employed work at home) (Figure 3). The remaining 33% did not work from home any workdays; they traveled to an outside work location every day they worked.

Respondents who worked from home full-time were asked a follow-up question to define their work situation. A small share (2%) of total workers indicated they were self-employed and their home was their only work location. This was the same percentage of workers who reported being self-employed in the 2019 SOC survey. These respondents typically are not considered teleworkers in commute studies, because they would not commute to an outside work location on days they do not work at home. They were included in questions about awareness of commute advertising and demographics but were not asked further questions on either telework or commuting.

More than one-third (37%) of 2022 respondents worked for an outside employer and teleworked all their workdays. This 37% share of full-time telework was a dramatic departure from the 2019 survey, in which only 2% of workers teleworked full-time; without doubt much of, if not all the increase was an outcome of the coronavirus pandemic. Most full-time teleworkers worked for an employer located in the Washington metropolitan region, but in 2022, about one in ten (13%) worked remotely for an employer located outside the region. Full-time teleworkers were excluded from questions about commute travel, but were asked telework follow-up questions, reported in Section 4, and most other questions in the survey. Respondents who worked from home some workdays also were asked telework questions as well as questions about their commute on the days they worked outside their homes.

Figure 3
Work From Home/Telework – 2019 and 2022
(2019 n = 8,219, 2022 n = 8,312)



Current Commute Mode

Respondents who did not telework/work from home full-time were asked what modes they used to travel to work each weekday (Monday-Friday) during a typical work week. By asking about an entire week, rather than simply "usual" travel mode, the survey captures use of modes that are used just one or two days per week. Figures 4 and 5 present two views of modal distribution: percentage of weekly work days by mode (weekly commute trips) and percentage of respondents using each mode (primary and secondary mode).

Weekly Work Days by Mode in 2022

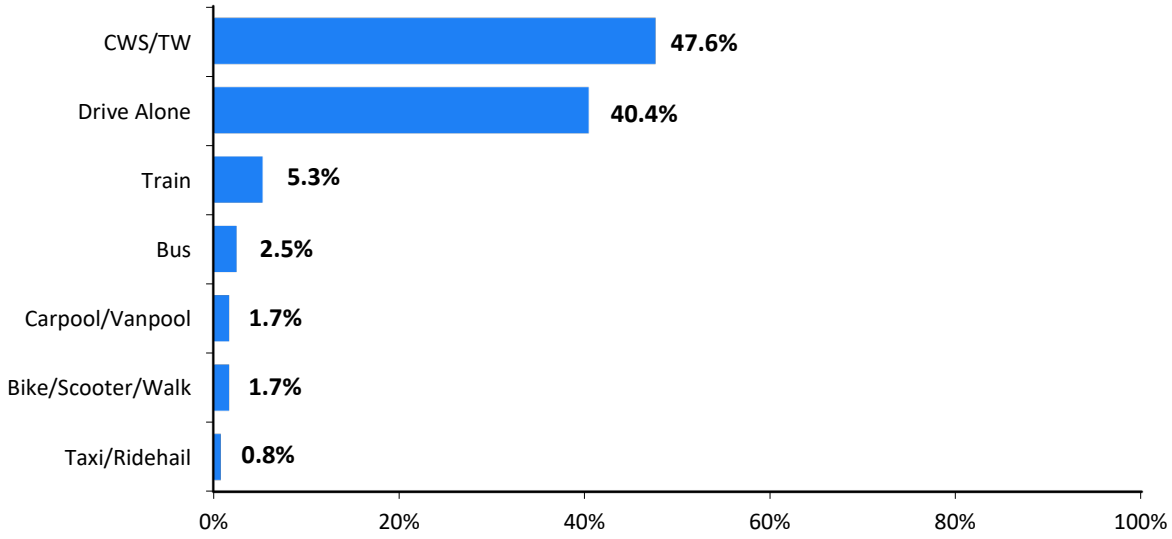
Figure 4 presents mode shares as a percentage of commuters' weekly work days for six "on the road" travel mode groups: drive alone (personal vehicle), train (Metrorail/commuter rail), carpool/vanpool (traditional carpool, casual carpool/slug, vanpool), bus (local bus, express bus, shuttle, and buspool), bike/scooter/walk, and taxi/ridehail (e.g., Uber, Lyft). The figure also includes the mode share for compressed work schedule and telework (CWS/TW). These are not actually travel modes but are included to show the percentage of weekly work trips eliminated through use of these options.

Commuters drove alone to work on 40.4% of their total work days. They rode on a train for 5.3% of work days and used a bus for 2.5% of work days. Respondents carpooled or vanpooled to work on 1.7% of work days and bicycled, rode a scooter, or walked for 1.7%.

About 0.8% of weekly commute trips were made by riding as a passenger in a taxi or ridehail vehicle (Uber or Lyft). In SOC surveys before 2019, use of taxi/ridehail was reported within the drive-alone mode group. While they are still considered "driving alone" for purposes of vehicle use (i.e., they do not eliminate a drive alone work trip), the 2019 survey began tracking and reporting ridehail use separately to define use trends for this growing service.

Compressed work schedule days off and telework days (CWS/TW) eliminated nearly half (47.6%) of weekly work trips. As noted in early in this section, two-thirds of all workers said they were teleworking/working from home at least some of their workdays and 38% were teleworking full-time at the time of the survey. These days are officially assigned as part of the work week and commuters would make a trip if they did not use these work arrangements.

Figure 4
Weekly Commute Trips by Modes – 2022
(n = 8,114)



If telework and compressed schedule days off were excluded, to estimate the "on the road" mode share of commute trips made to outside work locations, the percentage use of each of the travel modes would be higher. Without telework and CWS, the drive alone share would rise to 77.0% of weekly commute trips. Excluding telework and CWS, the weekly commute trip distribution for all travel modes would be:

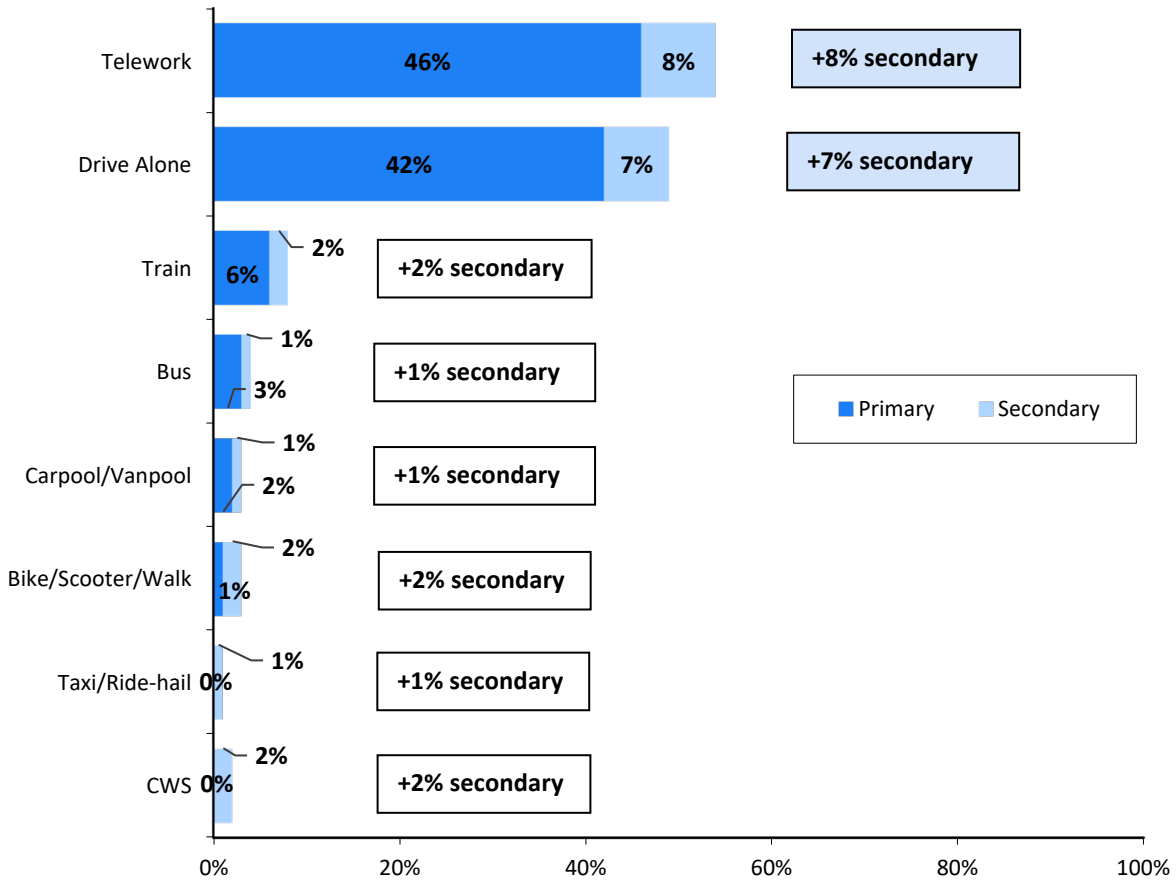
- Drive alone (including motorcycle) 77.0%
- Train 10.2%
- Bus 4.8%
- Carpool/vanpool 3.3%
- Bike/scooter/walk 3.3%
- Taxi/Ridehail 1.4%

Frequency of Current Mode Use

Primary Mode – Mode split also can be portrayed as the percentage of respondents who use each mode. Figure 5 presents the percentage of respondents who used a mode as their "primary" mode, defined as the mode used the greatest number of days per week. Most respondents worked five weekdays per week, so primary mode generally equated to use three or more days per week. For a small percentage of respondents who worked fewer than five weekdays or who used more than two modes, the primary mode could be used just two days per week.

As with mode split by weekly trips, telework was the most common primary mode; nearly half (46%) of respondents reported this as the mode they used most of their workdays. The second most common primary mode, used by 42% of respondents, was driving alone. Eight percent said they primarily rode a train, 3% rode a bus, and 2% carpooled or vanpooled. One percent of respondents primarily biked, rode a scooter, or walked. Less than 1% primarily rode in a taxi or ridehail vehicle. No commuters worked a primary compressed work schedule, but that is because CWS schedules eliminate at most two of the regular work days, so commuters would have at least one other mode during the week.

Figure 5
Primary Modes and Secondary Modes
(n = 8,114)



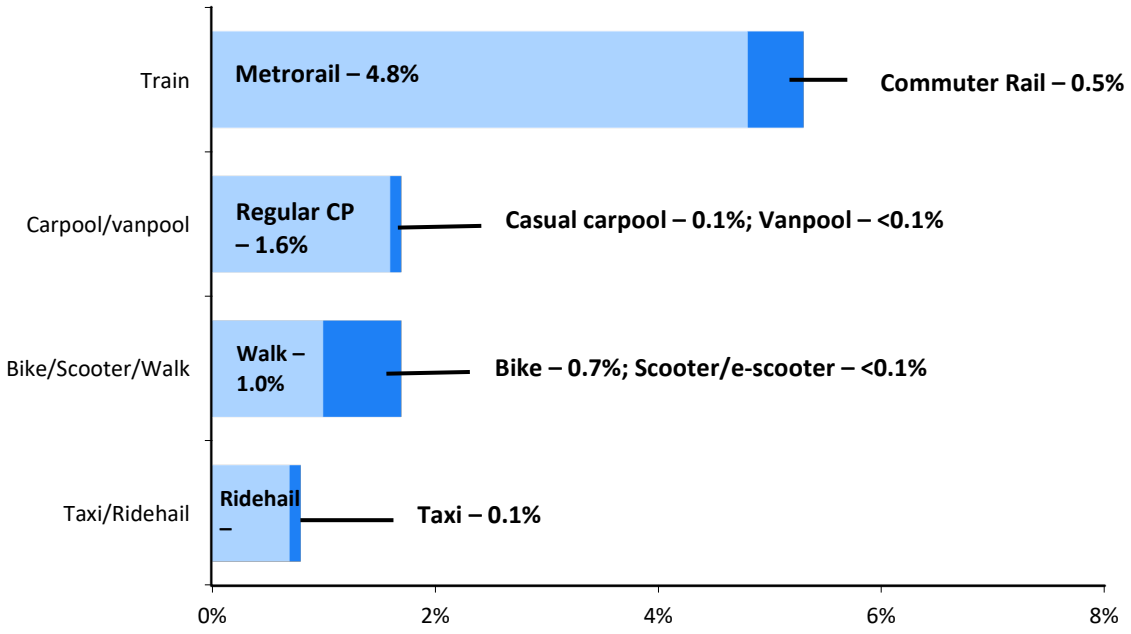
Secondary Modes – Figure 5 also shows the percentages of respondents who used a mode as a secondary mode, meaning they used it one or two days per week, in addition to their primary mode. The top two primary modes also had the greatest secondary use. Eight percent of respondents teleworked one or two days per week and 7% drove alone as a secondary mode. Two modes, train and bike/walk/scooter, each was used by 2% of respondents as a secondary mode. Two percent had a compressed schedule day off one or two days per week or one day off every two weeks. The remaining three modes each was used by just 1% of respondents as a secondary mode.

In most cases, the percentage of respondents who used a mode as their primary mode was higher than the percentage of total work days on which commuters used that mode. For example, 49% of respondents primarily drove alone to work but only 40.4% of weekly work trips were made by this mode. The difference was largely due to the incidence of telework and compressed work schedule as secondary schedules.

Mode Use within Mode Groups

The mode groupings shown in Figures 4 and 5 each is comprised of several related individual modes. The large sample size of the SOC survey enables some analysis not only of grouped modes, but also of individual modes. Figure 6 shows the relative use of individual modes within the four main combined mode groups: train, carpool/vanpool, bike/scooter/walk, and taxi/ridehail.

Figure 6
Composition of Combined Mode Groupings – Percentage of Weekly Commute Trips
(n = 8,114)
(Note: scale extends only to 8% to highlight mode group composition)



Train – The train mode group was comprised of Metrorail and three commuter rail companies: MARC (Maryland commuter rail), VRE (Virginia Railway Express), and Amtrak. Metrorail dominated this category, with nine in ten train riders using this mode (4.8% of total 5.3% train ridership). The balance of train ridership was in commuter rail (0.5% of total train use).

Carpool/Vanpool – Regular carpooling dominated the carpool/vanpool mode group. Nearly all carpool/vanpool trips were in regular carpools (1.6% of total 1.7% carpool/vanpool use). Casual carpools (also called "slugs"), accounted for about one in twenty of the total trips in the carpool/vanpool group (0.1% of total 1.7%).[8] Vanpool trips accounted for very few trips in this mode group (< 0.1% of 1.7%).

Taxi/Ridehail – Within the taxi/ridehail group, ridehail was by far the more common mode. About nine in ten of the taxi/ridehail mode group trips were made in Uber, Lyft, or another ridehail services (0.7% of the total 0.8%). Traditional taxi accounted for just one in ten trips in this group (0.1% of 0.8%).

[8] Casual carpooling is ridesharing without any prearrangement between the driver and riders. During commute hours, riders and drivers line up at predetermined meeting points and create spontaneous, single-trip carpools.

Ridehail services have been operating in the region for several years and even with travel disruptions during the coronavirus pandemic some commuters appear to use ridehail for commuting. The 71 respondents who used ridehail to get to work during their typical week were asked which ridehail services they had used. Note that respondents were permitted to check more than one type of transportation, so the total will add to more than 100%. Uber and Lyft (riding alone as a passenger) were reported by similar share of respondents; 76% used Uber for commuting and 70% used Lyft.

Six respondents (9%) said they used a shared-ride ridehail service, in which they rode with another passenger; three had used Lyft Shared Ride or Lyft XL and four used UberPool or Uber Express Pool. Because shared-ride ridehail groups could be considered carpools, respondents who used these services were asked how many riders, excluding the driver, typically rode in the vehicle but the sample of six respondents was too small for reliable analysis.

Ridehail users also were asked how they would have made these commute trips if ridehail service had not been available. About one-third of said they would have driven in a personal vehicle (19%) or ridden in a taxi (16%). But seven in ten (70%) said transit would have been a likely option, 28% likely would have walked, and 16% likely would have bicycled; this suggests some ridehail trips create a vehicle trip that would not have occurred in the absence of the ridehail service.

Mode Used if Ridehail Not Available	Percentage of Ridehail Respondents (n = 67)
• Drive alone in personal vehicle	19%
• Taxi	16%
• Public transit (train, bus)	70%
• Walk	28%
• Bicycle	16%
• Carpool/casual carpool	7%

Bike/Scooter/Walk – Walking and biking were about equally represented in the bike/scooter/walk mode group in Figure 6. Walking accounted for 1.0% of the total 1.7% trips in this group and 0.7% were made by bicycle. A very small share, less than 0.1%, of these trips were made by scooter or e-scooter.

In recent years, numerous shared-bike and shared-scooter options have been introduced in the metropolitan Washington region. Commuters who reported one or more days of bike/scooter use were asked what type(s) of bike/scooter they used. This distribution is shown below. Respondents were permitted to check more than one bike/scooter type, so the total will add to more than 100%:

Bike/Scooter type	Percentage of bike/scooter Respondents (n = 153)
• Personal bike	81%
• Capital Bikeshare bike	18%
• Dockless bike	3%
• Rented scooter/e-scooter	8%
• Personal scooter/e-scooter	7%

Commuters who reported using a bike or scooter overwhelmingly rode personal bikes for their commute; 81% said they rode a personal bike on some or all their bike/scooter commute days. About two in ten used a rented bike, either a Capital Bikeshare bicycle (18%) or a dockless bike (3%). About one in ten bike/scooter commuters typically used either a rented scooter (8%) or a personal scooter (7%).

Use of both personal bikes and rented bikes and scooters was strongly related to respondent characteristics. Nearly all (97%) commuters who used a rented bike/scooter lived in the Core area, 100% worked in the Core area, and 68% traveled less than five miles to work (Table 1). Rented bike/scooter users also were predominantly young (76% under 45 years old), male (59%), and higher income (61% with household income of $160,000 or more). Commuters who used personal bikes/scooters followed a generally similar profile for income and gender, but they were less likely to be as young. They also traveled somewhat farther to work and were less likely to be concentrated in the Core area.

Table 1
Predominant Characteristics of Commuters Who Used Rented and Personal Bikes/Scooters

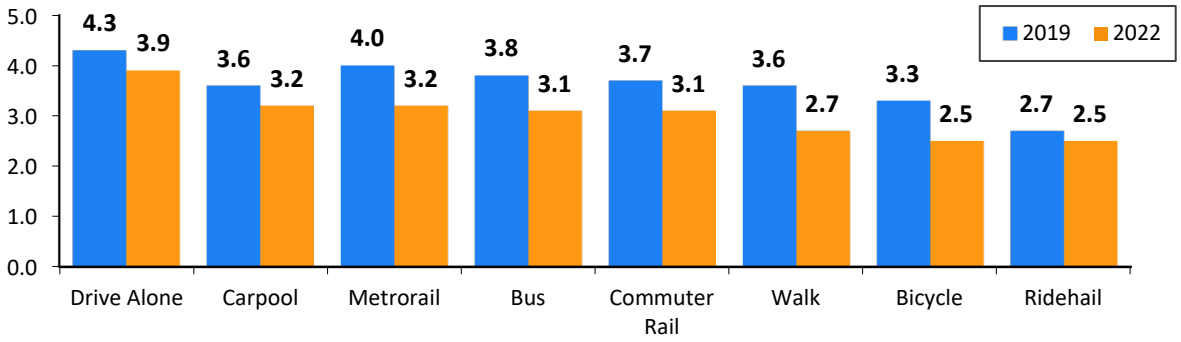
Respondent Characteristic	Rented (n = 41)	Personal (n = 135)
Lived in Core area	97%	59%
Worked in Core area	100%	66%
Travel distance less than 5 miles	68%	57%
Age under 45 years old	76%	58%
Income $160,000 or more	61%	61%
Male	59%	65%

Mean Days Used

Figure 7 details the average days per week individual modes were used, by respondents who used the mode. Five modes, excluding walk, bicycle, and ridehail, were used an average of at least three days per week in 2022. Commuters who drove alone used this mode most frequently; 3.9 days per week on average. The high average use is consistent with further analysis of the data, which showed that 78% of commuters used a single mode four or more of their commute days and 67% used a single mode all their commute days.

Figure 7
Average Days per Week Modes Were Used by Respondents Using the Modes – 2019 and 2022

(Drive Alone n = 3,972, Carpool n = 161, Metrorail n = 561, Bus n = 311, Commuter Rail n = 69 Walk n = 158, Bicycle n = 153, Ridehail n = 73; Vanpool and taxi not included due to insufficient sample sizes)



But as also shown in Figure 7, the average frequency of use declined for every mode from 2019 to 2022. This is because even though the average total weekly workdays was about the same in 2022 (4.7) and 2019 (4.8), respondents teleworked some days and commuted fewer days to outside work locations.

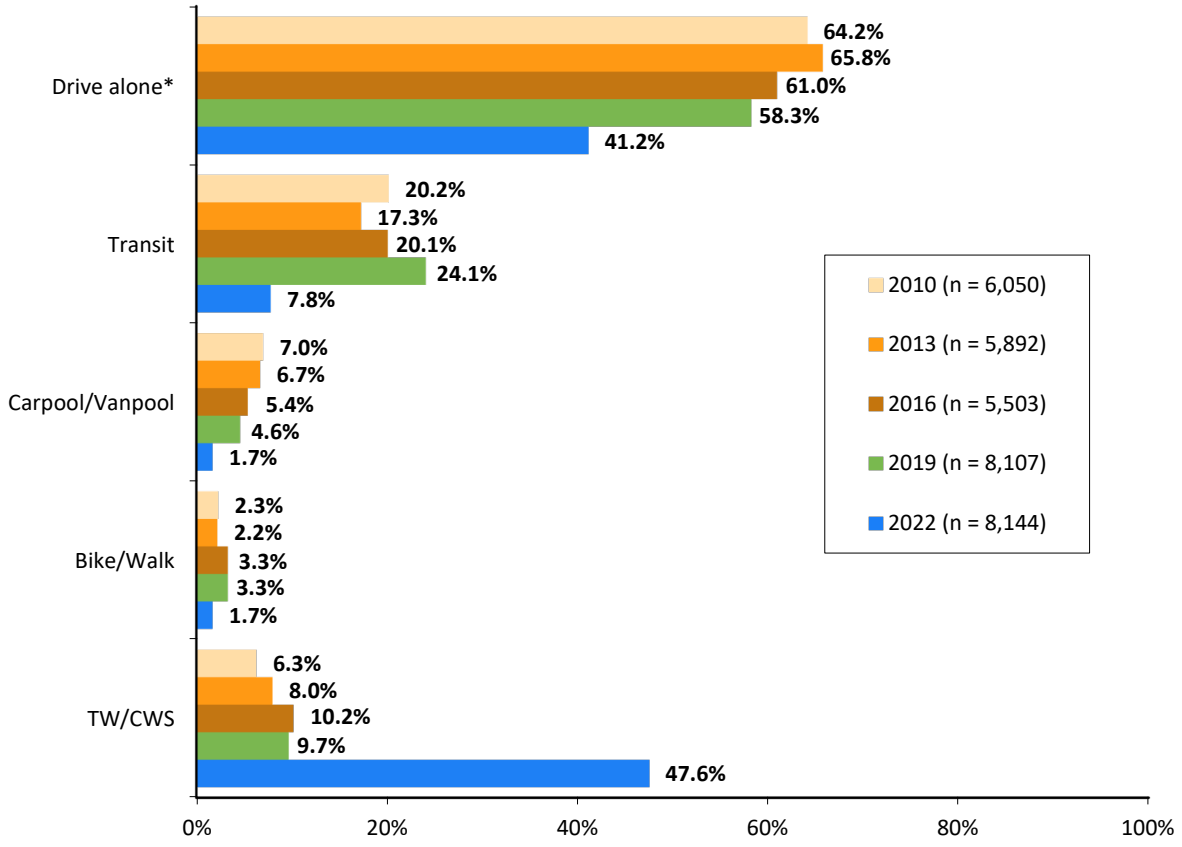
Weekly Trips by Mode – Trends from 2010 to 2022

Figure 8 presents weekly commute trip mode use for 2022 and four previous SOC surveys. The share of drive alone trips in 2022 (41.2%) was by far the lowest of all SOC surveys since 2010 and fully 17.1 percentage points lower than in 2019. As evidenced by the 37.9 percentage point increase in telework's share of commute days/trips in 2022, however, the drive alone trips eliminated were overwhelmingly shifted to telework, rather than to other travel modes. Driving alone exhibited a declining pattern also between 2013 and 2019, with trips shifted both to transit and telework. Commute trips in each non-drive alone travel mode other than telework also dropped from 2019 to 2022, with transit losing 16.3 percentage points from 24.1% in 2019 to 7.8% in 2022. Commute use of carpool/vanpool and bike/walk also fell between 2019 and 2022. All 2019-2022 mode differences were statistically significant.

Figure 8
Percentage of Weekly Trips by Mode – 2010 to 2022

(Including telework and compressed schedules)

(*Note: taxi/ridehail was reported as part of "drive alone" in the 2010-2016 surveys. For consistency, "drive alone" percentages shown for 2019 and 2022 follow the same approach. In 2022, taxi/ridehail accounted for 0.8% of the total 41.2% drive alone.)



Change in Mode Use from 2019 to 2022, Excluding Telework – The overwhelming change in telework mode share between 2019 and 2022 obscures shifts in use of other modes. If telework/CWS are excluded from both the 2022 and 2019 mode distributions, a clearer pattern of shifting mode use emerges for commute trips to outside work locations. Table 2 presents percentages of weekly commute trips by mode for 2019 and 2022 and the percentage point changes for each mode.

Table 2
Change in Percentage of Weekly Commute Trips by Mode, Excluding Telework – 2019 to 2022
(2019 n = 8,107, 2022 n = 8,144)

Commute Mode (excluding TW/CWS)	2019 SOC	2022 SOC	Change (Percentage Points)
Gained Mode Share			
Drive alone (incl. taxi/ride-hail)	64.6%	**78.4%**	**+ 13.8**
Lost Mode Share			
Train	20.2%	**10.2%**	**- 10.0**
Carpool/vanpool	5.1%	**3.3%**	**- 1.8**
Bus	6.5%	**4.8%**	**- 1.7**
No Statistical Change			
Bike/scooter/walk	3.6%	**3.3%**	- 0.3

While Figure 8 showed that driving alone declined as a share of all commute days, driving alone increased as a share of trips for days workers traveled to outside work locations. When telework is excluded, workers drove alone for 78.4% of work trips in 2022, 13.8 percentage points more than in 2019 (64.6%). Transit and carpool/vanpool both lost mode share; train use fell 10.0 percentage points from 20.2% to 10.2%, bus and carpool/vanpool dropped 1.8 and 1.7 percentage points, respectively.

Some of the loss in alternative mode use is explained by shifts to telework. Thirty-seven percent of respondents who primarily teleworked at the time of the survey said they commuted by transit or rideshare most days pre-pandemic, compared with only 22% of respondents who were traveling to outside work locations most days in early 2022. The 2019 figures include these pre-pandemic alternative mode trips, while they are missing from the 2022 percentages. But alternative mode loss also is due to some commuters who shifted away from shared modes to driving alone, perhaps to minimize their interactions with other people to avoid contracting COVID-19; 8% of 2022 respondents who were driving alone in 2022 said they primarily used alternative modes in pre-pandemic.

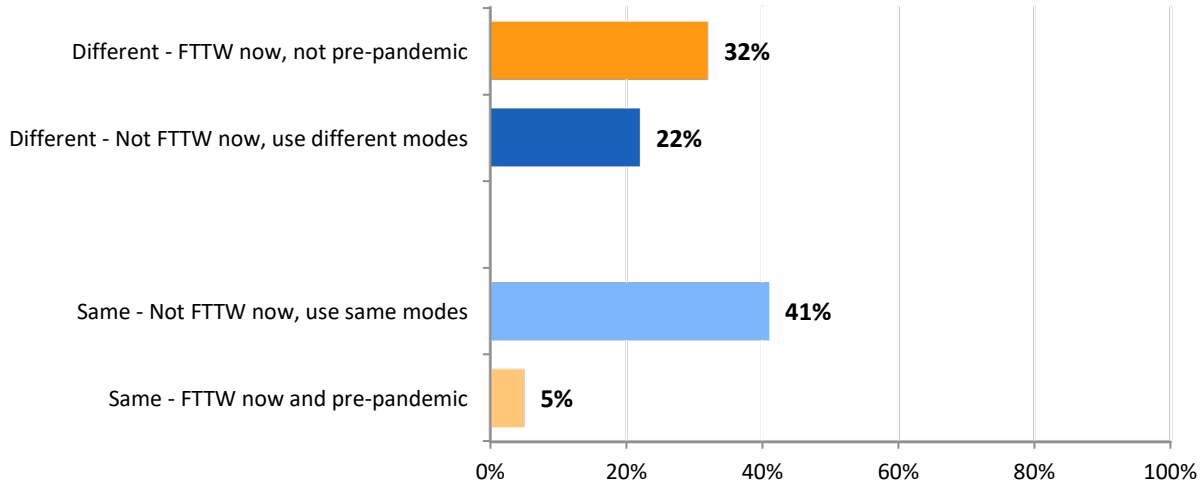
Commute Changes Related to Coronavirus Pandemic and Pre-pandemic Mode

The 2022 SOC survey added questions to examine other changes workers made that could have altered their commute. Respondents were asked a general question; “Is your current travel to work as you just described it about the same as your commute before the coronavirus pandemic began or is it different than before the pandemic?” They were then asked to indicate if they had made any work or commute changes. Finally, they were asked what commute modes they used one or more days per week and which of those modes they had used most of their work days (primary mode) in early 2020.

Commute Same As or Different Than Before Pandemic

Given the large increase in use of telework and declines in use of other travel modes in 2022, it is not surprising that 54% of respondents reported that their commute was different at the time of the survey (January-March 2022) than it had been before the coronavirus pandemic (February 2020). Figure 9 presents four general commute change scenarios that respondents indicated.

Figure 9
Current Commute (Early 2022) Same or Different than Pre-pandemic (Early 2020)
(n = 7,952)



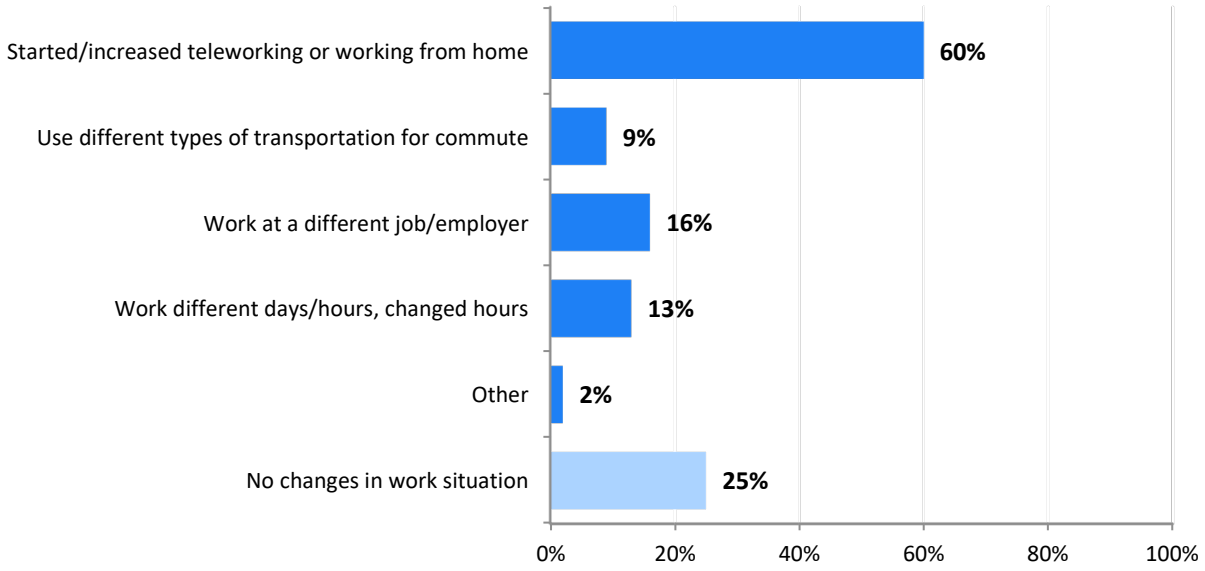
One-third (32%) of all respondents said their commute had changed because they were teleworking full-time (FTTW) now and had not been doing so before the pandemic. About two in ten (22%) respondents said they were not currently teleworking all their workdays but their commute was different because they were using a different mix of commute options. The remaining 46% of respondents said their commute was essentially the same; 41% were using the same commute option mix as before the pandemic and 5% had been teleworking full-time before the pandemic and still were doing so.

Commute and Work Situation Changes Since the Start of the Pandemic – Both respondents who said their commutes were the same and those who said they were different were asked a follow-up question to explore various work situations or commute components that might have changed. Overall, three-quarters of respondents reported at least one of the changes shown in Figure 10.

Six in ten (60%) respondents either started teleworking or increased the number of days per week that they teleworked. One in ten (9%) said they started using different types of transportation to get to work on days they traveled to an outside work location. About three in ten made a work situation change, such as changing jobs or employers (16%) or a change in their work days or hours (13%). Two percent said their commute had changed for some other reason.

Respondents whose commutes were different because they shifted to full-time telework contributed to the telework growth shown in Figure 8. But some telework growth between 2019 and 2022 was from workers who were still commuting to an outside work location at least some workdays and were working from home some days. Across all workers who reported a different commute than before the pandemic, 88% said starting or increasing telework was part of their commute change.

Figure 10
Commute and Work Situation Changes Since Start of Pandemic
(n = 7,745; multiple responses permitted)



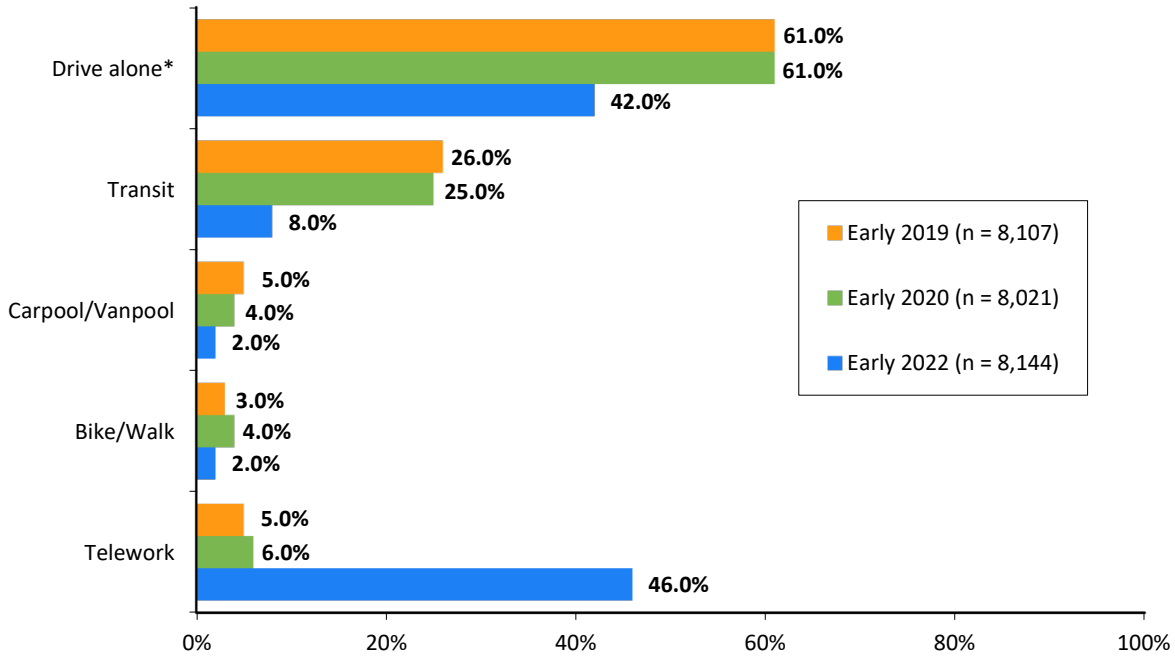
Primary Commute Mode in 2022 Compared with Early 2020, Pre-Pandemic

Figure 8 and Table 2 documented substantial commute mode shifts between 2019 and 2022. The 2019 survey was conducted just one year before the start of the pandemic and it is reasonable to expect that commute patterns would not have changed dramatically over the next year. However, to test this assumption, respondents in the 2022 survey were asked what modes they had used to get to work in early 2020, just before the pandemic began.

They first were asked to select all modes that they used at least one day per week, then to indicate the single type of transportation that they used most days for their commute, their primary mode. For consistency with other mode questions in the survey, respondents who typically used more than one mode on a single day (e.g., ride a bus and train) were instructed to choose the mode they used for the longest distance part of their trip. The middle (green) bars in Figure 11 show the results for primary mode in early 2020, the immediate pre-pandemic period. Figure 11 also shows the distributions of primary mode from the 2019 SOC (top/orange bars) and for the 2022 SOC, in early 2022 (bottom/blue bars).

As is evident from the top two bars in each mode group, the mode distribution in early 2020 was essentially the same as that observed in the 2019 SOC data. There were slight differences in transit, carpool, bike/walk, and telework, but in each mode case it was only one percentage point and within expected statistical margins of error. This suggests that the mode changes observed between 2019 and 2022 can be largely, or perhaps entirely, attributed to the influence of the pandemic rather than other factors.

Figure 11
Primary Mode (Mode Used Most Days Per Week) – 2019, 2020, and 2022
(*Note: "Drive alone" includes taxi/ridehail)



Commute Changes by Respondent Characteristics

Pre-pandemic Commute Mode – Further analysis of the new questions on commute change revealed that some groups of respondents were more likely than were others to have reported a change in their commute. A particularly important finding was that respondents who had been commuting by public transit, carpool/vanpool, and or bike/walk reported commute changes at a much higher rate than did commuters who primarily drove alone prior to the pandemic (Table 3).

Eight in ten (80%) respondents who rode a train to work and three-quarters (74%) of respondents who primarily rode a bus said their commute was different than before the pandemic. Large shares of commuters who carpooled/vanpooled (68%) and biked/walked (60%) to work before the pandemic also noted that they had made a commute change. By contrast, less than half (47%) of respondents who primarily drove alone before the pandemic reported that their commute was different.

The last two columns of the table break down the different commute total into the two components that were presented in Figure 9; respondents who had a different commute because they were now teleworking full-time and respondents who were still commuting at least one day per week but were using a different mix of commute modes. These columns indicate that the high percentages of different commutes among alternative mode respondents were driven particularly by shifts to full-time work from home, with at least four in ten respondents in each alternative mode group shifting to full-time telework, compared with 25% of pre-pandemic drive alone commuters.

But percentages of respondents who were still traveling to outside work locations and who had changed the mix of modes they used also were higher among respondents who had used transit and carpool or vanpool pre-pandemic than was the case for pre-pandemic drive alone commuters, suggesting a further shift away from these modes.

Table 3
Current Commute Same or Different than Pre-pandemic – By Pre-pandemic Primary Mode

Pre-pandemic Primary Mode	Commute Same as Pre-pandemic	Commute Different Than Pre-pandemic		
		Different (Total)	Now Full-time Telework	Use Different Mix of Modes
Train (n = 1,473)	20%	80%	55%	26%
Bus (n = 552)	26%	74%	42%	31%
Carpool/vanpool (n = 228)	32%	68%	39%	29%
Bike/walk (n = 407)	40%	60%	43%	17%
Drive alone (n = 4,759)	53%	47%	25%	22%
Telework (n = 439)	89%	11%	9%	2%

Comparison of Current Primary Mode with Pre-pandemic Primary Mode – Table 4 compares the primary modes that respondents were using at the time of the survey (Current mode) with the modes they used pre-pandemic (early 2020). The percentages in each row will add to 100%.

Table 4
Current Primary Commute Mode by Pre-pandemic (Early 2020) Primary Commute Mode

Pre-pandemic Primary Mode (Early 2020)	Current Primary Commute Mode (Early 2022)					
	Telework	Drive Alone	Carpool/ Vanpool	Bus	Train	Bike/ Walk
All respondents (n = 8,126)	45%	42%	2%	3%	6%	2%
Drive alone (n = 4,874)	34%	62%	1%	1%	1%	1%
Carpool/vanpool (n = 231)	50%	16%	32%	1%	1%	0%
Bus (n = 556)	50%	14%	2%	28%	4%	2%
Train (n = 1,495)	63%	10%	1%	2%	23%	1%
Bike/walk (n = 413)	55%	10%	2%	1%	4%	28%
Telework (n = 442)	97%	3%	0%	0%	0%	0%

As indicated by the second column in the table, 34% of respondents who drove alone to work pre-pandemic reported shifting to telework as their primary mode at the time of the survey but more than six in ten (62%) continued to drive alone for days they traveled to an outside work location. Shifts to telework were even more common among respondents who used an alternative mode pre-pandemic; at least half of respondents in each of these groups reported telework as their current primary mode. But about one in ten respondents in each alternative mode group had shifted to driving alone. As shown by the shaded cells, only about three in ten respondents in each alternative mode groups continued using their pre-pandemic alternative mode (carpool/vanpool 32%, bus, 28%, train 23%, bike/walk 28%).

Commute Change by Geographic, Employment, and Demographic Factors – Other factors associated with commute changes included home and work location, type and size of employer, and several demographic characteristics:

- Lived in the Core and Middle Ring – 65% of workers who lived in the Core area and 53% who lived in the Middle Ring said their commute was different, compared with 48% of Outer Ring residents.
- Worked in the Core and Middle Ring – 65% of Core and 47% of Middle Ring workers said their commute had changed, compared with 34% of Outer Ring workers.
- Worked for larger employers – 65% of respondents who worked at worksites with more than 250 employees and 60% who worked at a location with 101 to 250 employees had a different commute, compared with 46% of respondents who worked at a worksite with 100 or fewer employees.
- Worked for Federal agencies or non-profit organizations – 65% of Federal agency workers and 60% of respondents who were employed by a non-profit organization had a different commute, compared with 49% of private sector employees and 39% of state/local agency workers.
- Higher incomes – 63% of respondents with incomes of $140,000 or more reported a different commute, compared with 47% of respondents with incomes below $140,000.
- Younger than 55 years old – 56% of respondents who were younger than 55 years said their commute was different, compared with 48% of respondents who were 55 or older.
- Female – 58% of female respondents had a different commute, compared with 50% of males.

Primary Commute Mode by Geographic and Demographic Group

Following are tables and figures examining primary mode distribution by respondents' home and work location and demographic characteristics: gender, race/ethnicity, age, income, and vehicle availability. Any of these characteristics, and indeed many other factors, might be related to or influence commuters' mode choice and relationships observed in each individual case should viewed as mode associations, rather than independent or causal relationships. Because the 2022 mode distribution was so strongly skewed toward telework and the figures were designed to highlight sub-group differences, the results for both the 2022 period (current) and the 2019 SOC survey show the share of respondents who teleworked, then the distribution of primary mode when telework is excluded. The discussion for each table and figure describes notable differences from the 2019 case.

Residence and Employment Location

Residence State – Table 5 shows the primary mode distributions by home state. Each line of the table shows the share of commuters in the sub-group who primarily teleworked. The last four columns of the table show the primary mode distribution with primary telework excluded. This provides a clearer comparison between 2022 and 2019 of modal distributions for travel to workplaces outside the home.

In 2022, telework was the primary mode for 55% of District of Columbia residents and for more than four in ten who lived in Virginia (46%) and Maryland (42%). When telework is excluded, driving alone was the most common mode for each state but was more than twice as common for Maryland (84%) and Virginia (80%) respondents as for District of Columbia residents (41%). District residents used transit and bike/walk at higher rates than did Maryland and Virginia residents. Carpool/ vanpool was used by a larger share of Virginia residents (5%) than District (2%) or Maryland (2%) residents.

Table 5
Primary Mode by State of Residence – 2022 and 2019
(Shading indicates statistically higher percentages of mode use)

Residence State	Telework	Primary Commute Mode (Excluding Telework*)			
		Drive Alone	Carpool/ Vanpool	Transit	Bike/ Walk
Current (2022 SOC)					
District of Columbia (n = 956)	**55%**	**41%**	**2%**	**41%**	**16%**
Maryland (n = 3,434)	**42%**	**84%**	**2%**	**13%**	**1%**
Virginia (n = 3,750)	**46%**	**80%**	**5%**	**12%**	**3%**
Pre-pandemic (2019 SOC)					
District of Columbia (n = 735)	3%	32%	2%	49%	17%
Maryland (n = 3,828)	7%	69%	4%	26%	1%
Virginia (n = 3,544)	4%	68%	8%	22%	2%

*Note: distribution of Drive alone, Car/vanpool, Transit, Bike/walk equals 100%; it excludes Primary Telework)

As is described further in Section 5, the much higher transit mode share for District residents is related to their greater access to transit modes. District residents also travel shorter distances to work than do Maryland and Virginia residents, thus the higher bike/walk percentage is not surprising. Virginia residents' higher use of carpool/vanpool is almost certainly related to their greater access to Express/Toll Lanes and High Occupancy Vehicle (HOV) lanes, which provide a substantial time saving for ridesharing commuters.

The bottom section of the table displays mode use patterns in 2019. The major difference between 2019 and 2022 is the overall share of telework, which was a very small component of primary mode in 2019. When telework is excluded, however, the relative use of modes in 2022 was essentially the same as in 2019. Drive alone was the primary mode for about twice as many residents of Maryland and Virginia as for District residents and transit and bike/walk was used by much larger shares of District residents. One notable difference was in apparent shifts from transit to driving alone. Transit use fell in all three states and driving alone increased, but the shifts were more prominent for Maryland and Virginia residents than for those who lived in the District.

Employment State – Table 6 displays primary mode distributions by respondents' employment state. Respondents who were working from home full-time at the time of the survey were asked to report where they would be working if they were not working from home. The 2022 mode patterns by employment state were similar to those observed by residence state. Telework was the primary mode for a larger share of respondents whose main work location was the District of Columbia (55%) than for respondents who worked in Virginia (41%) or Maryland (38%). When primary telework is excluded, drive alone rates were much lower for District of Columbia workers (56%) than for Maryland (87%) and Virginia (85%) and a much larger proportion of District workers rode transit (32%) to work than did Maryland (9%) and Virginia (8%) workers.

Table 6
Primary Mode by State of Employment – 2022 and 2019
(Shading indicates statistically higher percentages of mode use)

Employment State	Telework	Primary Commute Mode (Excluding Telework)*			
		Drive Alone*	Carpool/ Vanpool	Transit	Bike/ Walk
Current (2022 SOC)					
District of Columbia (n = 2,871)	**55%**	**56%**	**5%**	**32%**	**7%**
Maryland (n = 2,170)	**38%**	**87%**	**2%**	**9%**	**2%**
Virginia (n = 2,881)	**41%**	**85%**	**4%**	**8%**	**3%**
Pre-pandemic (2019 SOC)					
District of Columbia (n = 2,720)	2%	33%	6%	54%	7%
Maryland (n = 2,447)	7%	81%	5%	12%	2%
Virginia (n = 2,846)	4%	80%	5%	13%	2%

*Note: distribution of Drive alone, Car/vanpool, Transit, Bike/walk equals 100%; it excludes Primary Telework)

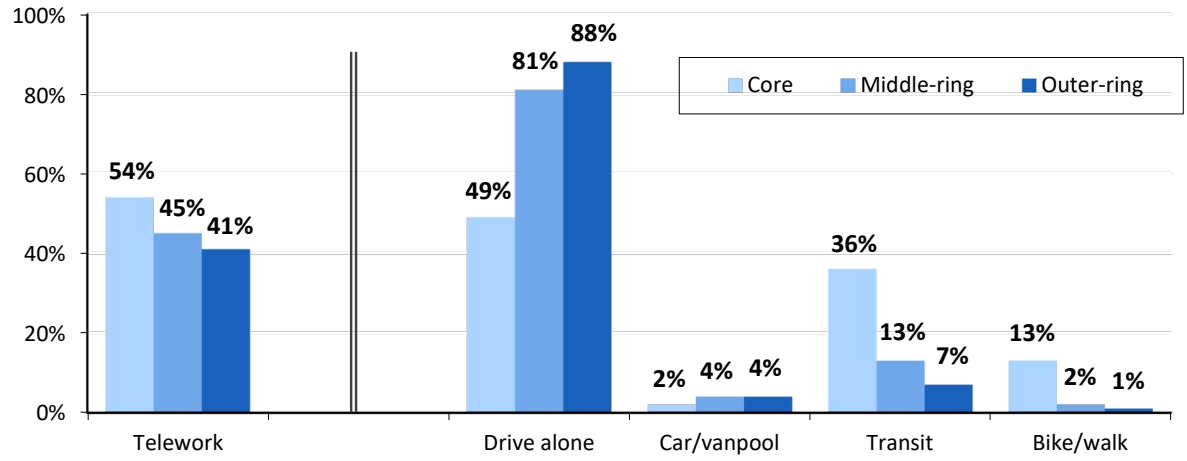
The mode use pattern in 2022, excluding primary telework, generally followed that from 2019. But as with home state, the most notable changes was the drop in transit use among District workers. In 2019, among commuters who were not primarily teleworking, 54% of District workers primarily commuted by transit; in 2022, transit was the primary mode for just 32% of District workers who were not teleworking.

Home Area "Ring" – The mode distributions presented for Virginia and Maryland represent average use across large geographic areas with substantially different travel conditions and options. Virginia includes two jurisdictions that are largely urban (Alexandria and Arlington), along with suburban (Fairfax), and exurban (Loudoun and Prince William) areas. Maryland includes two counties (Montgomery and Prince George's) that are largely suburban with pockets of urban development and three exurban areas (Calvert, Charles, and Frederick). These aggregations can mask large differences in mode use for sub-areas of the states. Figure 12 displays primary mode as a function of residence area, using the "ring" designation defined earlier. As with the state tables, the figure shows overall percentage of primary telework, then the distribution of other modes, excluding telework.

Primary use of telework was higher among respondents who lived in the Core (54%) than for residents of either the Middle Ring (45%) or Outer Ring (41%). With telework excluded, driving alone is the most common mode in all three areas, but only about half (49%) of Core residents primarily used this mode, compared with more than eight in ten residents in the Middle Ring (81%) or Outer Ring (88%). Conversely, use of transit and bike/walk were considerably higher among Core residents than for respondents who lived farther from the center of the region.

The mode distribution for the Core, which includes the District of Columbia, Alexandria, and Arlington, was nearly same as that shown in Table 5 for District of Columbia residents alone. This suggests that residents of the two Core Virginia jurisdictions were more like District of Columbia residents in travel mode characteristics than they were to residents of other Virginia jurisdictions.

Figure 12
Current Primary Mode by Home Area – Telework and Mode Distribution Excluding Telework
(Note: distribution of Drive alone, Car/vanpool, Transit, Bike/walk equals 100%; it excludes Primary Telework)
(Core n = 2,560, Middle Ring n = 2,528, Outer Ring n = 3,038)



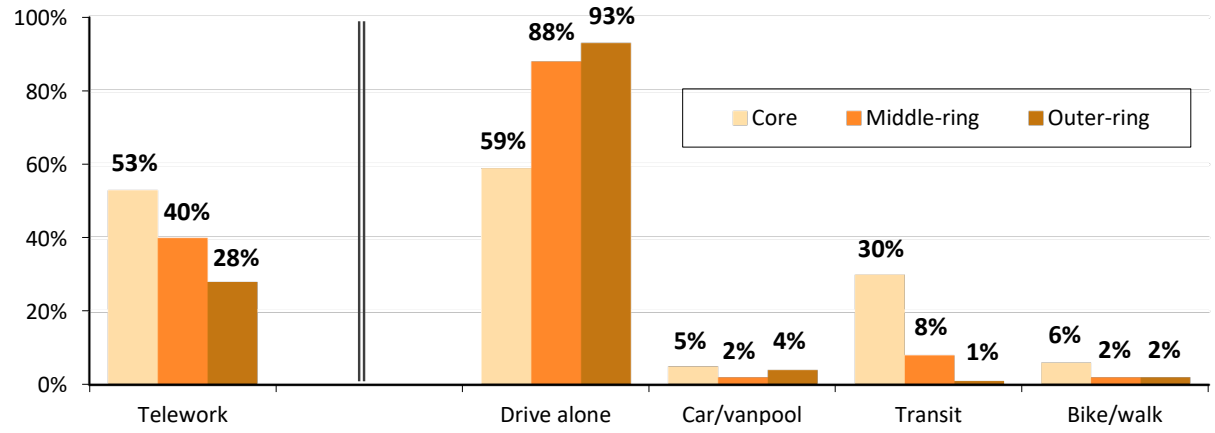
As shown below, excluding primary use of telework, the relative use of modes in 2022 paralleled that from 2019. In 2019, the drive alone and carpool/vanpool mode shares increased with increasing distance from the center of the region, while transit and bike/walk mode shares declined. However, the transit rates for all three areas declined from 2019 to 2022, while the drive alone rates increased.

	Home Area 2019 (Pre-pandemic) Primary Mode				
		Primary Mode (Excluding Telework)			
Home Area	**Telework**	**Drive alone**	**Car/vanpool**	**Transit**	**Bike/walk**
Core	3%	39%	2%	46%	13%
Middle Ring	5%	68%	5%	26%	1%
Outer Ring	5%	79%	8%	13%	0%

Work Area Ring – Primary telework was highest for Core area workers (53%) and lower among Middle Ring workers (40%) (Figure 13). These percentages were about the same as for residents of these two areas. A notable difference in the work area finding, however, was the relatively low share (28%) of Outer Ring workers who primarily teleworked.

With telework excluded, the 2022 mode use pattern by employment area was comparable to that for the residence area. About six in ten (59%) commuters who worked in the Core area drove alone, a dramatically lower rate than for the Middle Ring (88%) and Outer Ring (93%). Transit use was higher in the Core; 30% of Core workers who did not primarily telework used bus or train as their primary mode, while transit rates were much lower for commute trips to Middle Ring (8%) and Outer Ring (1%) worksites. This pattern obviously reflects the greater availability of transit infrastructure in the Core areas, as well as other potential factors.

Figure 13
Current Primary Mode by Work Area – Telework and Mode Distribution Excluding Telework
(Note: distribution of Drive alone, Car/vanpool, Transit, Bike/walk equals 100%; it excludes Primary Telework)
(Core n = 3,973, Middle Ring n = 2,699, Outer Ring n = 929)



As shown below, excluding primary telework, the 2022 drive alone mode shares in the Core area (59%) was well above the 2019 rate (39%) and 2022 transit use (30%) was considerably lower than 2019 (48%), suggesting large mode shifts from transit to drive alone, even accounting for telework growth. By contrast, drive alone rates in the Middle and Outer rings were higher in 2022 than in 2019.

	Work Area 2019 (Pre-pandemic) Primary Mode				
		Primary Mode (Excluding Telework)			
Work Area	**Telework**	**Drive alone**	**Car/vanpool**	**Transit**	**Bike/walk**
Core	3%	39%	7%	48%	6%
Middle Ring	5%	83%	4%	12%	1%
Outer Ring	5%	91%	5%	3%	1%

Primary Mode by Demographic Characteristics

Analysis of survey data also showed some differences in choice of primary mode (mode used most days per week) among demographic groups. Tables 7 through 11 present distributions of primary mode by respondent age, gender, income, race/ethnicity, and vehicle availability. As was presented for mode by home and work areas, the tables show primary telework percentages, then present primary use of other modes, with telework excluded.

Age – Telework was most common among respondents in the middle age groups; about half of respondents between 35 and 54 years of age primarily teleworked, compared with 44% of respondents who were younger than 35 and 39% who were 55 or older (Table 7). Respondents who were younger than 35 years old were less likely to drive alone than were older respondents. The 2019 mode distribution (excluding telework) generally followed the 2022 pattern, with lower drive alone and higher transit and bike/walk use among younger respondents. As was seen in mode use by home and work area, shifts from transit to drive alone were observed for all age groups between 2019 and 2022, but bike/walk use remained close to the 2019 rates.

Table 7
Primary Mode by Age – 2022 and 2019
(Shading indicates statistically higher percentages of mode use)

Age	Telework	Primary Commute Mode (Excluding Telework*)			
		Drive Alone	Carpool/ Vanpool	Transit	Bike/Walk
Current (2022 SOC)					
Under 35 years (n = 1,788)	**44%**	**74%**	**3%**	**19%**	**4%**
35-44 years (n = 1,843)	**51%**	**78%**	**4%**	**14%**	**4%**
45-54 years (n = 1,782)	**48%**	**79%**	**4%**	**15%**	**2%**
55+ years (n = 2,409)	**39%**	**81%**	**3%**	**13%**	**3%**
Pre-pandemic (2019 SOC)					
Under 35 years (n = 1,725)	4%	59%	5%	31%	5%
35-44 years (n = 1,795)	6%	64%	5%	28%	3%
45-54 years (n = 1,998)	5%	67%	5%	25%	3%
55+ years (n = 2,297)	5%	68%	5%	25%	2%

*Note: distribution of Drive alone, Car/vanpool, Transit, Bike/walk equals 100%; it excludes Primary Telework)

Gender – In 2022, male and female respondents reported primary telework at about the same rate (Table 8). Male respondents drove alone at a slightly higher rate (79%) than did female respondents (76%), while female respondents were slightly more likely to ride transit. Other modes showed no statistical differences. The 2022 mode patterns generally reflected those from 2019 with the exception that shifts from transit to drive alone between 2019 and 2022 were evident for both male and female respondents.

Table 8
Primary Mode by Gender – 2022 and 2019
(Shading indicates statistically higher percentages of mode use)

Gender	Telework	Primary Commute Mode (Excluding Telework*)			
		Drive Alone	Carpool/ Vanpool	Transit	Bike/Walk
Current (2022 SOC)					
Female (n = 3,670)	**46%**	**76%**	**4%**	**17%**	**3%**
Male (n = 3,809)	**45%**	**79%**	**3%**	**14%**	**4%**
Pre-pandemic (2019 SOC)					
Female (n = 3,806)	5%	64%	5%	28%	3%
Male (n = 3,859)	5%	64%	6%	26%	4%

*Note: distribution of Drive alone, Car/vanpool, Transit, Bike/walk equals 100%; it excludes Primary Telework)

Income – Primary telework showed a strong increasing pattern as income increased (Table 9). Only 18% of respondents with incomes under $60,000 primarily teleworked, compared with at least four in ten higher income respondents and more than six in ten (61%) respondents with incomes of $180,000 or more. Except for bike/walk use, which was highest among high income respondents, use of other modes did not follow a particular pattern with increasing or decreasing income and differences by income were not statistically significant for most modes.

Table 9
Primary Mode by Annual Household Income – 2022 and 2019
(Shading indicates statistically higher percentages of mode use)

Household Income	Telework	Primary Commute Mode (Excluding Telework*)			
		Drive Alone	Carpool/ Vanpool	Transit	Bike/Walk
Current (2022 SOC)					
Less than $60,000 (n = 610)	**18%**	**74%**	**4%**	**19%**	**3%**
$60,000 – 99,999 (n = 1,226)	**40%**	**80%**	**1%**	**16%**	**3%**
$100,000 – 139,999 (n = 1,162)	**48%**	**78%**	**4%**	**14%**	**4%**
$140,000 – 179,999 (n = 1,043)	**51%**	**74%**	**4%**	**18%**	**4%**
$180,000 or more (n = 1,999)	**61%**	**77%**	**5%**	**12%**	**6%**
Pre-pandemic (2019 SOC)					
Less than $60,000 (n = 633)	2%	65%	3%	28%	4%
$60,000 – 99,999 (n = 1,234)	3%	66%	4%	26%	4%
$100,000 – 139,999 (n = 1,267)	5%	61%	6%	29%	4%
$140,000 – 179,999 (n = 1,103)	4%	62%	5%	29%	4%
$250,000 or more (n = 1,537)	8%	63%	8%	24%	5%

*Note: distribution of Drive alone, Car/vanpool, Transit, Bike/walk equals 100%; it excludes Primary Telework)

In 2019 driving alone had been slightly more common among lower income respondents and carpool/vanpool use had increased with income, but other modes showed no clear association with income. Comparison of transit and drive alone rates for 2019 and 2022 indicates that shifts from transit to driving alone were observed for all income groups, at approximately the same rate.

Race/Ethnicity – Table 10 presents primary mode distribution for respondents of the four primary race/ethnicity groups. Hispanic respondents were more likely to carpool/vanpool than were other race/ethnicity groups and Non-Hispanic Blacks rode transit at higher rates than did other groups. Bike/walk was most common among Non-Hispanic White and Asian respondents. The 2022 pattern was similar in proportions to that from 2019, excepting the shifts from transit to driving alone that were noted for other demographic sub-populations. One other difference in the pattern was that carpool/vanpool use grew among Hispanic respondents between 2019 and 2022, while it substantially decreased among Asian respondents.

Table 10
Primary Mode by Race/Ethnicity – 2022 and 2019
(Shading indicates statistically higher percentages of mode use)

Race/Ethnicity	Telework	Primary Commute Mode (Excluding Telework*)			
		Drive Alone	Carpool/ Vanpool	Transit	Bike/Walk
Current (2022 SOC)					
Hispanic (n = 486)	**37%**	**75%**	**8%**	**15%**	**2%**
Non-Hispanic Black (n = 1,220)	**39%**	**78%**	**2%**	**19%**	**1%**
Non-Hispanic White (n = 4,577)	**48%**	**78%**	**3%**	**13%**	**6%**
Asian (n = 656)	**60%**	**79%**	**2%**	**14%**	**5%**
Pre-pandemic (2019 SOC)					
Hispanic (n = 502)	5%	66%	4%	27%	3%
Non-Hispanic Black (n = 1,351)	4%	63%	5%	31%	1%
Non-Hispanic White (n = 5,466)	5%	64%	5%	25%	6%
Asian (n = 586)	5%	63%	8%	27%	2%

*Note: distribution of Drive alone, Car/vanpool, Transit, Bike/walk equals 100%; it excludes Primary Telework)

Vehicles Available – Finally, Table 11 shows the primary mode distribution by the number of vehicles per adult resident in the respondent's household. This measure of vehicle availability accounts for both the number of household vehicles and number of adult household members. Some respondents had no household vehicle; these respondents were car-free regardless of the number of adults in the household. Some residents had at least one vehicle in the household for each adult resident. An intermediate group of respondents had a household vehicle but fewer vehicles than adult household members; these respondents, who shared a vehicle, were designated as "car-lite."

Not unexpectedly, respondents who lived in a car-free household (0 vehicles per adult) and those who had fewer cars than adult residents (0.1-0.5 vehicles and 0.6-0.9 vehicles) were less likely to drive alone and more likely to commute by transit and bike/walk than were respondents who reported having one or more vehicles for each adult in the household.

In 2022, as the number of vehicles per adult in the household increased, driving alone increased from 63% for respondents who had at most one vehicle for two household members (0.1-0.5 vehicles) to a high of 88% when every household member had a vehicle available. Use of transit declined significantly with higher vehicle availability. Carpooling was most common for respondents who were "car-lite," with a vehicle in the household, but fewer vehicles than adult residents. Some of these respondents likely carpooled with another member of the household. Biking/walking was more common among respondents with low vehicle availability, but these respondents would have lived close to work, so the relationship between car availability and mode could be in the opposite direction; being able to bike/walk to work could have encouraged them to avoid car ownership or share a vehicle with other household members.

Table 11
Primary Mode by Number of Vehicles Per Adult in the Household – 2022 and 2019
(Shading indicates statistically higher percentages of mode use)

Vehicles per Adults in Household	Telework	Primary Commute Mode (Excluding Telework*)			
		Drive Alone	Carpool/ Vanpool	Transit	Bike/Walk
Current (2022 SOC)					
0 vehicles (n = 535)	**52%**	**13%**	**4%**	**66%**	**17%**
0.1 to 0.5 vehicles (n = 1,406)	**52%**	**63%**	**6%**	**24%**	**7%**
0.6 to 0.9 vehicles (n = 454)	**43%**	**81%**	**7%**	**10%**	**2%**
1 vehicle or more (n = 5,421)	**45%**	**88%**	**3%**	**8%**	**1%**
Pre-pandemic (2019 SOC)					
0 vehicles (n = 393)	3%	8%	1%	74%	17%
0.1 to 0.5 vehicles (n = 1,021)	5%	56%	7%	34%	3%
0.6 to 0.9 vehicles (n = 431)	3%	53%	9%	34%	4%
1 vehicle or more (n = 5,982)	4%	73%	5%	20%	2%

*Note: distribution of Drive alone, Car/vanpool, Transit, Bike/walk equals 100%; it excludes Primary Telework)

Mode use by vehicle availability in 2019 had been much the same as in 2022, with higher drive alone rates and lower use of transit among respondents with greater access to a personal vehicle. But one notable finding was the degree to which respondents in each group shifted modes between 2019 and 2022. The drive alone rate was higher and transit rate was lower in 2022 than in 2019 for each vehicle availability group, but transit use declined much more for respondents with between 0.6 and 0.9 vehicles per adult (from 34% to 10%) and respondents with a vehicle for each adult (from 20% to 8%) than for respondents with no vehicle (from 74% to 66%) and 0.1 to 0.5 vehicles (from 34% to 24%). And respondents who had no vehicle or limited vehicle availability reported continued or even higher bike/walk use in 2022 than in 2019.

Length of Commute

Both the 2022 SOC survey and past SOC surveys have asked about the distance and time commuters spend traveling to work and the time at which they arrive at work. However, because it was expected that a notable share of workers still could be working from home full-time in 2022, the 2022 survey adjusted this series of questions. First, respondents who teleworked full-time were excluded from the questions on the time they spent commuting and their work arrival time, because it asked about a current activity (commuting to an outside location) that was not relevant to their situation.

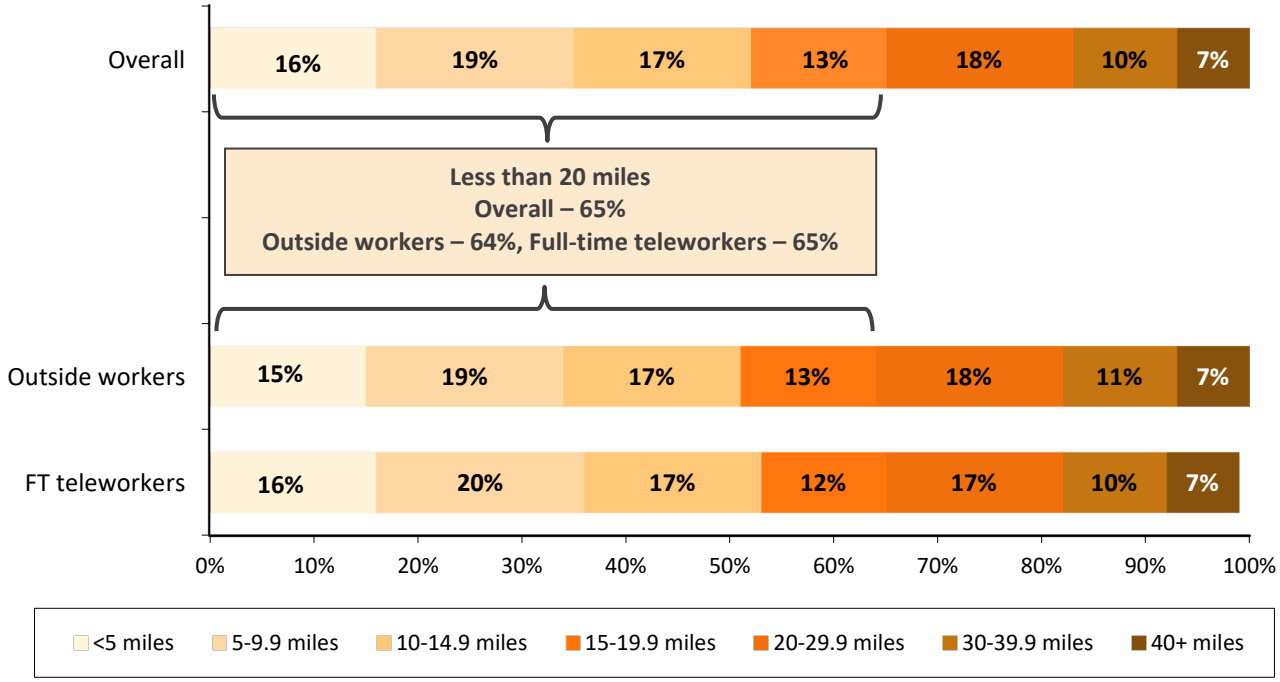
A different change was made to the commute mileage question to include two question forms. Respondents who were traveling to an outside work location one or more days per week were asked the same question that had been asked in the 2019 survey: “How long is your typical daily commute one-way in miles?” Respondents who were teleworking full-time were asked: “You said you are working from home full-time now. How many miles is it one-way from your home to where you would work if

you were not working from home?" Because the non-telework location would be a physical location, it was reasonable to expect respondents could provide a valid response to the question.

Number of Miles

Respondents reported a wide range of commute distances, ranging from less than one mile to more than 100 miles, with an overall average of 16.7 miles. Slightly more than one-third (35%) of respondents said they commuted, or would commute if they were not teleworking full-time, fewer than 10 miles one-way (Figure 14). Three in ten (30%) reported a distance between 10 and 19 miles. Seven percent reported a commute distance of 40 or more miles.

Figure 14
Commute Distance (miles) – Overall, Outside Workers, and Full-time Teleworkers
(Overall n = 7,291, Outside workers n = 4,854, Full-time teleworkers n = 2,452)



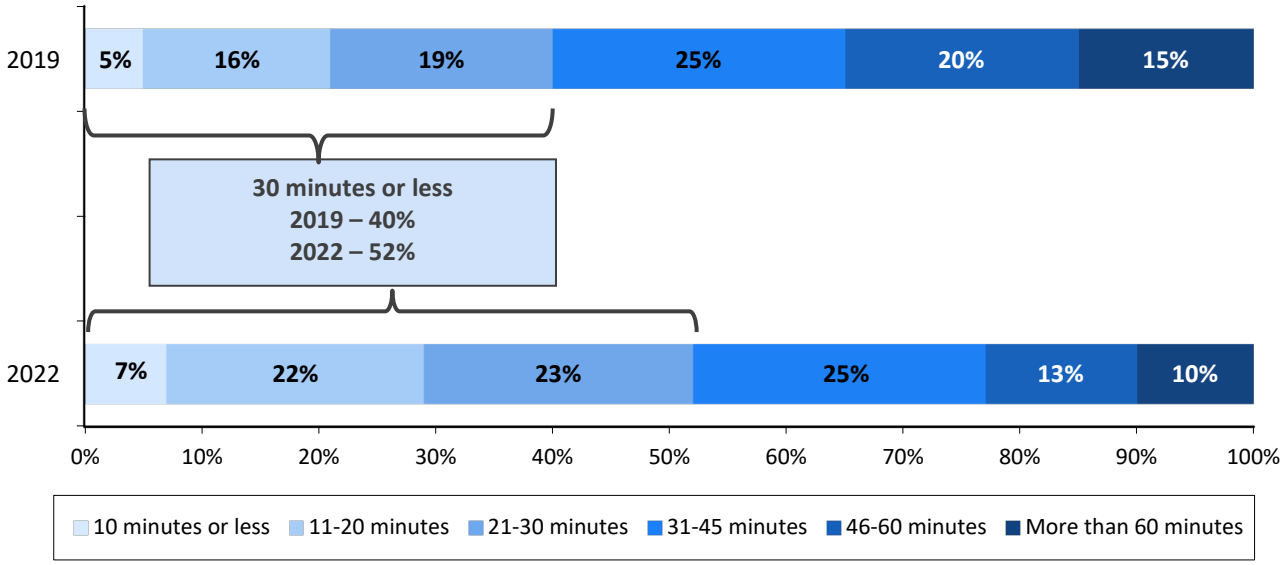
The 16.7 mile average travel distance was slightly less than the 17.1 miles estimated in the 2019 SOC survey. The drop could be related to work location changes. Respondents who were traveling to an outside work location in 2022 reported an average commute distance of 16.9 miles, not statistically different from the overall distance in 2019. By contrast, those who were working from home full-time said their average travel distance would be 16.3 miles if they were not teleworking. But the distance distributions of the two groups were nearly the same. About two thirds of both groups reported they traveled or would travel less than 20 miles (full-time teleworkers 65%, outside workers 64%) and 7% of each group reported 40 or more miles. And the overall distance distribution in 2022 was not statistically different from the distribution in 2019.

Commute Travel Time

Respondents who were traveling to an outside work location commuted, on average, about 37 minutes one-way.[9] Three in ten (29%) respondents commuted 20 minutes or less and 48% commuted between 21 and 45 minutes (Figure 15). Slightly less than one quarter (23%) traveled more than 45 minutes, with 10% traveling more than one hour one-way.

The 2022 reported average commute time (37 minutes) was notably shorter than the time reported in 2019 (43 minutes). This could be related to the slight drop in commute distance, but it is likely the elimination of commute trips due to expanded telework was the more significant factor. One-third of workers were teleworking full-time at the time of the survey and another one-third were teleworking at least occasionally. This would have removed a much larger number of commuting trips from the peak period in 2022 than in 2019.

Figure 15
Commute Time (minutes) – 2019 and 2022
(2019 n = 7,862 ; 2022 n = 5,088)



Commute Distance By Mode

Survey respondents' travel mileage and travel time differed by the type of transportation they used to commute (Table 12). Commuter rail riders traveled the farthest, 31.1 miles one-way. Commuters who drove alone to work also traveled farther than the 16.7-mile regional average.

Transit riders spent the longest amount of time commuting; commuter rail riders traveled 76 minutes on average, while bus and Metrorail riders traveled averages of 50 minutes and 49 minutes, respectively, for their one-way commute trips.

[9] Respondents who teleworked full-time were excluded from the questions on the time they spent commuting, because it asked about a current activity (commuting to an outside location) that was not relevant to their situation.

Table 12
Average Commute Distance and Commute Time by Primary Mode

(Note: Distances greater than 120 miles and times greater than 150 minutes are excluded from the averages; Vanpool is excluded from the mode list due to insufficient sample size for reliable analysis)

Primary Commute Mode	Average Distance (mi.)		Average Time (min.)	
	(n = __)	Average	(n =__)	Average
Commuter rail	38	31.1 mi.	47	76 min.
Drive alone	3,247	18.1 mi.	3,434	35 min.
Carpool	104	16.7 mi.	110	37 min.
Bus	175	13.9 mi.	206	50 min.
Metrorail	320	12.4 mi.	383	49 min.
Bike	88	4.5 mi.	88	25 min.
Walk	91	1.3 mi.	98	20 min.

Commute Distance By Home and Work Location

Respondents' travel distance also varied by where they lived and where they worked (Table 13). Respondents who lived in the Core area traveled the shortest distance to work, an average of 7.7 miles one-way. Respondents who lived in the Middle Ring commuted considerably farther, 15.6 miles. Respondents who lived in the Outer Ring traveled an average of 26.4 miles one-way, more than three times the distance of Core area residents.

Table 13
Average Commute Distance and Commute Time by Home and Work Areas

(Note: Distances greater than 120 miles and times greater than 150 minutes are excluded from the averages)

Primary Commute Mode	Average Distance (mi.)		Average Time (min.)	
	(n =__)	Average	(n =__)	Average
Home Area				
Core	2,263	7.7 mi.	1,436	31 min.
Middle Ring	2,255	15.6 mi.	1,549	35 min.
Outer Ring	2,745	26.4 mi.	2,098	46 min.
Work Area				
Core	3,564	15.3 mi.	2,244	42 min.
Middle Ring	2,480	16.3 mi.	1,814	33 min.
Outer Ring	810	18.0 mi.	688	28 min.

Commute distances by work area were less varied. Respondents who worked in the Core traveled an average of 15.3 miles and Middle Ring workers traveled 16.3 miles. Respondents who worked in the Outer Ring traveled the farthest, 18.0 miles one way.

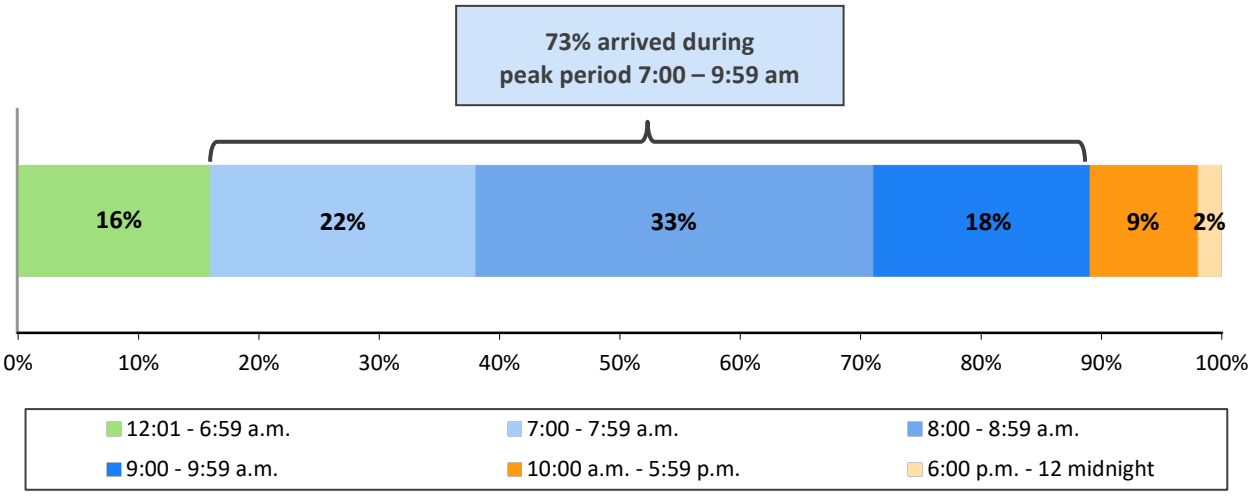
Core area residents had the shortest travel time, an average of 31 minutes one-way. But, while the Core respondents traveled fewer miles and fewer minutes to work than did other respondents, they did not have proportionately shorter travel times than their distances might suggest. Middle Ring residents traveled only four minutes longer than did Core residents and Outer Ring residents traveled just 15 minutes longer, despite substantially longer mileage. This was likely due to Core residents' higher transit and bike/walk use; transit and bike/walk trips, while short in distance, tend to be longer in time.

By contrast with the home area results, respondents who worked in the Core had the longest commute time, an average of 42 minutes one-way. Middle Ring workers and Outer Ring workers commuted 33 and 28 minutes, respectively. The higher travel time for Core workers likely was due to their higher use of transit for commuting and congestion they would encounter along their commute.

Work Arrival Time

More than half (55%) of all respondents typically arrived at work between the hours of 7:00 am and 8:59 am (Figure 16). Another 18% arrived between 9:00 am and 9:59 am, so many of these commuters also would be traveling during the peak commuting time. Sixteen percent arrived at work before 7:00 am.

Figure 16
Arrival Time at Work
(n = 5,137)



Arrival Time in 2022 versus 2019 – The question of arrival time was asked only of respondents who were traveling to an outside work location at least one day per week; full-time teleworkers were not asked the question. Thus, the results shown in Figure 16 represent work arrival time for only about six in ten respondents. But the distribution of arrival times was not substantially different in 2022 than in 2019, when 97% of respondents were asked the question. In 2019, 57% of respondents arrived between 7:00 am and 8:59 am and 77% of respondents arrived during the peak period.

Primary Roads Used on the Trip to Work

The 2022 SOC survey included a question to identify the major roadways that commuters use to get to work. This question will primarily be used for COG/TPB planning purposes, but the results are briefly summarized in Table 14 for commuters whose primary mode was carpool/vanpool or public transit. These commuters did not drive alone to work, so the question identified roads on which traffic was most likely to have been reduced when commuters chose non-drive alone modes of travel.

Table 14
Primary Roadways Used to Get To Work – Commuters who Carpool/Vanpool or Ride Public Transit

Primary Roadway	Carpoolers / Vanpoolers (n = 115)	Public Transit Riders (n = 617)
Maryland / District of Columbia)		
I-495 – Capital Beltway (MD)	16%	13%
I-270 (MD)	10%	6%
I-295 (MD/DC)	9%	12%
I-95 (MD)	8%	7%
U.S. Route 1 (MD)	7%	4%
U.S. Route 50 – John Hanson Highway (MD)	5%	2%
I-695 – Southeast-Southwest Freeway (DC)	1%	5%
Baltimore Washington Parkway – U.S. Route 295 (MD)	1%	6%
U.S. Route 301 (MD)	1%	2%
U.S. Route 29 – Colesville Road (MD)	1%	0%
Virginia		
I-66 Outside the Beltway (VA)	24%	8%
I-66 Inside the Beltway (VA)	23%	11%
I-495 – Capital Beltway (VA)	19%	8%
I-395 Shirley Highway (VA)	18%	15%
I-95 (VA)	18%	9%
Dulles Toll Road – VA Route 267 (VA)	13%	5%
U.S. Route 50 – Lee Jackson Highway (VA)	13%	5%
George Washington Parkway (VA)	12%	7%
U.S. Route 1 – Richmond Highway (VA)	11%	5%
VA Route 29 – Lee Highway (VA)	4%	1%

The most common commute route for carpoolers/vanpoolers was I-66 in Virginia; nearly one-quarter used I-66 either outside the Beltway (24%) or inside the Beltway (23%) for their trip to work. Other common routes, each used by nearly two in ten carpoolers/vanpoolers were the Capital Beltway in both Virginia and Maryland, I-395 (Shirley Highway) in Virginia, and I-95 in Virginia. About one in ten carpoolers/vanpoolers used the Dulles Toll Road, US Route 50, the George Washington Parkway, and US Route 1 in Virginia. One in ten carpoolers/vanpoolers said they used I-270, I-295, or I-95 in Maryland.

Commuters who used transit all their workdays were asked what roads they would use if they drove to work. Among transit riders, common routes would be the Capital Beltway in Maryland and Virginia, I-295 in Maryland/District of Columbia, I-270 in Maryland, I-395, I-66, and I-95 in Virginia.

Alternative Mode Use Characteristics

Carpool Occupancy

About 2% of respondents reported carpooling one or more days per week. On average, respondents' carpools carried 2.3 occupants, including the driver. Average carpool occupancy declined slightly from the 2019 SOC survey, when carpools carried an average of 2.6 occupants. This could reflect a reduction in carpooling with non-family members, but carpool occupancy had fluctuated between 2.4 to 2.6 occupants over the past 15 years of SOC surveys, so the 2022 average does not necessarily indicate a longer-term declining trend. In 2022, two-thirds (67%) of carpoolers rode with just one other person. It was not possible to calculate a reliable vanpool occupancy, because only eight respondents reported vanpooling. But all vanpoolers said their vanpools had eight or fewer occupants.

Seven respondents said they used a pooled form of ridehail, such as UberPool, Uber Express Pool, Lyft Shared Ride, or Lyft XL at least one day per week for their commute. While ridehail services are not typically considered carpools, in the traditional sense of the word, these pooled options are comparable to casual carpooling, because passengers share rides with other passengers on a one-time basis. These respondents were asked how many passengers (excluding the driver) were usually in the vehicle, but as with vanpooling, the sample of shared-ride ridehail users was too small to analyze.

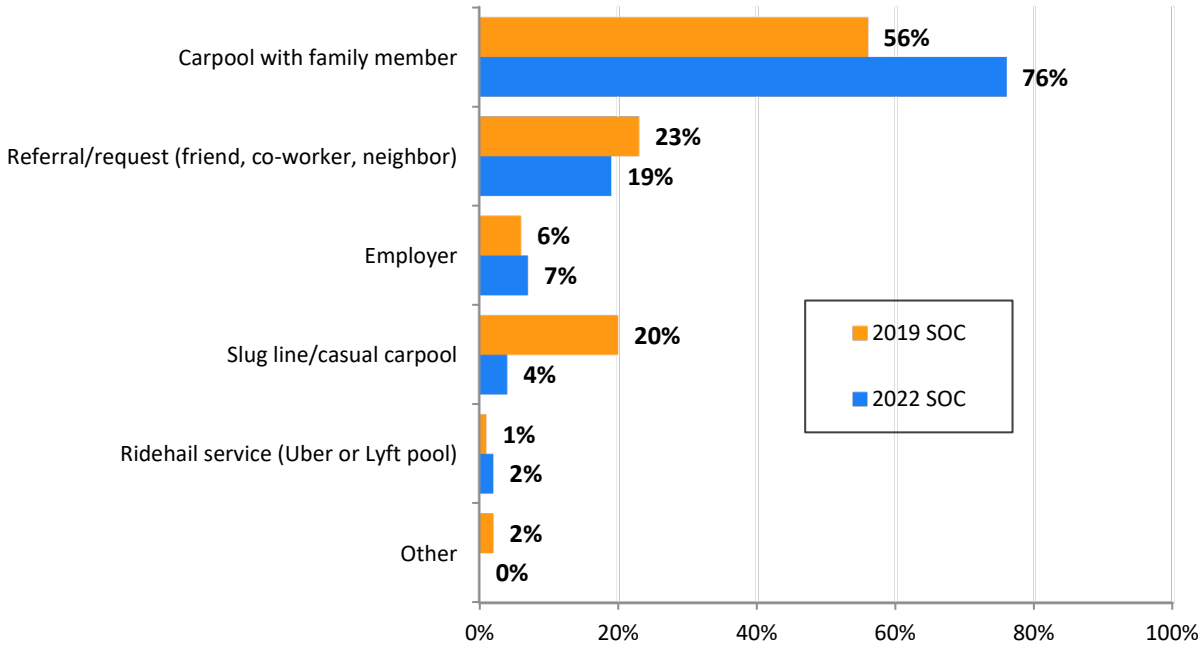
Carpool Formation Assistance

Carpoolers have numerous ways to find rideshare partners. More than three-quarters (76%) of respondents who carpooled at the time of the survey rode with family members (Figure 17). This was a notable increase over the 2019 SOC survey, when only 56% of carpoolers reported household carpooling. This most likely indicates that while the share of regional workers who carpool had declined, household carpooling had continued through the pandemic, representing a larger component of the overall lower carpool population in 2022 than it did in 2019.

The other notable change between 2019 and 2022 was the drop in carpoolers who said they casual carpooled/slugged, so traveled with different people each day they carpooled. These commuters either pick up riders at slug line pick-up points or wait in the line to travel as a passenger. In 2022, only 4% of carpoolers found their partners through slug lines, compared with 20% in 2019.

For more than 25 years, slug lines that facilitate use of this mode, primarily located in Virginia near the I-95 and I-395 HOV lanes, have provided both a substantial time-saving motivation for commuters to carpool and an opportunity to carpool without committing to a full-time carpool arrangement. The coronavirus pandemic could have had two impacts on these arrangements. First, the shift of many workers to work from home/telework would have reduced the number of potential slug drivers and riders. The second possible factor is commuters' desire to minimize their risk of contracting coronavirus by avoiding travel with commuters whose virus and or vaccination status they did not know.

Figure 17
How Carpool Riders Found Rideshare Partners – 2019 and 2022
(2019 n = 420, 2022 n = 153; multiple responses permitted)



The percentages of carpoolers who found carpool partners by other methods did not change substantially from 2019 to 2022. The second highest share of carpool formation in 2022 was by referral or simple request from a friend, co-worker, or neighbor who knew that their work locations and schedules were compatible; 19% of respondents cited this source. Presumably these respondents did not need assistance from an outside group to find rideshare partners, although they might have received other services, such as preferential or reserved carpool parking at work or information about the location of Park & Ride lots, which influenced their decisions to rideshare. The 2022 percentage was near the 23% for referrals in the 2019 SOC survey.

Seven percent of carpoolers said they found their rideshare partners through their employer, about the same as the 6% who reported this source in 2019. Although some employers do provide pool formation assistance, it is likely that many of these ridersharers used regional or local commuter ridematching resources, which were provided to them at transportation information meetings and fairs at their worksites, with the agreement and encouragement of their employers. Two percent said they carpooled through a pooled ridehail service, such as UberPool or Lyft Shared Ride.

Access Mode to Alternative Mode Meeting Points and from Drop Off to Worksite Destination

Table 15 presents how carpoolers, vanpoolers, and transit riders traveled to where they met their rideshare partners or where they started their transit trip. The table also shows results for a question asking transit commuters how they got from where they got off the bus or train to their work location. This question was designed particularly to examine use of bikeshare and e-scooters as a “last mile” option to get from a transit stop to the workplace.

Table 15
Means of Getting from Home to Alternative Mode Meeting Place and from Alternative Mode "Drop Off" Location to Worksite Destination
(Access to alternative mode n = 1,039; Worksite destination access n = 878)

Access/Destination Mode	Access Mode Percentage	Destination Mode Percentage
Driving access	**22%**	
Drive to a central location (e.g., Park & Ride)	21%	
Drive alone to driver's/passenger's home	1%	
Non-driving access	**78%**	
Walk	45%	
Picked up at home by carpool/vanpool driver	13%	
Bus/transit	13%	
Dropped off/rode in another carpool/vanpool	3%	
I drive the carpool/vanpool or carpool with family members	2%	
Bicycle	2%	
Non-driving destination mode (transit users)		**100%**
Walk		93%
Ridehail (Uber, Lyft)		2%
Bicycle (personal, bikeshare, dockless), scooter/e-scooter		1%
Bus, shuttle, Metrorail		4%

Access Mode to Alternative Mode Meeting Points – More than four in ten respondents walked (45%) to the meeting place. Thirteen percent said they were picked up at home by the carpool or vanpool driver and 2% always drove the pool vehicle or rode with a household member, so they left home together. Thirteen percent of respondents rode transit to the meeting point and 3% said they were dropped off, for example by a spouse or other household member. Two percent bicycled to the meeting point.

The remaining 22% of respondents said they drove to the meeting point, such as a Park & Ride lot or bus/train station (21%) or the home of a carpool rider (1%) and left their cars at that location during the day. This is significant, because a large proportion of auto emissions are produced during the first few miles of a vehicle trip, when the engine is cold. Even though these trips generally were short, they have an environmental impact.

The total 22% drive alone access, however, is a reduction from 32% drive alone access in the 2019 survey. This likely reflects the drop in carpool/vanpool use from 2019 to 2022; drive alone access is more common for ridesharers than for transit riders. Driving alone to a meeting point also was far more common for commuters who lived outside the Core area. Nearly six in ten (57%) alternative mode commuters who lived in the Outer Ring and 25% of Middle Ring commuters drove alone to the meeting point. Among Core area respondents, driving alone accounted for only 4% of all access trips. Core respondents were far more likely to walk; 71% walked to the meeting point, compared with 36% of Middle Ring respondents and just 7% of Outer Ring residents.

The high share of walk access for Core area residents largely reflects their proximity to and use of transit. Nearly three-quarters (74%) of bus riders and 42% of train riders walked to the transit stop. By comparison, the majority (72%) of carpoolers said they traveled from home with a household member, so there was no access distance at all. Among train riders, 25% drove and 22% took a feeder bus.

Destination Mode from Transit Drop Off Location to Workplace Destination – The third column of Table 15 displays the modes transit riders used to get from their transit "drop off" point to their work location. Nearly all (93%) of these respondents said they walked from the drop-off point to their work location. Two percent used a ridehail service and 1% used a bike (personal bike, Capital Bikeshare, dockless bike) or a scooter/e-scooter. About 4% said they rode a company shuttle or other transit service to the work location. The question specifically asked respondents who used more than one transit route or mode to report how they got to work after they got off the last transit vehicle. These respondents appear to have misunderstood the question. If they are excluded from the respondent base, the share of respondents who walked from the drop-off location rises to 97%, with 2% using ridehail and 1% using a bike/scooter.

Distance to Alternative Mode Meeting Point

Most access trips to alternative mode meetings points were short. Respondents traveled an average of 2.6 miles to the meeting point. Six in ten (60%) traveled one mile or less; these were primarily bus and Metrorail riders who walked to the stop or station (Table 16). About one-quarter (27%) of respondents traveled between 1.1 and 5.0 miles. Only 13% of respondents traveled more than 5.0 miles. Carpoolers traveled farther to the meeting points than did transit riders; carpoolers had an average access distance of 3.6 miles, while train riders traveled 2.9 miles. Bus riders traveled the shortest distance, an average of just 2.0 miles, and 55% of bus riders traveled one-half mile or less.

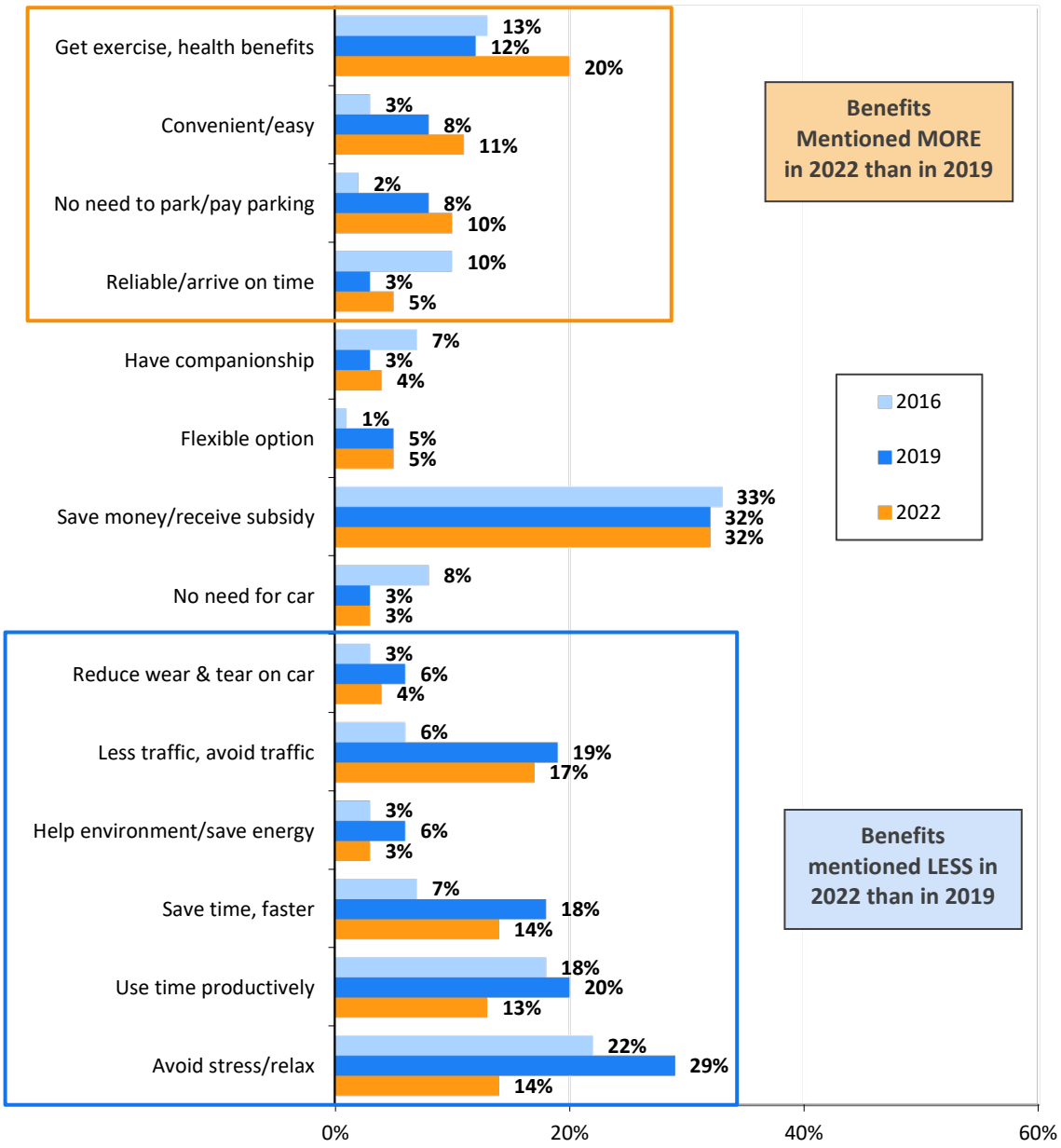
Table 16
Distance from Home to Alternative Mode Meeting Point
(n = 830)

Distance	Percentage
1.0 mile or less	60%
1.1 to 3.0 miles	17%
3.1 to 5.0 miles	10%
5.5 to 10.0 miles	8%
10.1 miles or more	5%

Personal Benefits of Alternative Mode Use

Respondents who used alternative modes were asked what benefits they personally had received from traveling to work this way. More than nine in ten (94%) named at least one benefit, a slightly higher share than the 89% who mentioned a personal benefit in 2019. Saving money or receiving a financial incentive that reduced their transportation cost topped the list of personal benefit; 32% of alternative mode users mentioned this benefit (Figure 18).

Figure 18
Personal Benefits of Alternative Mode Use – 2016, 2019, and 2022
Asked Only of Alternative Mode Users
(2016 n = 1,555, 2019 n = 2,610, 2022 n = 1,203)
(Scale extends only to 60% to highlight differences between years)



Respondents also cited benefits that have a connection to personal quality of life. About two in ten, primarily those who biked/walked or used transit to work, mentioned getting exercise or another health benefit (20%). Seventeen percent said use of alternative modes could avoid traffic and 14% said it helped them avoid stress or relax while commuting. Fourteen percent said they could save time or travel more quickly and 13% said they could use their travel time productively when they used an alternative

mode. Over one in ten said it was a convenient/easy way to travel (11%) and 10% benefitted by not needing to find or pay for parking.

Figure 18 also presents responses to this question from the SOC surveys in 2016 and 2019. Saving money was the top benefit in each of the three years shown, but other benefits showed quite different results in 2022 than in 2019. As shown by the responses highlighted with the orange box at the top of the figure, larger shares of 2022 respondents mentioned getting exercise, convenience, avoiding parking, and reliability than did 2019 respondents. Responses that were mentioned less often in 2022 than in 2019 are shown in the blue box at the bottom of the figure. These included reducing wear and tear, avoiding traffic, environmental concern, saving time, using time productively, and avoiding stress. Benefits in the center of the figure were mentioned at statistically the same rates in 2022 as in 2019.

Differences in Personal Benefits by Alternative Mode – Saving money was a common personal benefit named by all alternative mode users, with about two in ten in each mode group naming this benefit (Table 17). Saving time also was noted across modes, but carpoolers/vanpoolers and bike/walk users noted this benefit at a much higher rate than did transit riders. Respondents who primarily carpooled also reported having companionship during the commute, saving on gas, and being able to use the HOV lanes, a benefit associated with saving time. Carpoolers also cited less wear and tear of personal vehicles and flexibility in traveling, benefits also mentioned by transit riders.

Table 17
Personal Benefits of Alternative Mode Use by Primary Alternative Mode
(Shaded percentages indicate statistically higher values for benefits)

Personal Benefit	Carpool (n = 135)	Transit (n = 800)	Bike/Walk (n = 261)
Save money	16%	22%	17%
Save time, travel faster	21%	11%	24%
Have companionship during commute	24%	1%	1%
Save gas, save energy	12%	7%	2%
Can use HOV lane	10%	0%	0%
Less traffic/don't need to drive	5%	23%	6%
Use travel time productively	5%	17%	4%
Avoid stress, relax	3%	16%	16%
No need to park/look for parking	3%	13%	5%
Receive financial benefit for mode use	0%	10%	0%
Get exercise	0%	5%	78%
Less wear and tear on car	7%	4%	2%
Flexibility/control/always available	6%	4%	8%
Arrive at work on time	4%	4%	6%
No need for a car	1%	3%	1%

Transit riders mentioned several benefits at higher rates than did other mode groups. They particularly noted being able to avoid traffic or not having to drive (23%), avoiding stress (16%), and not having to look or pay for parking (13%). Another benefit cited disproportionately by transit riders was using travel time productively (17%); this was noted by few carpoolers or bike/walk commuters, who would have to give their attention to their travel. Transit riders also mentioned receiving a financial benefit for their commute costs (10%), a benefit that was not mentioned by other alternative mode users. Commuters who bicycled or walked to work also mentioned saving money (17%), saving time (24%), and avoiding stress (16%), but they overwhelmingly noted getting exercise; nearly eight in ten bike/walk commuters noted this personal benefit.

Differences in Personal Benefits by Commute Distance (Minutes) and by Work Location – Some benefits were more often reported by short-distance or long-distance commuters or by respondents who worked in the Core of the region. For example, commuters who traveled 20 minutes or less to work noted that using an alternative mode was faster, gave them travel flexibility, and was an opportunity to get exercise. Commuters who traveled longer distances were more likely to mention avoiding traffic and stress. These results likely were related, however, to the modes that were common at each distance, such as the sizeable presence of bikers/walkers in the short commute time category and carpoolers and train riders in the long commute time group.

Respondents who worked in the Core or Middle Ring areas were more likely to note using travel time productively, avoiding traffic/not having to drive, and avoiding stress during their commutes than were Outer Ring workers, but these benefits also were likely influenced by both the modes used and travel time to each area, so were not solely due to work location. One benefit that was definitively related to location was the benefit of not needing to find parking. One in ten (11%) Core workers and 9% of Middle Ring workers mentioned not needing to find parking because they used an alternative mode, compared with less than 1% of Outer Ring respondents.

SECTION 3 – RECENT COMMUTE CHANGES, EASE OF COMMUTE, AND COMMUTE SATISFACTION

The SOC survey also examined recent changes in commuting, in particular:

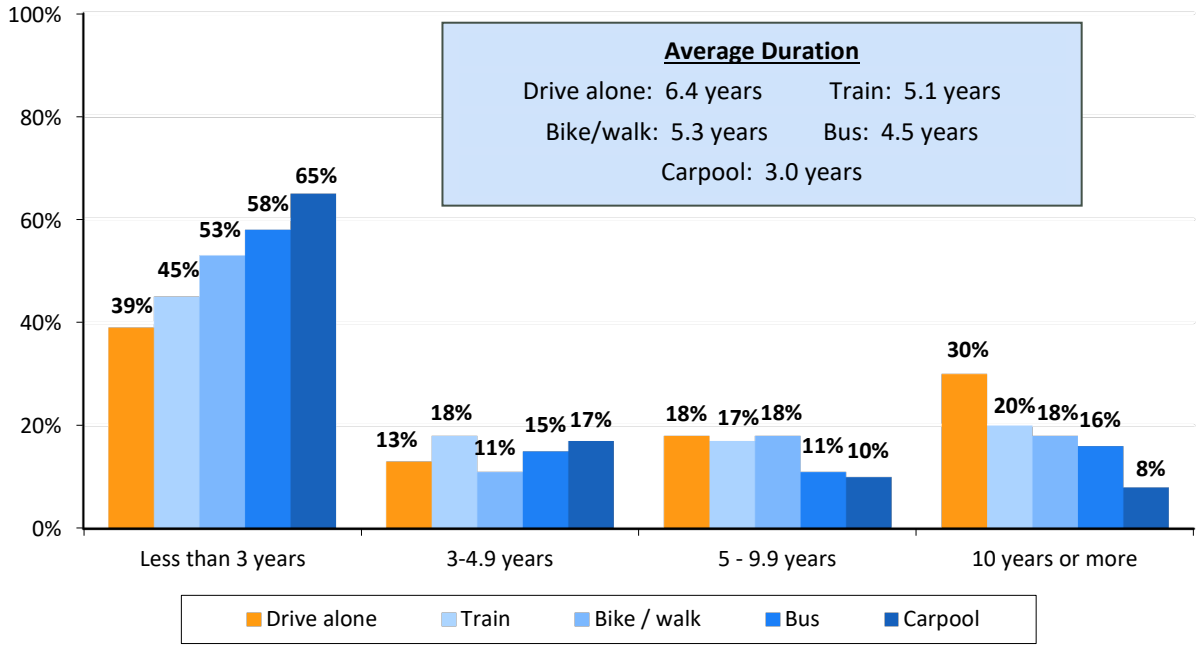
- Commute mode shifts and motivations for making commute changes
- Satisfaction with current commute
- Ease of commute
- Commute influence of residential and work location changes

Commute Mode Shifts and Mode Shift Motivations

Length of Time Using Mode

Respondents were asked how long they had used each mode they reported using one or more days per week. Results are shown in Figure 19 for commuters who drove alone, rode a train, rode a bus, biked/walked, and carpooled. Commuters who drove to work had used this mode the longest, an average of 6.4 years. Three in ten (30%) drive alone commuters used this mode 10 years or more and 48% had been driving alone for five or more years. About four in ten (39%) started using this mode less than three years ago.

Figure 19
Duration of Mode Use by Primary Commute Mode
(Drive alone n = 3,755, Train n = 595, Bus n = 280, Bike /Walk n = 294, Carpool n = 148)



Alternative mode users had used their modes for shorter durations, ranging from an average of 3.0 years (carpool) to 5.3 years (bike/walk). But a substantial portion of alternative mode users still were long-term users; 37% of train riders, 36% of bike/walk commuters, 27% of bus riders, and 18% of carpoolers had used these modes for five or more years. Carpoolers and bus riders were most likely to

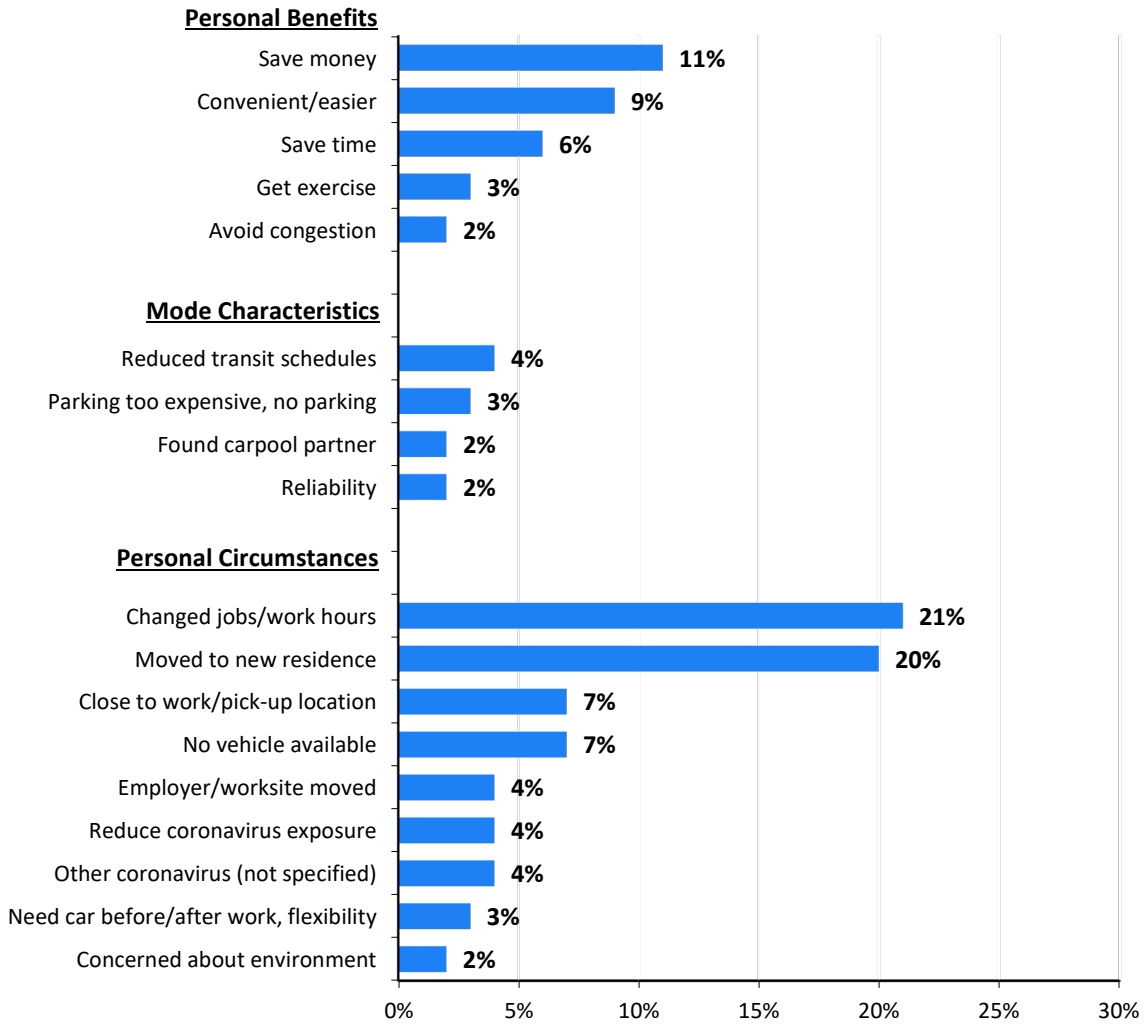
have started using these modes recently; 65% of commuters who carpooled and 58% of bus riders started using these modes within the past three years. About half (53%) of bikers/walkers and 45% of train riders started these modes less than three years ago.

Reasons for Changing Mode

Respondents who Started a New Alternative Mode – Respondents who had been using an alternative mode for three years or less were asked why they began using those modes. The reasons are listed in Figure 20, divided into three broad categories:

- Personal benefits – benefits the respondent would expect to receive by using an alternative mode
- Commute mode characteristics – characteristics, either positive or negative, that had encouraged or discouraged use of a mode
- Personal circumstances – personal circumstances or changes experienced by the respondent

Figure 20
Motivations to Start Using Current Alternative Mode
(Note: Scale extends only to 30% to highlight difference in responses)
(n = 378, multiple responses permitted)



Current alternative mode users cited motivations in each of the three categories. The most common personal benefit reasons were to save money (11%), that the new mode was more convenient to use (9%), or to save time (6%). The most common reason in the mode characteristics category was that transit service/schedule had been reduced, noted by 4% of respondents. The top two personal circumstances reasons to shift to an alternative mode were changing jobs or work hours (21%) and moving to a new residence (20%). Other personal circumstances included living close to work or to a transit pick-up location (7%) and not having a vehicle available (7%).

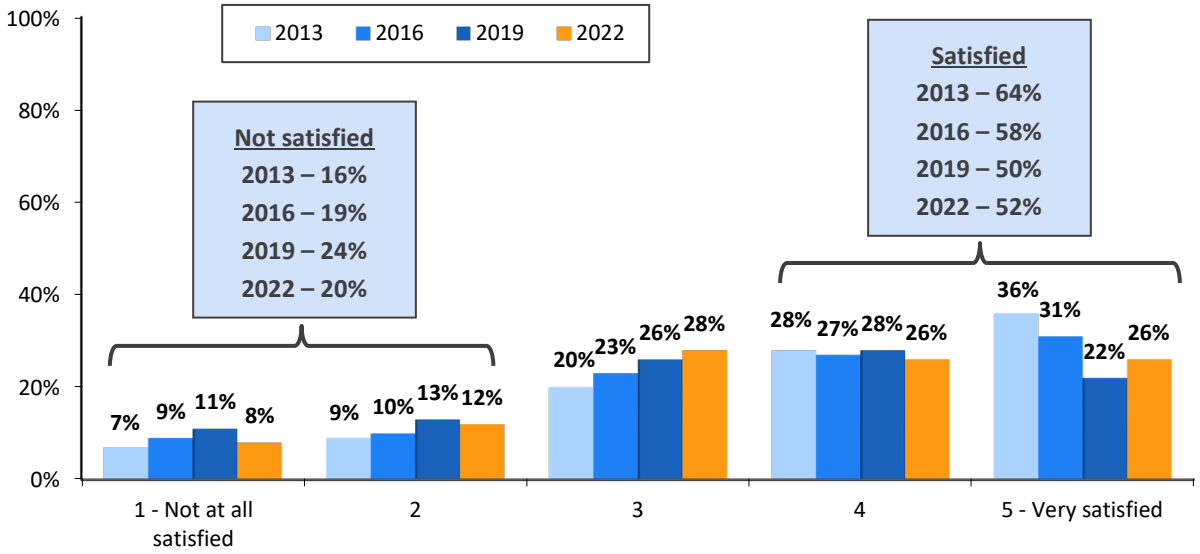
Respondents who Started Driving Alone – Respondents who started driving alone to work in the past three years gave some of the same reasons for switching modes as did alternative mode users; 16% of new drive alone users had changed jobs or work hours, 8% moved to a new residence, 7% wanted to save time, and 6% said driving alone was easier or more convenient. These results suggest both drive alone and alternative mode shifts are made to respond to changing personal circumstances. But respondents who started driving alone reported greater concerns about coronavirus than did alternative mode users; 11% of commuters who started driving alone said they wanted to avoid getting COVID-19 and 7% simply said "coronavirus pandemic." Twelve percent switched due to reduced or unreliable transit service and 7% said they lost a carpool partner; these also could have been pandemic-related.

Commute Satisfaction

The 2022 survey included a question that had been asked in several previous SOC surveys, about how satisfied commuters were with their trip to work. As with other questions about the current commute experience, respondents who were working from home/teleworking full-time were not asked this question, so this section reflects responses only for those who were commuting to an outside location one or more days per week.

In 2022, 52% rated their commute satisfaction as a "4" or "5" on a 5-point scale, where "5" meant "very satisfied" (Figure 21). Twenty-eight percent gave a rating of 3 and 20% rated their satisfaction as either a "1 – not at all satisfied" (8%) or 2 (12%).

Figure 21
Satisfaction with Commute – 2013 to 2022
(2013 n = 5,692, 2016 n = 5,217, 2019 n = 7,911, 2022 n = 5,131)



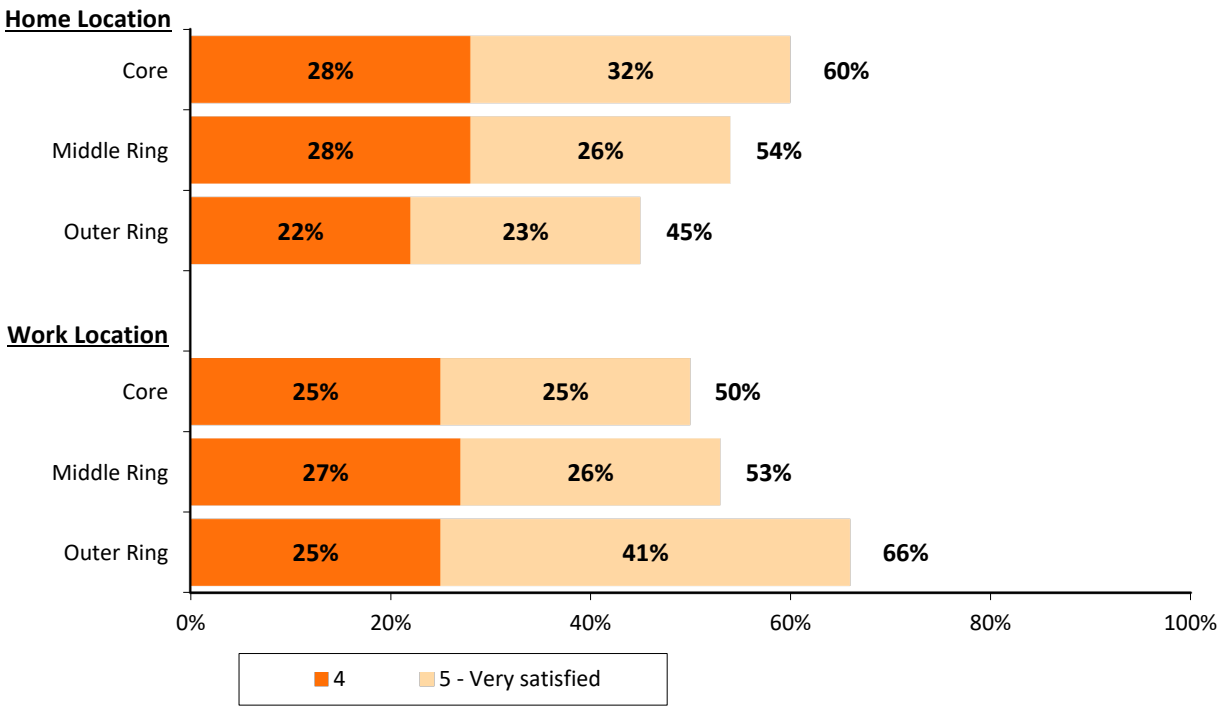
Commute satisfaction in 2022 was about the same as in 2019, when 50% of respondents rated their satisfaction as a 4 or 5 (very satisfied). But satisfaction has declined since 2013, when nearly two-thirds (64%) of SOC respondents said they were satisfied with their commute. The percentage satisfied fell over the next three years to 58% in 2016. Satisfaction declined even more between 2016 and 2019, to 50%, the lowest percentage since the question was added to the SOC survey in 2010. The uptick to 52% in 2022 is not a statically significant change.

Over the years since 2013, the most striking change has been in the percentage of respondents who reported being very satisfied (rating of 5). In 2013, 36% of all respondents said they were very satisfied. That percentage dropped in each of the subsequent survey years, to a low of 22% in 2019. In 2022, the percentage of very satisfied commuters increased slightly, to 26%.

Commute Satisfaction by Home and Work Location

Respondents who lived in the Core area were notably more satisfied with their commute than were respondents who lived farther out in the region (Figure 19). Six in ten Core residents rated their commute satisfaction as a 4 (28%) or 5-very satisfied (32%), while only 54% of Middle Ring and 45% of Outer Ring residents were satisfied. Respondents who worked in the Core and Middle Ring areas were about equally satisfied, with about half of respondents in these two work areas rating their commute satisfaction as a 4 or 5. Respondents who worked in the Outer Ring reported considerably higher satisfaction, however; two-thirds (66%) were satisfied and 41% said they were very satisfied.

Figure 22
Satisfaction with Commute by Home and Work Area
Percent Rating Commute Satisfaction a 4 or 5
(Home Area – Core n = 1,456, Middle Ring n = 1,569, Outer Ring n = 2,106)
(Work Area – Core n = 2,261, Middle Ring n = 1,822, Outer Ring n = 703)



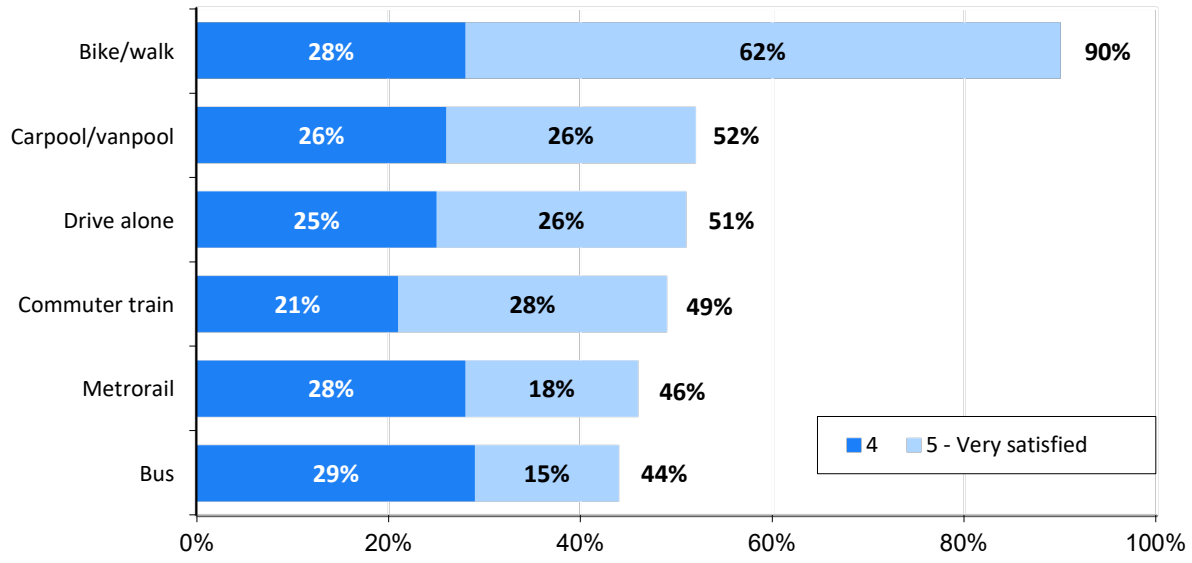
Commute Satisfaction by Demographic Characteristics

The data showed only small differences in commute satisfaction across demographic characteristics. Men and women were equally satisfied (men – 53% satisfied, women – 54% satisfied). Non-Hispanic White respondents (61%) were slightly more satisfied than were Hispanic (54%), Non-Hispanic Black (54%), or Asian (51%) respondents. Respondents with household incomes under $100,000 were more satisfied (58%) than were those with higher incomes (52%). And commute satisfaction was higher among respondents who were younger than 35 years (55%) and those who were older than 55 years old (58%) than for respondents in the middle 35 to 54 years old group (49%). The 2022 results for each of these demographic groups were consistent with the results observed in the 2019 SOC survey.

Commute Satisfaction by Commute Mode

Commute satisfaction appeared more related to commute mode than to demographics. Nine in ten (90%) commuters who walked or biked to work reported high commute satisfaction (Figure 23). About half of carpoolers/vanpoolers (52%) and drive alone commuters (51%) reported being satisfied. Transit riders reported slightly lower satisfaction; half (49%) of commuter rail riders also were satisfied but only 46% of Metrorail riders and 44% of bus commuters rated their commute satisfaction as a 4 or 5.

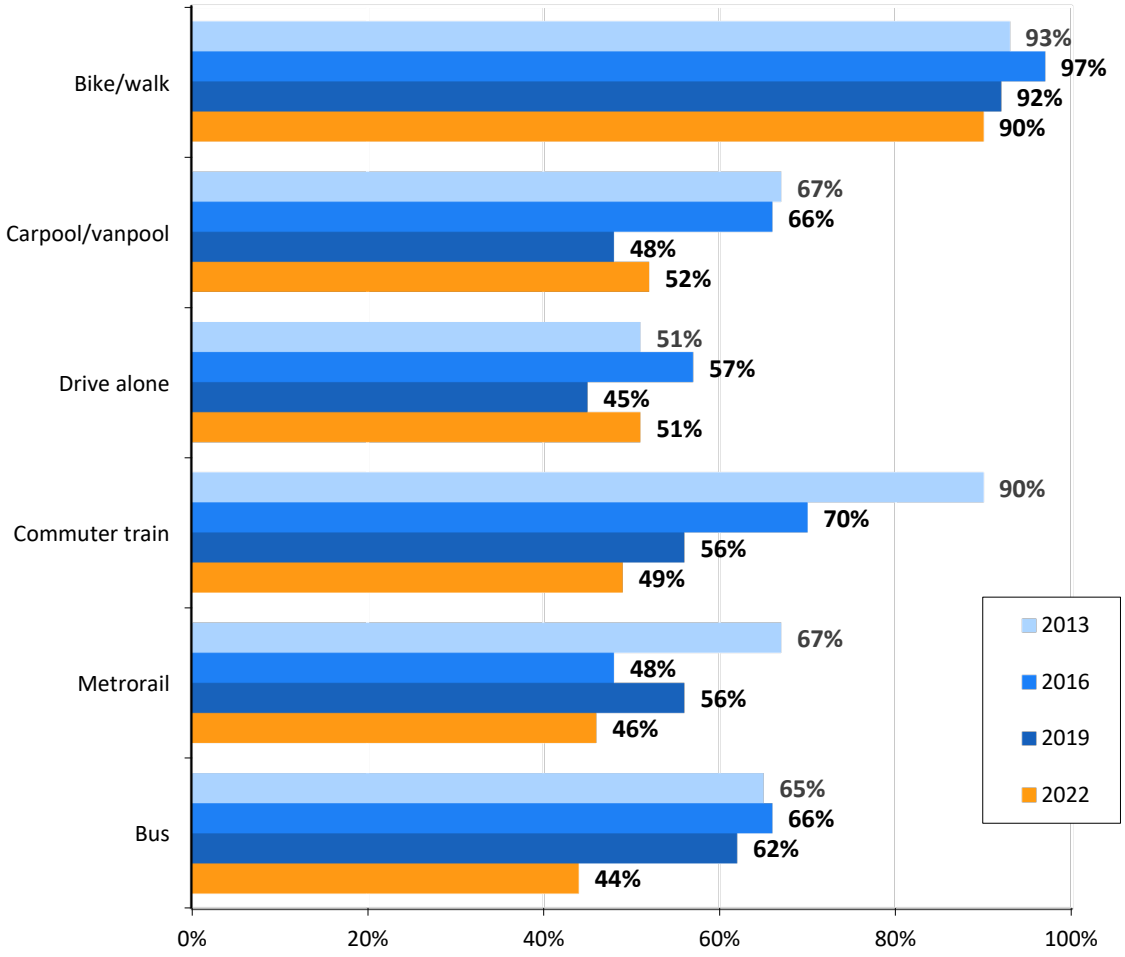
Figure 23
Satisfaction with Commute by Primary Commute Mode
Percent Rating Commute a 4 or 5
(Bike/walk n = 190, Carpool/vanpool n = 119, Drive alone n = 3,364, Commuter train n = 47, Metrorail n = 393, Bus n = 209)



Satisfaction by Mode from 2013 to 2022 – Commute satisfaction among bike/walk commuters has been high since 2013 but has shifted up and down for other mode users over the 12-year period (Figure 24). Carpool/vanpool and drive alone commute satisfaction both experienced a substantial decline between 2016 and 2019 but increased slightly in 2022. These mode users are most affected by traffic congestion and these changes could reflect longer travel times and more congested travel in 2019 and a lessening of congestion in 2022, as fewer workers traveled to outside job locations.

Figure 24
Satisfaction with Commute by Primary Commute Mode – 2013 to 2022
Percent Rating Commute Satisfaction as 4 or 5

(2013: Bike/walk n=150, Carpool/vanpool n=363, Drive alone n=4,080, Commuter train n=64, Metrorail n=615, Bus n=298)
(2016: Bike/walk n=180, Carpool/vanpool n=283, Drive alone n=3,552, Commuter train n=62, Metrorail n=634, Bus n=284)
(2019: Bike/walk n=302, Carpool/vanpool n=378, Drive alone n=5,042, Commuter train n=144, Metrorail n=1,177, Bus n=588)
(2022: Bike/walk n=190, Carpool/vanpool n=119, Drive alone n=3,364, Commuter train n=47, Metrorail n=393, Bus n=209)

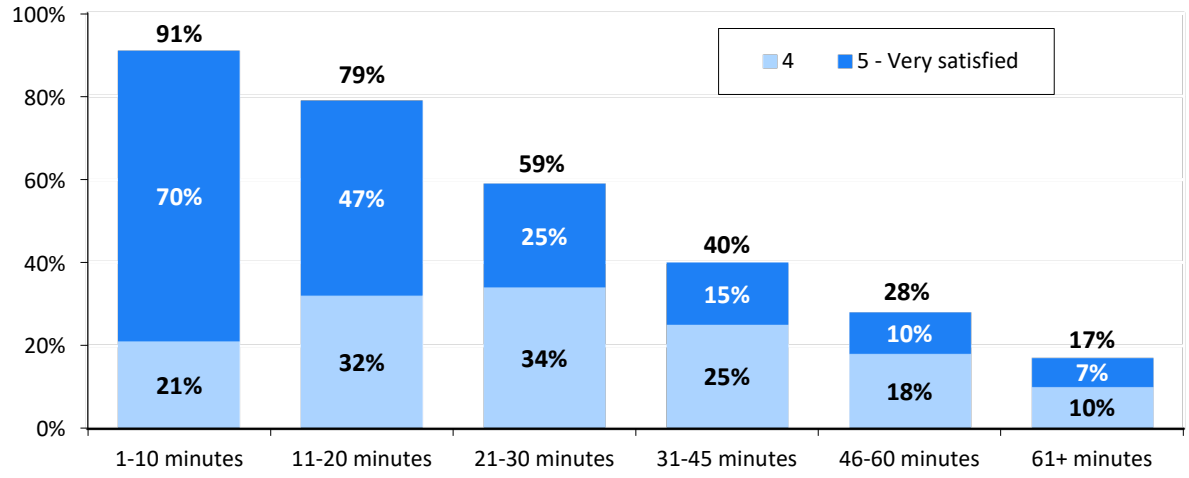


Satisfaction with transit commuting also has varied over the 12 years, but with different patterns for each transit mode. Satisfaction among bus users declined substantially between 2019 and 2022, after a stable pattern of satisfaction. Commuter rail satisfaction steadily declined from a high of 90% in 2013 to just 49% in 2022. Metrorail riders expressed notably lower satisfaction in 2016 than in 2013, likely due to the SafeTrack trackwork maintenance efforts, which affected both frequency and reliability of train service. Metrorail reversed some of the loss in 2019, when the SafeTrack work was completed, but satisfaction declined again in 2022. The 2022 decline in satisfaction for the three transit options likely is at least somewhat related to transit service disruption during the pandemic and riders' concerns with the potential exposure to coronavirus. Metrorail riders' ratings also could be related to perceptions that track, train car, and other infrastructure problems could negatively affect personal safety while riding.

Commute Satisfaction by Travel Time

Commute satisfaction declined steadily and significantly as the amount of time a commuter traveled increased (Figure 25). Nine in ten (91%) commuters who traveled 10 minutes or less gave a 4 or 5 rating for commute satisfaction. When the commute was between 11 and 20 minutes, 79% were satisfied. At 21 to 30 minutes, satisfaction dropped to 59%. Only four in ten (40%) commuters who traveled 31 to 45 minutes were satisfied and satisfaction fell to 28% for travel times of 46 to 60 minutes. When travel time exceeded 60 minutes, only 17% rated their commute a 4 or 5.

Figure 25
Satisfaction with Commute by Length of Commute (minutes)
Percent Rating Commute Satisfaction a 4 or 5
(1-10 min n = 353, 11-20 min n = 1,032, 21-30 min n = 1,018, 31-45 min n = 1,193, 46-60 min n = 804, 61+ min n = 626)

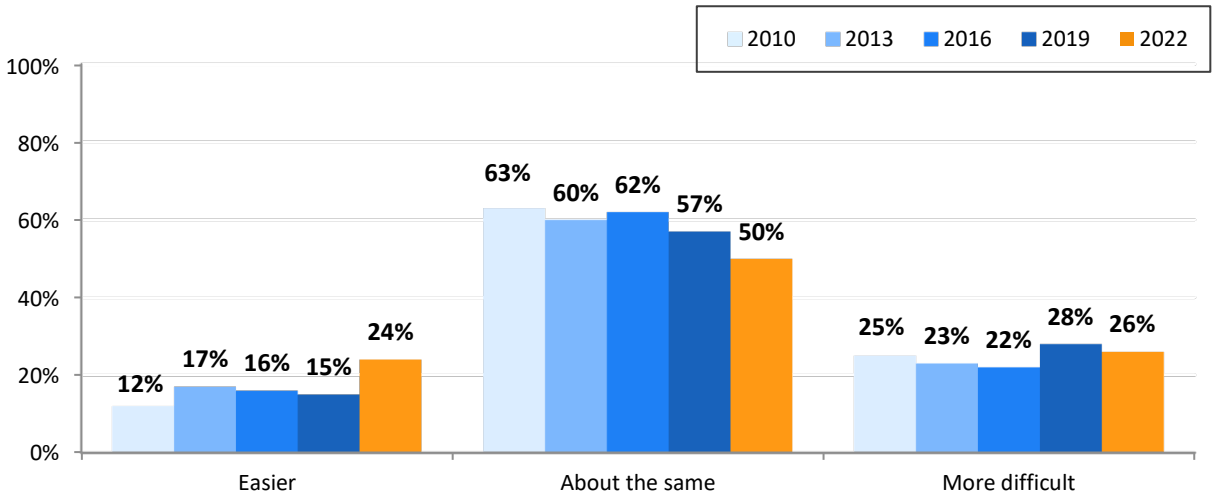


Ease of Commute

Respondents who commuted to an outside work location at least one day per week also were asked if their commute was easier, more difficult, or about the same as it was a year prior. Half (50%) of respondents said their commute was about the same (Figure 26). The remaining responses were divided nearly evenly between commuters who said their commute was easier (24%) and those who said their commute was more difficult (26%).

The 24% share of respondents who said they had an easier commute in 2022 was well above the results from the four previous surveys but the 26% share of commuters who said they had a more difficult commute in 2022 was not appreciably lower than for the previous years. With these combined results, 2022 was the first year in which the share of commuters who reported an easier commute was statistically as high as the share of commuters who experienced a degradation in the commute.

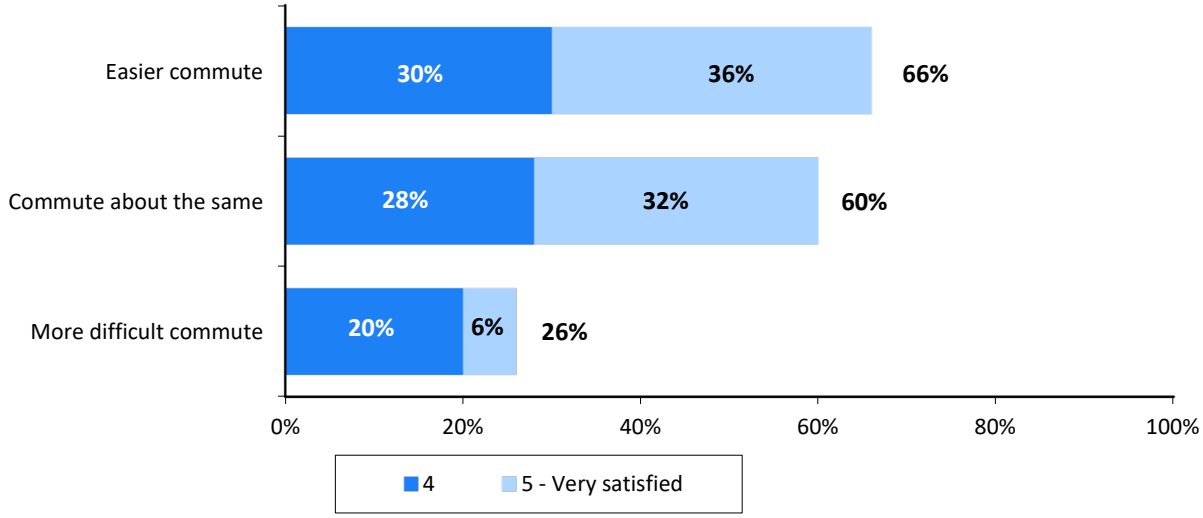
Figure 26
Commute Easier, More Difficult, or About the Same as Last Year – 2010 to 2022
(2010 n = 6,049, 2013 n = 5,717, 2016 n = 5,142, 2019 n = 7,787, 2022 n = 5,067)



Commute Satisfaction by Ease of Commute Compared with a Year Ago

Commuters' satisfaction with commuting appeared related to the ease or difficulty of commuting. Two-thirds (66%) of respondents who said they had an easier commute than last year and 60% who said their commute had not changed were satisfied with their commute, compared to only 26% who said their commute had become more difficult (Figure 24).

Figure 27
Satisfaction with Commute by Change in Ease of Commute
Percent Rating Commute Satisfaction a 4 or 5
(Easier commute n = 1,106, Commute about the same n = 2,637, More difficult commute n = 1,273)



Change in Commute Ease by Primary Commute Mode

Figure 24 showed that commute satisfaction had improved for carpool/vanpool and drive alone commuters between 2019 and 2022 and had declined for transit riders. Table 18, which presents results on change in commute ease by primary commute mode, suggests the satisfaction results are related to changes in the commute experience.

Table 18
Change in Ease of Commute by Primary Commute Mode
(Shading indicates statistically higher percentages of ease or difficulty)

Primary Mode	Easier	About the Same	More Difficult
Telework* (n = 772)	33%	45%	23%
Carpool/Vanpool (n = 119)	29%	44%	27%
Drive alone (n = 3,339)	24%	54%	23%
Bus (n = 207)	18%	40%	42%
Train (n = 426)	15%	35%	50%
Bike/Walk (n = 191)	15%	75%	10%

*Includes respondents who primarily teleworked but did NOT telework full-time; Full-time teleworkers were not asked the question about commute ease/difficulty.

Commuters who carpooled or vanpooled were about equally likely to report an easier commute (29%) as a more difficult commute (27%). Drive alone respondents had similar results. Respondents who primarily biked or walked to work were least likely to report a worse commute; only 10% said it was more difficult, but most (75%) reported a commute that was about the same.

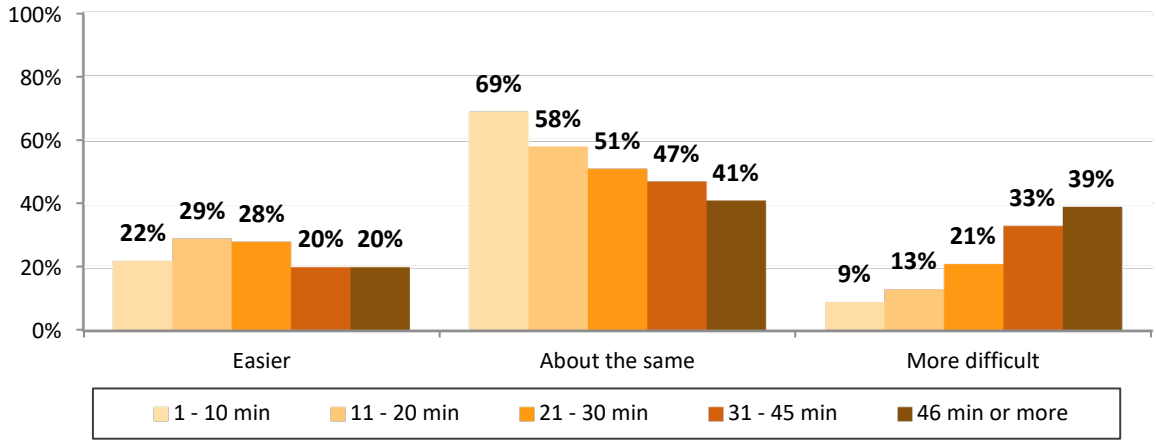
Train and bus riders reported a less positive experience. More than twice as many bus riders said they had a more difficult commute (42%) as said their commute was easier (18%). Train riders reported an even starker situation; half (50%) said their commute had become worse, more than three times the percentage who said it improved (15%). These results reinforce the drop in commute satisfaction for transit riders and satisfaction improvement of carpool/vanpool riders and drive alone commuters.

Respondents who were teleworking full-time were excluded from this question, but the question was asked of respondents who worked from home some days. One-third (33%) of respondents who primarily teleworked said they had an easier commute in 2022, while only 23% said their commute was more difficult. It seems reasonable to expect that eliminating some commute days could have influenced teleworkers' overall perception of commute ease.

Change in Commute Ease by Travel Time

Figure 28, which presents change in commute ease by respondents' commute time, shows a clear pattern; the ease of commuting was inversely proportionate to the length of the commute. Among commuters who traveled 10 minutes or less to work, seven in ten said their commute was about the same as it was a year ago and 22% said it was easier; only 9% said it was more difficult. Conversely, the share who had a more difficult commute increased steadily with increasing commute time. Among commuters who traveled more than 45 minutes to work, 39% said their commute was more difficult.

Figure 28
Change in Ease of Commute by Commute Time (minutes)
(1 to 10 min n = 352, 11 to 20 min n = 1,020, 21 to 30 min n = 1,012, 31 to 45 min = 1,174, 46 min or more n = 1,410)



Change in Commute Ease by Home and Work Location

Respondents who lived in the Core of the region were more likely to report that their commute was worse than one year ago than were commuters who lived farther from the center (Table 19). One-third (33%) of Core area residents said their commute was more difficult, compared with 24% of Middle Ring residents and 25% of Outer Ring residents. Percentages of respondents whose commutes had gotten easier were about the same in all three areas.

Table 19
Change in Ease of Commute in Past Year by Home Location – 2022 and 2019
Shading indicates statistically higher percentages)

Home Location	Easier	About the Same	More Difficult
Current (2022 SOC)			
Core (n = 1,432)	**22%**	**46%**	**33%**
Middle Ring (n = 1,551)	**25%**	**51%**	**24%**
Outer Ring (n = 2,084)	**21%**	**53%**	**25%**
Pre-pandemic (2019 SOC)			
Core (n = 2,104)	19%	61%	21%
Middle Ring (n = 2,315)	15%	59%	26%
Outer Ring (n = 3,368)	11%	49%	40%

As seen in the bottom of the figure, the 2022 results are nearly opposite to what was observed in 2019. In 2019, respondents who lived in the outer areas of the region were more likely to report a more difficult commute and fully four in ten (40%) Outer Ring residents said their commute was more difficult. The greater difficulty for Core area commuters in 2022 is likely related to their much higher use of transit for commuting, as was noted in the commute mode distributions reported in Section 2.

The ease or difficulty of commuting in 2022 also seemed related to where respondents worked, with the same pattern as was noted for home location. More than half (56%) of Core area residents said their commute had changed, compared with 46% of Middle Ring and 40% of Outer Ring workers. Respondents in all three areas reported similar rates of easier commutes (Core 25%, Middle Ring 23%, Outer Ring 23%) but one-third (33%) of respondents who worked in the Core reported a more difficult commute, compared with 23% of Middle Ring and 17% of Outer Ring workers. In 2019, work location did not appear to have an impact on changes in the ease or difficulty of their commute, with commuters in all three work areas reporting similar rates of easier and more difficult commutes.

Influence of Changes in Residence or Work Location on Commuting Conditions

Anecdotal reports suggest some commuters might move their residences and/or seek new jobs at least in part to make their commute easier or less costly and several survey questions explored the role commute factors might play in such decisions. Respondents were asked if they had made a change in their work and/or home location in the past two years. Note that commuters who shifted to full-time telework during the pandemic were asked only about home changes. They were not asked about work location changes, because the intent was to examine how job changes and/or moves to different worksites could affect commuting decisions. But it also should be noted that many workers lost jobs during 2020 due to business shut-downs related to the pandemic. While many subsequently found new jobs, their "decision" to change jobs or work locations might have been more necessity than choice.

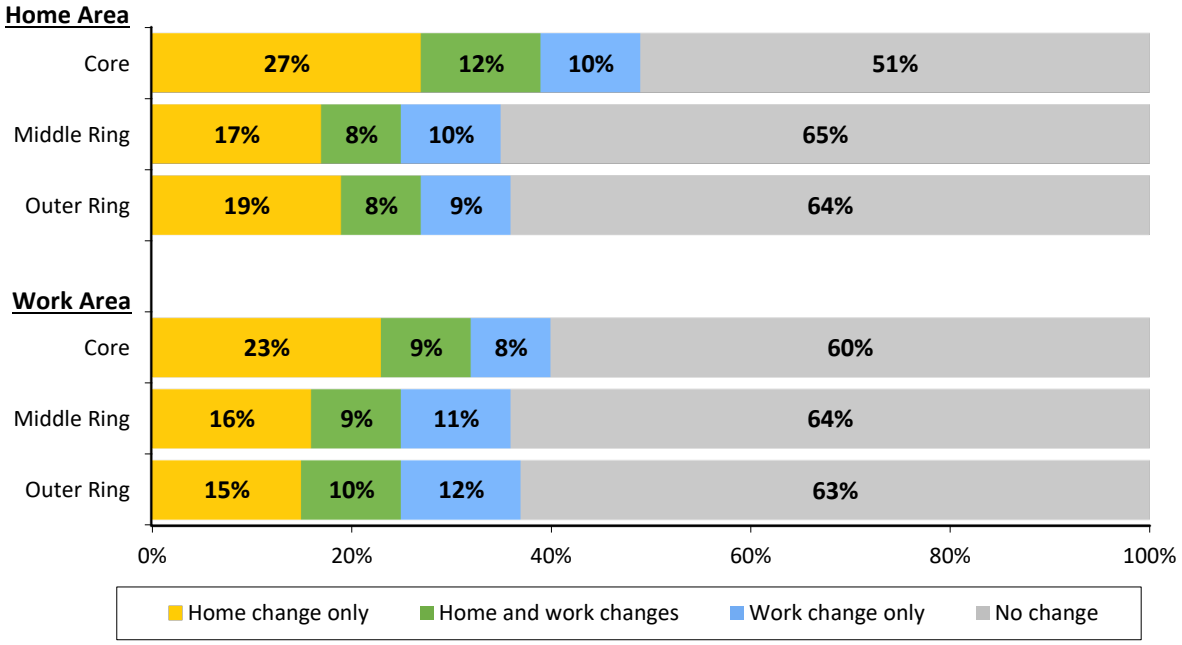
Incidence of Home and Work Location Changes

Nearly four in ten respondents reported a location change; 9% changed both home and work, 10% changed only the work location, and 19% changed only the home location. Of the 19% of respondents who changed only the home location, slightly more than half (56%) were full-time teleworkers. The remaining 44% were working outside their home some days; these respondents were asked the work location question and said their work location had not changed.

When combined, these results show that 28% of respondents moved their residence and 19% moved their work location. The 19% who moved to a different work location was about the same as the 20% who reported a work location change in 2019. But the 28% who moved their home was well above the 18% who reported a recent home location in the 2019 SOC survey. About two-thirds (65%) of respondents moved within the Washington metropolitan region and one-third (35%) moved from a jurisdiction outside the Washington region.

Home and Work Location Changes by Home and Work Areas – Figure 29 presents percentages of respondents who made home or work changes by where they lived at the time of the survey. Nearly half (49%) of Core area residents made a location change in the past two years, versus 35% of Middle Ring and 36% of Outer Ring residents. Core area respondents were particularly more likely to have moved their home; nearly four in ten reported a home move (27% home only and 12% home and work), compared with 25% of Middle Ring and 27% of Outer Ring residents. Core area residents also made work location changes at a higher rate; 22% of Core residents moved their work location (12% home and work and 10% work only), compared with 18% of Middle Ring and 17% of Outer Ring residents.

Figure 29
Home and Work Location Changes by Home and Work Area
(Home Area – Core n = 2,563, Middle Ring n = 2,531, Outer Ring n = 3,046)
(Work Area – Core n = 3,982, Middle Ring n = 2,700, Outer Ring n = 931)



Percentages of respondents who made location changes varied less by where they worked at the time of the survey. About four in ten respondents in each area reported some move. Core workers reported more home moves (32% total; 23% home only and 9% home and work), than did Middle Ring (23%) and Outer Ring (25%) workers. But fewer Core area workers made a work location change (17% total; 9% home and work plus 8% work only) than did Middle Ring (20%) and Outer Ring (22%) workers.

Home and Work Location Changes by Demographics – There were no statistical differences in home or work changes by race/ethnicity, but women and young respondents made location changes at higher rates. Half (53%) of respondents who were younger than 35 years old made a change, compared with 28% who were 35 years or older and 41% of female respondents made location changes, compared with 37% of males. Changes also were more common among lower income respondents; 49% of respondents with incomes below $100,000 reported a change, compared with 40% of those with incomes between $100,000 and $179,999 and 33% who had household incomes of $180,000 or more. Some of these differences likely were related to the pandemic; media reports during 2020 and 2021 highlighted that pandemic-related job losses were higher among women, younger workers, and lower-income workers.

Ease of Commute By Home and Work Location Changes

Commute ease appeared related to location changes for at least some respondents (Table 20). Fifty-five percent of respondents who did not move said their commutes were about the same, 22% said their commutes had improved, and 23% said they had gotten more difficult. Among those who made a location change, 29% had a more difficult commute but nearly as many (27%) said their commute improved. Both the percentages of easier and more difficult commutes were higher for those who made location changes than those who did not. This suggests a move could play a role in improving or worsening a commute, but the move was as likely to improve the commute as to make it more difficult.

Table 20
Change in Ease of Commute by Made a Change in Home or Work Location
(Shading indicates statistically higher percentages for ease/difficulty of commute)

Changed Home or Work Location *	Easier	About the Same	More Difficult
No location change (n = 3,135)	22%	55%	23%
Any location change (n = 1,932)	27%	44%	29%
Type of change made			
Changed only home (n = 633)	25%	52%	23%
Changed only work (n = 720)	27%	43%	30%
Changed home and work (n = 579)	28%	38%	34%

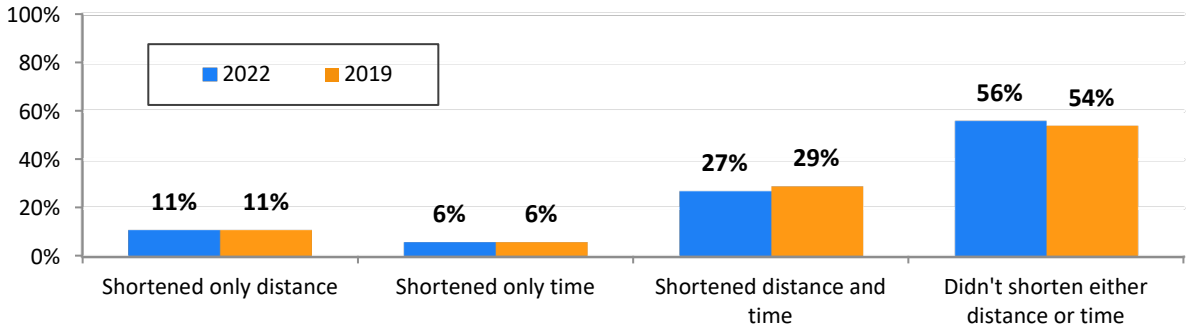
*Excludes respondents who moved from outside the region because they could not provide a valid before-the-move comparison for change in ease/difficulty of commute.

The table also shows a breakdown of change in commute conditions by whether the move was for home location only, work location only, or both home and work. Respondents were about equally likely to report easier commutes, regardless of the type of location changes they had made. But higher percentages of commuters whose work location changed said their commute was more difficult than was the case for those who moved only their home. This result could be related to job changes made to replace pandemic-related job losses. Workers who needed to find a job because they were suddenly unemployed might have felt they had little freedom to consider the new work location. They needed jobs and the commute conditions to the new location, including the distance, traffic along the route, and/or availability of commuting options, would be secondary concerns in their job search.

Move as Factor in Shortening Commute Distance or Time

Nearly three in ten (27%) respondents who moved said the move shortened both the distance and time for their trip to work (Figure 30). For 11%, the move shortened only the distance and 6% said it shortened only the time. These results were very close to the 2019 results; 29% said the move led to a shorter distance and time, 11% had only a shorter distance, and 6% had only a shorter commute time.

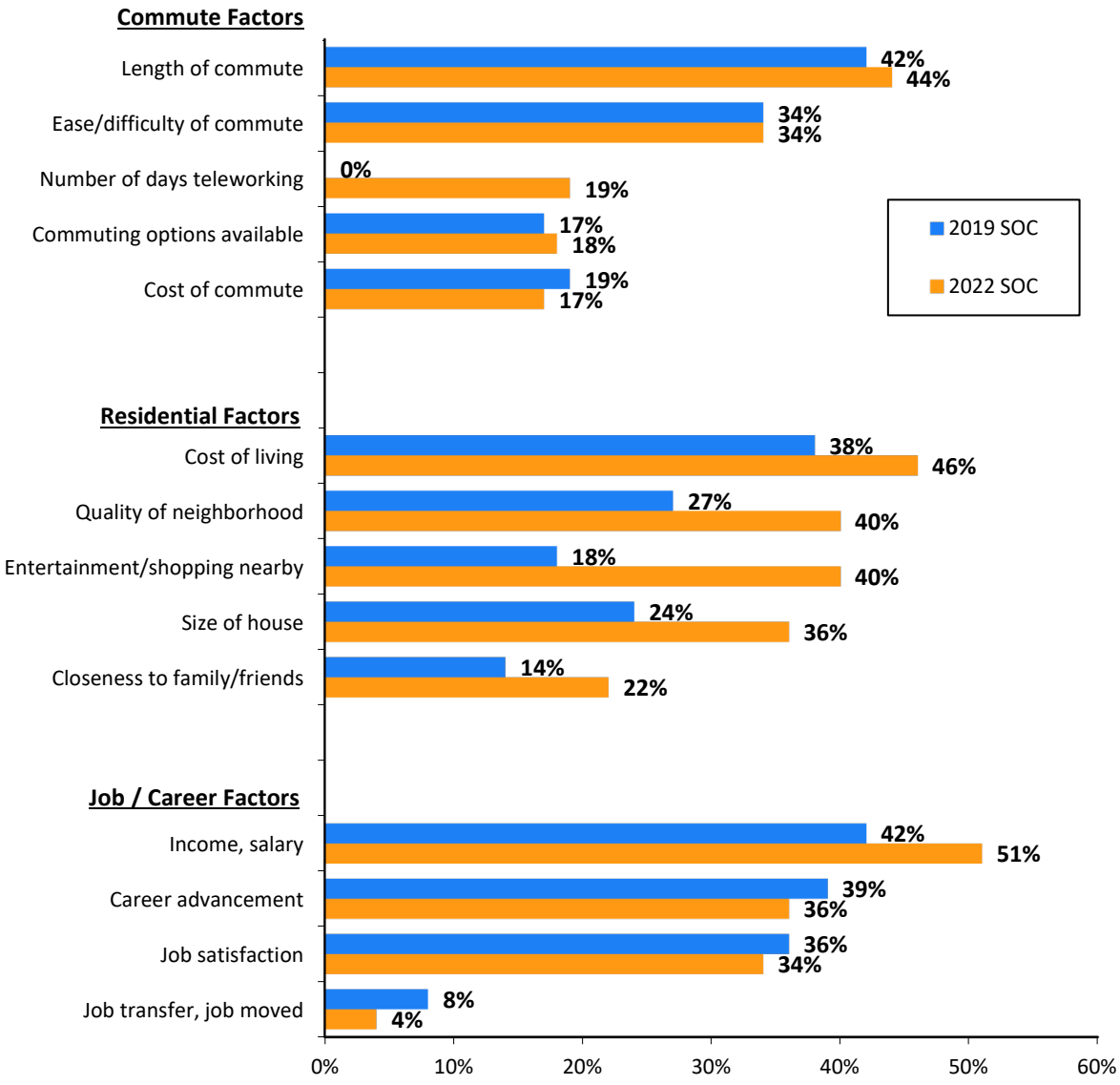
Figure 30
Home or Work Move Shortened Distance or Time from Home to Work – 2019 and 2022
(2019 n = 1,960, 2022 n = 2,585)



Concern about Commuting as a Factor in Location Change Decisions

Respondents who moved also were asked what factors they considered in making location changes and how important to their decision commute ease had been compared with other factors they considered. Two-thirds (67%) of respondents cited at least one commute-related concern in the moving decision. Four in ten (44%) cited the length of the commute (either distance or time) and 34% mentioned the ease or difficulty of the commute (Figure 31). Nineteen percent said the number of days they would be teleworking had entered their consideration about the move, 18% considered the range of commuting options that would be available at the new location, and 17% had thought about how much the commute would cost.

Figure 31
Factors Considered in Home or Work Location Changes
Respondents who Made a Change in Work or Residence Location
(Note: Scale extends only to 60% to highlight difference in responses)
(2019 n = n = 2,013, 2022 n = 2,657; multiple responses permitted)



Except for the number of days the respondent would be teleworking, which was not included in the list of factors in 2019, the commute factor results were very similar in 2022 to the results from the 2019 SOC survey. The results for residential factors were strikingly different, however. In 2022, more than three-quarters (78%) of respondents mentioned at least one residential factor, compared with about half of respondents in 2019 and every residential factor was cited by a statistically higher share of respondents in 2022 than in 2019. The most common residential factors were the cost of living (46%), quality of the neighborhood (40%), entertainment and shopping that would be in the neighborhood (40%), and the size of the house (36%).

Finally, in 2022, 73% of respondents noted a job or career concern as a factor in their decision, essentially the same percentage that cited one of these factors in 2019. In 2020, respondents mentioned income (51%), career advancement (36%), and job satisfaction (34%) as common considerations. Only income had a statistically different result in 2022 than in 2019.

Several groups of respondents cited commute factors at a statistically higher rate, presumably because they anticipated a more difficult commute after moving or because they wanted to improve their commute by moving:

- Respondents who worked in the Middle Ring – 69% of Middle Ring workers named commute factors, compared with 64% of Core area and (64%) of Outer Ring workers.
- Respondents with household incomes under $100,000 – 71% of respondents with incomes of less than $100,000 mentioned commute factors, compared with 65% of respondents with incomes between $100,000 and $179,999, and 60% of those with higher incomes.
- Respondents who rode transit to work – 72% of respondents who primarily rode a train or bus to work had considered commute factors, while only 64% of drive alone commuters, 58% of carpoolers, and 57% of bike/walk commuters considered commute factors.
- Respondents who changed their home location – 68% of respondents who made a residence change considered commute factors, compared with 62% of respondents who moved only their work location. Likely, some respondents who moved only their work location would have been required to make the job move to continue their employment, so commuting was less of a motivating factor for these respondents than job or career considerations.

Importance of Commute Ease Relative to Other Factors – Respondents who made a location change also were asked how important the expected ease of their new commute had been to their decisions, relative to other factors they considered. Nearly three in ten (28%) of these respondents said the length or ease of their commute was more important than other factors and 1% said it was the only factor they considered (Table 21). About 46% said length or ease of commute was about equally important to other factors. Only 25% said commute ease was less important.

Table 21 also lists the responses for the question from the four previous SOC surveys. Except for 2016, when a higher share of respondents said commute ease was the only factor they considered, the relative role of commute ease as a factor in location decisions has been consistent since 2010; the 2022 results are not statistically different from past results. Thus, even with substantial job upheaval due to the pandemic, commuting remained an important factor through the 2022 survey period.

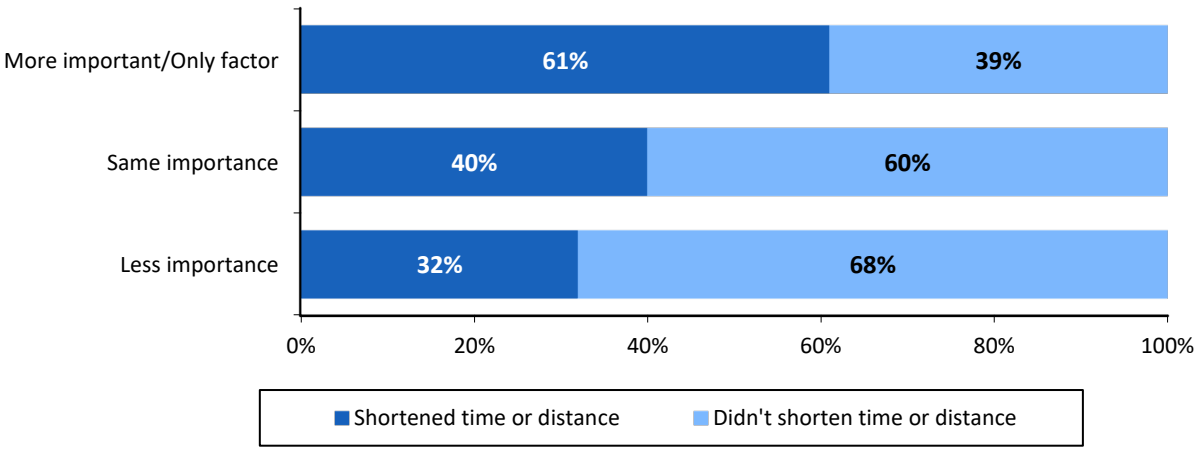
Table 21
Importance of Commute Ease Relative to Other Factors in Home or Work Location Changes
Respondents who Made a Change in Work or Residence Location
(2010 n = 887, 2013 n = 850, 2016 n = 789, 2019 n = 1,921, 2022 n = 2,612)

Importance of Commute Ease	2010	2013	2016	2019	2022
Commute ease was the only factor	---	---	13%	3%	**1%**
More important than other factors	29%	28%	26%	30%	**28%**
About the same importance as other factors	38%	46%	42%	42%	**46%**
Less important than other factors	33%	26%	19%	25%	**25%**

Importance of Commute Factors by Commute Mode – Respondents who commuted by bike/walk and transit were more likely to have considered commuting an important factor; 41% of bike/walk commuters and 36% who primarily used transit said the length or ease of their commute was more important than other factors, compared with only 29% of commuters who carpooled or drove alone.

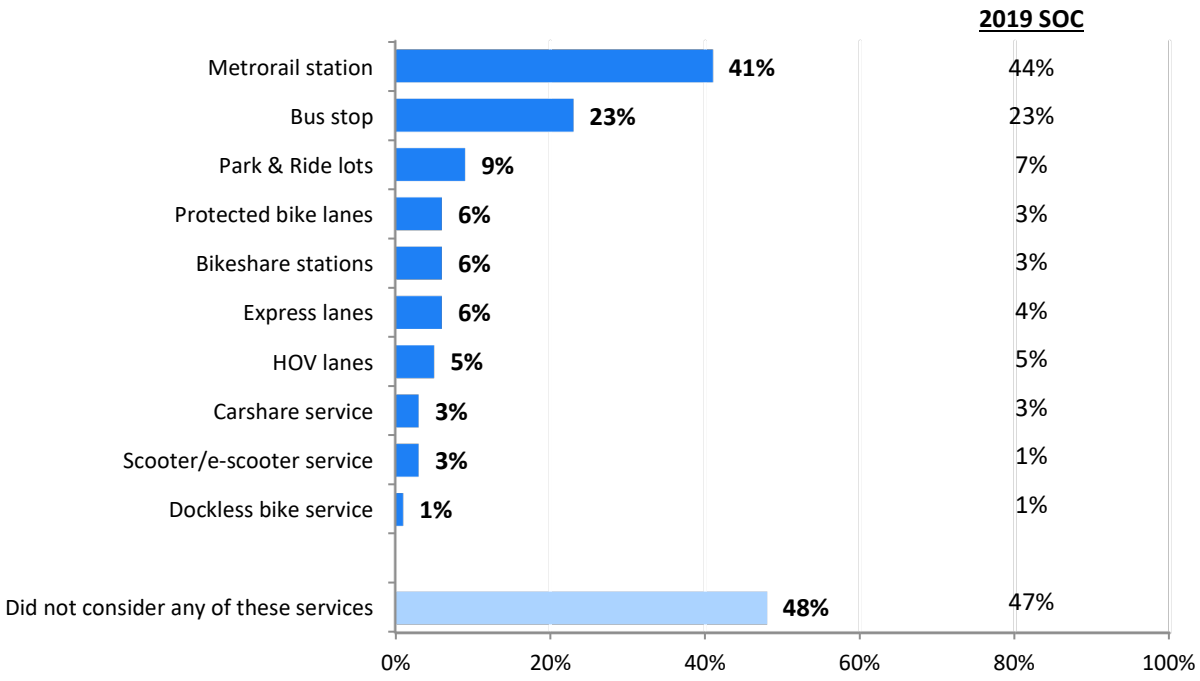
Importance of Commute Factors by Length of Commute – Respondents who said commuting was important to their decision also were more likely to have a shorter commute after making the move than were respondents who said commuting was not as important. Six in ten (61%) respondents who said commuting was more important or the only factor they considered in the move had a shorter commute after making the move (Figure 32). This suggests respondents who were particularly concerned with commuting ease, length, or cost chose work and/or home locations that improved their commutes. By contrast, only 40% of those who said commute factors had been about the same importance as other factors and 32% who said commute factors were less important than were job, home, or personal factors shortened their commutes.

Figure 32
Importance of Commute Factors by Move Shortened Distance or Time from Home to Work
(Commute factors were: More important/only factor n = 681, Same importance n = 1,169, Less important n = 631)



Transportation Services Considered When Making Home or Work Move – Finally, respondents who made a residential or work location change were asked if, when they were considering making this change, they had considered how close their new location would be to any of ten transportation services such as Park & Ride lots, HOV and Express Lanes, bike and scooter servicers, and transit stops or stations (Figure 33).

Figure 33
Access to Transportation Services Considered when Making Home or Work Move
(2019 n = 2,013, 2022 n = 2,697; multiple responses permitted)



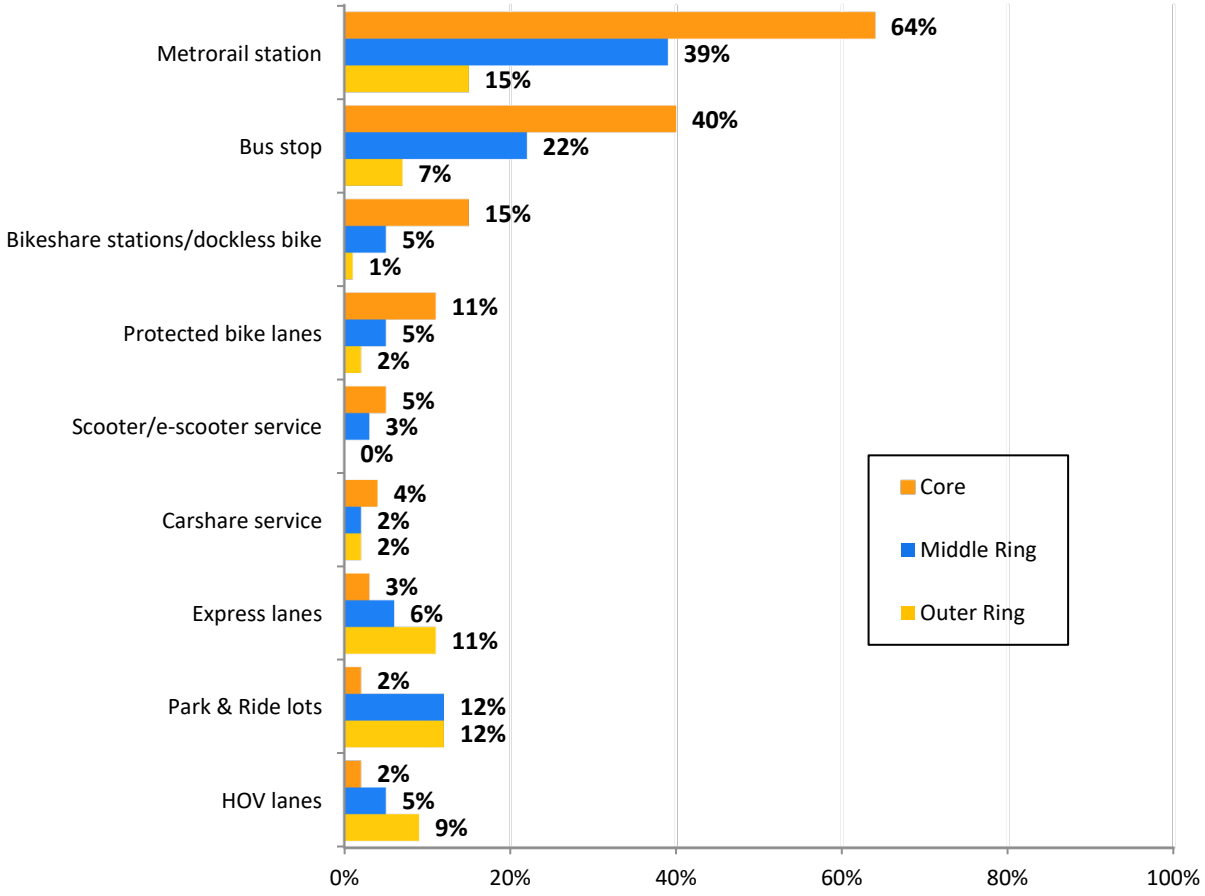
More than half (52%) of respondents who moved said they considered their access to at least one of these services. Four in ten (41%) considered how close they would be to a Metrorail station and 23% considered their access to a bus stop. About one in ten (9%) thought about the availability of a Park & Ride lot. Only one in twenty considered their access to Express lanes (6%) or HOV lanes (5%), but these lanes are primarily available in Virginia, so would be less likely to be noted by respondents who lived in the District of Columbia and Maryland. Similarly small shares said they considered how close they would be to bike lanes, bikeshare, carshare, and scooter services; these services also are offered only in limited areas and in the most urban parts of the region.

As indicated by the sidebar in Figure 33, the percentages who considered service access in 2022 were essentially the same as from the 2019 SOC survey. Fifty-two percent of respondents had considered one or more of the services in 2022, compared with 53% in 2019. And nearly all individual services were named by approximately the same share of respondents in 2022 as in 2019.

Consideration of these services was highly dependent on where respondents lived and worked. Three-quarters (74%) of Core area residents considered transportation service access, compared with 50% of Middle Ring and 31% of Outer Ring respondents. And 69% of Core workers explored the availability of transportation services, compared with 40% of Middle Ring and 22% of Outer Ring workers.

The lower percentages of Outer Ring residents who explored their access to these services suggests that they assumed, rightly in many cases, that these services would not be available in their new home or work area, or that they would not be useful services for their travel in the new area. Despite their lower overall interest, however, Middle Ring and Outer Ring residents were more likely to have considered their access to Park & Ride lots and to HOV lanes and Express Lanes than were commuters who lived closer to the center of the region (Figure 34).

Figure 34
Access to Transportation Services Considered when Moving – By Home Area
Respondents who Made a Change in Work or Residence Location
(Core n = 823, Middle Ring n = 338, Outer Ring n = 245)



About one in ten Middle Ring (12%) and Outer Ring (12%) residents explored their access to Park & ride lots, compared with just 2% of Core area residents. Similarly, one in ten Outer Ring residents considered their access to HOV (9%) and Express (11%) lanes, compared with about one in twenty Middle Ring residents and 2%-3% of Core area residents.

Several other groups of respondents also gave greater consideration to transportation access at their new home or work location:

- Respondents who moved their residence – 58% of respondents who moved their home location considered their access to services at their new home, while just 35% who moved only their work explored transportation service access.
- Respondents who had limited access to a personal vehicle – 82% of respondents who were car-free (no household vehicles) and 62% who had fewer than one car for each adult in the household (0.1 – 0.9 vehicles per adult) considered transportation options. By contrast, just 42% of respondents who had a vehicle for each adult in the household explored service access.
- Respondents who were younger than 35 years old – 59% of respondents who were younger than 35 years considered what transportation services would be available, compared with 48% of respondents who were between 35 and 54, and 33% of respondents who were 55 years or older. This result could be related to younger respondents being less likely to have a personal vehicle available, their greater presence in the Core area of the region, where these services are primarily available, and/or young respondents' perception that these are feasible or appropriate modes for commuting.
- Respondents who used an alternative mode to commute – More than eight in ten (84%) transit riders, 63% of commuters who biked/walked to work, and 52% who carpooled considered their access to transportation services at the new location. This indicates that commuters who were using alternative modes were interested in continuing to do so after the move. By contrast, only 32% of respondents who drove alone had considered access to the services. However, the fact that one-third of drive alone commuters were willing to consider alternative mode access when their commute pattern was changing due to a move highlights the potential value of providing commute information and assistance services to relocating commuters.

SECTION 4 – TELEWORK

Since the first SOC survey in 2001, the survey has explored the incidence of telework in the region. Analysis of telework trends and characteristics of teleworkers has been an important component of the research, showing a steady but gradual increase in telework use in the Washington metropolitan region.

As noted in Section 2 the coronavirus pandemic resulted in many employers pausing onsite operations in early 2020 and shifting workers to full-time or part-time work from home. With these changes, the 2022 SOC survey was expected to show radically different telework patterns from the incremental changes observed in past surveys. While work from home is discussed in other sections of this report when it is a relevant factor in those discussions, this section focuses on examining telework/work from home patterns and the experience of teleworkers in early 2022.

Because telework was a new concept to some workers and employers used different terms to refer to telework, the survey employed various redundant naming options in the early sections of the questionnaire to try to develop a consistent understanding for respondents of the telework questions. The early questions used the term "telework" but noted that the respondent might call the action "telecommute," "work from home," or "remote work." Subsequent questions used one or more of these terms as seemed appropriate for the question and the targeted respondents.

The survey further clarified that respondents should consider as telework only regularly assigned workdays they worked at home or a telework/co-working center during an entire work day. This definition, which had been used in previous SOC surveys, excluded work at client or customer locations during the day, working part of the workday at home and part at the regular workplace, and work at home on evenings or weekends, outside of normal work hours. These situations are not generally considered telework for commute-related purposes, because workers still make work-related trips.

Finally, the questions emphasized that respondents were to report their current telework/commute experience, even if they expected it to be a temporary arrangement. For this reason, the results presented in this section and throughout the report should be considered a profile of telework in the region for early 2022, when the survey data were collected. When available and informative, results for previous SOC surveys are also presented.

Current and Potential Telework

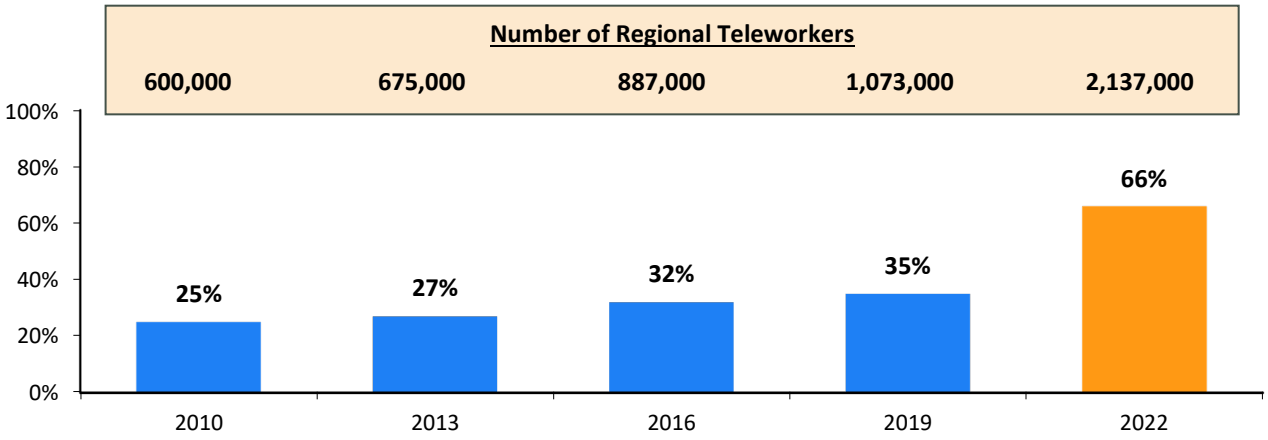
Respondents who Currently Telework

Sixty-five percent of all respondents said they teleworked, either regularly or occasionally. When extrapolated to the regional worker population, this represented about 2,137,000 workers region-wide.

Teleworkers accounted for 66% of regional workers who would otherwise travel to a main work location on non-telework days (i.e., commuters). Using the commuter base excludes self-employed workers for whom home was their only workplace. These workers would not make commute trips to an outside work location, thus, excluding them from the telework calculation reflects a more realistic assessment of telework's role in eliminating commute trips.

The 66% telework percentage represents a dramatic increase over the 2019 survey, when 35% of employees teleworked (Figure 35). But telework grew in each of the previous SOC surveys, albeit at a gradual rate of increase.

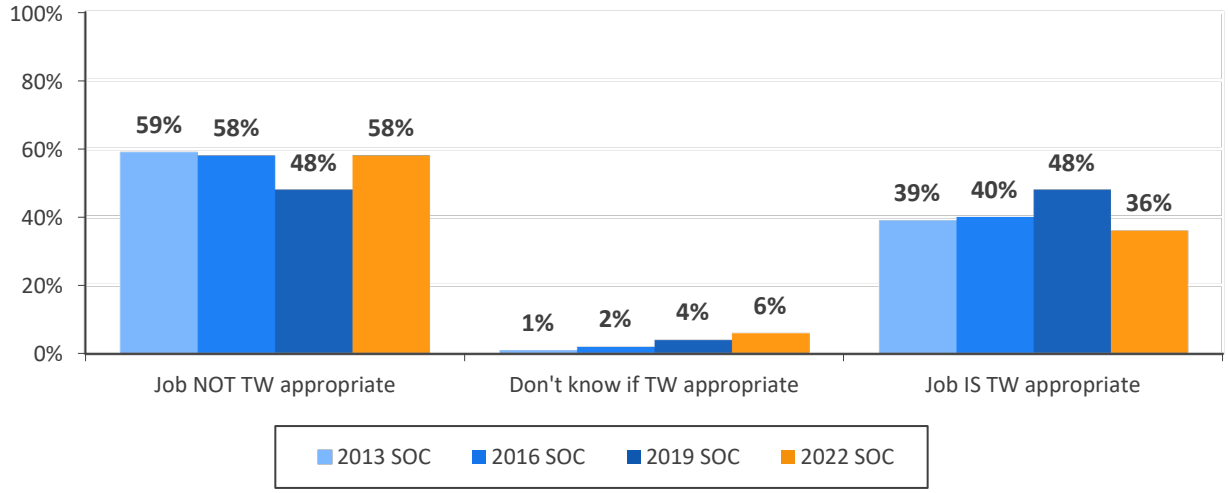
Figure 35
Percentage of Commuters who Telework – 2010 to 2022
(2010 n = 6,050, 2013 n = 5,892, 2016 n = 5,503, 2019 n = 8,107, 2022 n = 8,139)



Interest in Telework

Commuters who worked at a location outside their homes and who did not report teleworking at the time of the survey were asked if their job responsibilities would allow them to work at a location other than their main work place, at least occasionally. In 2022, 36% of non-teleworkers had at least some telework-appropriate work (Figure 36). The percentage of non-teleworkers with telework-appropriate responsibilities declined between 2019 and 2022, but this was largely because many non-teleworkers who had telework-appropriate jobs in 2019 were working from home in 2022, so the remaining base of non-teleworkers logically would include a higher share of workers for whom telework was not a feasible job option.

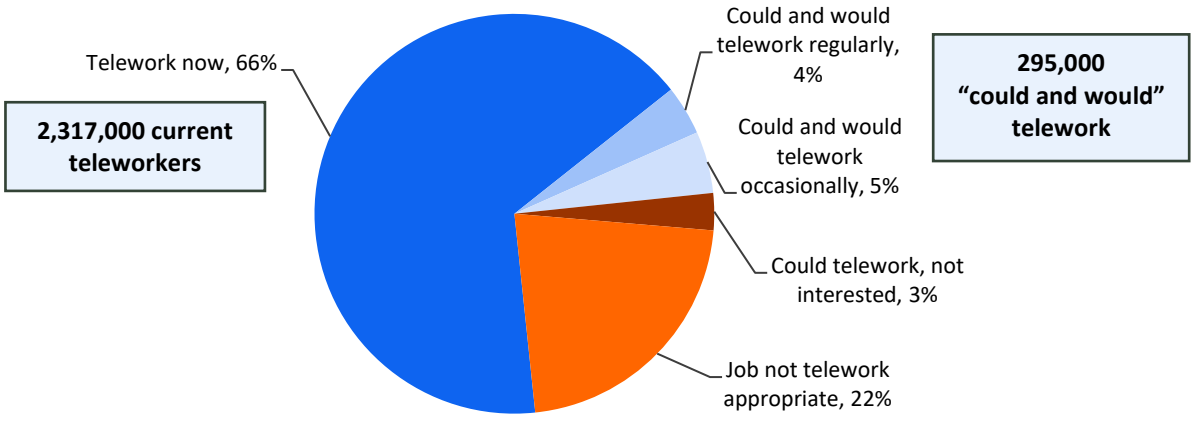
Figure 36
Potential for Telework Among Non-teleworkers – 2013 to 2022
(2013 n = 4,319, 2016 n = 3,605, 2019 n = 5,195, 2022 n = 2,610)



Non-teleworkers who had telework-appropriate jobs were then asked how often they would want to telework. In 2022, the 36% of non-teleworkers was evenly divided between 18% who could telework one or more days per week and 18% who could telework less than one day per week. Three-quarters of these non-teleworkers said they would be interested in telework on either an occasional (40%) or regular (36%) basis. Telework-interested respondents equaled about 295,000 commuters or about 9% of all commuters region-wide.

The results for current telework and non-teleworker interest suggest that even with the dramatic growth in telework in 2022, additional telework potential exists. Figure 37 summarizes the 2022 telework status of all respondents who were commuters, that is, not self-employed/work at home.

Figure 37
Telework Status Distribution
(n = 8,139)



About 2,317,000 regional commuters (66%) teleworked at the time of the survey. An additional 9% of commuters "could and would" telework, that is, they had job responsibilities that could be accomplished away from the main work place and they would be interested in teleworking, if given an opportunity. These potential teleworkers represented about 295,000 commuters. The remaining commuters said they would not be interested in teleworking (3%) or that their job responsibilities could only be performed at the main workplace (22%).

Table 22 summarizes the 2022 results shown above, with additional comparisons for previous SOC surveys. The sum of current plus potential telework had increased substantially from 45% in 2010 to 60% in 2019. While the composition of jobs could have changed somewhat in the region, this result more likely suggests a shift in commuters' ability or perception of their ability to perform work remotely, due to increasing availability of communication, computer, and networking technology or perhaps from greater understanding of telework options and a broader definition of what jobs were "telework-compatible." Interestingly, the 2022 current telework share of 66% exceeded the current plus potential 60% share from 2019. But it is likely that some respondents teleworked in 2022 solely because their workplace shut down due to the pandemic. In 2019, they would not have chosen to telework so would have been excluded from the potential (could and would) percentage in 2019.

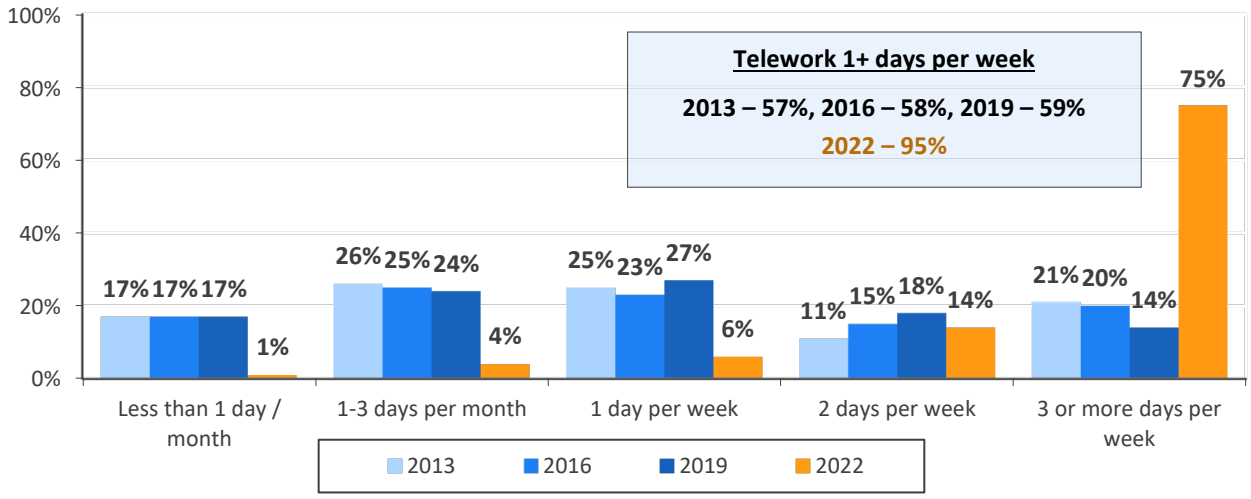
Table 22
Summary of Current and Potential Telework – 2010 to 2022
Respondents who are not Self-Employed/Work at Home ("Commuters")

Telework Status	2010 (n = 6,050)	2013 (n = 5,892)	2016 (n = 5,503)	2019 (n = 8,107)	2022 (n = 8,139)
Currently teleworking	**25%**	**27%**	**32%**	**35%**	**66%**
Not teleworking	**75%**	**73%**	**68%**	**65%**	**34%**
- Job responsibilities allow telework and INTERESTED in telework ("could and would")	21%	18%	18%	25%	9%
- Job responsibilities allow telework, but NOT INTERESTED in telework	9%	11%	9%	6%	3%
- Job responsibilities would NOT allow telework	45%	44%	41%	34%	22%

Telework/Work at Home Frequency

The frequency with which respondents teleworked in 2022 and in the years of the previous three SOC surveys is detailed in Figure 38. Prior to 2022, about six in ten respondents teleworked one or more days per week and four in ten teleworked less than one day per week. The 2022 pattern was notably different, with 95% of respondents teleworking at least one day per week and 75% teleworking at least three days per week.

Figure 38
Frequency of Telework – 2013 to 2022
(2013 n = 1,559, 2016 n = 1,874, 2019 n = 2,856, 2022 n = 5,514)



In 2022, the average telework frequency was 3.37 days per week, nearly a tripling of the average 1.20 days per week frequency from 2019. The high average frequency in 2022 was driven by two factors.

First, more than half of teleworkers were teleworking all their workdays, substantially raising the average across all teleworkers. But the telework frequency for respondents who worked some days at an outside work location was 1.46 days per week, also higher than the 2019 average.

Average frequency in 2022 was generally high across respondent sub-groups. Differences that did exist generally followed a similar pattern to that for telework percentages of the sub-group, that is, population sub-groups with higher shares of overall telework also had higher average telework frequencies, reinforcing the conclusion that members of these sub-groups had job responsibilities, work situations, or personal characteristics that made them especially well-suited to telework.

Frequency of Work at Home Among Non-Teleworkers

Even with the 2022 telework growth, self-defined teleworkers could under-represent the extent of telework activity in the region. The research team considered the possibility that some commuters who occasionally worked at home might not consider this "telework." To test this premise, the survey asked respondents who were not teleworking but who had telework-appropriate jobs the following question:

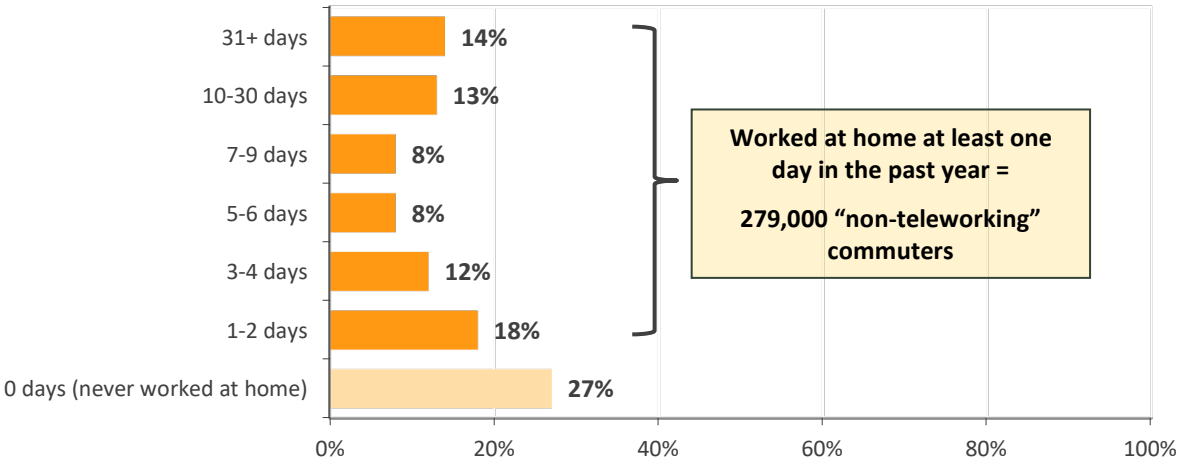
> "*In the past year, about how many days did you work at home all day on a regular work day, instead of traveling to your main workplace?*"

The purpose of the question was to determine how many had teleworked during the past year, even though they did not consider it as such.

Nearly three-quarters (73%) of these respondents had worked all day at home at least once in the past year (Figure 39). These respondents represented about 9% of all commuters region-wide or a total of 279,000 commuters. When added to the 66% of commuters who self-defined as teleworkers, the total percentage of commuters who telework/work at home at least occasionally rises to 75%.

The average work at home frequency of these "non-teleworkers" was quite low. Self-defined teleworkers teleworked an average of 3.37 days per week. By contrast, "non-teleworkers" worked at home an average of just 13.5 days per year or about 0.27 days per week (13.5 telework days per year / 50 work weeks per year = 0.27 telework days per week).

Figure 39
Number of Days Worked at Home in the Past Year – Non-teleworkers
(n = 911)



Total Workers Teleworking on a Typical Workday

When the average telework frequency for respondents who self-identified as teleworkers and the work-at-home frequency of workers who did not self-identify as teleworkers are applied across the region, it equates to approximately 1,455,404 regional workers teleworking/working at home on a typical workday, or about 44% of all regional workers. The 2022 typical day telework estimate is five times higher than the 2019 SOC estimate of 272,700 typical day teleworkers. In 2022, about 1% of the telework/work at home days come from commuters who do not consider themselves teleworkers occasionally working at home. Assuming each worker makes two commute trips per day, workers in the Washington metropolitan region eliminate 2.9 million work trips each day by telework/work from home.

1,455,404 Workers Teleworking on a Typical Day (44% of regional workers)

Total telework/work at home days per week = 7,277,020 weekly days

Teleworkers = 2,137,000 workers x 3.37 days per week = 7,201,690 weekly days

Non-teleworkers work at home = 279,000 workers x 0.27 days per week = 75,330 weekly days

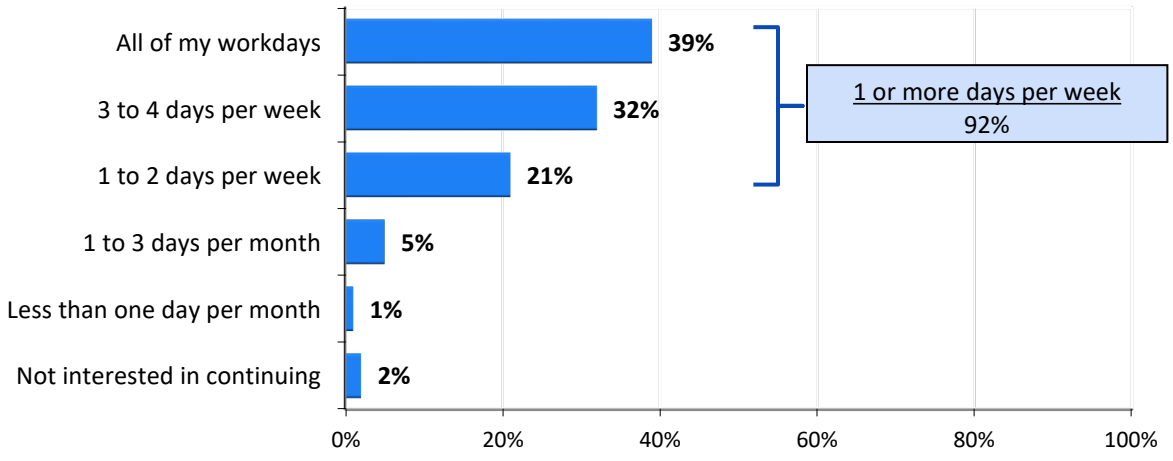
Typical day impact = 1,455,404 teleworkers (7,277,020 weekly TW/WAH days / 5 weekdays)

Commute trips eliminated per day = 1,455,404 x 2 trips per day = 2.9 million trips per day

Interest in Continued Telework After Pandemic is Over

Respondents who were teleworking at the time of the survey were asked how often they would want to telework in the future, if given a choice by their employer. More than nine in ten (92%) respondents who were teleworking at the time of the survey said they would want to telework at least one day per week and 39% said they would want to telework all their workdays (Figure 40). Only 2% of teleworkers were not interested in continuing to telework at all. Note that this is the preference of the employee; it does not indicate how often employers will expect or allow employees to telework. Some employers might dictate a frequency different from what employees would want, but this question illustrates that most respondents who teleworked wanted to continue at a reasonably high level of telework.

Figure 40
Teleworkers' Preferred Future Frequency of Telework
(n = 5,495)

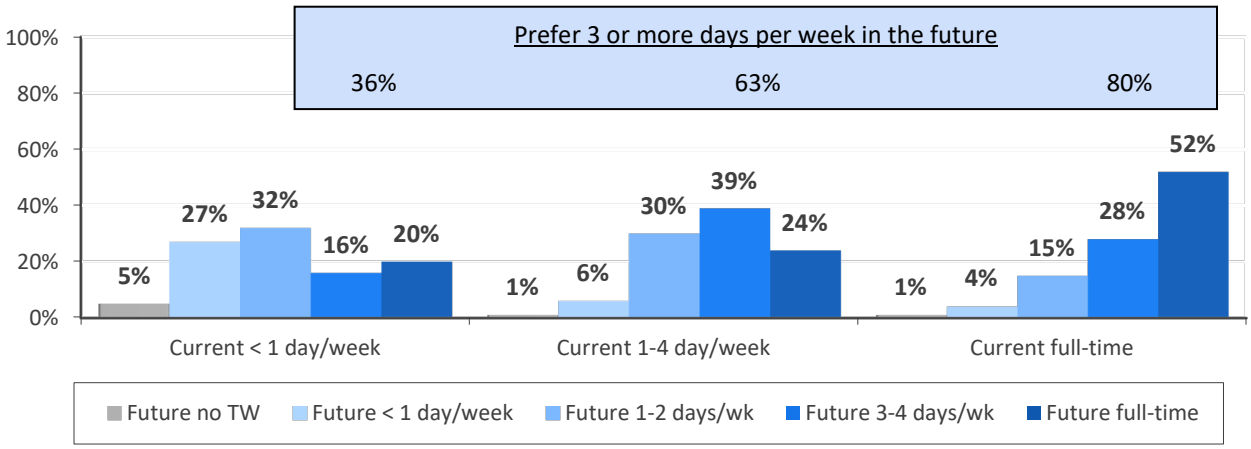


Preferred Future Telework Frequency by Current Frequency

Respondents who teleworked full-time at the time of the survey expressed the greatest interest in teleworking frequently in the future. Eight in ten (80%) full-time teleworkers said they wanted to telework at least three days per week and 52% wanted to continue full-time (Figure 41). Among respondents who teleworked at least one day per week but not full-time, 24% would like to increase to full-time and 63% wanted to telework at least three days per week. More than one-third (36%) who teleworked less than one day per week wanted to increase to at least three telework days per week.

Interest in frequent future telework also was higher among those who teleworked before the pandemic; 78% of these respondents wanted to telework three or more days per week, compared with 70% of respondents who started teleworking during the pandemic. Frequent telework, defined as three or more days per week, also was preferred by higher shares of women (76%) than men (67%) and higher shares of Non-Hispanic Black (82%) respondents than those in other racial/ethnic groups (69%). And teleworkers who commuted longer distances on days they traveled (or would travel) to an outside work location had greater interest in frequent telework; 78% of teleworkers with commutes of 20 or more miles wanted to telework three or more days per week in the future, compared with 70% who traveled between 5 and 19 miles and 61% who had commutes of less than five miles.

Figure 41
Preferred Future Telework Frequency by Current Frequency
(Current TW: < 1 day/week n = 263, 1-4 days/week n = 2,172, Full-time n = 2,979)



Telework by Personal and Employment Characteristics

Differences in Telework Use by Demographics

Telework was not distributed equally by demographic group. Table 23 compares the incidence of telework by respondents' gender, race/ethnicity, age, and income. The table presents the percentages of respondents in each demographic group who teleworked in 2019 (e.g., 35% of men and 34% of women) and in 2022 (e.g., 66% of men and 66% of women). The last column shows the 2022 percentage of commuters in the group who "could and would" telework if given the opportunity (e.g., additional 9% of men and 9% of women would telework). Note that the "could and would" percentages should be compared against the 9% regional "could and would" average.

Table 23
Telework by Demographic Characteristics

Demographic Group	2019 SOC		2022 SOC		
	(n = __) *	Telework	(n = __) *	Telework	"Could and would Telework"**
Gender					
Male	3,859	35%	3,817	66%	9%
Female	3,806	34%	3,674	66%	9%
Race/Ethnicity					
Asian	586	39%	659	76%	9%
Non-Hispanic White	5,466	39%	4,582	70%	8%
Non-Hispanic Black	1,351	27%	1,222	60%	10%
Hispanic	502	26%	487	57%	9%
Age					
Under 25 years	205	19%	243	40%	19%
25 – 34	1,520	35%	1,530	67%	9%
35 – 44	1,795	37%	1,844	72%	9%
45 – 54	1,998	36%	1,783	68%	8%
55 – 64	1,883	32%	1,804	64%	9%
65 or older	614	27%	614	55%	8%
Income					
Less than $30,000	123	5%	118	19%	15%
$30,000 – $59,999	510	15%	495	38%	12%
$60,000 – $99,999	1,234	25%	1,230	59%	10%
$100,000 – $139,999	1,267	36%	1,163	70%	8%
$140,000 – $179,999	1,013	45%	1,043	77%	9%
$180,000 – $249,999	957	48%	1,104	80%	6%
$250,000+	580	53%	896	84%	6%

* All respondents in the group, both teleworkers and non-teleworkers
** Respondents whose job responsibilities would allow telework and who would be interested in telework

In 2022, some demographic groups teleworked more than did others. For example, 76% of Asian respondents and 70% of Non-Hispanic Whites teleworked, compared with 60% of Non-Hispanic Blacks and 57% of Hispanics. Use of telework increased with increasing age to a peak among 35 to 44 year old respondents, then declined as age increased further. There was a strong pattern of increasing telework as income increased; about eight in ten respondents with household incomes of $140,000 or more teleworked, compared with only 19% of workers with incomes below $30,000, 38% of workers with incomes between $30,000 and $59,999, and 59% of respondents with incomes of $60,0000 to $99,999.

The relative use of telework by demographic groups in 2022 generally followed the 2019 patterns; demographics groups with higher telework use in 2022 also had higher share of telework in 2019. But even groups with lower use in 2022 exhibited telework growth since 2019.

Table 23 also illustrates the potential for additional telework; the percentages of non-teleworkers who would telework in the future, if given the opportunity. In general, with only a few exceptions, additional potential was within one or two percentage points of the 9% regional average for most groups. The youngest respondents and lower income respondents exhibited higher potential telework, but their current telework percentages were much lower than for others in the demographic category.

Differences in Telework Use by Home and Work Location

Respondents who lived in the Core area (77%) teleworked at a higher rate than did Middle Ring (64%) residents and Outer Ring residents (61%) (Table 24). A similar pattern was observed for telework by work area but with a stronger association; 76% of respondents who worked in the Core area and 60% of Middle Ring workers teleworked, compared with less than half (47%) of respondents who worked in the Outer Ring.

Table 24
Telework by Home/Work Area and Home/Work State

Commute Characteristic	2019 SOC		2022 SOC		
	(n = __) *	Telework	(n = __) *	Telework	"Could and would Telework"**
Home Area					
Core	2,198	37%	2,563	**77%**	**7%**
Middle Ring	2,421	35%	2,531	**64%**	**10%**
Outer Ring	3,488	31%	3,045	**61%**	**10%**
Work Area					
Core	3,843	39%	3,982	**76%**	**7%**
Middle Ring	2,828	32%	2,700	**60%**	**11%**
Outer Ring	1,375	23%	930	**47%**	**13%**
Home State					
District of Columbia	751	35%	956	**77%**	**6%**
Maryland	3,876	35%	3,433	**62%**	**10%**
Virginia	3,592	35%	3705	**67%**	**9%**
Work State					
District of Columbia	2,720	41%	2,871	**78%**	**7%**
Maryland	2,447	31%	2,169	**57%**	**13%**
Virginia	2,846	31%	2,881	**62%**	**9%**

* All respondents in the group, both teleworkers and non-teleworkers
** Respondents whose job responsibilities would allow telework and who would be interested in telework

Telework use by home state followed the pattern for Home Area; District of Columbia residents (77%) teleworked at a higher rate than did Maryland (62%) or Virginia (67%) residents. The pattern was similar for work state; 78% of District workers teleworked, compared with 57% in Maryland and 62% of Virginia.

Differences in Telework Use by Employment Characteristics

The survey data also showed differences in the telework and potential telework distribution by employment characteristics (Table 25).

Table 25
Telework by Employment Characteristics

Employment Characteristic	2019 SOC		2022 SOC		
	(n = __) *	Telework	(n = __) *	Telework	"Could and would Telework"**
Employer Type					
Federal agency	2,435	48%	2,284	**79%**	**7%**
Non-profit organization	1,152	36%	1,269	**75%**	**8%**
Private employer	3,480	30%	3,514	**62%**	**10%**
State/local agency	848	14%	789	**48%**	**16%**
Employer Size					
1 – 25 employees	1,390	24%	1,367	**45%**	**1%**
26 – 100	1,578	26%	1,481	**60%**	**11%**
101 – 250	1,031	34%	1,005	**66%**	**10%**
251 – 999	1,414	41%	1,275	**75%**	**8%**
1,000+	2,174	42%	2,033	**74%**	**8%**
Occupation					
Executive, manager	1,796	41%	1,300	**74%**	**10%**
Professional	4,006	38%	3,202	**73%**	**9%**
Technicians/related support	152	19%	669	**71%**	**6%**
Administrative support	527	20%	818	**65%**	**15%**
Military	90	9%	101	**57%**	**23%**
Protective services	184	15%	237	**46%**	**10%**
Sales	228	25%	209	**44%**	**7%**
Other service	101	2%	181	**22%**	**4%**
Precision craft, production	74	14%	77	**5%**	**9%**

* All respondents in the group, both teleworkers and non-teleworkers
** Respondents whose job responsibilities would allow telework and who would be interested in telework

Federal agency employees (79%) and non-profit organization employees (75%) reported the highest rate of telework, above the 62% of private sector workers and well above the 48% for state/local agency employees. The lower rates of telework for private sector workers would reflect the wider job types in this category, including retail, service, medical, hospitality, and other jobs that involve greater levels of customer contact than for most Federal agencies and non-profit organizations. Similarly, state/local agency jobs include utilities, fire and police protective services, and other government functions that require an onsite presence.

Generally, use of telework increased with increasing employer size. About three-quarters of respondents who worked for employers with 251 to 999 employees (75%) or 1,000 or more employees (74%) teleworked, compared with 45% of respondents who worked for employers with between 1 and 25 employees. Some occupations also had above average telework rates, including executive and managerial (74%), professional (73%), and technicians/related support (71%). Common occupations with below average telework rates included protective services (46%), sales (44%), other service such as hospitality (22%) and precision craft/production (5%).

Telework Use Patterns

Respondents who self-defined as teleworkers were questioned about their telework characteristics including their telework location, incidence of trips during a telework day, length of time teleworking, use of informal or formal telework arrangement, and sources of telework information.

Telework Locations

Nearly all (96%) teleworkers said they teleworked exclusively from home. Two percent named another telework location, such as a satellite office, library or community center, or Telework/Co-working Center and 2% said they teleworked from both home and from another location. Teleworkers who teleworked from locations outside their homes traveled an average distance of 12.5 miles to the telework location. Three-quarters (76%) of these respondents drove alone to the telework location. The remaining 24% used an alternative mode.

Trips Made During a Telework Day

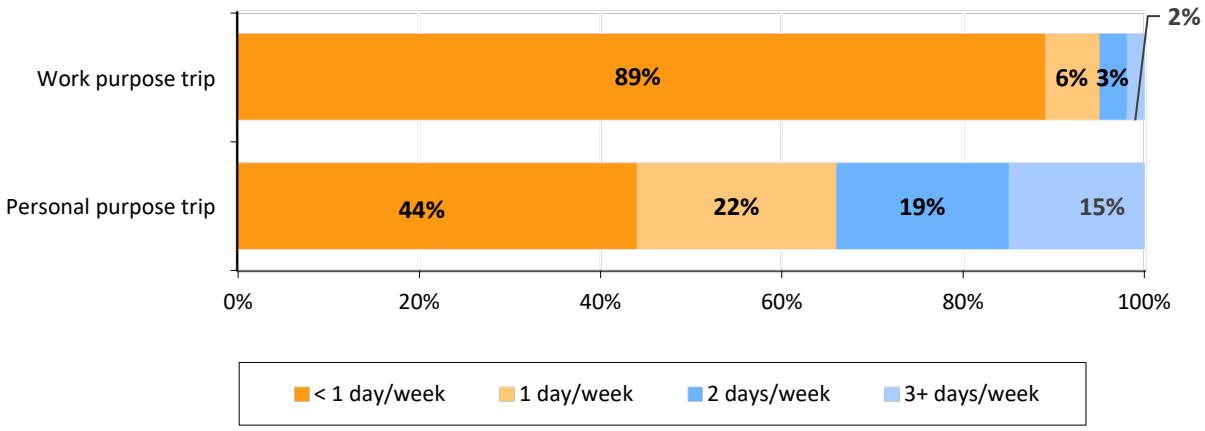
Many workers who commute to an outside location use their commute trip as an opportunity to make personal errand, shopping, and appointment trips on the way to and from work. Respondents who telework full-time do not have that opportunity but might make some of these trips during their regular work hours. The 2022 survey added a question, asked only of full-time teleworkers, to examine the frequency of work-purpose and personal-purpose trips made by teleworkers.

Work-Purpose Trips – Respondents made few work-purpose trips on telework days (Figure 42). Nine in ten (89%) said they typically made these trips less than one day per week and 6% said they made such trips only one day per week. Only 5% made work-purpose trips on two or more telework days.

Personal-Purpose Trips – Full-time teleworkers made personal-purpose trips much more frequently. More than half (56%) typically made a personal trip at least one day per week during usual work hours, 19% made trips two days per week and 15% made these trips three or more days per week.

The survey did not ask when during the workday the trip was made, the trip distance, or the modes used for the trips, so it is not possible to estimate the travel or environmental impact of the trips. But trips made during work hours on telework days could contribute to regional traffic and/or air pollution if they are primarily made by driving during the peak commuting hours.

Figure 42
Frequency of Work-Purpose and Personal-Purpose Trips on Telework Days – Full-time Teleworkers
(n = 2,874)



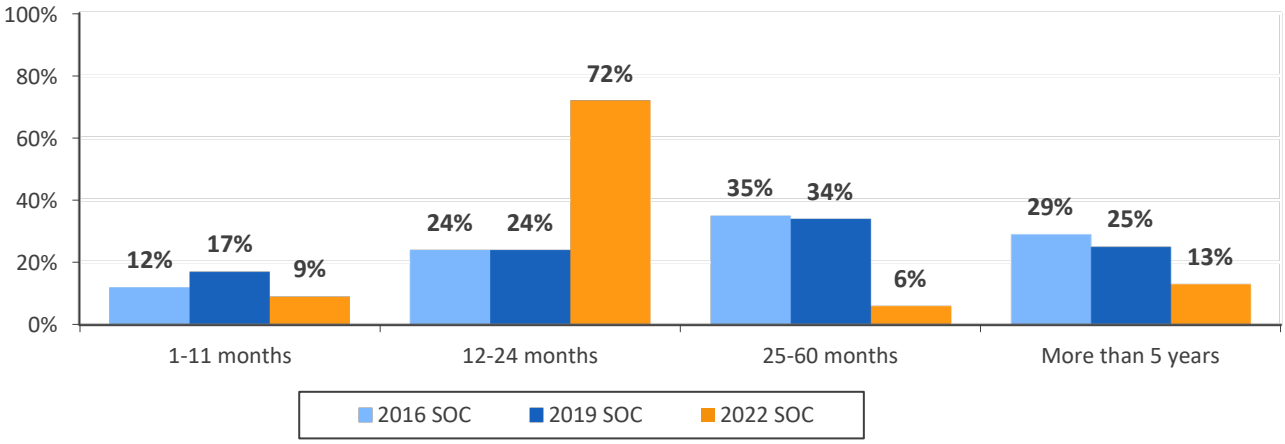
Frequency of personal trip making was similar across most telework sub-groups; there were no differences among teleworkers who worked under a formal or informal arrangement and no difference by how long they had been teleworking. Similarly, there were no differences by gender, income, or race/ethnicity. But several characteristics were associated with higher rates of personal trip-making:

- Lived in the Core – 65% of Core area teleworkers made personal trips at least one day per week, compared with 56% who lived in the Middle Ring and 46% of Outer Ring teleworkers.
- Worked for smaller employers – 62% of teleworkers who worked at worksites with 100 or fewer employees made at least one trip per week, compared with 54% who worked for firms with 101 to 999 employees, and 50% who worked for employers with 1,000 or more employees.
- Worked for state/local agencies or non-profit organizations – 64% of state/local agency workers and 63% of teleworkers employed by non-profit organizations made at least one personal trip per week on a telework day, compared with 59% of private sector employees and 47% of Federal agency workers.
- Younger than 35 years old – 63% of respondents who were younger than 35 years made at least one personal trip per week during their telework day, compared with 57% of respondents who were between 35 and 54 years old and 44% of those who were 55 years or older.

Length of Time Teleworking

Although telework has been common in the region for many years, telework's growth has meant that in each SOC survey, a sizeable share of teleworkers said they adopted this work option recently. As indicated in Figure 43, 36% of teleworkers in the 2016 SOC survey and 41% of 2019 teleworkers started teleworking within the past two years. In each of those years, about one-third teleworked for between 25 and 60 months and about one-quarter had been teleworking more than five years.

Figure 43
Length of Time Teleworking
(2016 n = 1,822, 2019 n = 2,744, 2022 n = 5,390)



Not surprisingly, given the nearly doubling of telework between 2019 and 2022, the pattern for 2022 was much different. More than eight in ten teleworkers had been teleworking two years or less and 72% started teleworking between 12 and 24 months before the survey. The question specifically asked respondents to indicate the approximate duration in months and fully 52% of all teleworkers said they started 22, 23, or 24 months ago. The 2022 SOC survey was conducted between January and March 2022, thus most new teleworkers started in March or April of 2020. In 2022, only 19% of all teleworkers had teleworked more than two years; 13% had been teleworking more than five years.

On average, 2022 SOC respondents had been teleworking about 30 months, well below the average of 50 months calculated in the 2019 survey. But with the steady growth in telework in past years, as more workers teleworked each year, the average telework duration had been declining since 2013, when the average was 59 months.

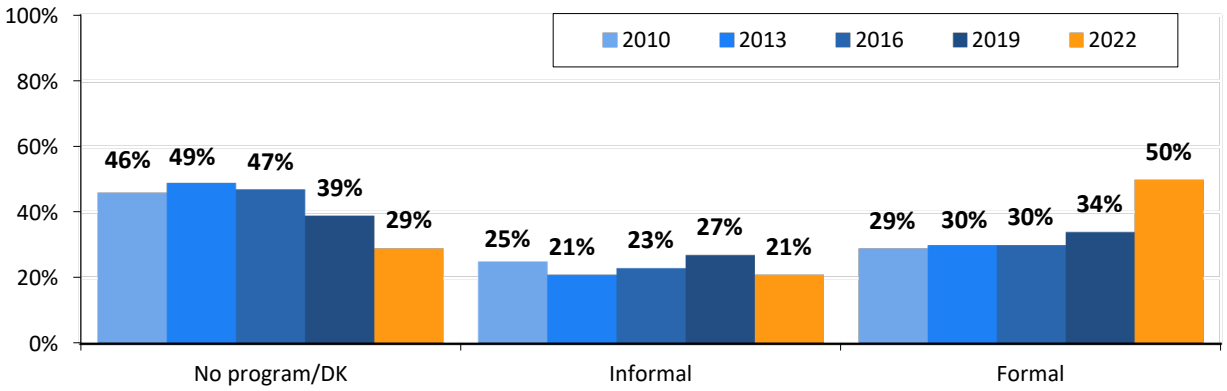
Formal or Informal Telework Arrangement

Teleworkers were asked if they teleworked under a formal program or through an informal arrangement with a supervisor. Respondents who said they were not teleworkers were asked if their employer had a telework program, even though the respondent did not use it. More than seven in ten (71%) of all respondents said their employers allowed some telework, either under a formal program (50%) or an informal arrangement (21%) (Figure 44). The remaining 29% of respondents said their employers did not have any telework program (18%) or that they did not know about any program (11%).

Figure 37 also shows telework arrangements for the four previous SOC surveys. The overall share of employees that reported telework availability increased in each SOC survey between 2013 and 2022, with the change between 2019 and 2022 (+10%) being about the same as for 2016 to 2019 (+8%).

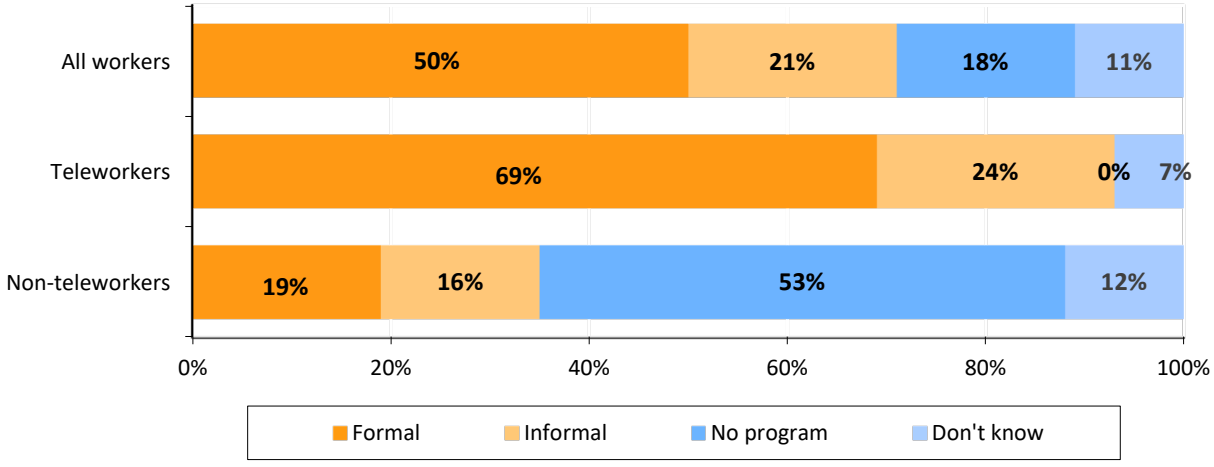
What changed markedly was the shares of formal and informal telework. Until 2022, formal programs only slightly dominated over informal programs. The 2022 results exhibited a notable change in the pattern, with formal programs accounting for seven in ten of all telework programs in 2022. It is possible that employers' opening telework to a much greater number and wider range of employees to respond to the pandemic prompted some employers to formalize telework policies and replace informal agreements that had been sufficient for use with selected employees before the pandemic.

Figure 44
Telework Arrangements – 2010 to 2022
(2010 n = 5,854, 2013 n = 5,892, 2016 n = 5,487, 2019 n = 8,101, 2022 n = 8,214)



Availability of Telework Arrangements at Worksites by Teleworkers and Non-teleworkers – Teleworkers were much more likely than were non-teleworkers to report that their employer had a formal telework program (Figure 45). Seven in ten (69%) teleworkers teleworked under a formal arrangement and 24% teleworked under an informal arrangement with their supervisor. This represents a continued shift from 2010, when only 50% of teleworkers had a formal agreement.

Figure 45
Formal and Informal Telework Arrangements Available at Work – Teleworkers and Non-Teleworkers
All respondents and Teleworkers versus Non-Teleworkers
(All workers n = 8,214, Teleworkers n = 5,221, Non-teleworkers n = 2,600)



Among respondents who were not teleworking, only 19% said their employers had a formal telework program and 16% said telework was permitted under informal arrangements. Half (53%) said the employer had no program and 12% did not know if a program existed.

Telework Arrangement by Employer Type – The availability of telework arrangements varied by respondents' employer types. Formal programs were most common among respondents who worked for a Federal government agency (Table 26).

Table 26
Formal or Informal Telework Arrangements By Employer Type

Program Type	Federal Agencies (n = 2,279)	Non-profit Organizations (n = 1,265)	Private Employers (n = 3,503)	State/local Agencies (n = 787)
No TW program/Don't know	16%	19%	35%	41%
Telework permitted	84%	81%	65%	59%
Formal program	74%	52%	39%	45%
Informal arrangement	10%	29%	26%	14%

Three-quarters (74%) of respondents who worked for Federal agencies said their employers had formal programs, compared to only about 52% of respondents who worked for non-profit organizations, 39% who worked for private employers, and 45% who were employed by state/local agencies. Respondents who worked for non-profit organizations or private employers were most likely to have informal telework. Three in ten (29%) non-profit employees and 26% of private sector employees said their employers permitted informal telework. State/local government agencies were least likely to permit telework under any arrangement. Only 59% of these respondents said their employer allowed employees to telework at all.

Telework Arrangement by Employer Size – Respondents who worked for large employers were most likely to have access to a telework program and to have access to a formal program (Table 27). Eight in ten respondents who worked employers with 1,000 or more employees said their employer had either a formal program (64%) or permitted informal telework (15%). By contrast, only two-thirds who worked for employers with 50 or fewer employees had access to either formal (42%) or informal (25%) telework.

Table 27
Formal or Informal Telework Arrangements By Employer Size

Program Type	1-50 Employees (n = 1,477)	51-100 Employees (n = 802)	101-250 Employees (n = 1,004)	251-999 Employees (n = 1,273)	1,000+ Employees (n = 2,027)
No TW program/Don't know	33%	32%	28%	21%	21%
Telework permitted	67%	68%	72%	79%	79%
Formal program	42%	43%	52%	61%	64%
Informal arrangement	25%	25%	20%	18%	15%

Telework Arrangement by Employer Location – Finally, access to telework programs generally and formal telework, specifically, were both more common for respondents who worked in the Core (Table 28). Nearly eight in ten respondents who worked in the Core said their employer had either a formal program (56%) or permitted informal telework (22%). Among Middle Ring workers, about two-thirds had access to either a formal program (45%) or informal program (21%). Workers in the Outer Ring were least likely to have access to telework; only 54% had any telework option and just 18% said their employer had a formal program.

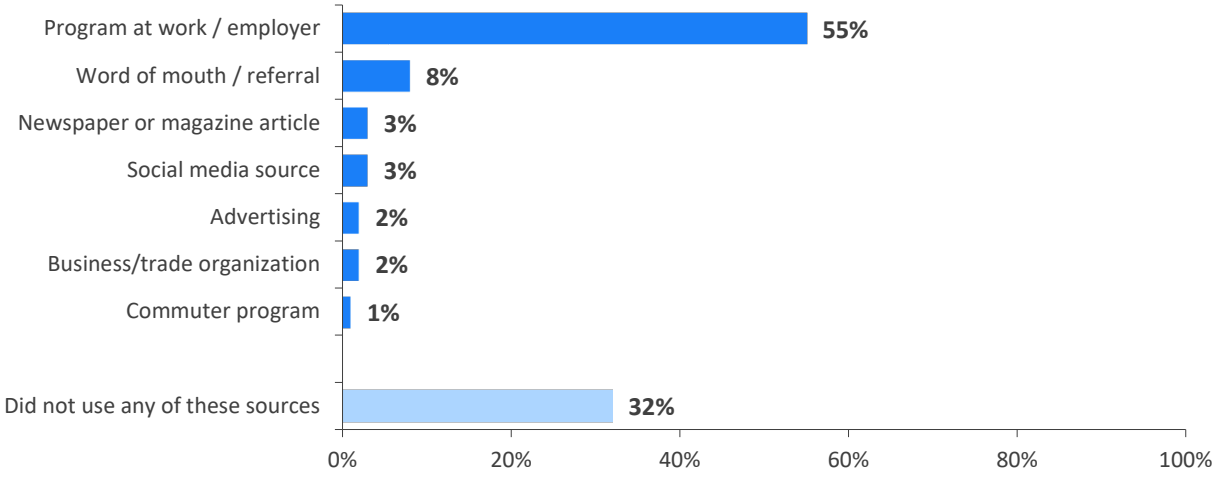
Table 28
Formal or Informal Telework Arrangements By Employer Work Location

Program Type	Core (n = 3,969)	Middle Ring (n = 2,695)	Outer Ring (n = 926)
No TW program/Don't know	22%	34%	46%
Telework permitted	78%	66%	54%
Formal program	56%	45%	36%
Informal arrangement	22%	21%	18%

Sources of Telework Information

Respondents who teleworked were if they had used any of a listed set of information resources to learn about telework. They also were asked a separate question to determine if they had received telework information from Commuter Connections or from MWCOG. The largest source of information, by far, was "program at work/employer," named by 55% of respondents (Figure 46). Eight percent learned of telework through "word of mouth" referrals from friends, co-workers, or family.

Figure 46
Sources of Information About Telework
(n = 2,511, multiple responses permitted)



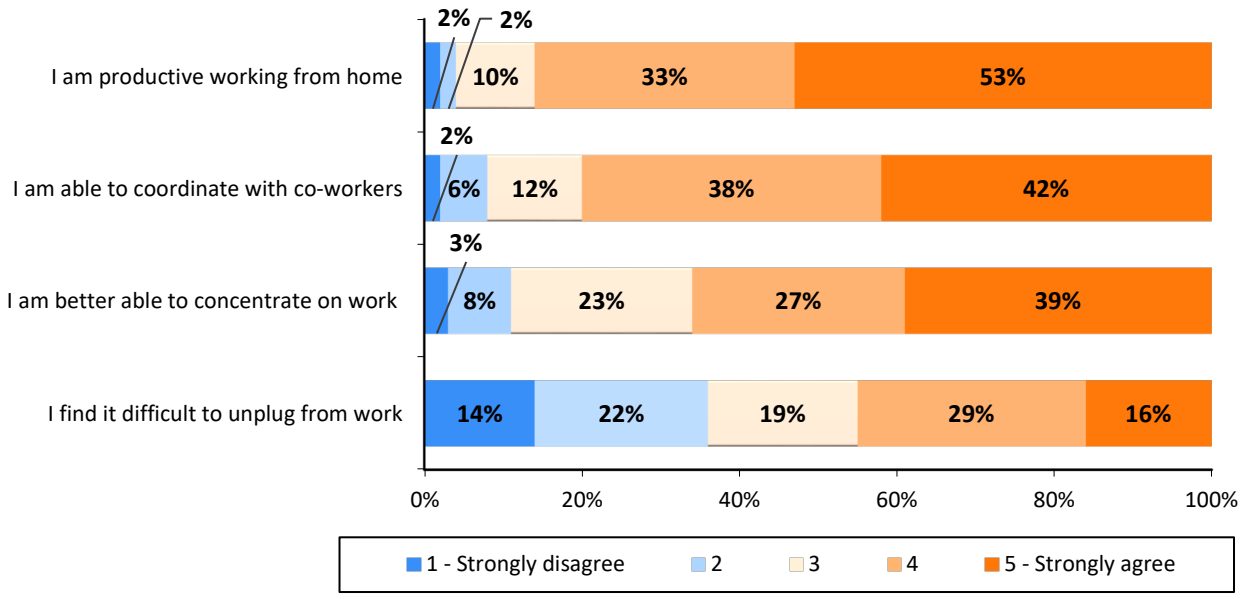
Small percentages of respondents mentioned that a newspaper or magazine article (3%), social media (3%), general advertising (2%), or a business or trade/industry organization (2%) provided information. In this question about general sources, 1% cited a commuter service organization or program, such as Commuter Connections, Telework!VA, www.telework.gov, or a county transportation program.

When asked directly if they had received information from Commuter Connections or MWCOG, 5% said they had. This was a slightly lower percentage than had mentioned Commuter Connections/MWCOG in 2019 (7%) and 2016 (9%) but many teleworkers likely had been directed by their employer to work from home due to the pandemic, so perhaps had not sought information beyond the information their employers supplied. Additionally, while the percentage was lower in 2022, on the high base of teleworkers, this represented more than 100,000 teleworkers who had received telework information from Commuter Connections/MWCOG.

Respondents' Experience with Telework

Telework research has found that employees can receive both personal and work-related benefits from teleworking. To examine this possibility for the Washington region, the survey asked teleworkers to rate their level of agreement with four statements about possible impacts of teleworking (Figure 47).

Figure 47
Experience with Telework – Agreement with Statements About Telework
(n = 2,411)



At least eight in ten respondents agreed with the statement that they were productive while they were teleworking (86%) and that they were able to coordinate with co-workers while they were working at home (80%).These are two common concerns of managers about employees who work remotely; employees' perception was that they did not experience significant problems with these two considerations. Teleworkers were less positive in assessing telework's impact on their concentration; 66% agreed that they were better able to concentrate on work while teleworking and one-quarter (23%) gave this statement a neutral rating, indicating neither agreement nor disagreement.

Teleworkers rated their agreement on one potential negative impact of telework. When asked if they found it difficult to unplug from work while teleworking, nearly half (45%) agreed. But more than one-third either disagreed or strongly disagreed, suggesting that it was not universally a concern.

One important caveat in reviewing these results is that they reflect telework experience for a very unusual period. Many employers and teleworkers were new to the arrangement in 2020 and some encountered technical, coordination, and management issues that needed to be resolved all at once. For this reason, the results presented above might not be comparable to results of similar telework research conducted pre-pandemic.

However, the survey was conducted two years after the start of the pandemic, thus the experience described above likely reflects resolution of most telework issues that might have been common at the start of the pandemic. Additionally, some workers who worked from home during the early months of the pandemic could have returned to full-time work at an outside work location. These respondents would not have been asked the telework agreement questions, so the level of agreement with the telework statements would include only those workers who were teleworking at the time of the survey.

Agreement With Telework Experience Statements by Length of Time Teleworking – Table 29 shows the level of agreement on the four telework statements by how long respondents had been teleworking. Statistical differences were found between long-term teleworkers and respondents who started teleworking more recently on two statements. Respondents who had been teleworking 25 months or longer, meaning they started teleworking prior to the pandemic, reported slightly higher agreement with the statements "I'm productive working at home" and "I'm better able to concentrate on work tasks" than did respondents who had been teleworking less than 25 months.

Table 29
Percentage Agreeing with Telework Statement by Length of Time Teleworking

(Shaded percentages indicate statistically higher percentages of agreement)

Telework Statement	Length of Time Teleworking		
	1-24 months (n = 4,143)	**25-60 months** (n = 657)	**61+ months** (n = 517)
Productive working at home	85%	88%	92%
Better able to concentrate on work	64%	71%	73%
Able to coordinate with co-workers	80%	82%	86%
Difficult to unplug from work	45%	45%	44%

But the percentages who said they were able to coordinate with co-workers were statistically the same across the three groups. Similarly, about four in ten (44%-45%) in each group reported agreement with the statement about difficulty unplugging from work.

Agreement With Telework Experience Statements by Desire to Continue Teleworking – As noted earlier, most current teleworkers wanted to continue teleworking, but many wanted to telework only some of their workdays. It seems reasonable to think that teleworkers' interest in future teleworking could be related to their experience during the pandemic. Table 30 shows the level of agreement on the four telework statements by respondents' preference for future telework.

Teleworkers who wanted to telework frequently in the future reported higher agreement with the three statements about positive impacts of telework on their work and lower agreement with the one statement about a negative personal impact. Agreement with the statement that "I'm productive working at home" showed a steady increase with increase in the preferred frequency of future telework; 95% who wanted to telework all their workdays agreed with the statement, compared with 69% who wanted to telework less than one day per week.

Respondents who were interested in frequent telework also had higher agreement on the statements related to concentration on work tasks and ability to coordinate with co-workers and lower agreement on the one statement about difficulty unplugging from work. These results suggest that personal factors and personality characteristics could influence both respondents' interest in telework as well as their self-assessment of their personal suitability to telework.

Table 30
Percentage Agreeing with Telework Statement by Desired Future Telework Frequency
(Shaded percentages indicate statistically higher percentages of agreement)

Telework Statement	Desired Future Telework Frequency			
	< 1 day per week (n = 373)	1-2 days per week (n = 1,233)	3-4 days per week (n = 1,712)	All workdays (n = 2,042)
Productive working at home	69%	74%	88%	95%
Better able to concentrate on work	39%	43%	65%	83%
Able to coordinate with co-workers	60%	70%	80%	90%
Difficult to unplug from work	58%	54%	48%	35%

Agreement With Telework Experience Statements by Demographic Characteristics – Analysis of the agreement with the statements by demographic sub-groups showed slight differences by age and gender. Respondents who were older than 35 were slightly more likely to agree that they were productive (88%) than were teleworkers who were younger than 35 years (82%). A higher share of older respondents (68%) also agreed that they were better able to concentrate than were those under 35 (61%).

There also were statistical differences in the responses from female and male teleworkers, with female respondents reporting higher agreement with the three work-related statements: productive working at home (89% of females, 84% of males), better able to concentrate on work (71% of females, 60% of males), and able to coordinate with co-workers (83% of females, 78% of males). These age and gender differences could be related to many other factors, however, including the types of work they perform, their roles in the organizations, and personal or home situations.

SECTION 5 – AVAILABILITY OF AND ATTITUDES TOWARD TRANSPORTATION OPTIONS

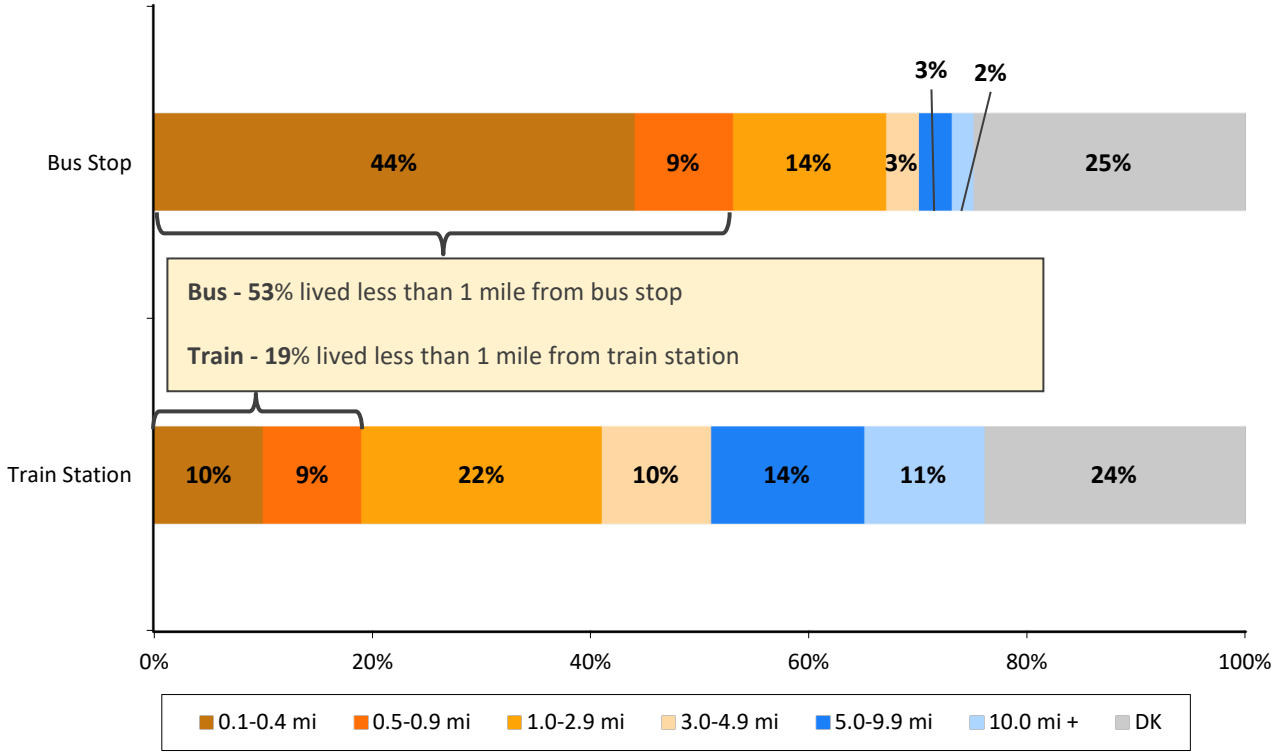
Another major section of the State of the Commute Survey examined the availability of transportation options, such as public transportation, and respondents' attitudes toward these options.

Public Transportation

Distance to Bus Stop and Train Station

Respondents were asked how far their homes were from the nearest bus stop and the nearest train station. More than four in ten (44%) respondents said they lived less than one-half mile from a bus stop and 53% lived less than one mile (Figure 48). But one-quarter (25%) were unsure of the distance. Among respondents who could provide a distance to a bus stop, the average distance was 1.1 miles.

Figure 48
Distance from Home to Bus Stop and Train Station
(n = 8,109)



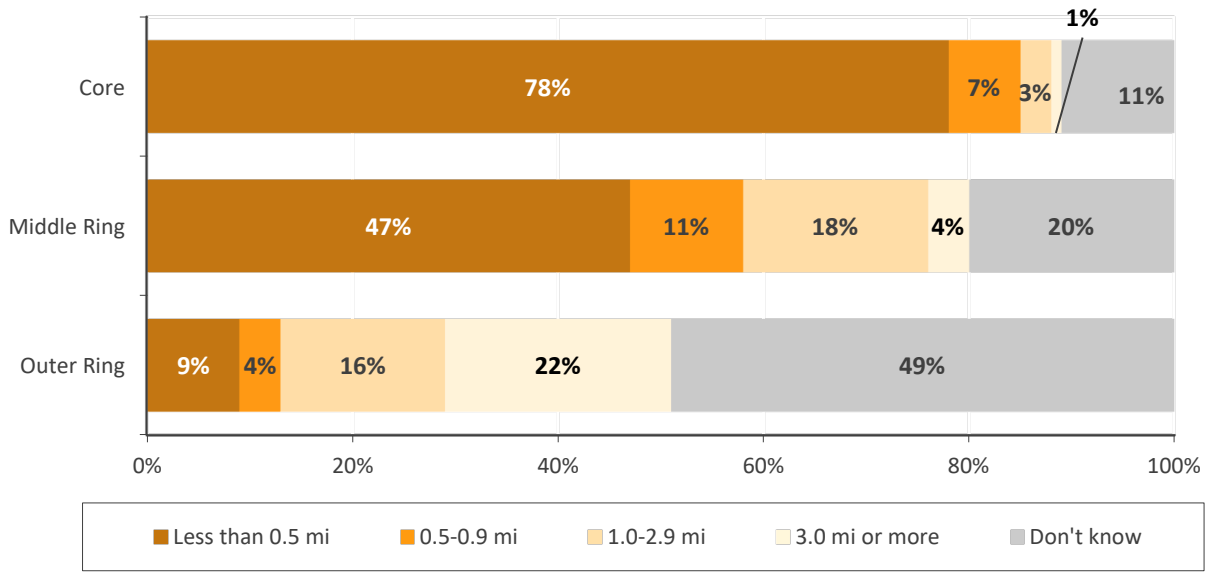
Train stations were farther away for most respondents. Only 10% lived less than one-half mile from a Metrorail or commuter rail station and only 19% lived less than one mile. Thirty-five percent said they lived three or more miles from the nearest train station. As with bus stop distance, 24% of respondents did not know the distance from their home to the train stations. On average, respondents who provided a distance lived 4.4 miles away.

Distance to Transit by Home Area

Figure 49 presents the distribution of bus stop distance for the three home areas. Eight in ten (85%) Core area residents said they lived less than one mile from a bus stop, compared with 58% of Middle Ring and just 13% of Outer Ring residents. About 22% of Middle Ring and 38% of Outer Ring residents said they lived one or more miles from a bus stop but an additional 20% of Middle Ring and 49% of Outer Ring residents said they did not know the distance to the nearest bus stop; it is likely these respondents did not have bus stop nearby.

The average transit access distance was the shortest for respondents who lived in the Core area; just 0.4 miles to the nearest bus stop and 1.2 miles to the nearest train station. Respondents in the Middle Ring said they traveled 0.8 miles to the nearest bus stop and 3.9 miles to the nearest train station. Respondents who lived in the Outer Ring reported that the nearest bus stop was an average of 3.7 miles away and train was 10.6 miles away.

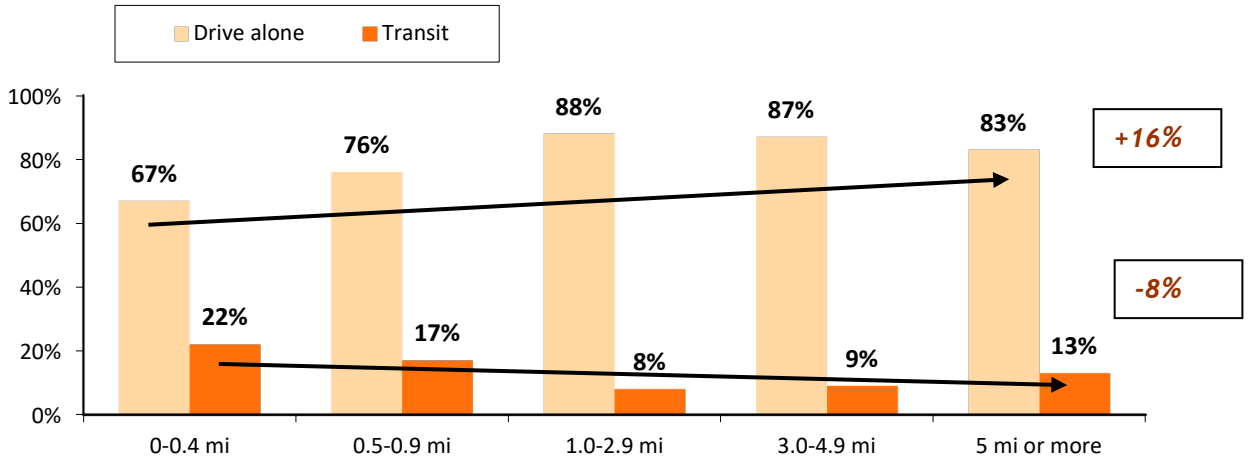
Figure 49
Distance from Home to Bus Stop by Home Area
(Core n = 2,559, Middle Ring n = 2,518, Outer Ring n = 3,032)



Commute Mode by Distance to Bus Stop – As might be expected, the transit commute mode share declined with increasing distance from a bus stop (Figure 50). More than two in ten (22%) commuters who lived less than one-half mile from a bus stop primarily commuted by bus or train. As the distance from home to a bus stop increased, the transit share fell. When the nearest bus stop was one or more miles from home, the percentage who commuted by transit fell by half.

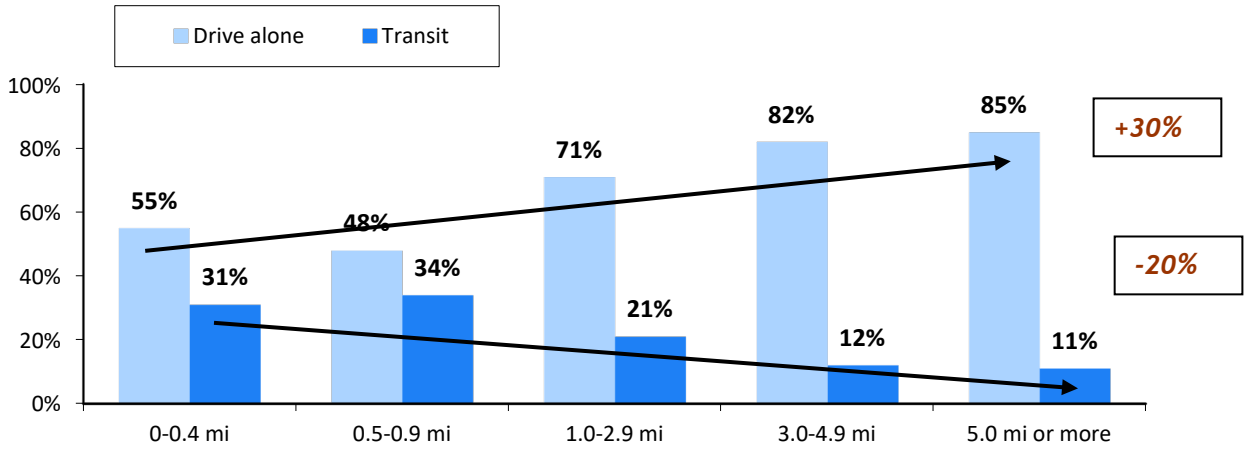
The decline in transit use was mirrored by a corresponding increase in driving alone. The drive alone rate for commuters who lived one or more miles from a bus stop was as much as 21 percentage points higher than the 67% rate for commuters who lived less than one-half mile from a bus stop.

Figure 50
Commute Mode by Distance from Home to Bus Stop (Excluding Primary Telework)
(Less than 0.5 mi n = 1,542, 0.5-0.9 mi n = 313, 1.0-2.9 mi n = 563, 3.0-4.9 mi n = 173, 5.0 mi or more n = 391)



Drive alone use also increased and transit use decreased with increasing distance from home to a train station (Figure 51). Among commuters who lived less than one-half mile from a train station, 55% drove alone and 31% used transit. Among commuters who lived 5 miles or more from the nearest train station, the drive alone rate was 85%, an increase of 30 percentage points, and the transit share was 11%, a drop of 20 percentage points.

Figure 51
Commute Mode by Distance from Home to Train Station (Excluding Primary Telework)
(Less than 0.5 mi n = 332, 0.5-0.9 mi n = 343, 1.0-2.9 mi n = 771, 3.0-4.9 mi n = 328, 5.0 mi or more n = 1,153)



High Occupancy Vehicle (HOV) and Express/Toll Lanes

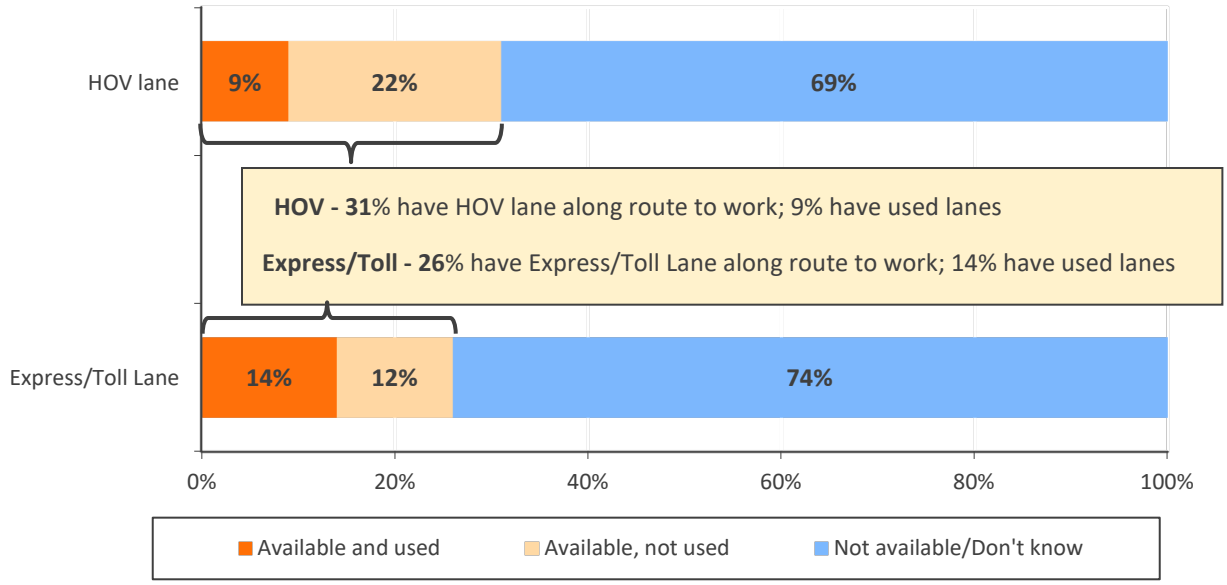
Availability and Use of HOV and Express/Toll Lanes

The survey also examined availability and use of High Occupancy Vehicle (HOV) and Express/Toll Lanes. Several roads in the region have had HOV lanes for many years. In recent years, new HOV lanes have opened in Maryland and Virginia, and Virginia has initiated tolled Express Lanes, which permit travelers who are driving alone to use the lanes for a fee. The 2022 SOC survey repeated several HOV/Express questions from previous SOC surveys. Because respondents who were full-time teleworkers could not report on current availability or use of the lanes, they were excluded from this set of questions.

Nearly four in ten (38%) commuters said one or both types of facilities were available along their route to work: 31% had access to HOV lanes (12% only HOV and 19% both HOV and Express/Toll) and 26% had access to Express/Toll lanes (7% only Express/Toll and both 19% Express/Toll and HOV). About half (52%) said HOV/Express lanes were not available and 10% said they were not sure.

Nine percent of commuters region-wide had used an HOV lane, about one-third of the 31% of commuters who said an HOV lane was available along their route to work (Figure 52). Fourteen percent of commuters region-wide had used an Express/Toll Lane, more than half of the 26% who reported access to an Express/Toll Lane along the route to work.

Figure 52
Availability and Use of HOV and Express/Toll Lanes – All Regional Commuters
(n = 4,910)

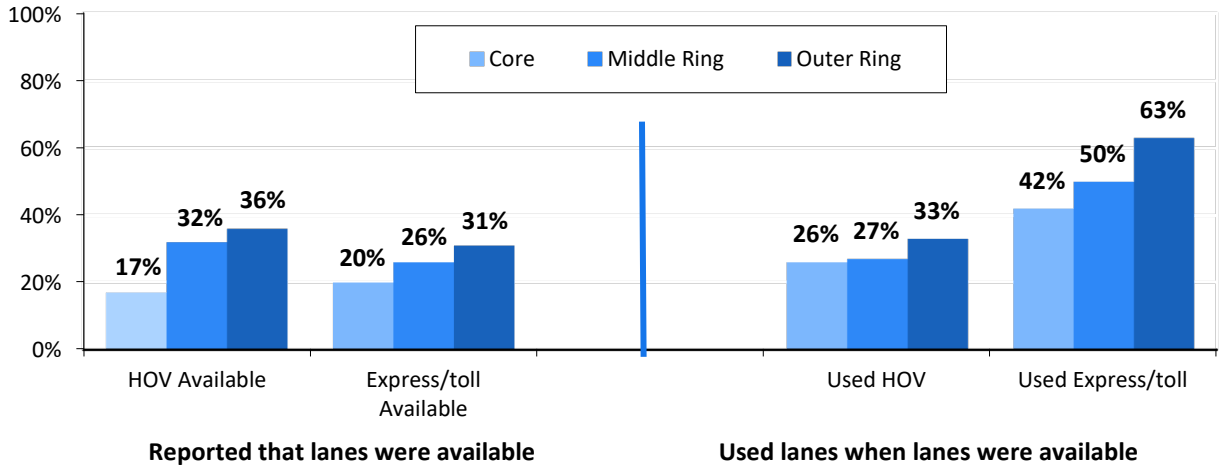


The lower use of HOV lanes than Express/Toll Lanes is certainly related to the lower potential market for HOV lanes; they allow only carpools, vanpools, and transit buses, while Express/Toll Lanes also are open to all vehicles, including single-occupant vehicles. But reported availability of HOV lanes fell between 2019 to 2022; in 2019, 34% of respondents said an HOV lane was available on their route. By contrast, both availability and use of Express/Toll Lanes increased from 2019 to 2022; in 2019 only 18% reported that an Express/Toll Lane was available and 12% of commuters had used an Express/Toll Lane.

HOV and Express/Toll Lanes by Home Area – Figure 53 shows availability and use of HOV lanes and Express/Toll Lanes by home location within the three "ring" categories. Commuters were more likely to have HOV lanes available on their route to work if they lived in Middle Ring (32%) or Outer Ring (36%) jurisdictions than if they lived in the Core (17%). The pattern was similar for availability of Express/Toll Lanes; 26% of Middle Ring and 31% of Outer Ring residents said they were available, compared with 20% of Core area residents. The greater access of commuters who lived and worked outside the Core reflects the locations of HOV lanes and Express/Toll Lanes, nearly all of which are outside the Core.

Figure 53
Availability and Use of HOV and Express/Toll Lanes by Home Area

(HOV lane/Express Lane available – Core n = 1,289, Middle Ring n = 1,548, Outer Ring n = 2,099)
(HOV lane used (respondents with lanes available) – Core n = 292, Middle Ring n = 455, Outer Ring n = 580)
(Express lane used (respondents with lanes available) – Core n = 344, Middle Ring n = 372, Outer Ring n = 447)



The right half of Figure 53 displays use of lanes, among respondents who had the lanes available. Respondents who lived in the Outer Ring also used HOV lanes at a higher rate than did commuters in other areas. One-third (33%) of Outer Ring respondents who had access to HOV lanes said they used them, compared with about one-quarter of Middle Ring (27%) and Core area (26%) residents. Outer Ring respondents also used Express Lanes at a high rate; 63% who said the lanes were available had used them. But Express Lane use also was sizeable (50%) among Middle Ring respondents and four in ten (42%) Core area residents who said Express Lanes were available had used the lanes.

Table 31 shows availability and use of HOV/Express Lanes by respondents' home county or city. Virginia residents generally had higher availability than did residents of Maryland or the District of Columbia. At least one-quarter of respondents in each of the five Virginia jurisdictions said an HOV lane was available; nearly half of Prince William County (49%) and Fairfax (48%) respondents reported having access to HOV lanes. By comparison, the highest rates of HOV lane availability outside Virginia were 38% for Frederick County, MD residents and 31% for Montgomery County, MD residents. Only 9% of respondents from the District of Columbia reported having access to the lanes along their route to work.

Table 31
Availability and Use of HOV and Express/Toll Lanes by Residence Jurisdiction

Home Jurisdiction (County/City)	All Respondents			Respondents Use Lanes When Available			
	(n=___)	HOV Available	Express Available	HOV (n =)*	HOV Use	Express (n=)*	Express Use
Virginia jurisdictions							
Prince William Co	458	49%	49%	241	37%	217	62%
Fairfax Co	518	48%	50%	231	26%	242	53%
Loudoun Co	353	35%	39%	121	31%	137	66%
Alexandria City	404	33%	39%	131	18%	150	35%
Arlington Co	455	26%	34%	124	22%	157	42%
Maryland jurisdictions							
Frederick Co	431	38%	7%	164	25%	30	53%
Montgomery Co	482	31%	14%	143	27%	69	53%
Prince George's Co	548	16%	12%	81	28%	61	38%
Charles County	480	8%	11%	37	35%	45	55%
Calvert County **	377	4%	5%	NA	NA	NA	NA
District of Columbia	430	9%	8%	37	40%	37	52%

* Respondents in the jurisdiction who have an HOV/Express Lane available along their route to work.
** Samples for Calvert County residents with HOV lanes and Express lanes available were too small for reliable analysis of use.

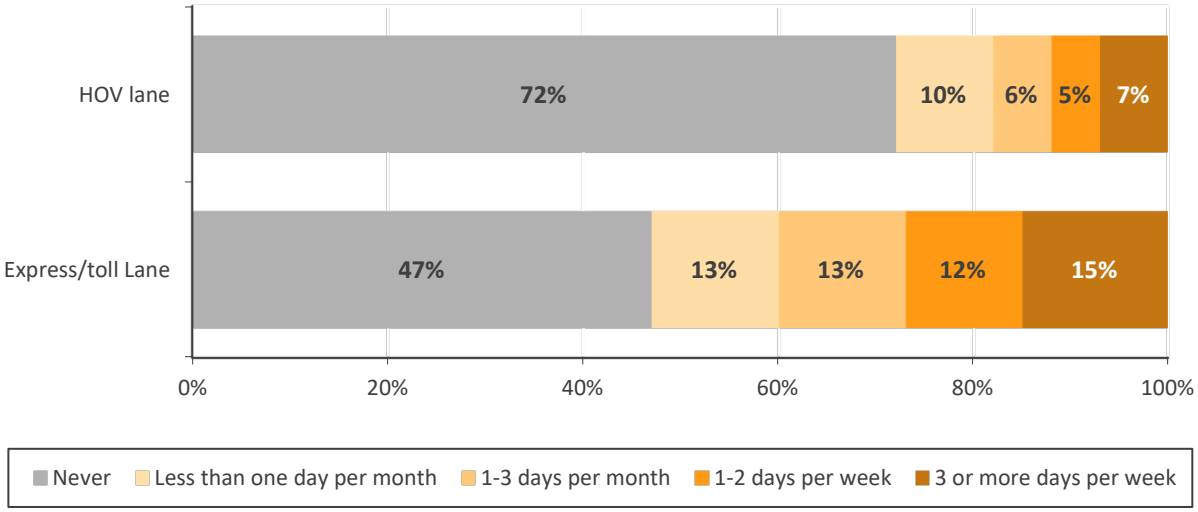
Virginia residents also had higher availability of Express/Toll Lanes than did residents of Maryland or the District of Columbia. Half of Prince William (49%) and Fairfax (50%) residents said Express/Toll Lanes were available. In Maryland, about one in ten residents of Montgomery (14%), Prince George's (12%), and Calvert (11%) counties said Express/Toll Lanes were available.

Table 31 also shows use of the lanes for respondents who had lanes available. Both HOV lane and Express/Toll Lane use was highest for Virginia residents; except for Alexandria, at least two in ten of these jurisdictions used HOV lanes when they were available and four in ten used Express/Toll Lanes.

HOV lane use also was notable for residents of the District of Columbia and Maryland, with at least one-quarter of residents who had lanes available using them. And substantial shares of Maryland residents used Express/Toll Lanes when they were available. But fewer respondents in Maryland jurisdictions had Express/Toll Lanes available, so much smaller numbers of residents of these jurisdictions used the lanes, when compared to absolute use among Virginia residents.

HOV and Express/Toll Lane Use Frequency – As noted above, respondents who had access to Express/Toll Lanes typically used them at a higher rate than did respondents who had access to HOV lanes. They also used them more frequently than did those with HOV lanes available. More than one-quarter (27%) of commuters with Express/Toll Lanes available used them at least one day per week, compared with 12% of commuters who had an HOV lane available (Figure 54).

Figure 54
Use Frequency of HOV and Express/Toll Lanes – Among Commuters Who Have Lanes Available
(HOV lane available n = 1,327, Express/Toll Lane available n = 1,163)



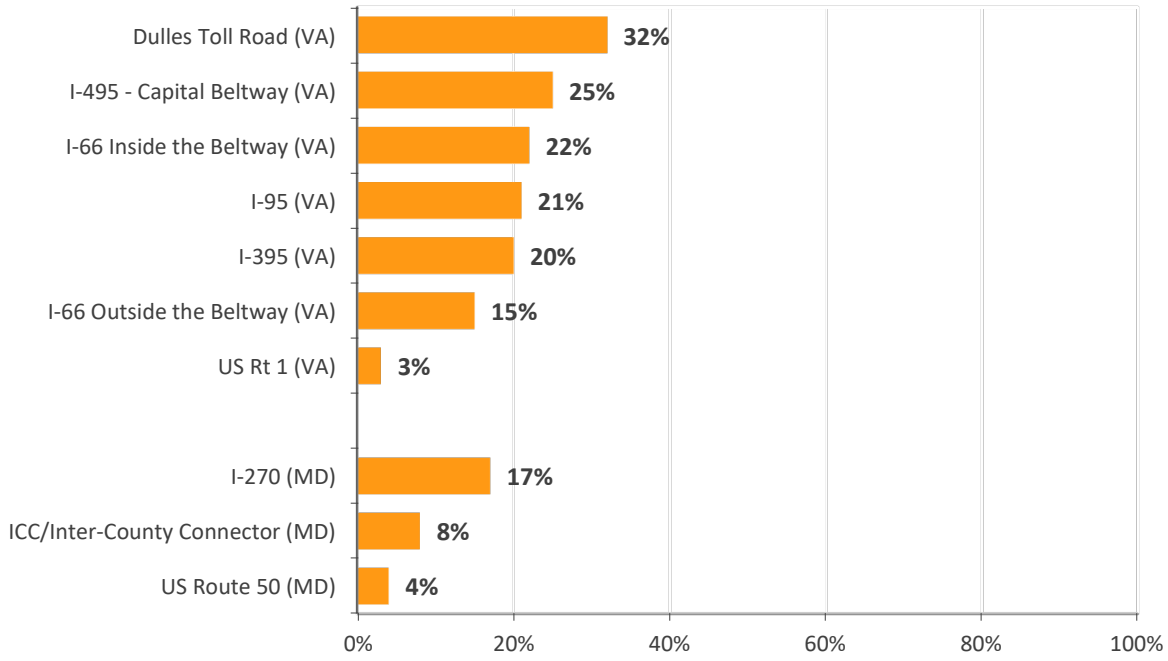
The 27% share of regular use of an Express/Toll Lane when it was available was the same in 2022 as in 2019 (27%). Use of HOV lanes among those who had lanes available declined, however, between 2019 and 2022. In 2022, 12% of commuters with HOV lanes available had used them one or more days per week, compared with 20% in 2019. The decline in HOV lane use likely is related to coronavirus pandemic travel changes away from long-distance bus and carpooling to driving alone.

HOV and Express/Toll Lanes Used – In 2022, HOV/Express/Toll Lanes were available on several major roads in the region. These roads in Maryland included I-270, US Route 50, and the Inter-County Connector. In Virginia, HOV and/or Express/toll lanes were available on I-495, I-66, I-395, I-95, the Dulles Toll Road, and US Route 1. Respondents who said they used either an HOV or Express/toll Lane on their commute were asked which roadway(s) they used (Figure 55).

The most common road overall was the Dulles Toll Road; 32% of respondents who used either an HOV or Express/Toll Lane reported using the lane on this road. About one-quarter of respondents reported using another HOV/Express/Toll lane in Virginia; I-495 - Capital Beltway (25%), I-66 inside the Capital Beltway (22%), I-95 (21%), I-395 (20%), and I-66 outside the Beltway (15%). Lower shares of respondents reported using HOV/Express/Toll lanes in Maryland; I-270 (17%) and Inter-County Connector (8%).

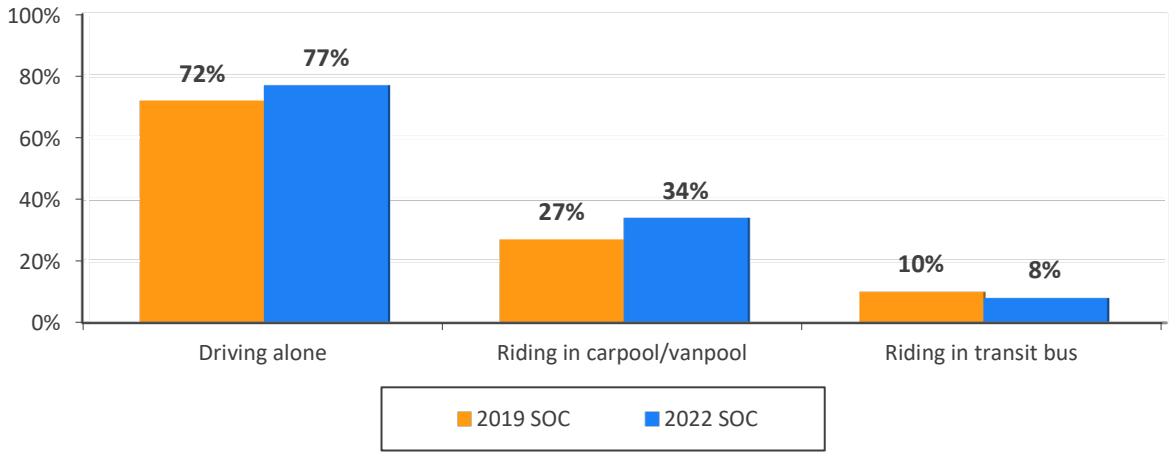
It is important to note that the Figure 55 distribution is based only on the commuters who are using HOV/Express/Toll lanes. It does not reflect the total volume of traffic on the roads or the share of individual road users who access the HOV/Express/Toll lanes on an individual road. Thus, the very high use of the Dulles Toll Road in Figure 55 results because this road is toll only; that is, all vehicles that travel on the road are subject to the toll, and the road is a primary route for many commuters who live or work in Fairfax and Loudoun counties in Virginia. The Inter-County Connector in Maryland also is a toll-only road but carries a lower commuter volume. The other roads listed in Figure 55 offer an option for vehicles to use non-tolled general purpose lanes.

Figure 55
HOV and Express/Toll Lanes Used – Among Commuters Who Have Lanes Available
(n = 747; multiple responses permitted)



Mode When Using Express/Toll Lanes – Respondents who said they used Express/Toll Lanes also were asked what mode they used while traveling on the lanes (Figure 56). During certain hours of the day, HOV lanes are restricted to those using shared-ride modes, such as carpools, vanpools, or transit buses. Express Lanes do not have this restriction; they are open to all users all day, although travelers who are driving alone pay a fee to use the lanes, while shared-ride users travel for free or a reduced price.

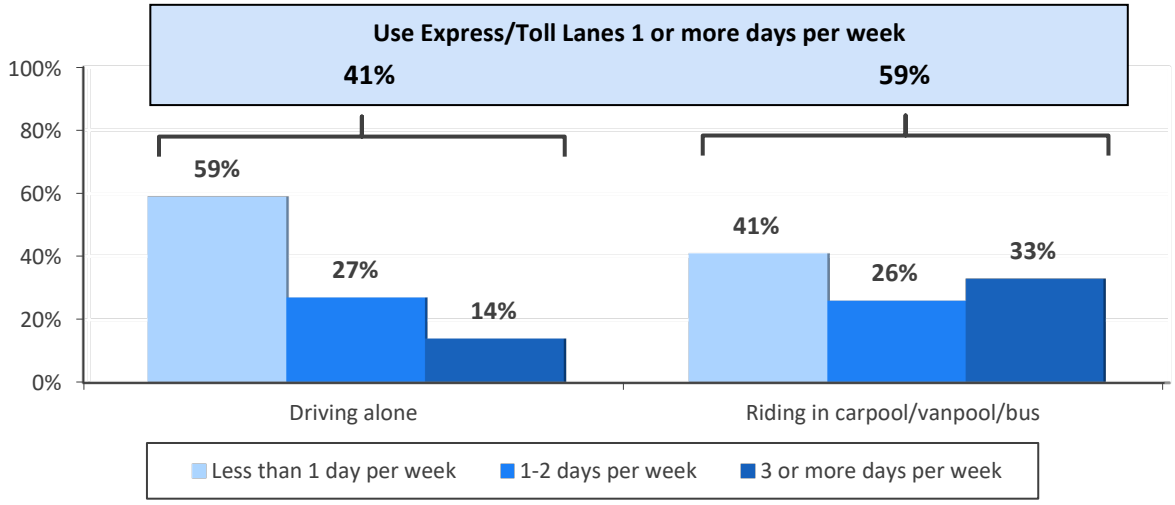
Figure 56
Commute Mode While Using Express/Toll Lanes – 2019 and 2022
(2019 n = 533, 2022 n = 213; multiple responses permitted)



More than three-quarters (77%) of Express/Toll Lane users said they typically drove alone while riding in the Express/Toll Lanes (Figure 56). This was a slightly higher percentage than was observed in 2019 (72%). About one-third (34%) rode in a carpool or vanpool at least some days. This also was an increase over the 2019 percentage of 27%. In 2022, 8% reported riding in a transit bus on the Express/Toll Lanes. This was not statistically different than the 10% result from 2019. Respondents were permitted to select more than one answer, so the total will add to more than 100%.

Frequency of Express/Toll Lane Use by Mode When Using Lane – Although a larger share of commuters said they typically drove alone while using Express/Toll Lanes, commuters who carpooled, vanpooled, or rode transit buses in these lanes used them more frequently. Nearly six in ten (59%) commuters who typically rode in a carpool/vanpool or bus on an Express/Toll Lane did so at least one day per week and 33% used the lane three or more days per week (Figure 57). By contrast, only four in ten commuters who drove alone on an Express/Toll Lane used the lanes at least once per week and only 14% were frequent users.

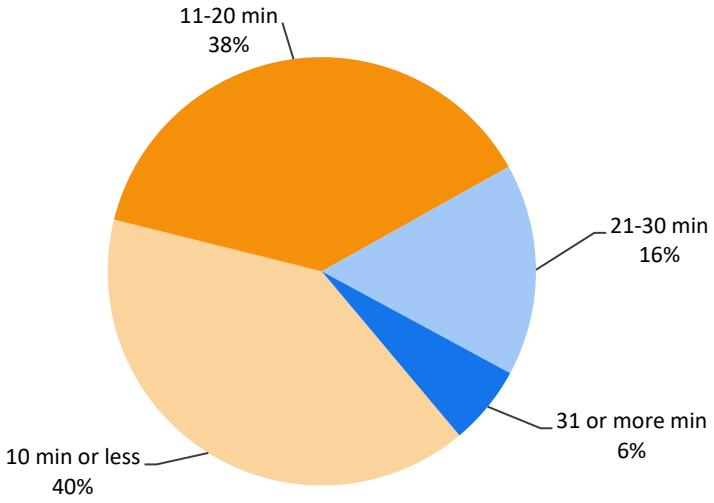
Figure 57
Frequency of Express/Toll Lane Use by Mode While Using Express/Toll Lanes
(Drive alone n = 175, Carpool/vanpool/bus n = 74)



HOV and Express/Toll Lane Influence

HOV and Express/Toll Lane Time Saving – A primary benefit attracting both HOV and Express/Toll Lane users is the travel time saving and travel time reliability these lanes provide. Respondents who said they regularly used an HOV or Express/Toll Lane for commuting estimated that using the lane saved them an average of 16 minutes for each one-way commute trip. Four in ten (40%) respondents said they saved 10 minutes or less and a similar share (38%) said they saved between 11 and 20 minutes (Figure 58). The remaining respondents were split between saving 21 to 30 minutes (16%) and saving more than 30 minutes one-way (6%).

Figure 58
Perceived Travel Time Saving of HOV and Express/Toll Lane Users (Estimated by Users)
(Note that actual time saving could be different from the respondent-estimated, perceived time saving)
(n = 551)

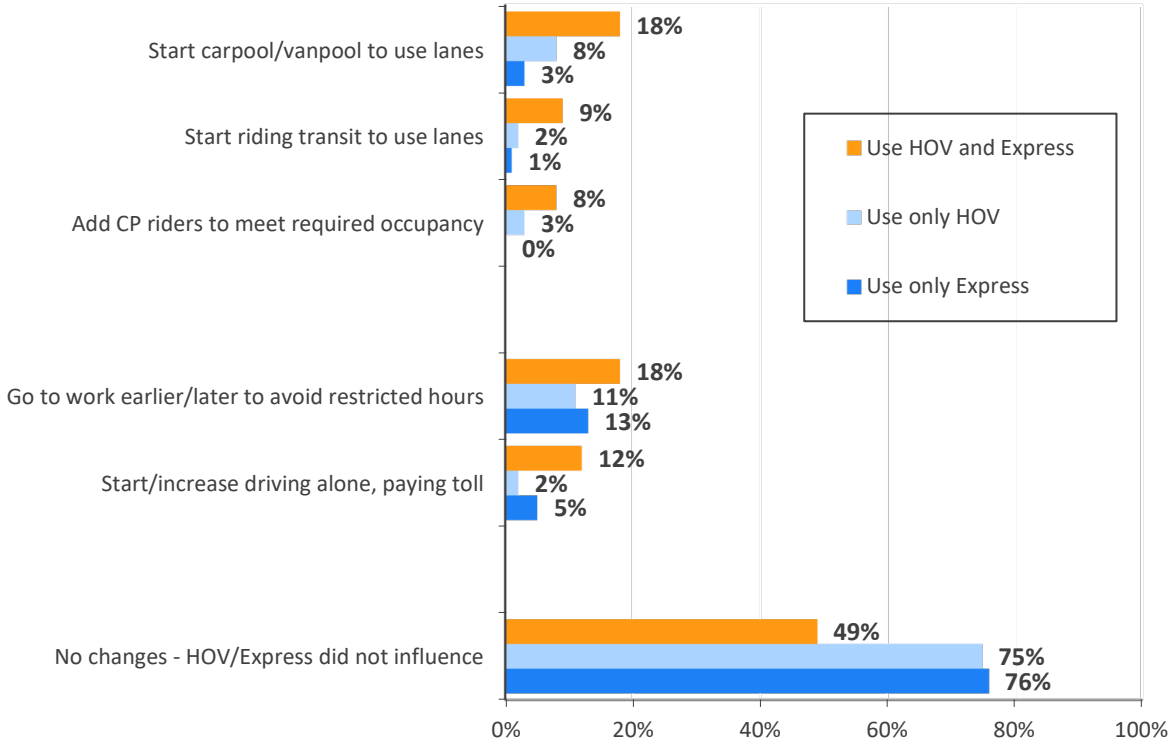


The 16 minutes time saving was slightly lower than the 19-minute saving reported by HOV/Express/Toll lane users in 2019. This could suggest there was less congestion on the general purpose lanes of these roadways. HOV/Express/Toll lane users who lived in the Core saved an average of 12 minutes, Middle Ring commuters saved 15 minutes, and Outer Ring commuters who used the lanes saved an average of 20 minutes on their commute. Note that these time savings are self-reported and represent the respondents' perceptions of time saving, rather than actual, measured time saving.

Travel Changes Influenced by HOV and Express/Toll Lane Use – A primary objective of HOV lanes is to encourage commuters to shift from driving alone to shared-ride modes, to obtain travel time savings. Express/Toll Lanes, which allow all users for a fee, also provide time savings, but do not necessarily encourage shifts to alternative modes, unless carpools and vanpools receive a toll discount. To explore the possible influence of HOV and Express/Toll Lanes on travel choices, the survey asked if the availability of HOV or Express/Toll Lanes had influenced users of the lanes to make any of five specific changes in how they commuted.

Three of the travel changes would result in greater use of non-drive-alone modes: start carpooling or vanpooling to use the lanes (or use for free/reduced price), start riding transit to use the lanes, and add another rider to an existing carpool to meet the occupancy requirement. The remaining two changes would allow the respondents to use the lanes, but while driving alone: go to work earlier or later to avoid the restricted hours and start or increase driving alone, knowing the commuter could pay the toll. Because HOV lanes and Express Lanes might influence quite different actions, Figure 59 displays the percentage of commuters who took each action by the type of lanes they used: both HOV and Express/Toll Lanes, HOV lanes only, and Express/Toll Lanes only.

Figure 59
Travel Changes Influenced by Use of HOV Lanes and Express/Toll Lanes
(Use both HOV/Express Lanes n = 212, Use only HOV n = 109, Use only Express Lanes n = 392; multiple responses permitted)



The data suggest HOV and Express/Toll lanes can influence commuters' mode choice. Among commuters who used both HOV and Express/Toll Lanes, 51% made one or more of the travel changes presented and many made one of the three changes that result in greater use of non-drive alone modes; 18% started carpooling or vanpooling and 8% added another rider to a carpool to meet the 3-person minimum requirement to use the lane for free or reduced toll. One in ten (9%) started riding a bus that travels along the HOV/Express Lane. Other respondents made one of the "continue driving alone" changes; 18% said they changed their work hours to avoid the time restrictions and 12% started or increased driving alone, gaining the travel time saving by paying the toll on the Express/Toll Lane.

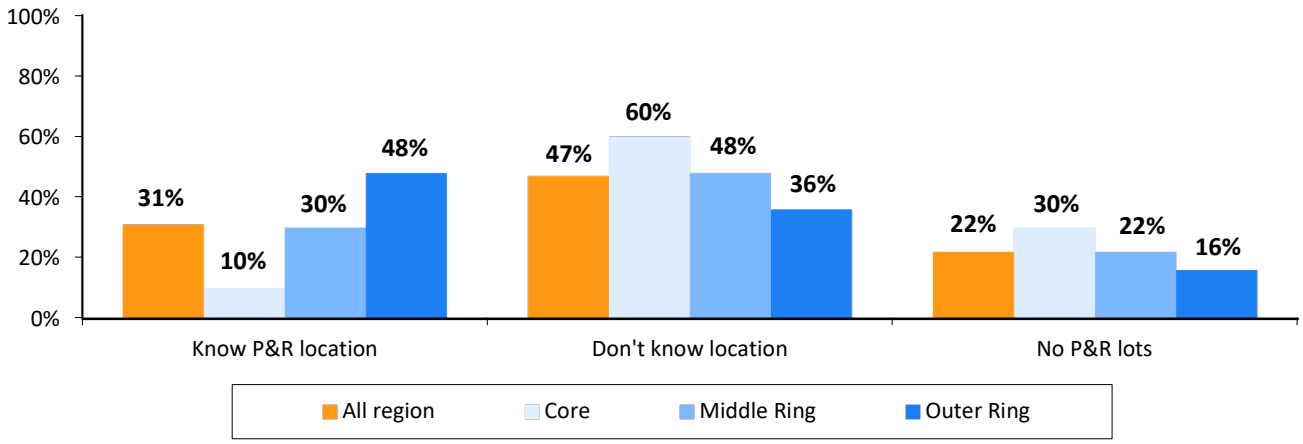
Of commuters who used only HOV lanes, 25% were influenced to make at least one change; 8% started ridesharing, 3% added a rider to an existing pool, and 2% started riding a bus traveling on the lanes. Eleven percent changed their work hours to avoid HOV restricted hours and 2% increased driving alone.

Not surprisingly, the profile of changes made by commuters who used only Express/Toll Lanes, which allow commuters to use the lanes with no travel changes at all, was very different from those of the HOV/Express and HOV only cases. One-quarter (24%) said they were influenced to change their travel but most made changes that would continue or increase how often they drove alone. Thirteen percent changed their work hours to avoid the restricted hours and 5% started or increased how often they drove to work, presumably shifting from an alternative mode. Only 4% were influenced to start using an alternative mode.

Park and Ride Lots

A large network of Park & Ride lots is available in the region, providing convenient locations for commuters who want to rideshare to meet their rideshare partners. Some Park & Ride lots also are served by feeder and express bus, so can facilitate use of transit and/or bicycling for commuting. Many of the lots are located along congested commuting routes and/or routes with HOV/Express/Toll lane access, to encourage alternative mode use even more. Figure 60 depicts respondents' awareness of the locations of Park and Ride (P&R) lots along their route to work.

Figure 60
Awareness of Park & Ride Lots Along Route to Work By Home Area
(All region n = 5,192, Core n = 1,473, Middle Ring n = 1,585, Outer Ring n = 2,134)



Regionwide, three in ten (31%) respondents said they knew P&R lots were available on their commuting route and they knew the locations. Forty-seven percent said they thought lots existed but did not know or were not sure of the locations. The remaining (22%) said there were no P&R lots along their route to work. These percentages were nearly the same as in 2019 (Yes 32%, Don't know 45%, No lots 23%).

Awareness/availability of lots varied substantially by home location. Only 10% of respondents who lived in the Core knew of a P&R lot on their route, while 30% of respondents who lived in the Middle Ring and 48% of respondents in the Outer Ring knew of a lot along their route to work.

Interestingly, there was very little difference in awareness of lots by the mode that respondents used to get to work; 31% of commuters who primarily carpooled to work and 32% who rode a bus knew lot locations, but 32% of primary drive alone commuters also knew lot locations.

Thirteen percent of those who knew Park and Ride lot locations had used these lots when commuting during the past year. These respondents represented 3% of total respondents in the survey, about half the share of respondents who used P&R lots in 2019 (7%), 2016 (6%), and 2013 (7%).

Among those who knew P&R lot locations, lot use was similar for respondents in all three home areas; 15% of Core area residents and 13% of Middle Ring and Outer Ring residents had used the lots. But respondents who worked in the Core used P&R lots at a much higher rate than did other respondents. One-quarter (26%) of Core area workers who knew of a lot used it in the past year, compared with just 6% of respondents who worked in the Middle Ring and 9% who worked in the Outer Ring.

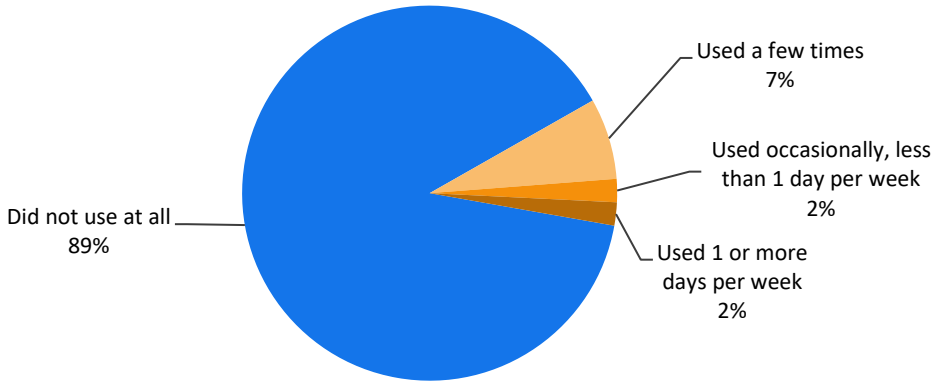
Attitudes Towards Transportation Options

Carpool/Vanpool Barriers

Previous Carpool/Vanpool Use Among Non-users – At the time of the survey, about 2% of respondents traveled to work by carpool, casual carpool, or vanpool one or more days per week. This was a considerable drop from 2019, when 6% of respondents reported ridesharing weekly. Respondents who were traveling to outside work locations at the time of the survey and were not ridesharing for their commute were asked if they had carpooled or vanpooled to work at any time in the past three years.

Most (89%) said they had not carpooled/vanpooled at all (Figure 61). Of those who had carpooled or vanpooled, most were infrequent users; 7% carpooled or vanpooled just a few times and 2% used a carpool or vanpool occasionally, but less than one day per week. Two percent had carpooled or vanpooled to work at least one day per week.

Figure 61
Carpool/Vanpool Commuting in the Past Three Years – Non-rideshare Commuters
(n = 4,960)



Reasons for Not Ridesharing – Respondents who had carpooled or vanpooled at least occasionally in the previous three years were asked how significant the pandemic had been in their decision to stop ridesharing. Six in ten respondents said the pandemic had been a factor; 32% said the pandemic was the only factor in their decision and 24% said the pandemic was a major factor. A small share (4%) said the pandemic was a minor factor and 40% said it was not a factor at all.

Note that these questions on past rideshare use were asked only of respondents who were commuting to outside locations; respondents who teleworked full-time were not included in these questions. As described in Section 2 (Table 4), 50% of respondents who said they were primarily carpooling or vanpooling in early 2020 (before the pandemic) reported they were primarily teleworking at the time of the survey, so the pandemic likely was a factor for these respondents' mode shift as well.

Respondents who stopped carpooling/vanpooling in the past three years were asked if they had other reasons, in addition to the pandemic, for making the change. Respondents who never carpooled or vanpooled in the past three years were asked a more general question of why they did not use these modes. Table 32 lists the responses for those who stopped ridesharing (Former Rideshare) and for those who had not used rideshare (Never Rideshare).

Table 32
Reasons to Stop Ridesharing (Former Rideshare) or For Not Ridesharing (Never Rideshare)
(Shading indicates statistically higher percentages for reasons; multiple responses permitted)

Reasons	Former Rideshare (n = 170)	Never Rideshare (n = 4,330)
Coronavirus Pandemic (general response)	60%	5%
Personal Changes		
Changed jobs/work location/schedule	11%	---
Moved to new home	8%	---
Mode Availability		
Don't know anyone to carpool/vanpool with	24%	26%
No carpool/vanpool services/options at my work	1%	9%
Don't know how to arrange carpool/vanpool	---	5%
Mode Characteristics		
Takes too much time	5%	2%
Too expensive	3%	1%
Carpool/vanpool partner could be unreliable/late	1%	2%
Personal Preferences/Needs		
Prefer to use bus / Metro / train	3%	5%
Prefer to drive	3%	5%
Don't like to ride with strangers, prefer to be alone	2%	5%
Work schedule irregular	1%	12%
Just not interested / not feasible or practical	---	8%
Live close to work, can walk, use other mode	---	6%
Not convenient	---	5%
Need car before/after work	---	4%
Need my car for work	---	4%
Need flexibility in commute	---	4%
Other	4%	10%

Former Rideshare – Six in ten (60%) respondents' who were still traveling to work but who stopped ridesharing cited the pandemic as at least one reason for the mode change. About one in ten mentioned a personal work location/schedule change (11%) or home location change (8%) as a factor; these also could be pandemic-related for some respondents. The only other commonly-noted reason given by those who stopped ridesharing was not knowing anyone with whom they could carpool or vanpool. This also could be related to the pandemic, if these commuters lost rideshare partners due to work schedule or location changes. Fewer than one in twenty named individual characteristics of the modes as reasons. Similarly, few former ridesharers cited personal preferences or needs as reasons to stop ridesharing.

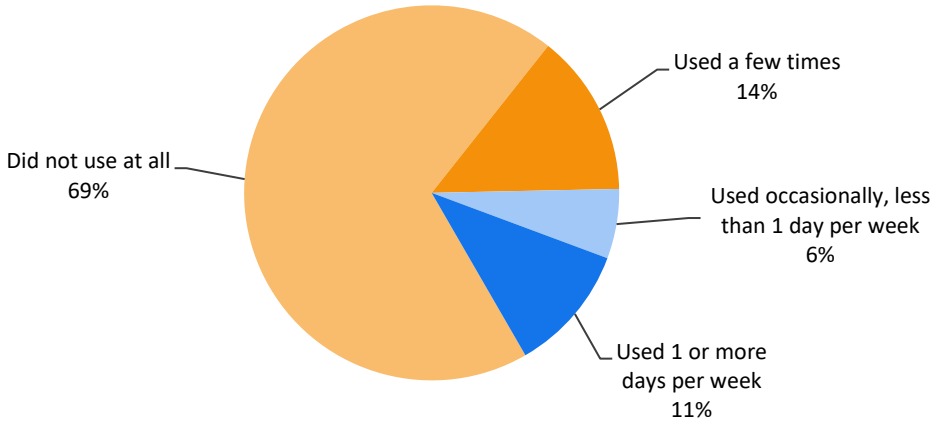
Never Rideshare – Respondents who had not carpooled or vanpooled in the past three years also named lack of mode availability; 26% said they didn't know any rideshare partners, about the same share as among former rideshare respondents (24%). But more than one in ten cited another availability issue; 9% said there were no carpool/vanpool services or options at their worksite and 5% said they did not know how to arrange a carpool or vanpool. Significantly larger percentages of commuters who had not carpooled or vanpooled also noted reasons related to personal preferences or needs, such as having an irregular work schedule (12%), feeling ridesharing was not feasible or practical (8%), living too close to work (6%), preferring to use transit (5%) or drive alone (5%), needing a car for work (4%) or before or after work (4%), or wanting more commute flexibility than ridesharing would offer (4%).

Transit Barriers

Previous Transit Use Among Non-riders – A parallel series of question to those described above for non-ridesharers was asked for respondents who were not commuting by transit. At the time of the survey 11% of respondents were using transit to get to work at least one day per week. This mode percentage represented a large drop from the 29% of respondents who were riding transit to work in 2019.

Among those who were not riding transit to work at the time of the survey, 31% said they had done so within the past three years (Figure 62). Fourteen percent had used transit just a few times and 6% used transit occasionally, but less than one day per week. One in ten (11%) non-riders had been regular riders, taking transit to work at least one day per week.

Figure 62
Transit Commuting in the Past Three Years – Non-transit Commuters
(n = 4,266)



Full-time teleworkers were excluded from this question, which also was asked in 2019, when full-time telework represented less than 3% of respondents. Interestingly, the 2022 distribution of former transit use was nearly identical to that from 2019. In 2022, 17% of transit non-riders had used transit at least occasionally and 11% were regular weekly riders. In 2019, the same 17% were former users and 11% were weekly riders. The only difference between the 2022 and 2019 results was that 14% reported using transit "a few times" in 2022; this was a slight decrease from the 18% who gave this response in 2019. This suggests full-time teleworkers who had used transit prior to the pandemic followed a similar past transit frequency profile to those who were still commuting but had stopped commuting by transit.

Previous Transit by Respondent Characteristic – Table 33 shows differences in past transit use by several respondent characteristic. The former rider percentage consists of respondents who commuted by transit regularly (one or more days per week) or occasionally (less than one day per week) in the past three years but who had stopped using transit. Some of these respondents might have shifted some workdays to telework, but full-time teleworkers were excluded from this question, thus former rider respondents shifted to non-transit modes on days they commuted to their outside work location. The table also shows the corresponding share of non-riders who had not ridden transit at all in the past three years (Never Rider).

Table 33
Percentage of Transit Non-Riders by Respondent Characteristic
(Shading indicates statistically higher percentages)

Respondent Characteristic	Former Transit Riders			Total Never Rider
	Former Regular	Former Occasional	Total Former	
Income				
Less than $100,000 (n = 1,123)	8%	6%	14%	86%
$100,000 - $179,999 (n = 1,110)	14%	6%	20%	80%
$180,000 or more (n = 904)	12%	8%	20%	80%
Household Vehicles per Adults				
0 vehicle (n = 92)	15%	26%	41%	59%
0.1 to 0.9 (Car lite) (n = 810)	14%	8%	22%	78%
1 vehicle (n = 3,205)	10%	5%	15%	85%
Home area				
Core (n = 960)	22%	12%	34%	66%
Middle Ring (n = 1,373)	12%	6%	18%	82%
Outer Ring (n = 1970)	5%	3%	8%	92%
Work area				
Core (n = 1,543)	22%	11%	33%	67%
Middle Ring (n = 1,715)	7%	4%	11%	89%
Outer Ring (n = 705)	3%	2%	5%	95%
Distance from home to bus stop				
Less than 1 mile (n = 1,714)	15%	9%	24%	76%
1.0 to 4.9 miles (n = 743)	8%	6%	14%	86%
5.0 miles or more (n = 403)	9%	2%	11%	89%

The overall shares of former transit riders who shifted from transit did not differ by gender, age, or race/ethnicity. But higher income respondents shifted away from transit at a higher rate; two in ten respondents with household income of $100,000 or more shifted from transit, compared with 14% with incomes under $100,000. Across all income groups, shifts from transit were primarily from former regular riders but were particularly evident among higher income respondents.

Shifts from transit also were more common among respondents who did not have a personal vehicle (41%) or had limited access to a vehicle (22%). In the case of car-free respondents, regular riders accounted for a smaller share of former riders than was the case for most other respondent sub-groups, perhaps indicating that occasional riders had more non-transit options than did the regular riders.

Shifts from transit also were related to where respondents lived and worked. One-third (34%) of transit non-riders who lived in the Core formerly rode transit, with two in ten having been regular riders. This was substantially higher than for Middle Ring (18% former riders) and Outer Ring (8% former riders) residents. Similarly, a larger share of transit non-riders who worked in the Core were former riders (33%) than was the case among Middle Ring (11%) and Outer Ring (5%). Finally, transit shifts were most common for respondents with close access to bus stops; one-quarter of transit non-riders who lived less than one mile from a bus stop had shifted away from transit, compared with 14% who lived between 1.0 and 4.9 miles from a bus stop and 11% who lived more than 5.0 miles from the nearest stop.

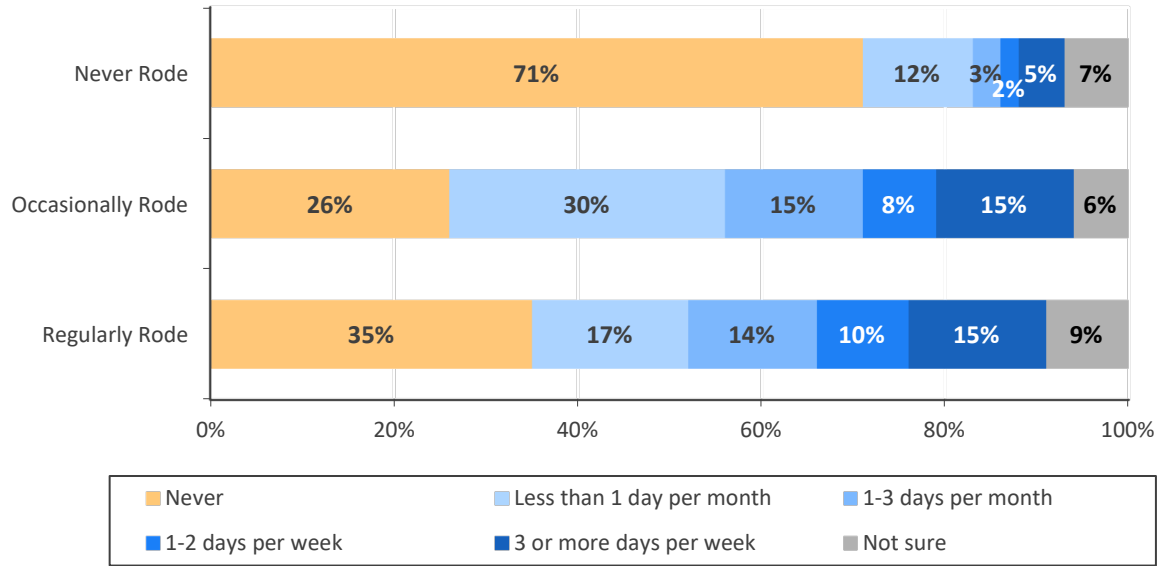
Possible Future Transit Use Among Non-riders – Non-transit riders also were asked how often they might be able to use transit now to get to work, considering their work and personal schedules. Across all non-riders, 64% said they would not be able to use transit at all for commuting and two in ten said they would be able to use transit only infrequently, 14% less than one day per month and 5% one to three days per month. One in ten would be able to commute by transit one or more days per week; 3% one or two days per week and 6% three or more days per week. The remaining 8% were unsure. In 2019, 14% said they would be able to use transit one or more days per week.

Figure 56 presents potential transit use frequencies by how often respondents rode transit to work in the past three years: never rode or rode just a few times, rode occasionally but less than one day per week, or rode regularly, one or more days per week. A large share of respondents who did not use transit at all in the past three years said they either would not be able to ride at all (71%) or could ride less than one day per week (15%). These results suggest these respondents either have work or personal situations that would make it infeasible for them to use transit or are unwilling to use transit for other reasons. Seven percent said they could use transit at least one day per week.

Among former regular riders, defined as respondents who formerly commuted by transit at least one day per week, 25% could still commute by transit this often and another 31% could ride occasionally, but less than once per week. One-third (35%) said they could not ride at all, perhaps because their work or personal situation had changed from the time when they were regular riders.

The more interesting result is for potential use among respondents who were occasional riders in the past three years. One-quarter said they would not be able to commute by transit at all now and 45% said they could use transit at most occasionally, as they had done previously. But nearly one-quarter (23%) said they would be able to ride at least one day per week, an increase over their past use.

Figure 63
Possible Transit Commute Frequency Now by Previous Transit Use
(Never rode n = 3,566, Occasionally rode n = 237, Regularly rode n = 454)



Potential for regular future transit use (one or more days per week) was highest among:

- Core area residents (16%), compared with Middle Ring (10%) and Outer Ring (6%) residents
- Core area workers (16%), compared with Middle Ring (7%) and Outer Ring (5%) workers
- Commuters who live less than one mile from a bus stop (13%), compared with those who live 1.0 to 9.9 miles away (9%) and those who live 10.0 miles or more from a stop (4%)
- Federal agency workers (13%), compared with non-profit (9%), private sector (9%), and state/local agency (6%) workers
- Male respondents (11%), compared with female respondents (8%)

Reasons for Not Using Transit or to Stop Using Transit – Respondents who had ridden a bus or train to work at least occasionally were asked how significant the pandemic had been in their decision to stop using transit. The impact of the pandemic on transit use was comparable to its impact on ridesharing; two-thirds of respondents said the pandemic had been a factor and more than half said it was an important factor; 22% said the pandemic was the only factor in their decision and 31% said it was a major factor. Fifteen percent said the pandemic was a minor factor and the remining one-third (32%) said the pandemic was not a factor at all. As described in Section 2 (Table 4), 50% of respondents who primarily rode a bus and 63% who primarily rode a train to work before the pandemic reported they were primarily teleworking at the time of the survey, so the pandemic likely was a factor for these respondents' mode shift as well.

Respondents who stopped riding transit in the past three years were asked if they had other reasons, in addition to the pandemic, for making the change. Respondents who did not previously use a bus or train were asked a more general question of why they did not use these modes. Table 34 lists the responses for those who stopped riding transit in the past three years (Former Riders) and for those who did not use transit during those years (Never Riders).

Table 34
Reasons to Stop Using Transit (Former Riders) or For Not Using Transit (Never Riders)

Reasons to Stop Using / for Not Using Transit	Former Riders (n = 636)	Never Riders (n = 3,418)
Coronavirus Pandemic (general response)	68%	4%
Service Availability *		
Service/schedule was limited, not convenient	13%	12%
Changed jobs/work location/schedule (transit not available)	12%	---
Moved to new home (transit not available)	5%	---
Transit not available/operating in home/work area	5%	19%
Stations closed for construction/renovation	2%	---
No train service available in home/work area	---	7%
No bus service available in home/work area	---	5%
Service Characteristics		
Takes too much time	14%	26%
Bus/train could be unreliable/late	8%	6%
Too expensive	5%	6%
Don't feel safe on bus/train or at stop/station, safety concern	5%	2%
Have to transfer/too many transfers	2%	1%
Buses/trains uncomfortable/crowded	2%	1%
Personal Preferences/Needs		
Prefer to drive, want freedom/flexibility, obtained vehicle	5%	14%
Commute is too short/prefer to walk	2%	7%
Childcare issues	2%	---
Need my car for work	1%	7%
Work schedule irregular	---	6%
Need car before/after work	---	4%
Trip is too long/distance too far	---	2%
Don't like to ride with strangers, prefer to be alone	---	1%
Other	7%	7%

* Respondents who said no train or bus service is available also were permitted to answer other reasons why they could not use bus or train

As already indicated, more than two-thirds of former riders said the coronavirus pandemic was one reason they stopped using transit. But access to transit also was a factor noted by respondents in the former rider group. For some, transit was less available because they had made a personal change; 12% changed their work location or schedule and 5% reported moving to a home area where transit was not

available or convenient. An additional 13% said transit service or schedule was limited or not convenient and 2% reported that the train station they previously used was closed for renovation.

Former riders noted some transit service characteristics as barriers to transit use, particularly that transit "takes too much time" (14%), "could be unreliable" (8%), and expensive (5%). One common reason was noted in the personal preferences or needs category; that they preferred to drive for the freedom or flexibility it offered (5%).

Among respondents who had not used transit in the past three years, lack of availability was a primary reason; 19% made a general statement that transit service was not available in their home or work area, 7% specified that train service was not available, and 5% indicated they did not have bus service. One in ten (12%) said service was limited or not convenient either to locations or times they wanted to travel.

Non-rider respondents noted bus/train service characteristics as transit barriers at about the same rate as did former riders, with one exception. More than one-quarter (26%) of never riders said transit "takes too much time," compared with 14% of former riders. Never riders' concerns with the need to transfer, transit cost, safety, and reliability were not substantially different from those for former riders.

Never riders reported greater concern than did former riders with nearly all the personal preferences or needs reasons, in particular preferring to drive for the freedom and flexibility, having a very short commute that made it easier to walk, needing a vehicle for work or before or after work, having an irregular work schedule, and not wanting to ride with strangers.

SECTION 6 – AWARENESS AND IMPACT OF COMMUTE ADVERTISING

Commute Advertising Recall

The next set of questions in the survey inquired about respondents' awareness of commute information advertising. About 27% of all respondents said they had seen, heard, or read advertising about commuting in the year prior to the survey. This was a considerably lower percentage than estimated in the 2019 (45%), 2016 (54%), 2013 (55%), and 2010 (58%) SOC surveys; in 2022 nearly two in ten (18%) respondents said they didn't recall if they heard, saw, or read any commute advertising, so could not provide a definitive response.

The dramatic shift to telework during the pandemic might have been a factor in the decline in advertising recall. Workers who teleworked most or all their workdays would have fewer opportunities to see or hear advertising during their commute and perhaps noticed it less because it was not relevant to their current work situation. Twenty-five percent of respondents who primarily teleworked at the time of the survey said they heard or saw commute ads, compared with 28% of respondents who primarily commuted to an outside work location. But some organizations that sponsor commute advertising paused their mass media and worksite outreach, so it also is likely that fewer ads were even available for commuters to notice.

Advertising recall differed by respondents' personal characteristics and by their travel patterns. Advertising recall was highest among respondents who:

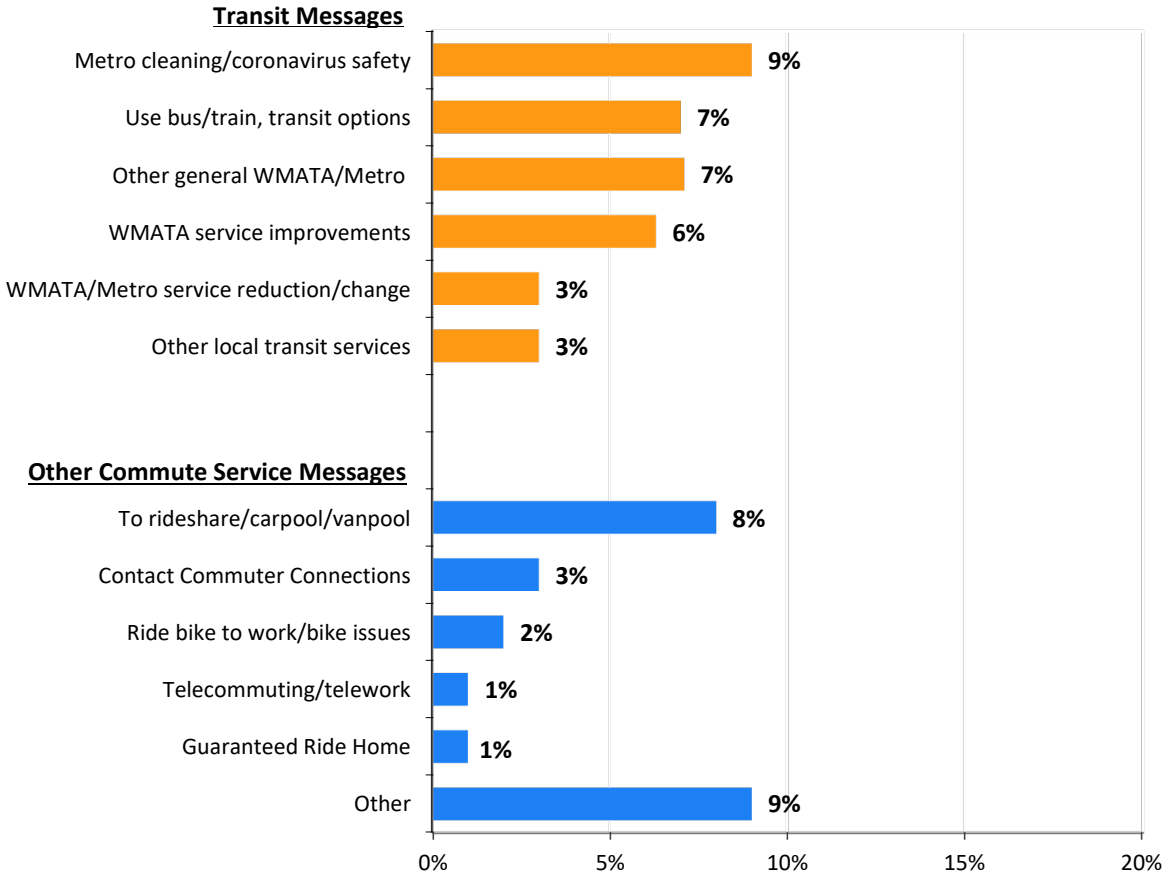
- Were 55 years or older – One-third (34%) of respondents who were 55 years or older, compared with 25% who were between 35 and 54 years and 24% who were younger than 35 years.
- Were Non-Hispanic White – Three in ten (30%) Non-Hispanic White respondents, compared with 27% of Non-Hispanic Black, 26% of Hispanic, and 18% of Asian respondents.
- Had Higher Household Incomes – Three in ten (29%) respondents with annual incomes of $100,000 or more, compared with 26% who had incomes less than $100,000.

Message Recall

Respondents who recalled some advertising were then asked what specific messages they saw or heard; 45% could cite a specific message. As with overall awareness of advertising, recall of specific messages was lower than the share who could recall a message in previous years (2019 – 59%, 2016 – 67%, 2013 – 67%, and 2010 – 70%). Figure 64 lists specific messages that were mentioned by at least 1% of respondents in the 2022 survey, divided into two categories: transit messages and other commute services messages.

Transit Messages – Nearly three in ten respondents who had heard or seen a message reported a message related to transit service. Seven percent cited a general message about using transit, but most recall focused on the Washington Metropolitan Area Transit Authority (WMATA, Metro). Nearly one in ten (9%) respondents reported a message about WMATA and coronavirus cleaning or safety. Six percent named a message about WMATA service improvements and 3% said it was about WMATA service cuts or changes. Seven percent recalled another reference to WMATA.

Figure 64
Commute Information/Advertising Messages Recalled
(Note: Scale extends only to 20% to highlight difference in responses)
(n = 2,405)



Other Commute Service Messages – The other broad category of messages included other commute service topics. The most common message in this category was "contact Commuter Connections," mentioned by 3% of respondents, slightly less than the 5% who gave this response in 2019. One percent of respondents mentioned the regional Guaranteed Ride Home, a large decline from the 5% who volunteered this response in 2019. Two percent of respondents recalled a bike service or issue message and 1% recalled a message about telework.

Recall of Advertising Sponsors

About four in ten (41%) respondents who could cite an advertising message said they remembered who sponsored the ad (Table 35). WMATA or Metro was named by 25% of respondents. Commuter Connections or COG was named by 6%, lower than the 10% who gave this response in 2019. Six percent cited a local county or city transportation or commuter program, 1% named a state transportation agency (VDOT, VDRPT, MDOT, MTA, DDOT), 1% said the sponsor was a transit agency other than WMATA (MARC, VRE, local bus company), and 1% mentioned a ridehail company (Uber or Lyft). Many other organizations also were named, each by less than 1% of respondents.

Table 35
Recall of Advertising Sponsors
(n = 2,405)

Advertising Sponsor	Percentage
Metro, WMATA	25%
Commuter Connections, MWCOG	6%
County/city transportation or commute agency	6%
State transportation agency (VDOT, MDOT, MTA, DDOT, DRPT)	1%
Transit agency other than WMATA (MARC, VRE)	1%
Ridehail company (Uber, Lyft)	1%
Don't remember, don't know	59%
Other	4%

Advertising Sources/Media

Table 36 presents the primary sources or media through which respondents encountered commute advertising. The most common 2022 source was a sign on a bus or train, or at a bus stop or train station; fully half (53%) of respondents who recalled an ad saw it in one of these locations. The other top sources were radio, named by 29% of respondents who recalled ads, and television, cited by 26% as the source.

Table 36
Advertising Sources/Media – 2010 to 2022
(Shaded percentages indicate statistically higher percentages between 2019 and 2022; multiple responses permitted)

Advertising Source/Media	2010 (n=2,756)	2013 (n=2,457)	2016 (n=2,341)	2019 (n=2,373)	2022 (n=2,380)
Sign on bus/train, at bus stop/train station	22%	25%	22%	49%	**53%**
Radio	40%	33%	34%	36%	**29%**
Television	24%	18%	21%	19%	**26%**
Roadside billboard/ad	5%	9%	10%	16%	**16%**
Postcard in the mail	3%	5%	4%	10%	**12%**
Social media (Facebook, Twitter)	---	---	2%	5%	**10%**
Newspaper	18%	20%	14%	8%	**8%**
Smart phone/tablet	---	1%	3%	4%	**6%**
At work	6%	5%	7%	6%	**4%**
MWCOG/Commuter Connections website*	---	---	---	5%	**4%**
Other website/internet	2%	2%	6%	3%	**4%**
Other	4%	3%	5%	2%	**2%**

* Prior to 2019, MWCOG/Commuter Connections website was not reported separately from other websites.

Other common sources named in 2022 included roadside billboard (16%), postcard received in the mail (12%), newspaper (8%), and employer/work (4%). More than two in ten mentioned a source related to the Internet; 10% noted social media, 8% mentioned seeing the ad on either the MWCOG or Commuter Connections website (4%) or another website (4%), and 6% cited a smart phone or tablet as the source.

Table 36 also shows sources or media named in previous SOC surveys. Most sources were used by about the same percentage of respondents in 2022 as in 2019. Two sources that was named substantially more in 2022 than in 2019 were television and social media. Radio showed a decline as a source from 36% in 2019 to 29% in 2022. This drop likely reflects both the drop in workers commuting to an outside work location and the reduction in radio advertising by Commuter Connections and other commute organizations in 2020. Prior to the pandemic, WMATA and Commuter Connections used radio spots during commute hours to disseminate messages to drive alone commuters. With both reduced messaging and many workers teleworking/working from home during the pandemic, commuters' exposure to drive-time radio ads would have declined.

Commute Advertising Impact

Persuasiveness of Advertising Messages

The advertising appeared to have had an effect for some respondents. Two in ten (17%) respondents who were commuting to an outside work location at the time of the survey and who recalled advertising said they were more likely to consider ridesharing or using transit after seeing or hearing the advertising. This was statistically the same percentage as the 18% who noted this willingness in 2019.

Persuasiveness of Messages by Commute Mode and Distance – The respondents who were most persuaded by the advertising were those who already used alternative modes. Half (50%) of bus riders, 31% of train riders, and 19% of carpoolers/vanpoolers said they were more likely to consider using an alternative after hearing the ads, compared with 13% of respondents who drove alone. Commuters who traveled longer distances were more likely to be persuaded; 27% who traveled 30 or more miles to work said they were more willing to use alternative modes after hearing the ads, compared with 17% of respondents who had shorter commutes.

Persuasiveness of Messages by Commute Ease and Satisfaction – An interesting result was that ad receptivity was highest among respondents who were satisfied with their commutes. Two in ten (20%) commuters who were satisfied with their current commutes said they were persuaded by the ads, compared with 14% of those who were not satisfied with their commutes.

Commuters Persuaded by Ads to Consider Alternative Modes – 17% overall

Commute Mode: Bus (50%) and train (31%) riders vs Drive alone commuters (13%)

Commute Distance: 30+ miles (27%) vs Commute less than 20 miles (17%)

Ease of commute: More difficult commute (22%) vs Easier commute (14%)

Satisfied with commute: Satisfied (20%) vs Not satisfied (14%)

Age: Younger than 35 (27%) vs 55 or older (13%)

Gender: Male (22%) vs Female (16%)

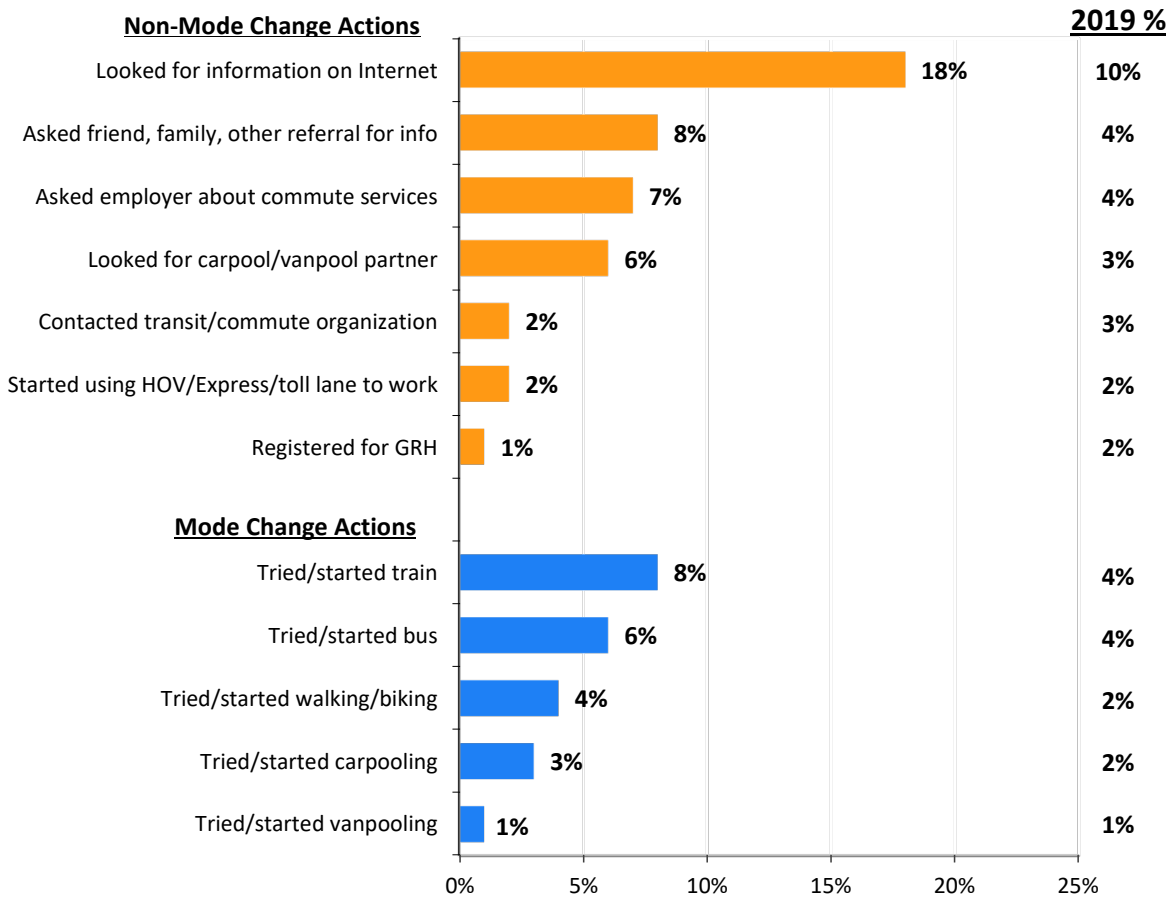
Commuters who reported a stable or more difficult commute than last year were more likely to say they were persuaded by the ads than were commuters whose commutes had become easier; 22% of commuters with a more difficult commute and 19% who said their commute was about the same were more willing to consider alternative modes after hearing the ads, compared with 14% of commuters who had an easier commute.

Persuasiveness of Messages by Gender and Age – A higher share of male respondents (22%) who heard ads reported being persuaded, compared with 16% of female respondents. Young respondents also said they were more persuaded by ads; 27% who were younger than 35 said they were more likely to consider using an alternative mode after hearing the ads, compared with 20% of respondents who were between 35 and 54 years and just 13% of respondents who were 55 or older.

Commute Actions Taken After Hearing or Seeing Commute Advertising

Respondents who recalled hearing or seeing commute advertising and who were commuting to an outside work location (not teleworking full-time) were asked if they had taken any actions to try to change how they commuted after seeing or hearing the ads. About one-third (35%) of these respondents said they took one of the actions listed (Figure 65).

Figure 65
Commute Change Actions Taken After Hearing/Seeing Commute Advertising
(Base is commuters who heard/saw ads and commuted to outside location; 2022 n = 687; multiple responses permitted)



For most respondents, the action they took was to seek more information on commuting options or services. Nearly two in ten (18%) sought information on commuting through the Internet, 8% asked family member, friend, or co-worker for commute information, 7% asked their employers about commute services, and 6% looked for a rideshare partner. Two percent sought information from a commute organization or a transit agency. Two percent started using an HOV lane to get to work and 1% registered for a regional or local Guaranteed Ride Home program.

About two in ten respondents who recalled an ad message (84 respondents) said they tried or started using one or more alternative modes for commuting. Eight percent started or tried riding a train and 6% started or tried riding a bus. Four percent of these respondents tried or started walking or bicycling, 3% tried/started carpooling, and 1% tried vanpooling. While these respondents equaled just 1.9% of all regional commuters, they represent nearly 40,000 commuters region-wide.

2022 Actions versus 2019 Action – The 34% who took some commute-change action in 2022 equated to 4% of all regional commuters. This was about half the rate from 2019 (7%), however, as noted earlier in this section, a much smaller share of commuters recalled hearing or seeing advertising in 2022 (27%) than in 2019 (45%), perhaps due to fewer ads and/or reduced ad exposure from fewer days commuting. Due to the many changes in commute patterns and in advertising messaging and dissemination since the pandemic began, it is difficult to draw comparisons between 2022 and 2019 in commute actions. But as illustrated by the "2019 %" sidebar in Figure 65, nearly all the individual mode and non-mode actions listed were reported by a higher percentage of the base (ad-aware workers who traveled to an outside work location) in 2022 than in 2019.

Influence of Ads on Commute Change Actions – More than one-third (35%) of respondents who took an action to change their commute said the advertising they saw or heard encouraged the action.

SECTION 7 – AWARENESS AND USE OF COMMUTE ASSISTANCE RESOURCES

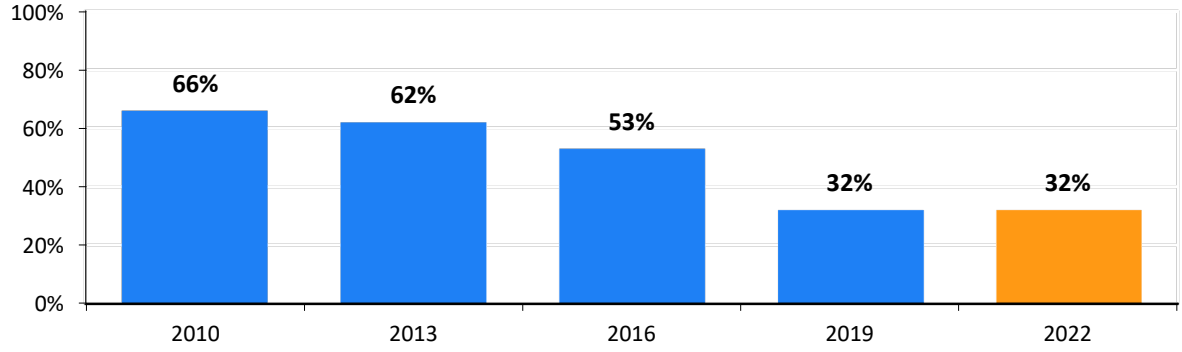
The survey also explored respondents' awareness of commute/travel assistance services that were offered to commuters by regional and local organizations. All respondents were asked an unprompted question about regionally-available telephone numbers, websites, and mobile applications that offered commute information. They next were asked if they had heard of Commuter Connections, the organization that provides services throughout the Washington metropolitan region. Finally, respondents were asked about local commute information organizations providing services in the geographic areas where they lived and worked.

Awareness of Commute Assistance Numbers/Websites/Mobile Applications

Respondents first were asked if they were aware of a telephone number, website, or mobile application they could use to obtain information on ridesharing, public transportation, HOV/Express Lanes, and telework in the Washington region. One-third (32%) of respondents said they knew such a resource. Twenty-one percent said there was not such a resource. Nearly half (47%) said they did not know if a phone number, web site, or mobile application existed.

Awareness of regional information resources has declined since 2010, when 66% of respondents knew of a number, website, or mobile application but the drop between 2016 (53%) and 2019 (32%) was particularly steep (Figure 66). The 32% awareness reported in 2022 represented a leveling off.

Figure 66
Awareness of Regional Commute Information Resource – 2010 to 2022
(2010 n = 6,629, 2013 n = 6,335, 2016 n = 5,903, 2019 n = 8,236, 2022 n = 8,359)



Awareness by Population Sub-Group

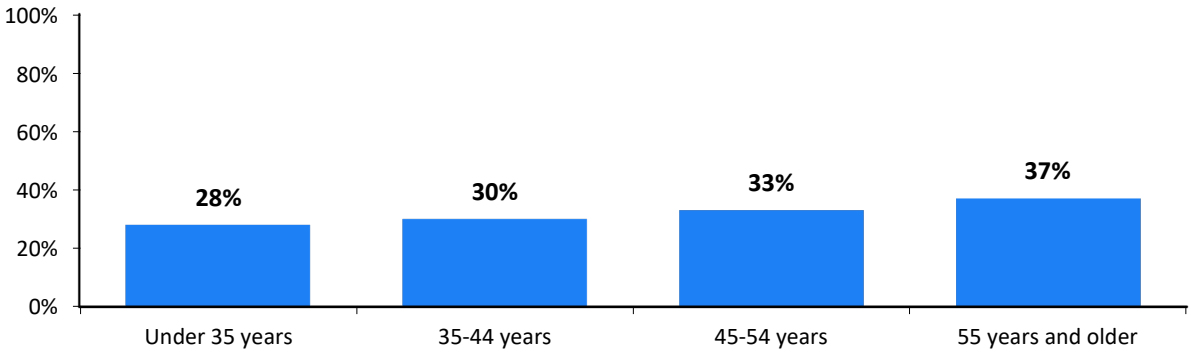
Awareness was substantially higher among respondents who said they saw or heard commute advertising in the past year (43%) than for respondents who did not recall advertising (26%). And commuters who had heard of Commuter Connections reported higher awareness of regional commute resources (43%) than did commuters who were not aware of Commuter Connections (24%). Commuters' contact with worksite commute programs also appeared to boost awareness of regional commute services; 36% of respondents who said their employers offered commute services at the worksite knew of a regional commute information resource, compared with 22% of those who said no such services were offered at work, suggesting some information that employers disseminate to commuters is related to regional services as well as to services offered directly by the employer.

Awareness by Commute Travel Time and Mode – There were no awareness differences by commuters' travel distance or travel time, but awareness was higher among commuters who used an alternative mode for commuting. Just one-quarter (26%) of drive alone commuters knew of a regional information number or website, compared with 32% of commuters who carpooled or vanpooled, 36% of those who rode a bus, 39% who commuted by train, and 35% who biked/walked to work.

Awareness by Home/Work Location and Demographics – Awareness of commute resources was slightly higher among respondents who lived in the Core (36%) than in the Middle Ring (32%) and Outer Ring (30%). Awareness of resources also was higher for Core workers; 36% of Core area workers knew of resources, compared with 29% of Middle Ring and 26% of Outer Ring workers.

Men and women were equally aware of regional resources and there was no clear pattern of awareness with household income. But awareness was higher among Non-Hispanic White (34%) and Non-Hispanic Black (34%) respondents than for Hispanic (28%) or Asian (28%) respondents. Awareness also was higher among older respondents (Figure 67). Fewer than three in ten respondents who were younger than 45 years of age knew of a regional resource, compared with 33% who were between 45 and 54 years and 37% of respondents who were 55 or older.

Figure 67
Awareness of Regional Commute Information Resources by Respondent Age
(Under 35 years n = 1,816, 35-44 years n = 1,881, 45-54 years n = 1,826, 55 year and older n = 2,517)



Recall of Web Sites and Phone Numbers

Respondents who said there was a regional resource were asked if they had used the resource and what number or website they used. About one-third of respondents who said a commute resource was available had used it. These commuters represented about 11% of all regional commuters (Figure 68).

Figure 68
Summary of Awareness and Use of Regional Commute Information Resource
(n = 8,396)

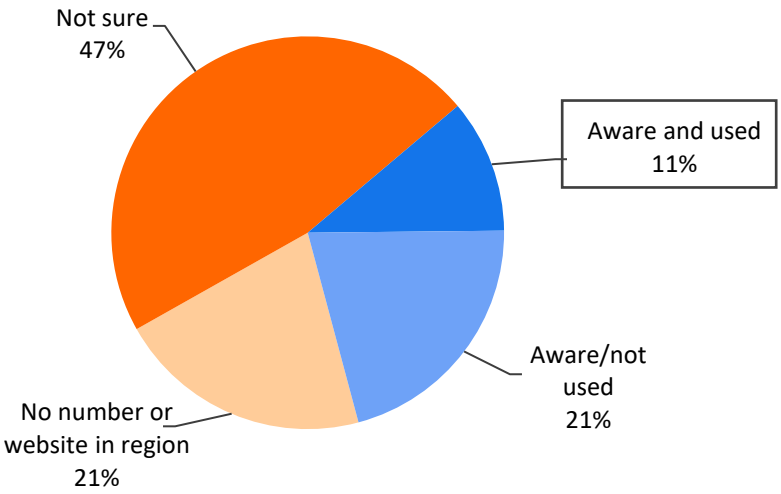


Table 37 summarizes the awareness/use of numbers/websites, as percentages of the regional commuter population. About 5% of respondents said they had used a WMATA resource; some could cite a specific web address or phone number but most recalled simply using a resource sponsored or maintained by WMATA. The Commuter Connections website was named by 0.2% of all respondents. About 0.8% of respondents had used a website or application maintained by a county transit, commute, or transportation agency, but except for Fairfax.gov, these resources individually each were named by less than 0.1% of respondents.

Respondents named 26 additional organizations that they had contacted to obtain commuter information. Each was named by less than 0.2% of all respondents, but collectively they were used by 3% of the regional population. The high count of commute resources suggests commuters seek information from a wide range of regional and local resources.

Commuters who had used one of the resources fell disproportionately in certain personal and travel characteristic groups. Use of regional information resources was highest among respondents who:

- Lived in the Core – Two in ten (21%) Core area residents, compared with 12% of Middle Ring residents and 13% of Outer Ring residents.
- Worked in the Core – Two in ten (19%) Core area workers, compared with 11% of Middle Ring workers and 11% of Outer Ring workers.
- Used alternative modes to commute – One-third (33%) of bus riders and train riders, 21% of bikers/walkers, and 18% of carpoolers/ vanpoolers, compared with 9% of drive alone commuters.
- Had longer commute times – Two in ten (21%) respondents with commutes longer than one hour, compared with 15% who commuted between 30 and 60 minutes, and 10% who traveled less than 30 minutes to work.
- Had a more difficult commute than last year – 18% who reported a more difficult commute, compared with 12% whose commute was easier than last year and 12% whose commute was about the same.

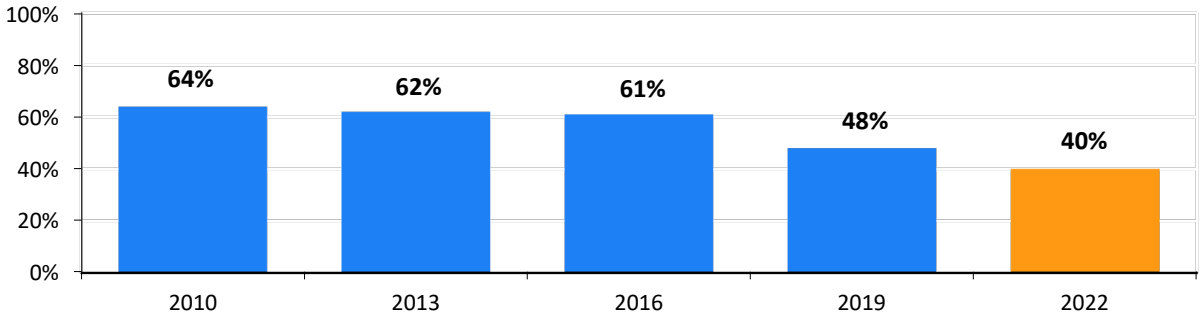
Table 37
Regional Commuter Assistance Resources Used
(n = 8,296, multiple responses permitted for numbers/websites used)

Number or Web site	Percentage
Believe no phone number/web site exists	21%
Don't know if a phone number exists	47%
Aware of number/web site, didn't use it	21%
Aware of number/web site and used it	11%
Transit numbers/websites used:	
www.wmata.com	2.1%
WMATA/Metro website (unspecified)	1.2%
WMATA/Metro app (unspecified)	1.0%
Transit app (unspecified)	0.8%
DC Metro bus / DC Metro Transit app	0.5%
Metrohero	0.2%
200-637-7000 Metro, WMATA	0.3%
PRTC/OmniRide.com website	0.2%
www.vre.org (VRE/Virginia Railway Express)	0.2%
Other websites used:	
Google/Google maps	1.2%
SmarTrip	0.4%
Waze	0.3%
www.CommuterConnections.org /.com	0.2%
Fairfax.gov/Fairfax Connector	0.2%
Uber/Lyft app	0.2%
Other	3.0%

Awareness and Use of Commuter Connections

A small share of commuters named Commuter Connections as a regional information source that they had used without being prompted with the organization's name. But when directly asked if they have heard of an organization in the Washington region called Commuter Connections, four in ten (40%) commuters knew of the program (Figure 69). This represented a drop of eight percentage points since 2019, when 48% were aware.

Figure 69
Awareness of Commuter Connections (Prompted)
(2010 n = 6,629, 2013 n = 6,335, 2016 n = 5,903, 2019 n = 8,227, 2022 n = 8,377)



Awareness of Commuter Connections by Population Sub-Group

Awareness by Home/Work Location – Commuter Connections was better known among commuters who lived farther from the center of the region; 45% of Outer Ring residents and 41% of Middle Ring residents had heard of Commuter Connections, while only 30% of Core area residents said they knew of the program. Awareness by work location was less varied; 40% of Core and 42% of Middle Ring workers knew of Commuter Connections, compared with 37% of Outer Ring workers.

Awareness by Commute Mode, Distance, and Time – Awareness of Commuter Connections differed very little by respondents' commute mode; 37% of commuters who drove alone and 35% of carpoolers said they knew of the program. Awareness was only slightly lower for bike/walk commuters (33%) and for transit riders (31%). Interestingly, workers who teleworked reported higher awareness of Commuter Connections than did non-teleworkers. More than four in ten (44%) respondents who teleworked at least one day per week and 36% who teleworked occasionally had heard of Commuter Connections; among respondents who did not telework at all, only 32% were aware of the program.

Know/Heard of Commuter Connections – 40% overall

Commute Distance: 20+ miles (49%) vs Less than 5 miles (28%)

Commute Time: 30+ minutes (42%) vs less than 30 minutes (34%)

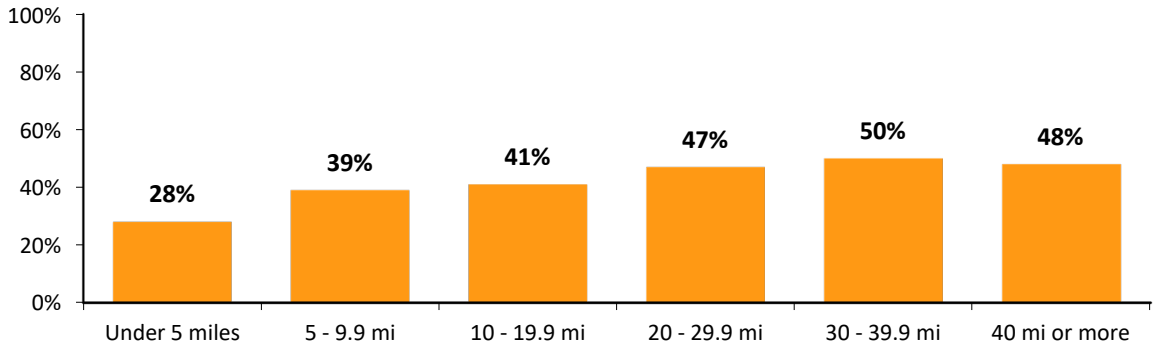
Teleworker: Telework 1+ day/week (44%) vs Not teleworking (32%)

Home Area: Outer Ring (45%) and Middle Ring (41%) vs Core (30%)

Work Area: Outer Ring (40%) and Middle Ring (42%) vs Core (37%)

Awareness of Commuter Connections also showed a strong relationship to both commute time and distance, with respondents who traveled longer distances and times more likely to know about the program. More than four in ten (42%) respondents who traveled 30 or more minutes to work had heard of Commuter Connections, while only 34% of respondents with shorter commutes had heard of the program. And fewer than three in ten (28%) respondents who traveled less than five miles to work knew of Commuter Connections, compared with four in ten respondents who traveled between 5 and 19.9 miles and nearly half who commuted 20 miles or more (Figure 70).

Figure 70
Awareness of Commuter Connections by Commute Travel Distance (miles)
(Under 5 mi n=1,221, 5–9.9 mi n=1,395, 10–19.9 mi n=1,756, 20–29.9 mi n=1,234, 30-39.9 mi n=897, 40+ mi n=770)



Referral Sources to Commuter Connections Program

Table 38 lists the methods by which respondents reported learning about Commuter Connections in 2022, with comparisons to sources named in the four previous SOC surveys. In 2022, about two in ten (21%) respondents cited the radio as their source of information. Other common sources included employer (7%), mail/postcard/brochure (7%), sign on transit vehicle/stop (4%), word of mouth/referral (4%), television (3%), and Internet (3%). More than four in ten (43%) respondents who knew of Commuter Connections did not remember how they learned of the organization.

Table 38
Commuter Connections Program Referral Sources – 2010 to 2022
(Yellow shading indicates sources with declining patterns and blue shading shows sources with increasing pattern)
(2010 n = 4,398, 2013 n = 4,046, 2016 n = 3,875, 2019 n = 4,484, 2022 n = 3,781)

Information Source	2010	2013	2016	2019	2022
Radio	48%	42%	41%	31%	21%
Employer	4%	5%	6%	8%	7%
Mail/postcard/brochure	1%	2%	4%	7%	7%
Sign on transit vehicle, bus stop	4%	3%	2%	6%	4%
Word of mouth, friend, co-worker	9%	10%	9%	5%	4%
Television	15%	14%	13%	5%	3%
Internet	4%	6%	5%	5%	3%
Sign/billboard	7%	7%	7%	3%	1%
Newspaper ads/article	6%	6%	5%	1%	0%
Don't know	11%	11%	10%	32%	43%

As indicated by the year-to-year comparisons, several referral sources, such as employers, mail/postcards, and Internet appear to have gained importance since 2010, while traditional media sources of radio and television as well as signs/billboards and newspaper ads and articles, have declined.

The shift from traditional media to digital media and targeted geographic and mode advertising is consistent with Commuter Connections' marketing plans, but traditional media still play a role in raising respondents' awareness. Awareness of Commuter Connections was nearly twice as high (57%) for respondents who recalled hearing or seeing commute advertising as for respondents who did not recall advertising (31%). The much higher percentage of "don't know" responses in 2019 and 2022 likely resulted from the use of the Internet, self-administered survey method. SOC surveys prior to 2016 were conducted primarily by telephone and interviewers would have prompted respondents whose initial response was "don't know" to attempt to recall the source.

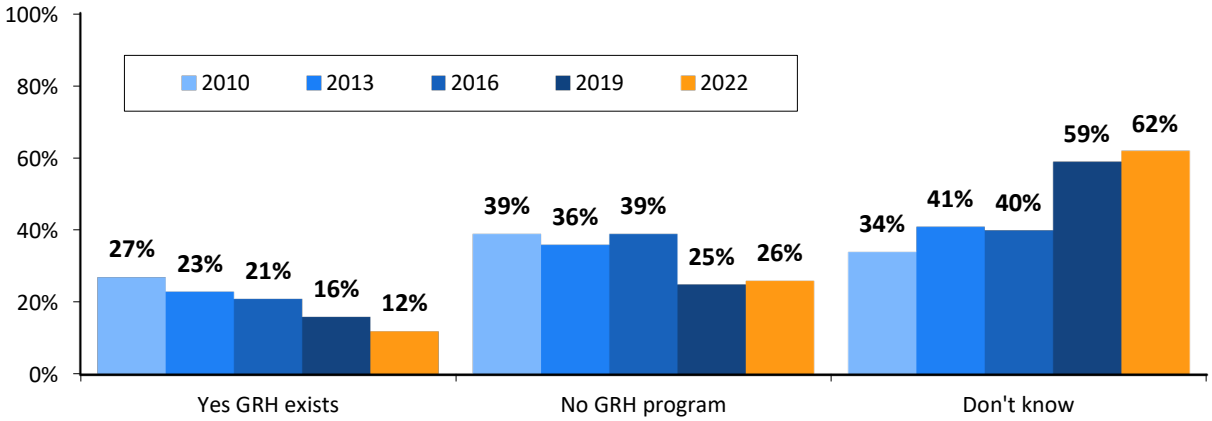
About 5% of respondents who knew of Commuter Connections said they contacted the program or visited a Commuter Connections or COG website in the past year. These respondents represented about 2% of all regional workers. Commuters who used alternative modes at the time of the survey were most likely to have made contact. Seventeen percent of commuters who were carpooling/vanpooling and 16% of transit riders who knew of Commuter Connections contacted the organization in the past year. By contrast, only 3% of drive alone commuters made a contact. The survey did not ask what modes these respondents were using before they contacted Commuter Connections. So it is not possible to say if any of these contacts with Commuter Connections led respondents to start or increase alternative mode use but some might have assisted or encouraged such a change.

Awareness of Regional Guaranteed Ride Home (GRH)

Since 1997, Commuter Connections has offered Guaranteed Ride Home to eliminate alternative mode users' fear of being without transportation in the case of an emergency. The program provides free rides in a taxi, ridehail service, or rental car in the event of an unexpected personal emergency or unscheduled overtime.

Survey respondents who were not teleworking/working from home full-time were asked if they knew of a regional GRH program available for commuters who rideshare or use public transportation. Twelve percent thought there was such a program, 26% said there was no such program, and the remaining 62% were unsure (Figure 71). Awareness of GRH has been steadily dropping since 2010, when 27% of respondents said they knew of a regional program.

Figure 71
Awareness of Regional GRH Program – 2010 to 2022
(2010 n = 6,084, 2013 n = 5,738, 2016 n = 5,266, 2019 n = 7,974, 2022 n = 5,279)



Awareness of regional GRH was strongly tied to respondents' awareness of Commuter Connections; 23% of commuters who said they had heard of Commuter Connections knew a regional GRH program existed, compared with only 5% of commuters who did not know Commuter Connections.

Awareness of GRH by Commute Mode – GRH awareness was highest among respondents who rode a commuter train to work; 47% of these respondents knew of the GRH program (Table 39). About two in ten ridesharers (22%) and bus riders (19%) knew that a regional GRH program existed. Among commuters who drove alone, only 10% knew of GRH. Program awareness among Metrorail riders (13%) and bikers/walkers (8%) was about the same as for drive alone commuters.

Table 39
Awareness of Regional GRH Program by Primary Commute Mode – 2010 to 2022

Current Primary Mode	2010	2013	2016	2019	2022
Drive alone (2022 n = 3,418)	27%	21%	19%	14%	**10%**
Commuter train (2022 n = 47)	67%	70%	57%	26%	**47%**
Bus (2022 n = 212)	32%	34%	20%	20%	**22%**
Carpool/vanpool (2022 n = 121)	39%	29%	25%	29%	**19%**
Metrorail (2022 n = 1,180)	31%	23%	23%	14%	**13%**
Bike/walk (202 n = 302)	26%	16%	16%	17%	**8%**

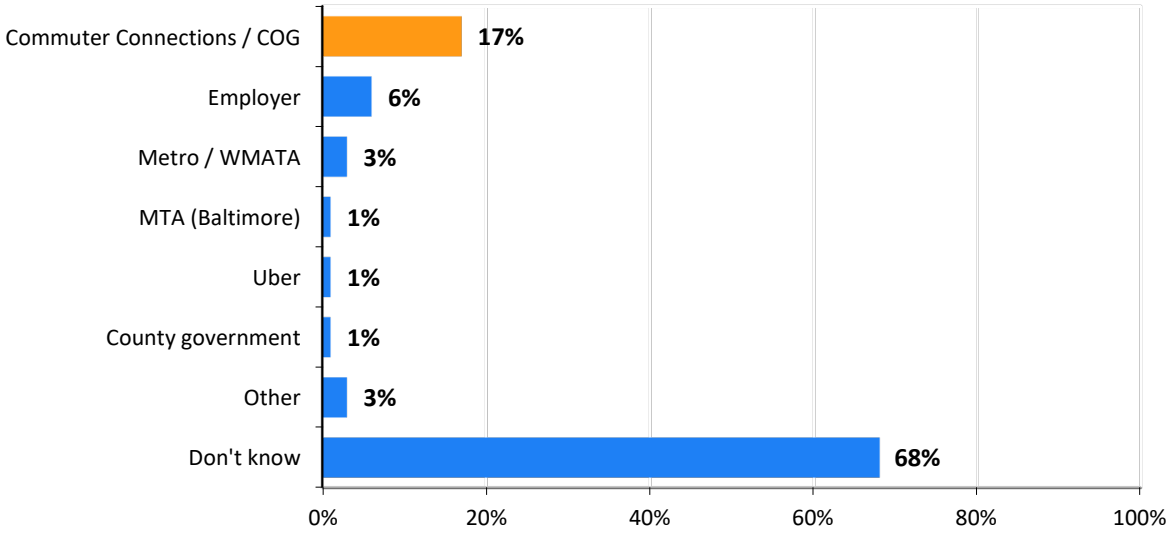
Awareness of GRH by Home and Work Location – Respondents who lived in the Outer Ring demonstrated slightly higher awareness of GRH (13%) than did Core area (10%) residents (Table 40). An opposite pattern was clear for work location; respondents who worked in the Core (13%) and Middle Ring (12%) areas were more likely to know about GRH than were respondents who worked in the Outer Ring (7%) sub-area.

Table 40
Awareness of Regional GRH Program by Home and Work Area

Location – Ring Designation	Percentage
Home Location	
Core (n = 1,492)	10%
Middle Ring (n = 1,617)	12%
Outer Ring (n = 2,170)	13%
Work Location	
Core (n = 2,316)	13%
Middle Ring (n = 1,871)	12%
Outer Ring (n = 729)	7%

GRH Program Sponsor – Respondents who said they believed there was a regional GRH program were asked who sponsored this service. Two-thirds (68%) said they did not know who operated the program. Just under two in ten (17%) said Commuter Connections or COG/Council of Governments sponsored the program (Figure 72). This was lower than the 26% who mentioned Commuter Connections as the sponsor in the 2019 SOC survey. Small shares of respondents mentioned other sponsors.

Figure 72
Awareness of Regional GRH Program Sponsor
Of Respondents who said a Regional GRH Program Existed
(n = 664)



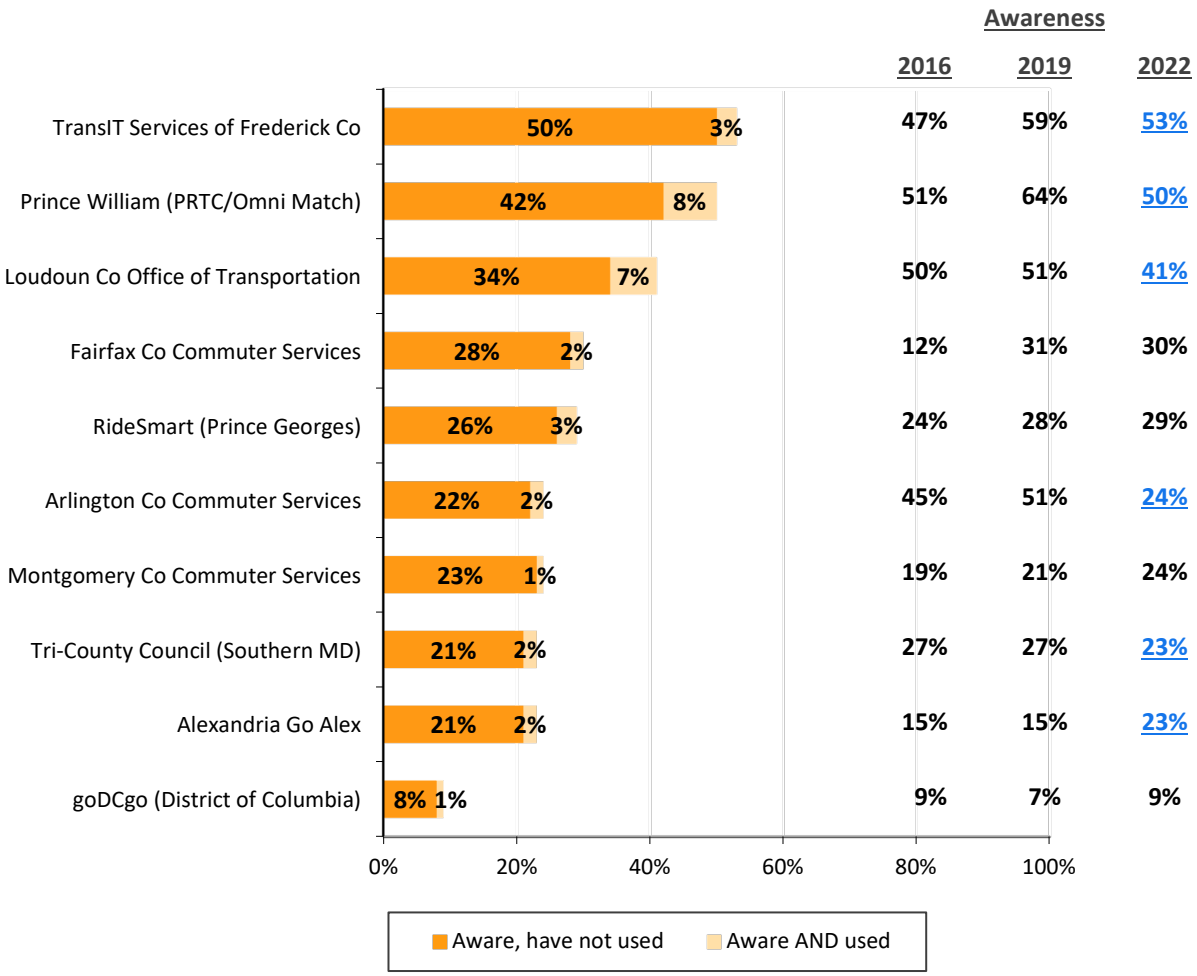
Awareness and Use of Local Commute Assistance Programs

Many of the commute services offered in the Washington region are promoted, supported, or administered by local commute program organizations. Ten organizations operate as Commuter Connections program partners, each serving a separate county or independent city. To test awareness and use of these programs, respondents who lived in an organization's service area were asked if they had heard of the organization and if they had used any services of the program. Commuters who worked in different jurisdictions than where they lived also were asked about the organization in their work area. Commuters were not asked about programs that did not serve their home area or work area.

Figure 73 presents the percentage of respondents who said they had heard of the organization, when prompted with the organization's name. Program awareness ranged from 9% to 53% of respondents who were asked about the organization. Two of ten programs were known to at least half of the target area respondents and three other programs were known to about three or four in ten target area respondents.

Figure 73
Heard of/Used Local Jurisdiction Commute Assistance Program

(2022: Frederick n = 652, Prince William n = 726; Loudoun n = 700, Fairfax n = 1,746, Prince George's n = 1,141, Arlington n = 1,369, Montgomery n = 1,316, Southern Maryland n = 1,218; Alexandria n = 921, District of Columbia n = 3,111)
(Blue highlighting for 2022 awareness totals denotes statistically different percentages from 2019 to 2022)



One program, Alexandria GO Alex, recorded higher awareness in 2022 than in 2019, but five programs showed a drop in awareness among targeted respondents between 2019 and 2022. Four programs had 2022 awareness levels approximately the same as in 2022.

Respondents who knew of a local organization were asked if they had contacted it. Figure 73 also shows these results. Use ranged from 1% to 8% of respondents who lived or worked in the service area. Eight percent of respondents who lived or worked in the PRTC/Omni Match area and 7% who lived or worked in Loudoun County had contacted these organizations.

Both awareness and use were generally higher for programs in outer jurisdictions (Frederick, Prince William, and Loudoun), a pattern that has held since 2007, when the question was added to the SOC survey. The relationship to the location in the region is likely because outer jurisdiction residents, many of whom work at locations that are in the Middle Ring or Core of the region, encounter more congestion in their travel and have longer commute times and distances than do residents of Core and Middle Ring

jurisdictions. These travel difficulties could encourage commuters who live in Outer Ring jurisdictions to seek non-drive alone options for travel to work.

Use also was higher for programs that are strongly associated with transit agencies (Prince William, Loudoun, Frederick, and Prince George's). This connection might be due to higher visibility of the services and/or to the broader range of services that these programs offer. In the other jurisdictions, the commuter information programs are less integrated with the organizations that provide transit service.

It also is important to note that both name recognition and service use for any of these programs is complicated by name changes for some programs in past years, as well as by the interwoven nature of these programs with Commuter Connections. For many years, the programs have been jointly branded with Commuter Connections, with the majority of commute program advertising being disseminated through regional "mass marketing" umbrella campaigns administered by Commuter Connections. Few of the local programs conduct commuter level outreach with brand name recognition as a goal. It is not surprising that awareness of specific program names was low in some areas.

Additionally, several key services that the programs promote (e.g., regional rideshare matching, Guaranteed Ride Home, Bike-to-Work Day), are publicly administered by and branded as Commuter Connections' programs. So, while each of the local programs offers independently-sponsored services, some of their most visible services would be most associated with Commuter Connections.

SECTION 8 – EMPLOYER-PROVIDED COMMUTE ASSISTANCE SERVICES

The SOC survey also inquired about commute assistance services and benefits that might be offered to employees at their worksites, either by employers or a building management company. Respondents were asked about two types of services:

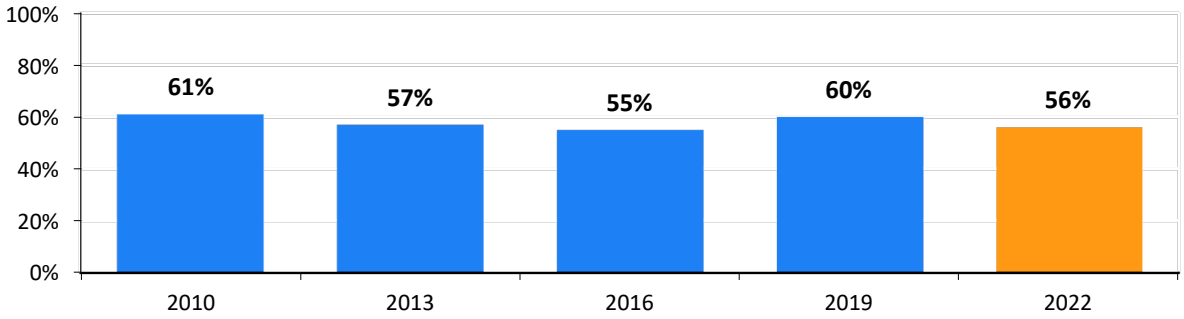
- Alternative mode support benefits and services
- Parking facilities and services

This section presents results regarding respondents' availability and use of these services in 2022. Results also are presented for some questions from previous SOC surveys.

Alternative Mode Benefits/Services

Fifty-six percent of respondents said their employers offered one or more commuter benefits or services (Figure 74). This was a slight decrease from the rate estimated in the 2019 SOC survey and approximately the percentage estimated in the 2016 survey. This could suggest some employers paused or discontinued commute services because many employees were working from home during the pandemic. However, the percentage represents employees' perceptions or awareness of service availability and could under-represent the true availability of services if employees were unaware of some services that were offered. While incorrect perceptions could have been an issue in both the current and past SOC surveys, the fact that many employees in the 2022 survey were working some or all their workdays at home could have limited their exposure to information or messaging they might have received if they were working at their usual work location.

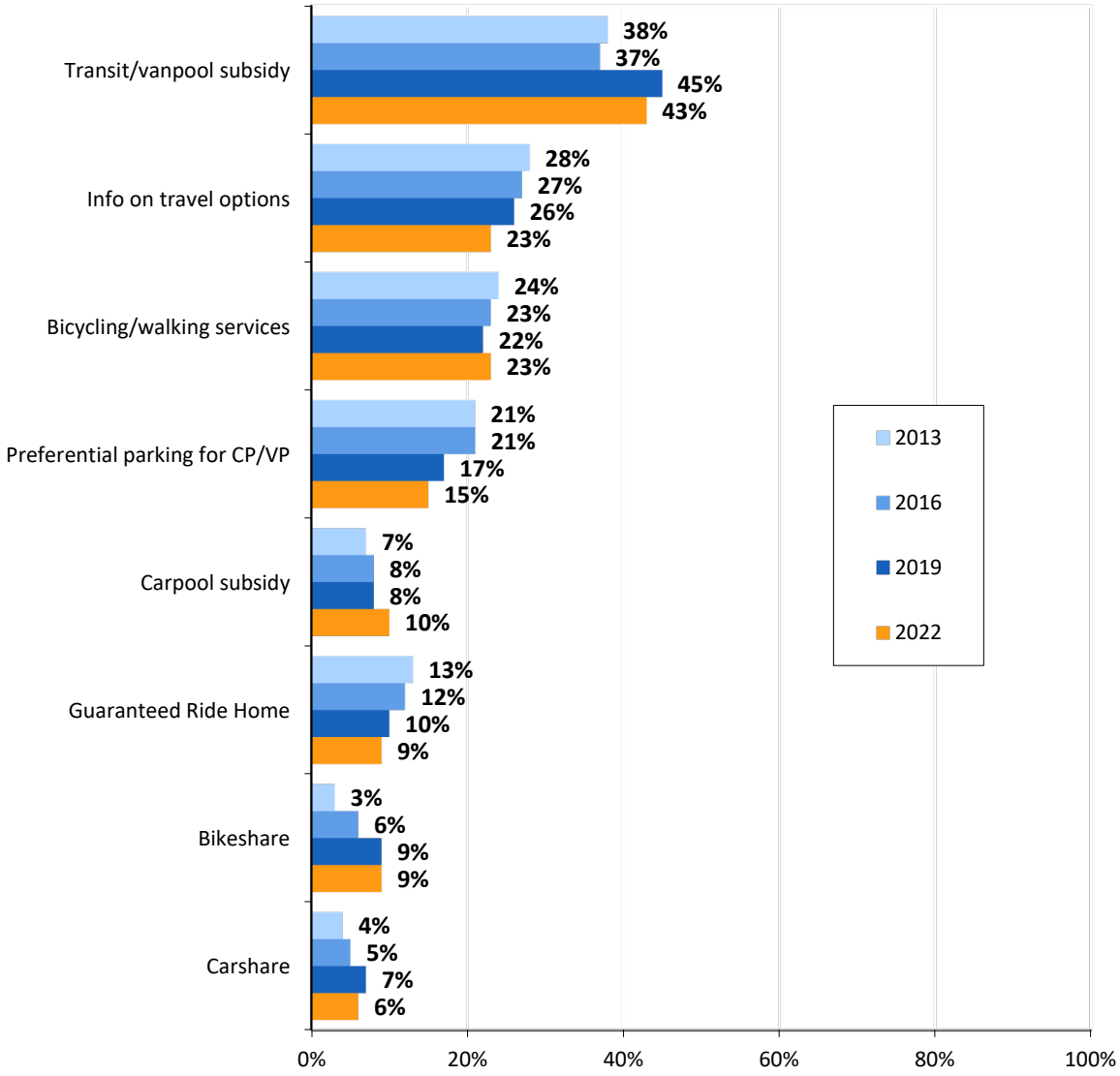
Figure 74
Employee Reports Access to any Worksite Benefits/Services – 2010 to 2022
(2010 n = 5,899, 2013 n = 5,524, 2016 n = 5,086, 2019 n = 7,991, 2022 n = 7,859)



Individual Benefits/Services Offered

The percentages for individual commute services offered are displayed in Figure 75. The most common services were SmarTrip/other subsidies for transit or vanpool, available to 43% of respondents, and information on commuter transportation options, available to 23% of respondents. Two in ten (23%) respondents said their employer offered services for bikers and walkers and 15% said preferential parking was offered to carpools and vanpools. One in ten said their employer offered carpool subsidies (10%) and Guaranteed Ride Home (9%). Memberships in two vehicle-sharing services, bikeshare membership and carshare membership, were mentioned by 9% and 6% of respondents, respectively.

Figure 75
Alternative Mode Benefits/Services Available at Worksites – 2013 to 2022
(2010 n = 5,899, 2013 n = 5,524, 2016 n = 5,086, 2019 n = 7,991, 2022 n = 7,859)



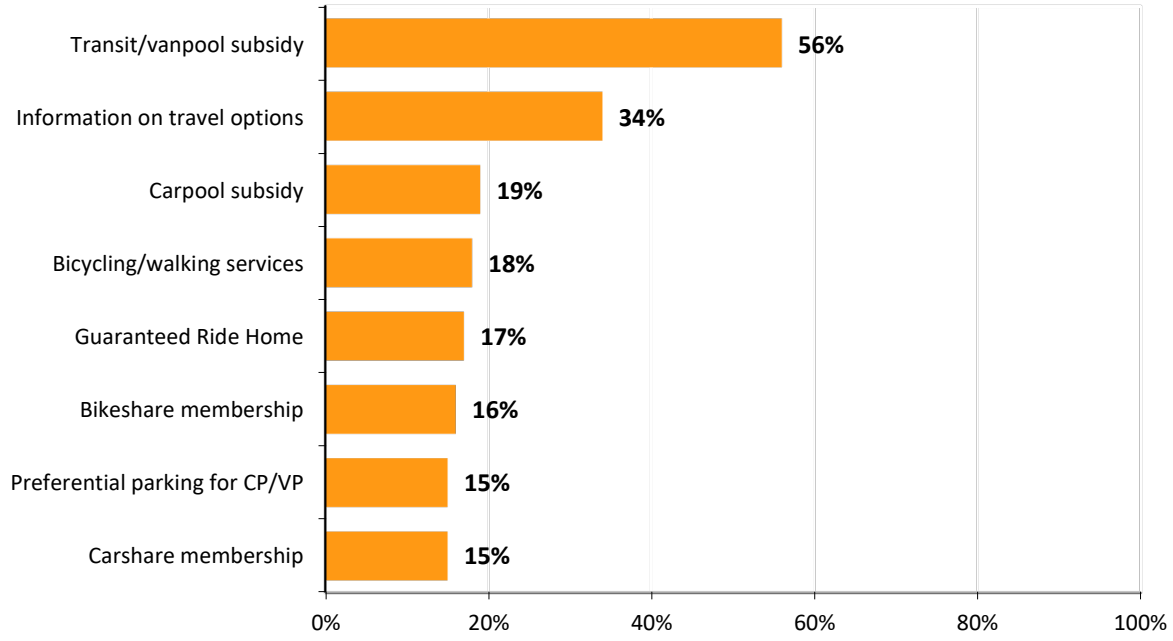
Availability of most services was not significantly different in 2022 than in 2019, typically changing only one or two percentage points. But when examining the service percentages over the years since 2013, the figure shows generally declining trends for information on travel options, preferential parking, and GRH. Conversely, access to carpool subsidies and bikeshare appears to have increased over the nine years since 2013.

Respondents whose employers offered incentives/support services were asked if they had ever used these services. Overall, 54% of respondents who said at least one of the commute services was available had used a service. This percentage represented 30% of all workers who were not self-employed.

The most used benefit or service was transit or vanpool subsidies, used by 56% of respondents whose employers offered this service (Figure 76). One-third (34%) of respondents who had access to commute information had used it and carpool subsidy was used by 19% who said it was available. The remaining services were used by fewer than two in ten respondents whose employers offered the services: bicycling or walking services (18%), Guaranteed Ride Home (17%), bikeshare membership (16%), preferential parking (15%), and carshare membership (15%).

Figure 76
Use of Employer-Provided Benefits/Services
Of Employees Who had Access to Services

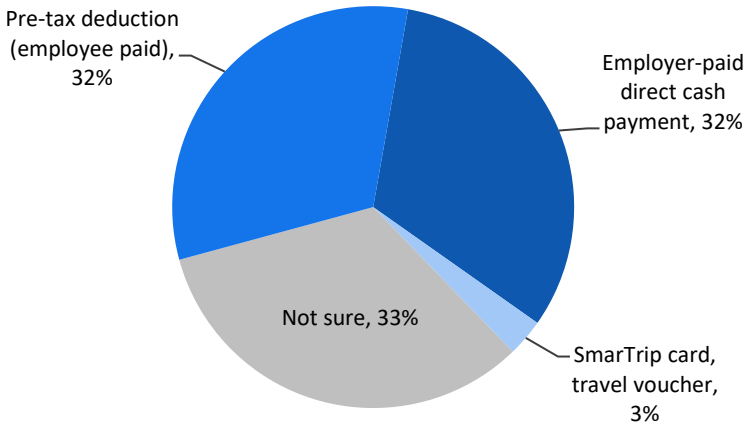
(Transit/vanpool subsidy n = 3,433, Information on travel options n = 1,878, Carpool subsidy n = 771, Bicycling / walking services n = 1,896, Preferential parking n = 1,292, Bikeshare membership n = 744, GRH n = 776, Carshare membership n = 431)



Form of Transit Financial Benefits – Transit/vanpool financial benefits were both available to and used by a large share of respondents. Respondents who said their employer offered this benefit were asked about the form in which it was provided. Two forms of benefits were equally common. One-third (32%) said the benefit was an employee-paid pre-tax deduction program, in which employees have the monthly cost of their transit cost deducted from their pay before taxes are deducted, reducing the amount of the tax they pay (Figure 77).

Another one-third (32%) of respondents said it was a direct cash payment or employer-paid SmartBenefits account. In this form, the employee receives the full cost of the benefit, either as an upfront payment or reimbursement for transit costs paid, as a non-taxed addition to their pay. Three percent reported that the employer offered SmarTrip cards or travel vouchers. One-third (33%) said they knew a financial benefit was available but did not know the specific type of benefit.

Figure 77
Transit Financial Benefit Types
(n = 3,415)



Benefits/Services Offered by Employer Type

Respondents who worked for Federal agencies were most likely to report availability of benefits/services at their worksites; 81% of Federal workers said they had at least one of these services (Table 41). Six in ten (60%) respondents who worked for non-profit organizations had access to services. Respondents who worked for state/local agencies and private employers were least likely to have access; about half (48%) of state/local government employees and 42% of private sector employees reported access to commuter benefits/services.

Table 41
Commute Benefits/Services Available by Employer Type

Incentives/Support Services	Employer Type			
	Federal (n = 2,236)	**Non-profit** (n = 1,237)	**State/local** (n = 787)	**Private** (n = 3,322)
Any services offered	**81%**	**60%**	**48%**	**42%**
SmartBenefits/transit/vanpool subsidy	73%	47%	33%	30%
Commute information	40%	21%	26%	16%
Bike/walk services	37%	28%	23%	16%
Preferential parking	33%	11%	12%	10%
GRH	15%	6%	11%	7%
Carpool subsidy/cash payment	18%	7%	7%	8%
Bikeshare membership	10%	10%	19%	7%
Carshare membership	7%	6%	9%	5%

Table 42 also compares the percentages of employers that offered various individual services by employer type. Not surprisingly, Federal agency workers also had greater access than did other respondents to individual services. This was especially true for transit/vanpool subsidies 73% of Federal workers said subsidies were offered, while only 47% of non-profit workers, 33% of state/local agency employees, and 30% who worked for private firms had this benefit. High availability of transit subsidies among federal agency employees is due to a federal mandate; an Executive Order signed in 2000 required Federal agencies in the National Capital Region to offer transit subsidies. In 2022, the maximum subsidy amount was $280 per month.

Benefits/Services Offered by Employer Size

Large employers were more likely to offer commuter services than were small employers (Table 42). Only 38% of respondents who worked for employers with 100 or fewer employees and 55% who worked for employers with 101-250 employees said they had any services. By contrast, 67% of respondents employed by large employers (251-999 employees) and 76% of respondents who worked for very large firms (1,000+ employees) had one or more employer-provided commuter service.

Respondents who worked for employers with 251 or more employees had greater access to most benefits/services, compared with employees of smaller firms. This trend of increasing services with increasing size was most striking with transit/vanpool subsidies, commute information, bike/walk services, and preferential parking.

Table 42
Commute Benefits/Services Available by Employer Size

Incentives/Support Services	Employer Size (number of employees)			
	1-100 (n = 2,883)	**101-250** (n = 1,012)	**251-999** (n = 1,282)	**1,000+** (n = 2,062)
Any services offered	**38%**	**55%**	**67%**	**76%**
SmartBenefits/transit/vanpool subsidy	28%	43%	56%	62%
Commute information	12%	22%	31%	38%
Bike/walk services	12%	23%	32%	38%
Preferential parking	7%	11%	17%	31%
GRH	6%	9%	11%	14%
Carpool subsidy/cash payment	7%	10%	12%	15%
Bikeshare membership	7%	10%	12%	12%
Carshare membership	4%	6%	8%	7%

Benefits/Services Offered by Employer Location

Finally, the analysis examined availability of services by respondents' work locations, divided into the three "ring" designations described earlier: Core area (Alexandria, Arlington, and the District of Columbia), Middle Ring (Fairfax, Montgomery, and Prince George's), and Outer Ring (Calvert, Charles, Frederick, Loudoun, and Prince William). Core area respondents had greater access to benefits/services than did other respondents (Table 43).

Table 43
Commute Benefits/Services Available by Work Area

Incentives/Support Services	Work Area		
	Core (n = 3,861)	Middle Ring (n = 2,621)	Outer Ring (n = 882)
Any services offered	**72%**	**46%**	**28%**
SmartBenefits/transit/VP subsidy	64%	31%	14%
Commute information	29%	22%	11%
Bike/walk services	32%	20%	12%
Preferential parking	16%	19%	6%
GRH	11%	9%	7%
Carpool subsidy/cash payment	11%	10%	8%
Bikeshare membership	14%	7%	5%
Carshare membership	7%	6%	4%

Seven in ten (72%) Core area workers said they had commute services, while only 46% of Middle Ring workers and 28% of Outer Ring workers had services available. Availability of services as reported in 2022 was lower than in 2019 for the Core (2022 72%, 2019 76%) and the Middle Ring (2022 46%, 2019 51%). Overall service availability for the Outer Ring was the same for both years (2022 28%, 2019 28%).

The higher share of Core area workers with commute services was primarily due to their much greater access to transit subsidies; 64% of Core area workers reported this service was offered, while only 31% of Middle Ring and 14% of Outer Ring workers said it was available. This largely mirrors the availability of transit service; employers in areas with limited transit operation would understandably be less inclined to offer a subsidy for transit. The high availability of transit subsidies in the Core also reflects the concentration of federal agencies in this area. As noted earlier, Federal agencies in the National Capital Region are required to offer transit subsidies to employees.

Another factor that could influence access to transit subsidies in the Core is the DC Commuter Benefits Ordinance enacted by the District of Columbia government. Beginning in 2016, employers with 20 or more employees at District worksites were required to offer a transit benefit. The 64% share of Core area employees who said a transit benefit was offered was seven percentage points higher than the 57% reported in 2016. But Middle Ring employees reported about the same jump in subsidy availability (25% in 2016 to 31% in 2022), so it is not definitive that the ordinance was responsible for the growth.

Core area workers also had much greater access to bike/walk services and to bikeshare memberships. Again, this difference reflects the greater access to bike/walk infrastructure and to bikeshare services in the Core, when compared with the Middle Ring and Outer Ring. Differences in access to other commute services were less pronounced, particularly between Core area and Middle Ring workers. The percentages of Core area and Middle Ring workers with access to commute information, preferential parking, GRH, carpool subsidies, and carshare memberships were similar. Outer Ring workers had lower availability of all services than did commuters who worked closer to the region's urban center.

Parking Facilities and Services

Respondents who were traveling to an outside worksite at least one day per week also were asked about the parking available at their worksites. These results are displayed in Table 44 for 2010 through 2022. Nearly seven in ten (69%) respondents across the region said their employers provided "free parking to all employees" at the worksite. One percent said the employer offered "free parking off-site" and 6% said their employers did not provide free parking to all employees, but that they personally had free parking. About one-quarter said they paid at least part of the cost of parking; 22% paid the total cost and 3% paid a portion of the cost with the balance paid by their employers.

Table 44
Parking Facilities/Services Offered by Employers – 2010 to 2022
(2010 n = 5,819, 2013 n = 5,524, 2016 n = 5,093, 2019 n = 7,385, 2022 n = 7,196)

Parking Facilities and Services	2010	2013	2016	2019	2022
Free on-site parking (all employees)	63%	63%	64%	60%	**69%**
Free on-site parking (some employees)*	----	----	6%	5%	**6%**
Free off-site parking	2%	2%	1%	1%	**1%**
Employee pays all parking charges	22%	23%	24%	28%	**22%**
Employee/employer share parking charge	7%	7%	5%	5%	**3%**
Parking discounts for carpools/vanpools**	16%	14%	14%	9%	**6%**

* Follow-up question about parking offered to some employees was added in 2016
** Percentages of parking discounts for CP/VP are calculated on a base of respondents who did not have free parking. These sample sizes are (2010 n = 1,610, 2013 n = 1,438, 2016 n = 1,148, 2019 n = 1,934, 2022 n = 1,530)

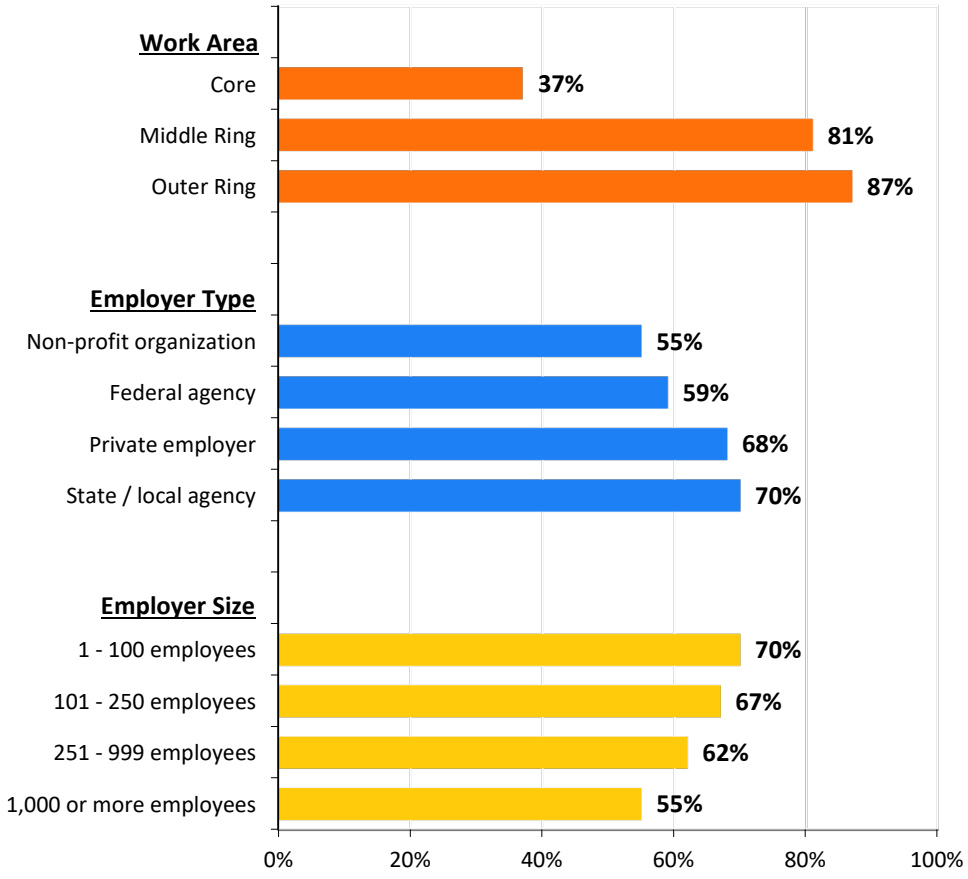
The availability of free parking remained relatively stable between 2010 and 2019 but increased between 2019 and 2022; the increase could reflect several factors. First, workers who were teleworking full-time were not asked this question and as noted earlier, a greater share of Core area workers shifted to full-time telework during the pandemic than did Middle Ring and Outer Ring workers. Because free parking was always more available for Middle Ring and Outer Ring workers, greater regional availability of free parking could reflect a different mix of respondents working at outside locations in 2022, with a higher share of Middle Ring and Outer Ring workers reporting on parking in the survey.

A second possibility is that some employers might have started offering free parking to encourage remote workers to return to the main work location. To test this possibility, the 2022 survey asked respondents who had free worksite parking if it was free before the pandemic. Most (92%) said it had been free pre-pandemic but 4% said it was not free before. The remaining 4% were not sure. Core area workers were more likely to note newly-free parking; 8% of Core workers with free parking said it was not free before the pandemic, compared with 3% of Middle Ring and 1% of Outer Ring workers.

Parking by Work Location, Employer Type, and Employer Size – Figure 78 displays free parking availability by employer type, employer size, and the location of the respondents' worksite. The most dramatic differences in free parking were evident for different parts of the region. Only 37% of Core area workers said their employers offered free parking to all employees, compared with 81% of respondents who worked in the Middle Ring and 87% of respondents who worked in the Outer Ring.

Figure 78
On-site Free Parking Availability by Work Area, Employer Type, and Employer Size

(Work Area – Core n = 2,320, Middle Ring n = 1,876, Outer Ring n = 729)
(Employer Type –Non-profit n = 829, Federal n = 1,233, Private n = 2,315, State/local n = 699)
(Employer Size – 1-100 n = 2,236, 101-250 n = 693, 251-999 n = 738, 1,000+ n = 1,231)



The 2022 Middle Ring and Outer Ring percentages were essentially the same as for 2019 (Middle Ring 80%, Outer Ring 84%) but the 37% free parking for Core area workers in 2022 was notably higher than the 23% of Core area workers who said they had free parking in 2019. Since parking had always been constrained for Core worksites, this supports the assumption that employees who were working at the main worksite were permitted to use parking that had not previously been available to them.

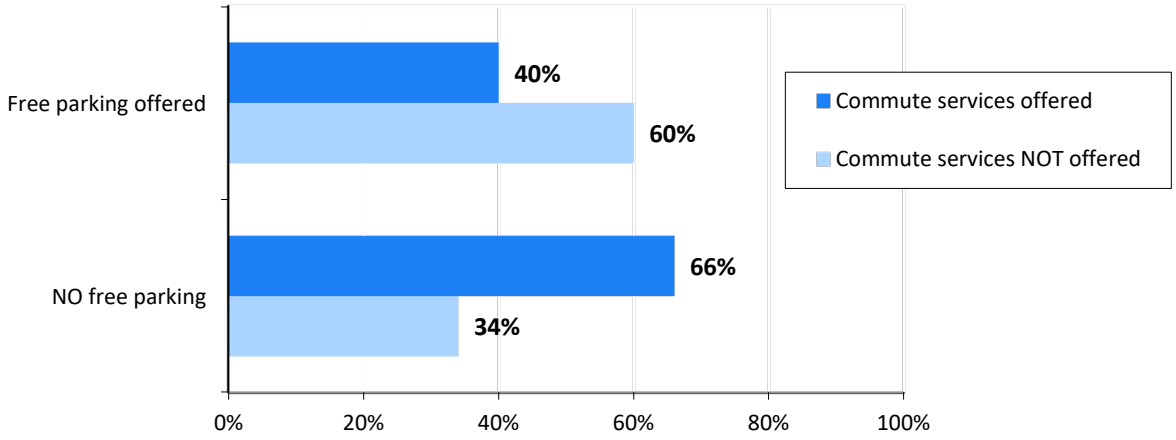
Federal agency workers and respondents who worked for non-profit organizations were least likely to have free parking at work. About 55% of respondents who worked for non-profits and 59% who worked for Federal agencies said their employers provided free on-site parking to all employees. By contrast, 68% of respondents who worked for private sector and 70% state/local agency employees said they had free parking. All employer types reported higher availability of free parking in 2022 than in 2019 but the increases were higher for Federal agencies (15 percentage points) and non-profits (13 percentage points) than for either private sector or state/local agencies (5 percentage points). Note that many federal agency and non-profit worksites are in the Core, thus both the lower 2022 parking availability for these employees compared with private and state/local employers and the greater change in availability between 2019 and 2022 could be due in part to their location.

Respondents who worked for large employers were less likely to have free parking. About six in ten respondents who were employed by employers with 251 or more employees had free parking, compared with about seven in ten respondents who worked for employers with 250 or fewer employees. Again, all employer size groups reported higher free parking percentages in 2022 than in 2019 but the relative changes were not substantially different by employer size.

Availability of Commuter Assistance Services/Benefits Offered by Availability of Free Parking

The availability of commute benefits/services was inversely related to the availability of free parking at the worksite. As shown in Figure 79, only four in ten (40%) respondents who said free parking was offered to all employees said their employers also offered commute benefits/services that would encourage or help them use alternative modes for commuting. By contrast, 66% of respondents who said free parking was not available reported having access to commute benefits/services at work.

Figure 79
Commute Benefits/Services Offered by Free Parking Available
(Free parking available n = 3,304, No free parking n = 1,637)



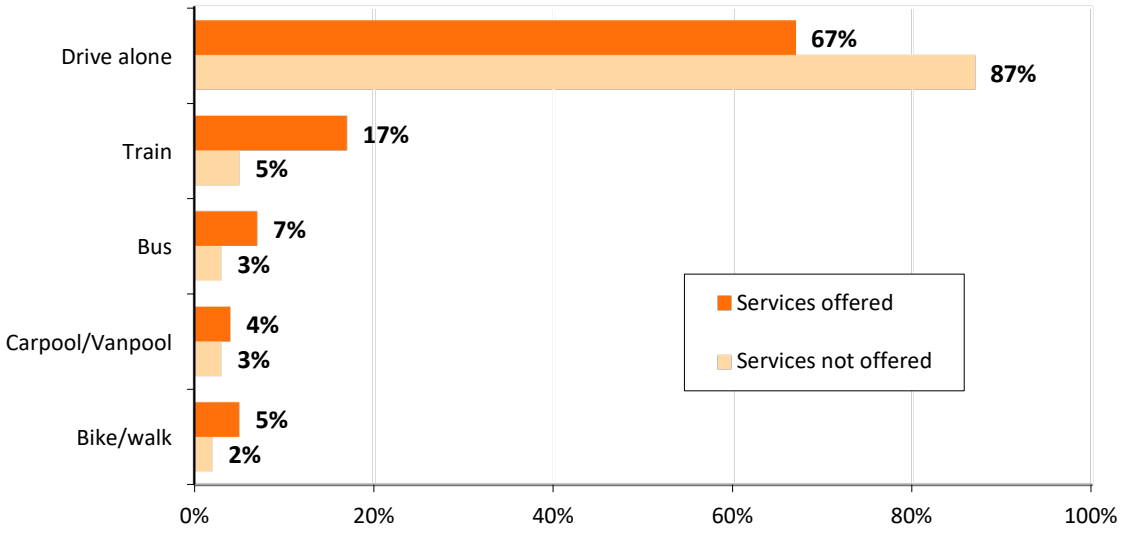
Impact of Commute Assistance Services and Parking

Commute Mode by Commute Assistance Benefits/ Services Offered

Figure 80 presents the share of commuters who used various commute modes by whether commute assistance benefits/services were available at their worksites. As with other distributions of primary mode in the report, the percentages are based on respondents who were not primarily teleworking.

A much lower share of respondents who had access to alternative mode benefits/services drove alone (67%), when compared with respondents whose employers did not provide these services (87%). Train use was particularly higher for respondents with commute services; 17% of respondents whose employers offered commute benefits/services rode the train to work, compared with 5% of respondents whose employers did not offer these services. Use of other alternative modes also was higher among respondents who had access to commute benefits/services as for respondents with no services.

Figure 80
Primary Commute Mode (Excluding Primary Telework) by Commute Benefits/Services Offered
(Services offered n = 2,041, Services not offered n = 2,350)



While the differences shown in the figure are statistically significant, it is not possible to say that the availability of these services was the only reason, or even the primary reason, for differences in mode use. Employers in the Core were much more likely than were employers in the Middle Ring and Outer Ring to offer commuter assistance services and drive alone rates were much lower for respondents who worked in the Core than for respondents who worked in the Middle Ring or Outer Ring.

However, respondents who worked in the Core also could be faced with greater impediments to driving alone. For example, Core area workers commuted an average of 42 minutes one-way, compared with 33 minutes for Middle Ring and 28 minutes for Outer Ring workers. And respondents who worked in the Core also might experience greater congestion levels and have greater availability of commute options, such as transit, than would be experienced by workers outside this area. Any of these factors might have been at least as important in influencing respondents' commute mode choices and encouraging greater use of modes other than driving alone.

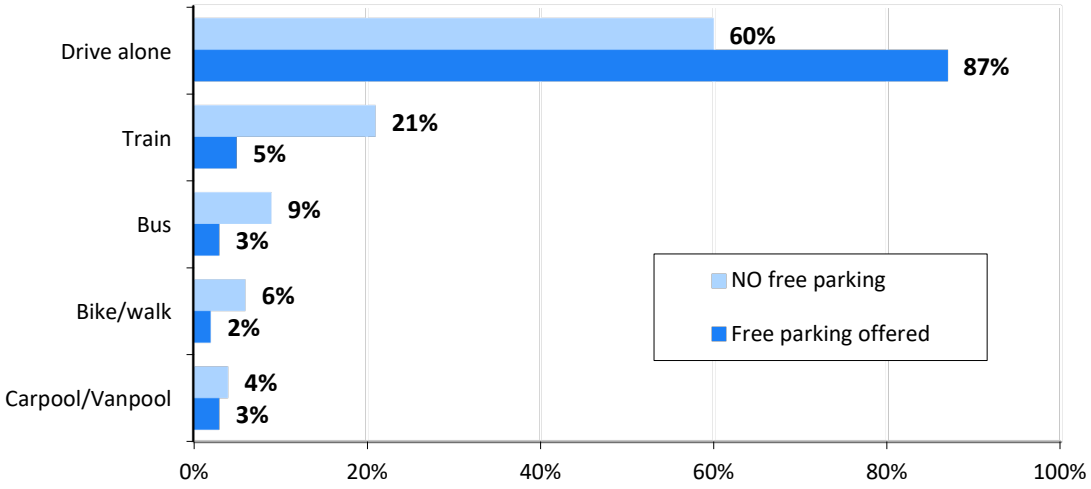
Commute Mode by Parking Services Offered

Figure 81 compares mode use rates for respondents who had free on-site parking at work and those who pay or would have to pay for parking. The difference in drive alone rates for these two groups was substantial; 87% of respondents whose employers offered free parking drove alone, compared with 60% of respondents who did not have this benefit.

Respondents who had to pay to park used all alternative modes at higher rates than did respondents with free parking. The difference was especially striking for use of transit; train mode share was more than four times as high for respondents who had to pay to park as for respondents who had free parking. Use of bus, carpool/vanpool, and bike/walk also were higher for respondents who did not have free parking. Many other surveys and research studies have documented the important role parking availability and cost play in commute decisions.

Figure 81
Primary Commute Mode (Excluding Primary Telework) by Free Parking Available at Work

(No free parking n = 2,862, Free parking offered n = 1,529)



Commute Mode by Commute Benefits/Services and Parking Services in Combination

Finally, Figure 82 presents a comparison of mode use by the combination of free parking and commute benefits/services. The top section of the figure shows the mode shares at worksites where free on-site parking was offered and commute benefits/services were and were not available. The bottom section shows the mode shares when free parking was not available and commute benefits/services were and were not offered.

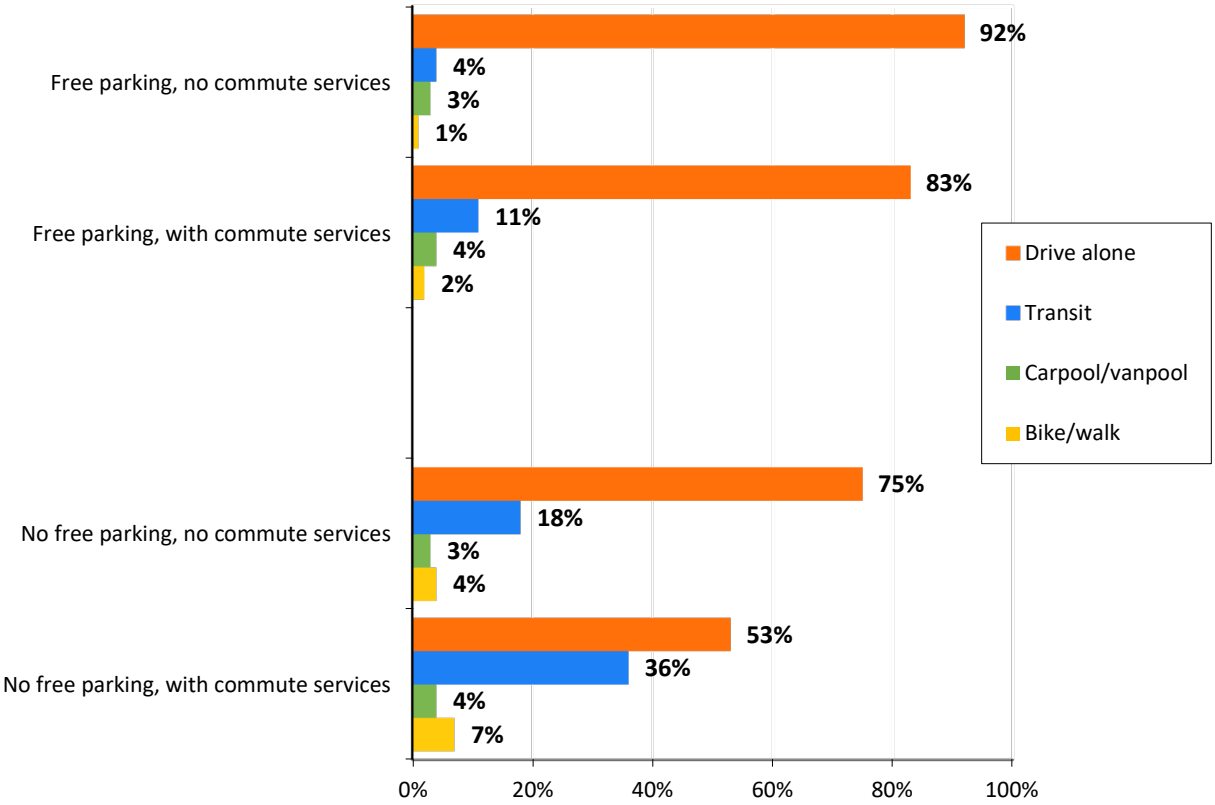
The drive alone mode share declined across the four cases, indicating that both parking cost and commute services influenced commuters' choice of driving alone. When parking was free and commute services were not offered, 92% of respondents drove alone to work. The drive alone rate dropped to 83% among respondents who had free parking, but when commute services were added.

When no free parking was available, the drive alone rate was 75% when no commute services were offered. This was 17 percentage points below the rate when parking was free and commute services were not offered, suggesting that parking charges can have a substantial impact on drive alone mode share, even in the absence of commute services. But when commute services were added, on top of parking charges, the drive alone mode share fell an additional 22 percentage points, to 53%, indicating that commute services also play a motivating role in commute mode choice.

The reverse pattern was clear for use of public transit. When free parking was offered, 4% of respondents used transit when no commute benefits/services were available and 11% used transit when they had access to commute benefits/services. At worksites where parking was not free, the transit share was 18% among respondents who did not have access to commute benefits/services and 36% when commute benefits/services were offered.

Figure 82
Mode Use by Combination of Free Parking and Commute Benefits/Services Offered

(Free parking, no commute services n = 1,320, Free parking, with commute services n = 1,541)
(No free parking, no commute services n = 444, No free parking, with commute services n = 1,083)



The figure also shows mode shares for bike/walk and carpool/vanpool. Carpool/vanpool rates were statistically the same across the four parking and commute service combinations, but there were slight differences in use of bike/walk. For respondents who reported free parking, bike/walk mode use was 1% without commute services and 2% when services were offered. Similarly, when parking was not free, bike/walk mode use was 4% without commute services and 7% when services were available.

The more dramatic differences in transit use reflect the motivating value of transit subsidies. Three-quarters of respondents who reported access to commute services said a transit subsidy was an available benefit, thus the "with commute services" categories would reflect a substantial transit motivating factor. Services, such as bike support services, bikeshare, carpool subsidies, and carpool/vanpool preferential parking, which primarily target use of bike/walk or carpool/vanpool were offered by fewer employers.

SECTION 9 – TECHNOLOGY APPLICATIONS AND DRIVERLESS CARS

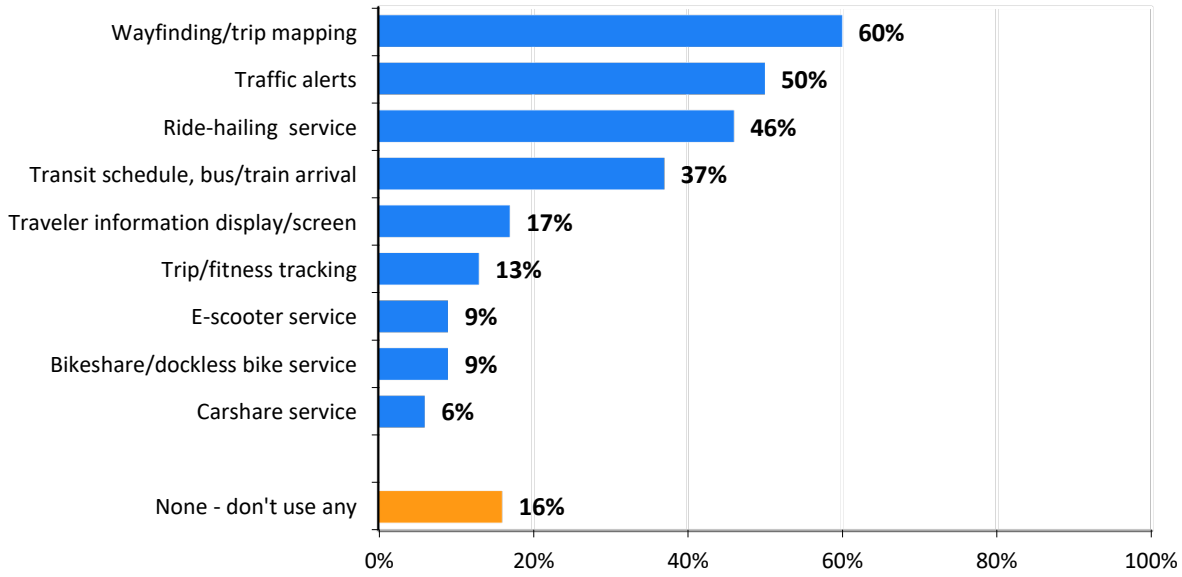
The 2019 survey added a new section of questions to examine the growing use of traveler information applications. These questions were retained in the 2022 survey. As defined in this section "applications" refers to mobile applications, but also websites, desktop, and other forms of the technology services. This section also included questions to explore awareness and interest in the concept of automated vehicles, also known as driverless cars. This section presents results for these questions.

Travel/Trip Information Applications

The wide-scale availability of smartphones and other mobile devices has created an opportunity for commute information and service organizations to deliver an extensive range of information via mobile applications, enhancing commuters' access to travel information in real time and before and during a trip. The 2022 SOC survey included a question to identify applications that regional commuters used. Survey respondents were shown a list of nine applications and asked to indicate those they had used.

Eighty-four percent of all respondents said they had used at least one of the listed applications (Figure 83). The most common application was for wayfinding or mapping applications, such as Google maps and Waze; 60% of respondents had used this type of application. Traffic alerts delivered via text message or other means had been used by 50% of respondents. Forty-six percent had used an application for a ridehail service such as Uber or Lyft and 37% had used an application that tracked transit schedules or provided "next bus/train" information on arrival time. Seventeen percent had used a traveler information display or screen located in a public location and 13% had used a trip or fitness tracking app. About one in ten respondents had used applications for e-scooter (9%), bikeshare (9%), and carshare (6%) services.

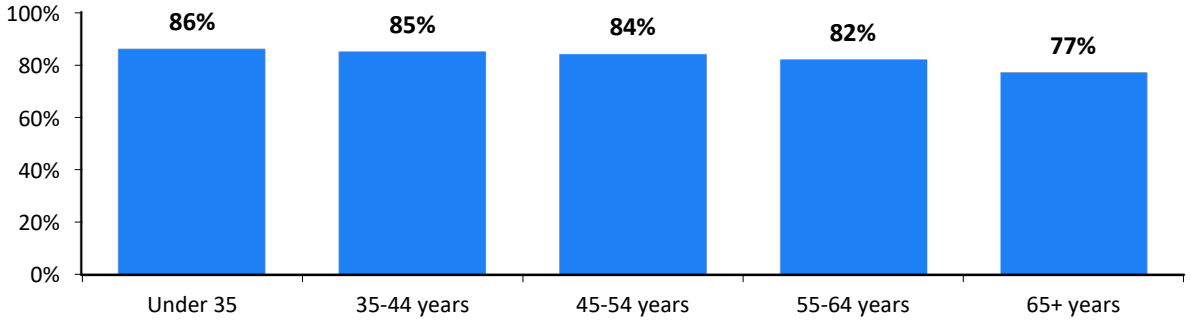
Figure 83
Travel/Trip Information Applications – Percentage Using in 2022
(n = 8,342)



Use of Travel/Trip Information Applications Among Respondent Sub-Groups

Use of Applications by Age – Use of travel/trip information applications exhibited a slight decline with increasing age (Figure 84). Use of the apps was essentially the same for respondents who were younger than 55 years. Use of the apps dropped among older respondents; 82% who were between 55 and 64 years and 77% of those who were 65 years or older had used an app.

Figure 84
Use of Travel/Trip Information Applications by Respondent Age
(Under 35 n = 1,812, 35-54 n = 1,879, 45-54 n = 1,822, 55-64 n = 1,855, 65 and older n = 664)



Use of individual applications varied substantially by age, with younger respondents nearly always using the apps more than did older respondents (Table 45). The only application that exhibited an increasing pattern with increasing age was traffic alert; 62% of respondents who were 55 years or older had used this application, compared with just 38% of respondents who were younger than 35 years.

Table 45
Use of Travel/Trip Information Applications by Respondent Age
(Shading indicates statistically higher percentages for app use)

Trip/Travel Application	Respondent Age			
	18-34 years (n = 1,812)	**35 – 44 years** (n = 1,879)	**45 – 54 years** (n = 1,822)	**55+ years** (n = 2,519)
Use any trip/travel info app	86%	85%	84%	81%
Transit schedule arrival	39%	40%	37%	33%
Ridehail service	59%	50%	42%	31%
Wayfinding	67%	64%	60%	48%
Trip/fitness tracking	14%	17%	13%	9%
Bikeshare service	13%	10%	5%	4%
Carshare service	9%	7%	5%	2%
E-scooter service	17%	10%	5%	2%
Traveler information display	19%	19%	15%	14%
Traffic alerts	38%	50%	57%	62%

Use of traveler information displays and bikeshare and e-scooter service apps particularly dropped off for respondents who were 45 years and older but younger respondents were less likely to have access to a personal vehicle and more likely to live in the Core, where these services are more widely available. The pattern for use of ridehail services and wayfinding applications declined steadily through all four age groups, with each age group using the application less than did the next younger group. Trip/fitness tracking apps were used at similar rates for respondents who were younger than 55 years.

Use of Applications by Other Demographics – Differences in use of the apps by other respondent demographic characteristics were small. Non-Hispanic White respondents (89%) reported higher use of apps than did Non-Hispanic Blacks (81%), Hispanics (81%) or Asian (80%) respondents. Use of the apps also appeared slightly related to income; 89% of respondents with annual household incomes of at least $100,000 had used an app, compared with 78% of respondents with incomes below $100,000. Female and male respondents were equally likely to report using apps.

Use of Applications by Home and Work Location – A slightly higher share of respondents who lived in the Core area of the region (91%) had used a travel/trip information app, compared with 83% of Middle Ring and 79% of Outer Ring respondents. Core area workers (88%) also used travel/trip apps at a higher rate than did Middle Ring (82%) or Outer Ring workers (75%).

The propensity of Core area and Middle Ring respondents to use applications likely is related somewhat to the age profiles of each area, but also to their wider availability of non-driving services, such as bikeshare and transit information, that were the subject of some of the apps. Application use was higher among young respondents than older respondents in each regional sub-area, but use dropped off for each age group among Outer Ring respondents. For example, among respondents who were younger than 35 years, 95% of Core area and 85% of Middle Ring residents had used apps, while only 76% of young Outer Ring respondents had done so. Among respondents who were 35 to 54 years, 93% of Core area residents had used apps, compared with 84% of Middle Ring residents and 81% of those who lived in the Outer Ring.

Use of Applications by Commute Mode and Commute Distance – Overall use of travel/trip information apps was high among respondents of all commute distance groups. As shown in Table 46, use was highest among alternative mode users, although nearly eight in ten drive alone commuters also used travel/trip applications. But the applications listed for the question covered all travel modes and the question did not ask if respondents had used the applications for commuting. Thus, the question covered a broad range of app types and situations for respondents to have used.

Use of individual applications, however, did vary by commute mode. Use of traffic alerts was higher among commuters who carpooled (54%) and those who drove alone (53%) than among transit riders (37%) and bike/walk commuters (36%). Most other applications had higher use rates among transit and bike/walk commuters. Commuters who rode biked or walked to work used all apps except traffic alerts at a higher rate than did other commuters, but transit riders also used traveler information displays, ridehail, bikeshare, and carshare service applications at higher rates than did carpoolers or drive alone commuters.

Table 46
Use of Travel/Trip Information Applications by Primary Commute Mode
Shading indicates statistically higher percentages)

Trip/Travel Application	Primary Commute Mode			
	Drive Alone (n = 3,716)	Carpool (n = 120)	Transit (n = 647)	Bike/Walk (n = 192)
Use any trip/travel info app	78%	84%	88%	90%
Traffic alerts	53%	54%	37%	36%
Transit schedule arrival	19%	36%	69%	56%
Traveler information display	8%	11%	26%	28%
Ridehail service	33%	32%	54%	73%
Bikeshare service	4%	7%	12%	28%
Carshare service	3%	5%	6%	16%
Wayfinding	55%	61%	47%	72%
Trip/fitness tracking	8%	5%	11%	36%
E-scooter service app	6%	7%	10%	25%

Use of Applications by Personal Vehicle Availability – One additional respondent characteristic that seemed to be associated with use of travel/trip information applications was the respondents' availability of a personal vehicle (Table 47). Respondents who had at least one vehicle per adult resident in the household were less likely to use travel/trip apps (85%) than were respondents who were car-free (92%) or who had a vehicle in the household, but fewer vehicles than adult residents (0.1 to 0.9 vehicles per adult) (88%).

As expected, respondents who were car-free or car-lite used applications for bikeshare, carshare, and e-scooter, and carshare services and for transit schedule arrival apps at statistically higher rates than did respondents with full vehicle availability, reflecting their higher use of non-driving modes overall. Car-free and car-lite respondents also used ridehail apps at a higher rate than did respondents with vehicles available, but the difference in use was less dramatic; 43% of respondents with full vehicle access had used ridehail apps, indicating the attractiveness of ridehail for some trips even among vehicle owners. Use of traffic alerts was higher among respondents with greater vehicle availability. Use of wayfinding applications was about the same across the three groups.

Table 47
Use of Travel/Trip Information Applications by Vehicles Available per Adult
Shading indicates statistically higher percentages)

Trip/Travel Application	Vehicles per Adult in Household		
	0 vehicles (n = 544)	0.1 to 0.9 vehicles (n = 1,918)	1.0+ vehicles (n = 5,573)
Use any trip/travel info app	92%	88%	85%
Traveler information display	36%	19%	15%
Bikeshare service	26%	11%	6%
E-scooter service	20%	11%	8%
Carshare service	24%	7%	4%
Transit schedule arrival	71%	41%	32%
Ridehail service	76%	50%	43%
Trip/fitness tracking	17%	12%	13%
Traffic alerts	30%	42%	56%
Wayfinding	62%	59%	61%

Driverless Cars (Automated Vehicles)

This section of the survey also explored respondents' opinions about automated vehicles, also known as driverless cars. For several years, these vehicles have been undergoing testing in several regions of the country and news media have reported on the tests. This series of questions was designed to:

- Assess baseline awareness of the concept
- Identify commuters' concerns about the vehicles
- Determine commuters' willingness to use an automated vehicle under various scenarios

Familiarity with the Concept of Driverless Cars

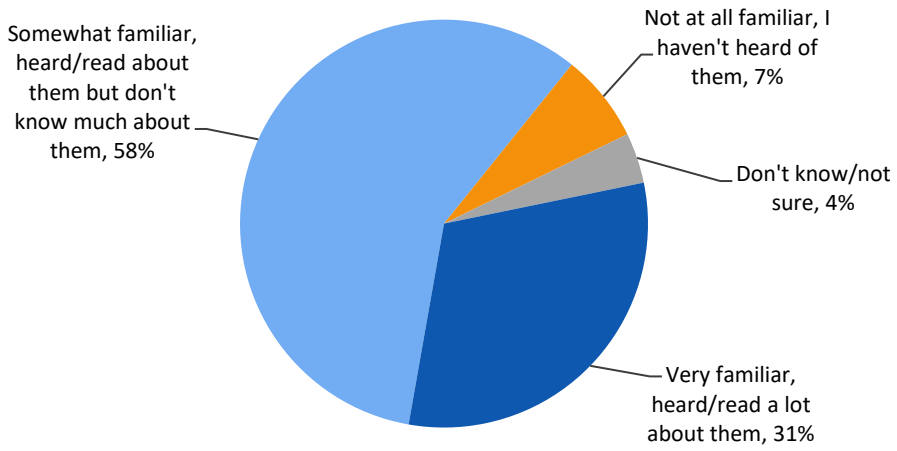
The first question asked about commuters' familiarity with driverless cars:

> *"You might have heard of self-driving cars, also known as driverless cars or automated vehicles. These are cars that can sense their surroundings and drive themselves. How familiar are you with the concept of these vehicles?"*

As displayed in Figure 85, the largest share of respondents (58%) said they were "somewhat familiar," they had heard or read about the concept, but did not know much about them. Three in ten (31%) were "very familiar," they had heard or read a lot about the concept. Seven percent had not heard about driverless vehicles at all and 4% were unsure. These results were nearly identical to respondents' self-identified familiarity in 2019, when 58% were somewhat familiar and 31% were very familiar.

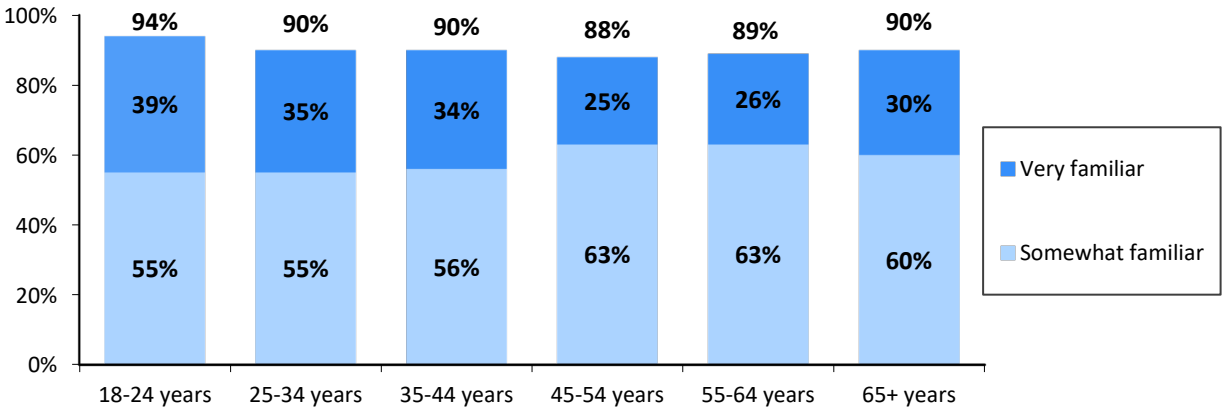
Familiarity by Home and Work Location – The concept of driverless cars was best known by respondents who lived in the Core; 35% of Core area residents were very familiar, compared with 31% of Middle Ring and 31% of Outer Ring residents. And 31% of respondents who worked in the Core or in the Middle Ring reported being very familiar with the concept, versus 28% of Outer Ring workers.

Figure 85
Familiarity with Concept of Driverless Cars
(n = 8,347)



Familiarity by Age – Unlike the results for trip/travel information applications, the pattern of driverless car familiarity by respondent age was less distinct (Figure 86). Respondents of all age groups were about equally likely to report some familiarity with driverless cars; about nine in ten in each age group said they were either somewhat or very familiar. Higher shares of young respondents said they were very familiar, however. Nearly four in ten (39%) respondents who were under 25 said they were very familiar and more than one third of respondents who were between 25 and 44 reported being very familiar. Among all other age groups, the percentages were between 25% and 30%.

Figure 86
Familiarity with Concept of Driverless Cars by Respondent Age
(18-24 n = 250, 25-34 n = 1,533, 35-44 n = 1,878, 45-54 n = 1,823, 55-64 n = 1,853, 65 and older n = 665



Familiarity by Other Demographics – Male respondents were twice as likely to say they were very familiar with driverless cars as were females (Male 42%, Female 19%). This difference was made up in the "somewhat familiar" category; 69% of females were somewhat familiar, compared with 49% of males. There also was a clear pattern by household income, with greater familiarity among higher income respondents; 37% with annual incomes of $160,000 or more said they were very familiar, versus 30% with incomes between $100,000 and $159,999, and only 27% whose incomes were under $100,000. And Non-Hispanic White (35%) and Asian (34%) respondents were more likely to say they were very familiar than were Hispanic (30%) or Non-Hispanic Black (21%) respondents.

Potential Concerns with the Concept of Driverless Cars

All respondents were next asked an open-ended question: *"What concerns, if any, do you have about driverless cars?"* Two-thirds (66%) noted at least one concern, with the primary concerns related to safety and technological reliability (Figure 87). Nearly half (48%) were concerned that driverless cars could reduce the safety of driving or increase driving crashes, 25% expressed a concern that the technology was not yet reliable enough, and 3% felt the vehicles could negatively affect pedestrian and cyclist safety. Small percentages (1% to 2%) cited other concerns, such as liability, security/privacy, high vehicle cost, and environmental concerns.

Figure 87
Respondents' Concerns Regarding Driverless Cars – 2019 and 2022
(2019 n = 7,706, 2022 n = 7,389)

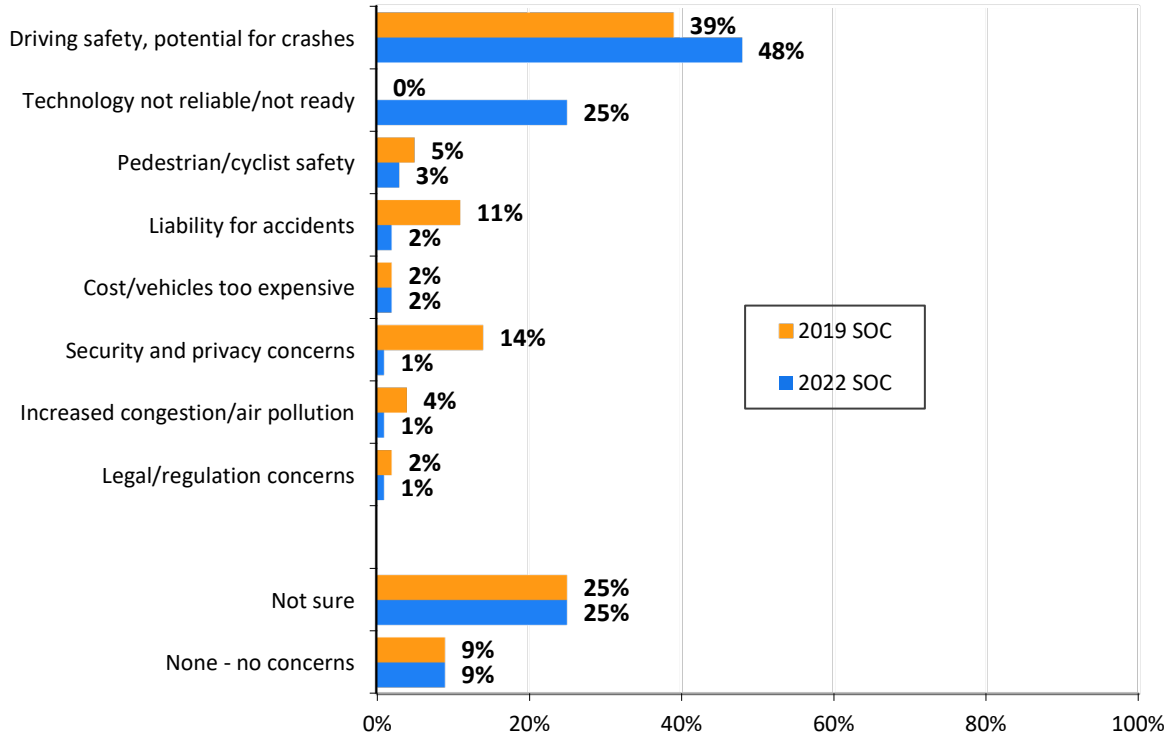


Figure 87 also shows the concerns that respondents expressed about these vehicles in the 2019 SOC. Driving safety also topped the list in 2019, but several other reasons had markedly different results in 2022 than in 2019. The reliability of technology, which was not mentioned explicitly in 2019 was an

important concern in 2022. Conversely, respondents were less concerned about liability for accidents and personal security and privacy in 2022 than they had been in 2019.

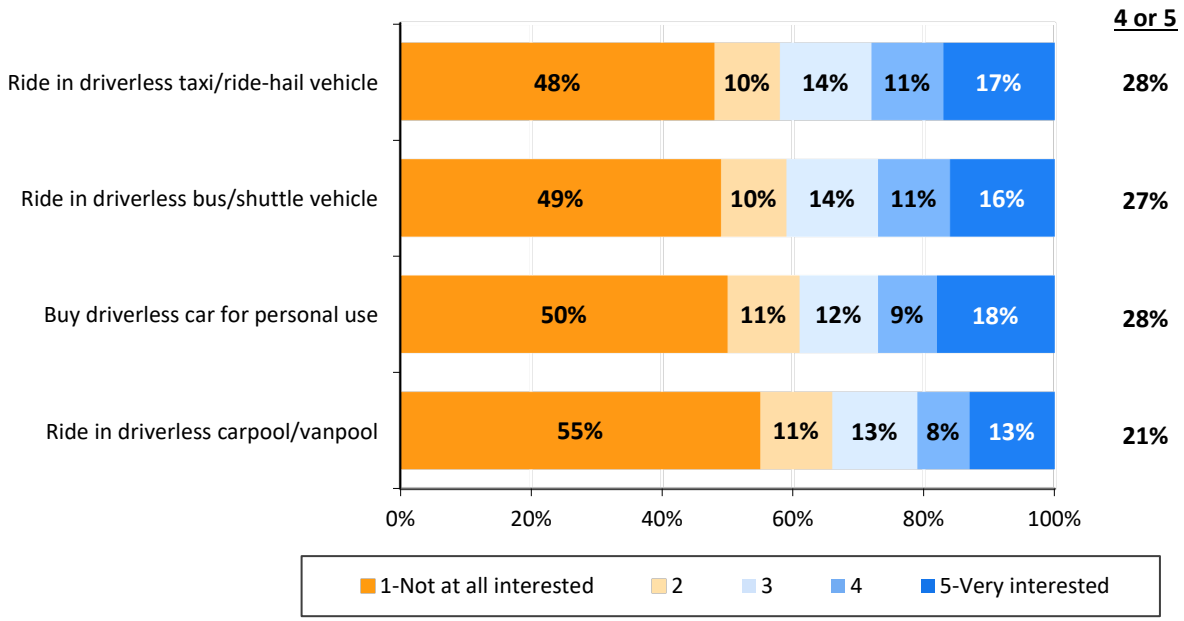
Interest in Using Driverless Cars

The final question in the section on driverless cars asked respondents how interested they would be in using a driverless car under four use scenarios:

- Buy a driverless car for personal use
- Ride in a driverless taxi/ridehail vehicle
- Ride in a driverless bus or shuttle vehicle
- Ride in a driverless carpool or vanpool

Figure 88 displays the percentages that rated each scenario on a 1 to 5 scale, where 1 meant "not at all interested" and 5 meant "very interested." The overall level of interest was quite similar across the scenarios, regardless of the type of vehicle described in the scenario and/or whether the vehicle was owned or rented by the respondent.

Figure 88
Interest in Using Driverless Cars by Use Scenario
(n = 7,670)



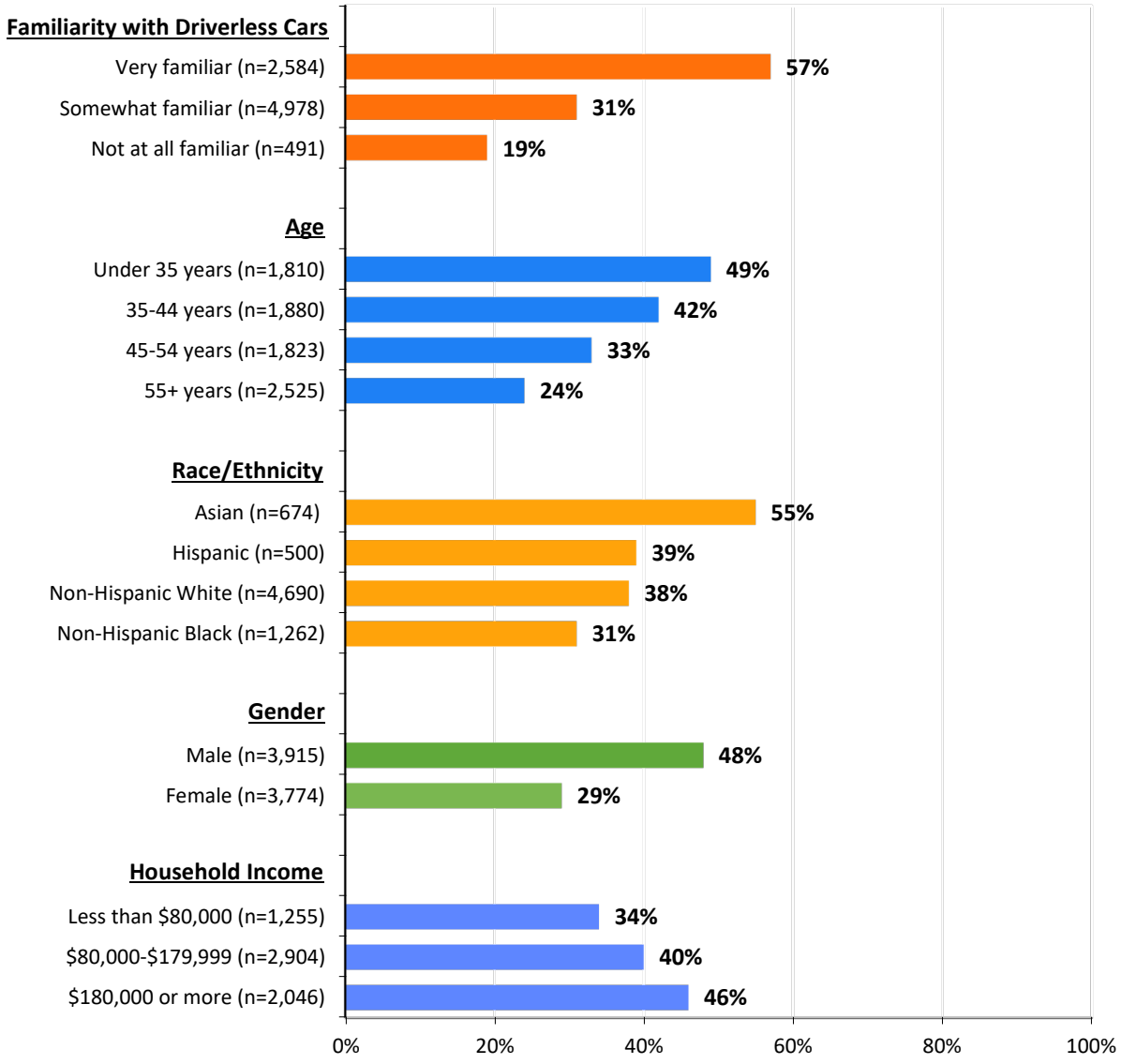
In three scenarios, more than one-quarter of respondents rated their interest as a 4 or 5 (very interested) and 16% to 18% were very interested. For the final scenario, ride in a driverless carpool or vanpool, interest was slightly lower, with 21% rating their interest as a 4 or 5. The relatively modest interest reported for using driverless vehicles could be related to the low level of familiarity many respondents indicated and the concerns that many respondents have about safety and reliability.

Interest by Familiarity with Driverless Car Concept and Demographics – While none of the individual scenarios received a high interest rating (4 or 5) from more than 28% of respondents, 38% of

respondents rated at least one of the scenarios as a 4 or 5 (very interested) and 14% rated their interest as a 3 for at least one scenario. The remaining respondents either were not interested (rating of 1 or 2) or didn't know if they were interested.

Interest in at least one scenario was notably higher among some respondent sub-group; for example, respondents who were more familiar with driverless cars (Figure 89). Nearly six in ten (57%) respondents who said they had heard or read a lot about driverless cars expressed interest in using them. Among respondents who said they had read or heard about driverless cars but did not know much about them, only 31% were interested. Interest was lower still for those who said they hadn't heard of driverless cars; only 19% were interested in using one.

Figure 89
Interest in Using Driverless Cars by Familiarity with Driverless Cars and Demographic Characteristics
Rated Interest as a 4 or 5 (Very interested)



Young respondents also expressed greater interest in using driverless cars; 49% who were under 35 years and 42% who were between 35 and 44 years rated their interest as a 4 or 5 for at least one driverless car scenario. By contrast, only one-third (33%) of respondents who were between 45 and 54 years and just 24% of respondents who were 55 years or older were interested.

The pattern of greater interest by young respondents held across all the driverless car scenarios. One-third (34%) of respondents who were younger than 45 years noted a willingness to buy a driverless car, while only 20% of respondents who were 45 or older were interested in this scenario. Younger respondents also were more willing to use a driverless taxi or ridehail vehicle and driverless bus or shuttle. Thirty-five percent of respondents under 45 years were interested in the taxi/ridehail scenario and 36% would use the bus/shuttle scenario. By contrast, 20% of respondents who were older than 45 years would be interested in using a driverless taxi/ridehail vehicle and the same 20% share would be interested in riding in a driverless bus/shuttle. One-quarter (25%) of respondents under 45 years would be willing to ride in a driverless carpool/vanpool, compared with 14% of older respondents.

Asian (55%) expressed much greater interest in using driverless cars than did other racial/ethnic groups. Male respondents (48%) were considerably more interested than were female respondents (29%). There also was a clear pattern by household income, with greater interest among higher income respondents; 46% with annual incomes of $180,000 or more said they were interested, versus 40% with incomes between $100,000 and $179,999, and only 34% whose incomes were under $100,000.

Interest by Home Location – Driverless car interest overall was greatest among respondents who lived in the Core. Four in ten (41%) Core area residents rated their interest as a 4 or 5 for at least one of the scenarios, compared with 37% of Middle Ring and 35% of Outer Ring residents. Core area residents were particularly more likely to report interest in using driverless vehicles that they did not own. One-third of Core area residents were interested in the taxi/ridehail scenario (33%) and the bus/shuttle scenario (33%). By contrast, interest in these scenarios was lower for Middle Ring (taxi/ridehail 27%; bus 27%) and Outer Ring residents (taxi/ridehail 25%; bus 23%). Core area residents also were more willing to ride in a driverless carpool/vanpool (25%) than were either Middle Ring (20%) or Outer Ring (20%) residents.

Interest by Commute Mode – Potential interest in driverless cars overall was quite similar across all commute mode categories; 29% of bus riders, 33% of train riders, 35% of drive alone commuters, and 35% of carpoolers/vanpoolers cited at least one driverless car scenario in which they were interested. The single mode exception was bike/walk; 45% of respondents who used this mode said they were interested in using a driverless car. They were no more interested in buying a driverless car than were other mode users but were more interested in riding in a driverless taxi/ridehail vehicle and riding in a driverless bus/shuttle. Thirty-four percent of bike/walk commuters would use the taxi/ridehail scenario, versus 23% to 25% of other mode users. And 37% of bike/walk commuters would be interested in using a driverless bus/shuttle, versus 21% to 29% for other mode users.

SECTION 10 – CHARACTERISTICS OF THE SAMPLE

At the end of the survey interview, respondents were asked a series of questions about their home and work locations, age, race/ethnicity, sex, income, household size, vehicle ownership, type of employer, size of employer, and occupation. These results define characteristics of the sample.

Home and Work Locations

About equal shares of respondents lived in Maryland (43%) and Virginia (45%) (Table 48). The remaining 12% of respondents lived in the District of Columbia. Because the survey only interviewed employed residents of the 11-jurisdiction area, no respondents lived outside these areas. Note also that the data expansion method defined expansion factor to align the interview counts for each of the 11 home jurisdictions to the correct representation in the region, thus the home location distribution exactly matches the percentages reported in the American Community Survey.

Table 48
Home and Work Locations

State/County	Home Location (n = 8,396)	Work Location (n = 8,290)
District of Columbia	**12%**	**34%**
Maryland Counties	**43%**	**26%**
Montgomery Co.	19%	14%
Prince Georges Co.	16%	9%
Frederick Co.	4%	2%
Charles Co.	3%	1%
Calvert Co.	1%	0%
Virginia Counties	**45%**	**37%**
Fairfax Co.	21%	19%
Arlington Co.	5%	7%
Prince William Co.	9%	3%
Loudoun Co.	7%	4%
Alexandria City	3%	4%
Other	**N/A**	**3%**

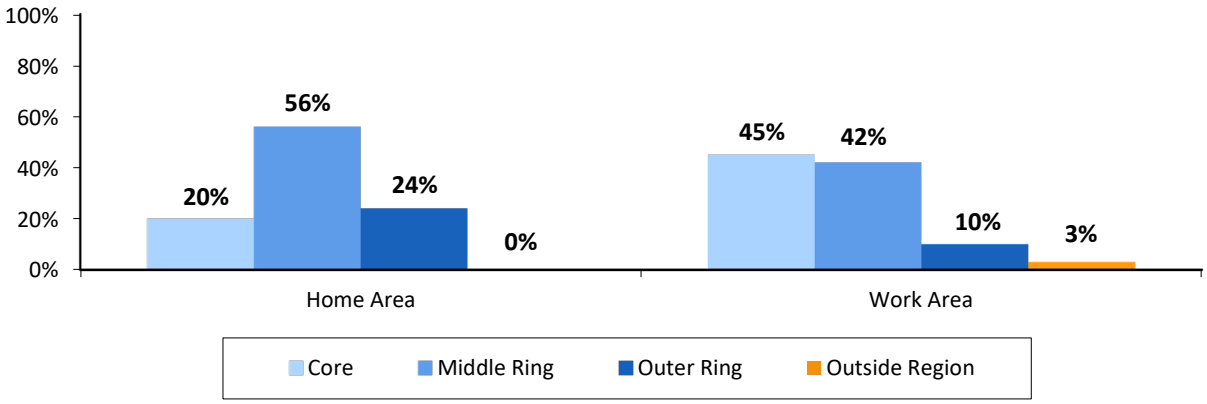
Work locations were more evenly divided. The largest number of respondents worked in Virginia (37%), but the District of Columbia, with 34%, was close behind in its share of regional employment. Slightly more than one-quarter (26%) of respondents worked in Maryland. Note that the work location percentages for Maryland and Virginia include only counties in the COG 11-jurisdiction non-attainment region. Maryland and Virginia locations outside this region are counted in the “other” category.

Nearly seven in ten respondents lived in one of four jurisdictions: Fairfax County (21%), Montgomery County, MD (19%), Prince George's County, MD (16%), and the District of Columbia (12%). Five jurisdictions accounted for more than eight in ten work locations: District of Columbia (34%), Fairfax County (19%), Montgomery County (14%), Prince George's County (9%), and Arlington County (7%).

Home and Work Areas

More than half of respondents (56%) lived in the Middle Ring (Figure 90). The remaining respondents were about evenly divided between the Core (20%) and Outer Ring (24%). Work locations, by contrast, were divided primarily between the Core (45%) and Middle Ring (42%). Ten percent of respondents worked in an Outer Ring jurisdiction. An additional 3% of respondents said their work location was outside the 11-jurisdiction region.

Figure 90
Home and Work Locations – Core, Middle Ring, and Outer Ring
(Home area n = 8,396, Work area n = 8,227)



Work Area by Home Area – Most respondents worked either in the geographic area where they lived or in an area closer to the center of the region (Table 49). More than eight in ten (83%) Core area respondents also worked in the Core and 56% of Middle Ring respondents worked in the Middle Ring. Outer Ring residents were most likely to travel to another jurisdiction to work; only 37% worked in their home area, 34% traveled inbound to the Middle Ring and 29% traveled inbound to the Core. Among Middle Ring residents, 38% traveled to the Core. Only a small share of respondents made a "reverse commute" to a more distant ring; 17% of Core area and 6% of Middle Ring residents traveled outbound.

Table 49
Work Location by Home Location

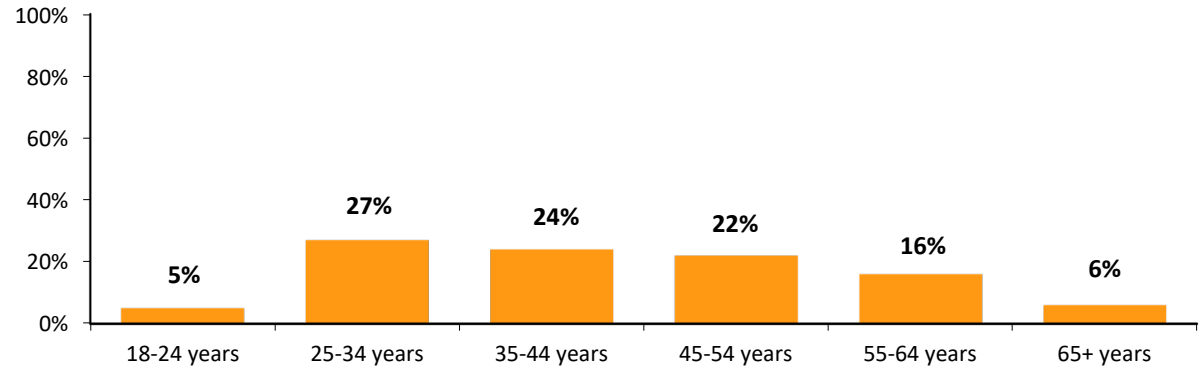
Home Area	Work Area		
	Core	Middle Ring	Outer Ring
Core (n = 2,588)	83%	14%	3%
Middle Ring (n = 2,568)	38%	56%	6%
Outer Ring (n = 3,071)	29%	34%	37%

Demographic Characteristics

Age

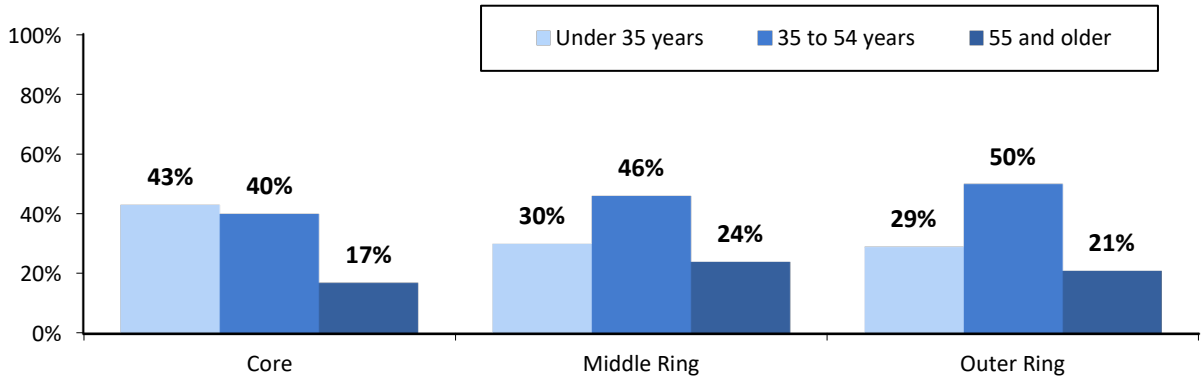
About one-third (32%) of respondents were younger than 35 years of age, 46% were between 35 and 54 years old, and 22% were 55 years of age or older (Figure 91). Note that the age distribution was adjusted during the sample weighting process, so the distribution presented in Figure 91 is exactly representative of the region, as defined in the U.S. Census American Community Survey (ACS).

Figure 91
Respondent Age Distribution
(n = 8,074)



The age distributions varied substantially by where in the region the respondents lived (Figure 92). Respondents who lived in the Core area were considerably younger than those who lived in the Middle Ring and Outer Ring. More than four in ten (43%) Core area respondents were under 35 years of age, compared with 30% of respondents who lived in the Middle Ring and 29% who lived in the Outer Ring.

Figure 92
Respondent Age by Home Area – Core, Middle Ring, and Outer Ring
(Core n = 2,567, Middle Ring n = 2,516, Outer Ring n = 2,991)



Race/Ethnicity

Non-Hispanic Whites and Non-Hispanic Blacks represented the two largest racial/ethnic groups of survey respondents, 43% and 23% respectively (Table 50). Respondents who self-identified as Hispanic accounted for about 14% and Asians/Pacific Islanders represented 15% of the total. As was noted for the age distribution, the race/ethnicity distribution was adjusted during the sample weighting process, so the distribution shown in Table 50 was representative of the region, as defined in the American Community Survey.

Table 50
Race/Ethnicity
(n = 7,693)

Race/Ethnicity	Percentage	Race/Ethnicity	Percentage
Non-Hispanic White	43%	Asian/Pacific Islander	15%
Non-Hispanic Black	23%	Other/Mixed	5%
Hispanic	14%		

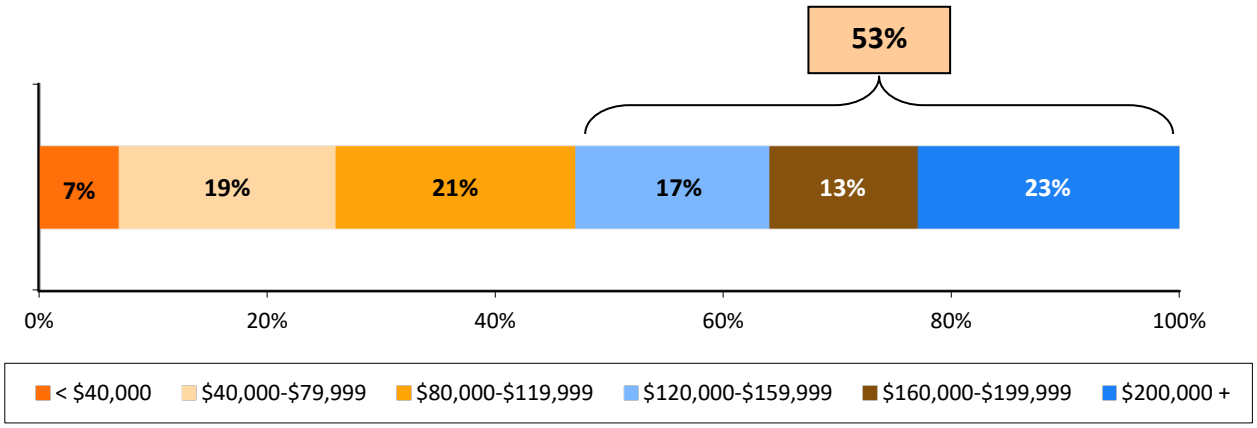
Gender

Respondents were about evenly divided between females (51%) and males (49%).

Income

Figure 93 presents the distribution of respondents' annual household income. Nearly three-quarters (74%) of respondents reported incomes of $80,000 or more and over half (53%) had incomes of $120,000 or more.

Figure 93
Annual Household Income
(n = 6,226)

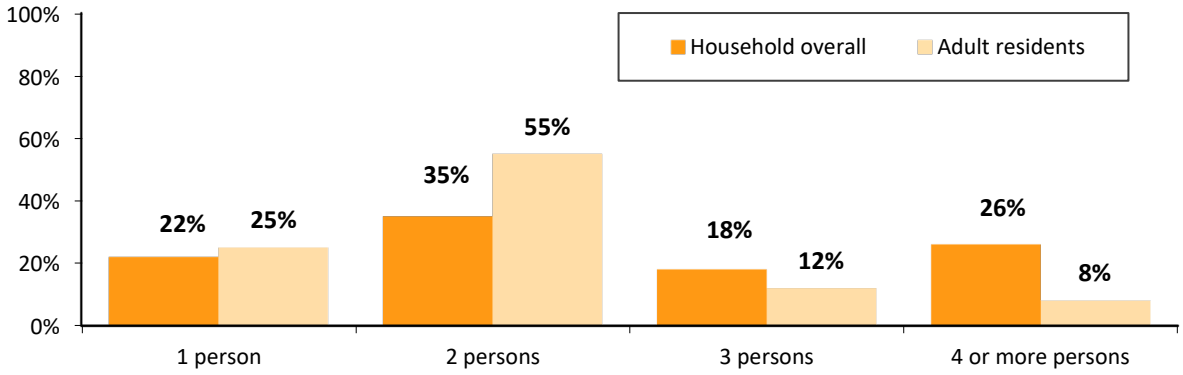


Household Size and Composition

Twenty-two percent of respondents said they were the only member of their household and 35% of respondents lived with one other person (Figure 94). The remaining respondents lived with at least two other household members. On average, respondents' households included 2.6 persons.

Most households were comprised solely of adults. Two-thirds (67%) of respondents said all household members were adults; they had no children in the household. Fifteen percent of respondents reported having one child in the household and 18% had two or more children under 18. The average household was comprised of 2.0 adults and 0.6 children.

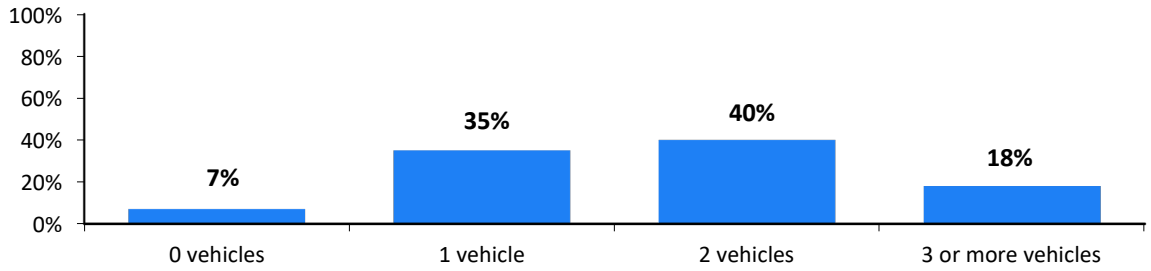
Figure 94
Household Size – Overall and Adult Residents
(n = 8,189)



Household Vehicle Ownership

Nearly all (93%) survey respondents reported having at least one household vehicle (Figure 95). Thirty-five percent had one vehicle, 40% had two vehicles, and 18% had three or more vehicles. Respondents reported an overall average of 1.7 vehicles per household.

Figure 95
Household Vehicles
(n = 8,165)

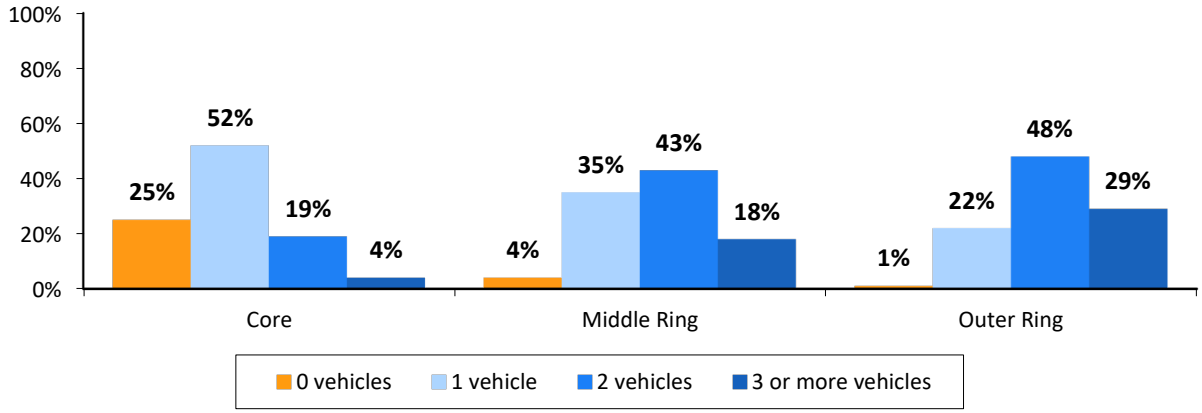


Recent Purchases of Motor Vehicles – Respondents who had at least one vehicle in the household were asked if anyone in their household had purchased, leased, or otherwise acquired any motor vehicles in the past year, and if so, was it replacing an existing vehicle or adding a new vehicle to the household. Twenty-three percent of respondents said they had acquired a vehicle; 16% replaced an existing vehicle and 7% added a new vehicle to the household.

Vehicle Ownership by Home Area – Vehicle ownership differed substantially by where respondents lived, with ownership lower among respondents who lived in the Core than in either the Middle Ring or Outer Ring (Figure 96). One-quarter (25%) of Core area respondents said they did not have a household vehicle, compared with only 4% of Middle Ring respondents and 1% of Outer Ring respondents.

Core area residents also were much less likely than were respondents who lived in other areas to have two or more vehicles per household. But this was due in part to their smaller household sizes; only 9% of Core area respondents lived in a household with three or more adult members, compared with 21% of Middle Ring respondents and 26% of Outer Ring respondents.

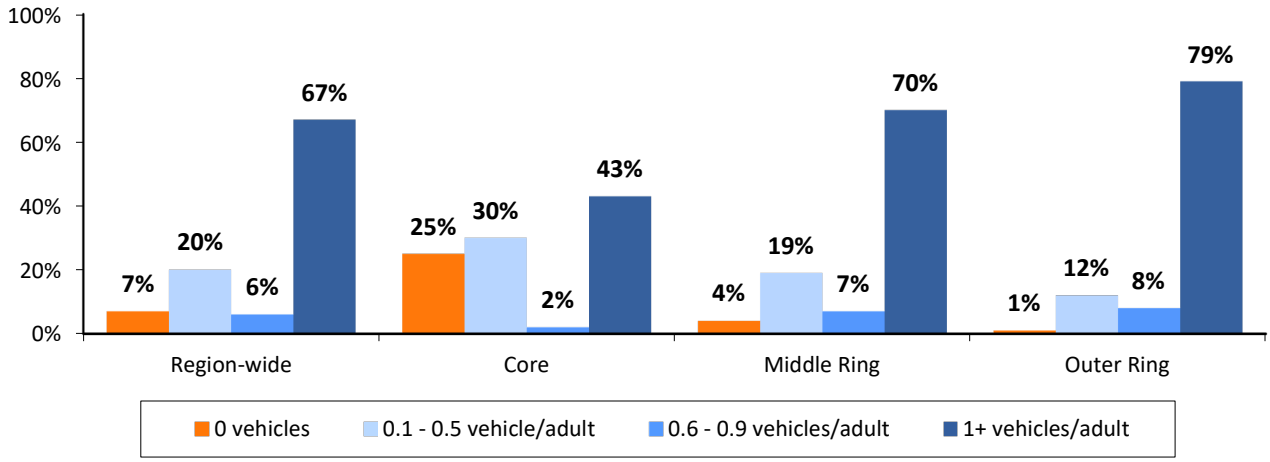
Figure 96
Household Vehicles by Home Area
(Core n = 2,568, Middle Ring n = 2,542, Outer Ring n = 3,055)



Vehicles Available Per Adult Household Member – The number of vehicles in the household is not a true measure of vehicle availability, however. Respondents who shared a vehicle with other household members might not have the vehicle available to them on a regular basis for their travel. Figure 97 presents the distribution of vehicle availability, accounting for both the number of household vehicles and number of adult household members.

As presented earlier, 7% of respondents were car-free, but an additional 26% were "car-lite," defined as having fewer vehicles than adult household members. Twenty percent had between 0.1 and 0.5 vehicles per adult, or at most one vehicle for every two adult members and 6% had between 0.6 and 0.9 vehicles per household member. Respondents had an average of 0.89 vehicles per adult household member.

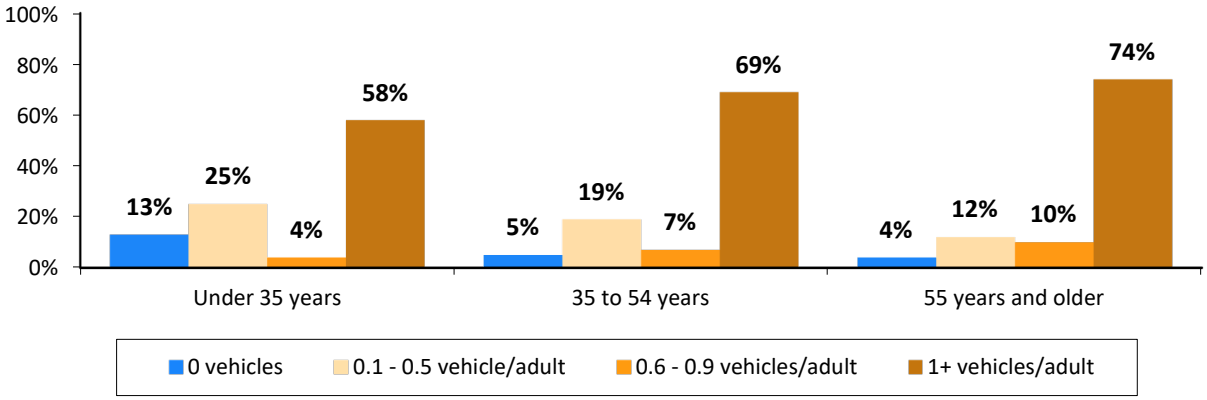
Figure 97
Vehicles Per Adult Household Member – Region-wide and by Home Area
(Region-wide n = 8,054, Core n = 2,552, Middle Ring n = 2,516, Outer Ring n = 3,006)



Vehicle availability per adult was considerably lower among respondents who lived in the Core than for those who lived in Middle Ring or Outer Ring jurisdictions. Just 43% of Core area respondents had a vehicle for each adult in the household, compared with 70% of respondents in the Middle Ring and 79% in the outer Ring. On average, Core area respondents had 0.62 vehicles per adult resident. Among Middle Ring and Outer Ring respondents, the averages were 0.93 and 1.05 vehicles per adult, respectively, essentially full availability.

Younger respondents also were much more likely to be car-free or car-lite (Figure 98). Thirteen percent of respondents who were under 35 years did not have a household vehicle and 29% had less than one vehicle per adult household member. Less than six in ten (58%) respondents in the youngest age group had a vehicle for every adult in the household. Vehicle availability was much higher among older populations. Among respondents who were 35 to 54 years, 69% had a vehicle for every adult in the household and 74% of respondents who were 55 years or older had a vehicle for each adult in the household.

Figure 98
Vehicles Per Adult Household Member by Respondent Age
(Under 35 years n = 1,774, 35 to 54 years n = 3,626, 55 years and older n = 2,495)



Vehicles Available Per Adult Household Member by Both Home Area and Age – As illustrated by Figures 97 and 98, respondents who lived in the urban center of the region and young respondents were less likely to have personal vehicles regularly available for their travel. But was age or the location the more important variable influencing their vehicle availability? Table 51 presents the percentages of respondents who were car-free (no household vehicle), car-lite (less than one vehicle per adult household member), and fully car available (one or more vehicles per adult household member) by the combination of home location and age.

Table 51
Vehicles Per Adult Household Member by Respondent Home Area and Age
Shading indicates statistically higher percentages of vehicle availability by age)

Home Area and Age		Car-free (0 vehicles)	Car-lite (0.1-0.9 vehicles per adult)	Car available (1 + vehicles per adult)
Core	**Under 35 years** (n = 965)	34%	32%	34%
	35 to 54 years (n = 1,036)	18%	33%	49%
	55 years and older (n = 516)	18%	26%	56%
Middle Ring	**Under 35 years** (n = 405)	7%	29%	64%
	35 to 54 years (n = 1,162)	2%	26%	72%
	55 years and older (n = 885)	3%	22%	75%
Outer Ring	**Under 35 years** (n = 404)	1%	25%	74%
	35 to 54 years (n = 1,428)	1%	19%	80%
	55 years and older (n = 1,094)	0%	18%	82%

In each of the three home areas, respondents who were younger than 35 years were less likely to have a vehicle always available to them than were older respondents. That is, young respondents were more likely to be car-free or car-lite than were older respondents regardless of where they lived. Among Core area respondents, only 34% of respondents who were younger than 35 years had a vehicle for each adult in the household, compared with 49% of those who were between 35 and 54 years old and 56% of respondents who were 55 or older.

Age differences in vehicle availability also were evident among Middle Ring and Outer Ring respondents but were less pronounced than for the Core. About two-thirds (64%) of Middle Ring respondents who were under 35 years old had a vehicle for each adult household member, compared with about three-quarters of respondents who were 35 years or older. In the Outer Ring, 74% of respondents who were under 35 years had a vehicle always available for their travel, versus about eight in ten older respondents who lived in the Outer Ring. This suggests that while age is a factor influencing vehicle availability, home location is more important, possibly reflecting the wider range of travel options available in the Core for residents who choose to be car-free or car-lite.

Vehicles Per Adult Household Member in 2016, 2019, and 2022 – The 2019 SOC survey report presented a comparison of vehicle availability by age and home area for 2019 versus 2016. That comparison showed that access to personal vehicles appeared to have increased. Statistically higher percentages of respondents in eight of the nine Home Area/Age categories reported having a vehicle for each adult household member in 2019 than in 2016. These results for 2016 and 2019 are presented in Table 52 along with the corresponding results for 2022.

Table 52
Respondents with One or More Vehicles Per Adult Household Member – 2016, 2019, 2022
by Respondent Home Area and Age
(Shading indicates statistically higher percentages)

Home Area and Age		1+ Vehicle Per Adult Household Member		
		2016 SOC	2019 SOC	2022 SOC
Core	**Under 35 years** (2016 n=212, 2019 n=778, 2022 n=965)	32%	40%	**34%**
	35 to 54 years (2016 n=749, 2019 n=908, 2022 n=1,036)	51%	56%	**49%**
	55+ years (2016 n=618, 2019 n=476, n=516)	57%	63%	**56%**
Middle Ring	**Under 35 years** (2016 n=218, 2019 n=417, 2022 n=405)	58%	67%	**64%**
	35 to 54 years (2016 n=719, 2019 n=1,065, 2022 n=1,163)	69%	75%	**72%**
	55+ years (2016 n=643, 2019 n=875, 2022 n=885)	73%	76%	**75%**
Outer Ring	**Under 35 years** (2016 n=272, 2019 n=483, 2022 n=404)	73%	83%	**74%**
	35 to 54 years (2016 n=1,285, 2019 n=1,746, 2022 n=1,428)	81%	87%	**80%**
	55+ years (2016 n=907, 2019 n=1,163, 2022 n=1,094)	81%	88%	**82%**

The increases in availability between 2016 and 2019 were most notable among respondents who were younger than 35. For example, in 2019, 40% of young respondents who lived in the Core reported having a vehicle for each adult household member, an increase of eight percentage points over the 32% who reported full vehicle access in 2016. The increase was nine percentage points for young respondents who lived in the Middle Ring (58% in 2016 to 67% in 2019) and ten percentage points for young respondents who lived in the Outer Ring (73% in 2016 to 83% in 2019). This suggested that the trend away from personal vehicle ownership among young residents might be reversing.

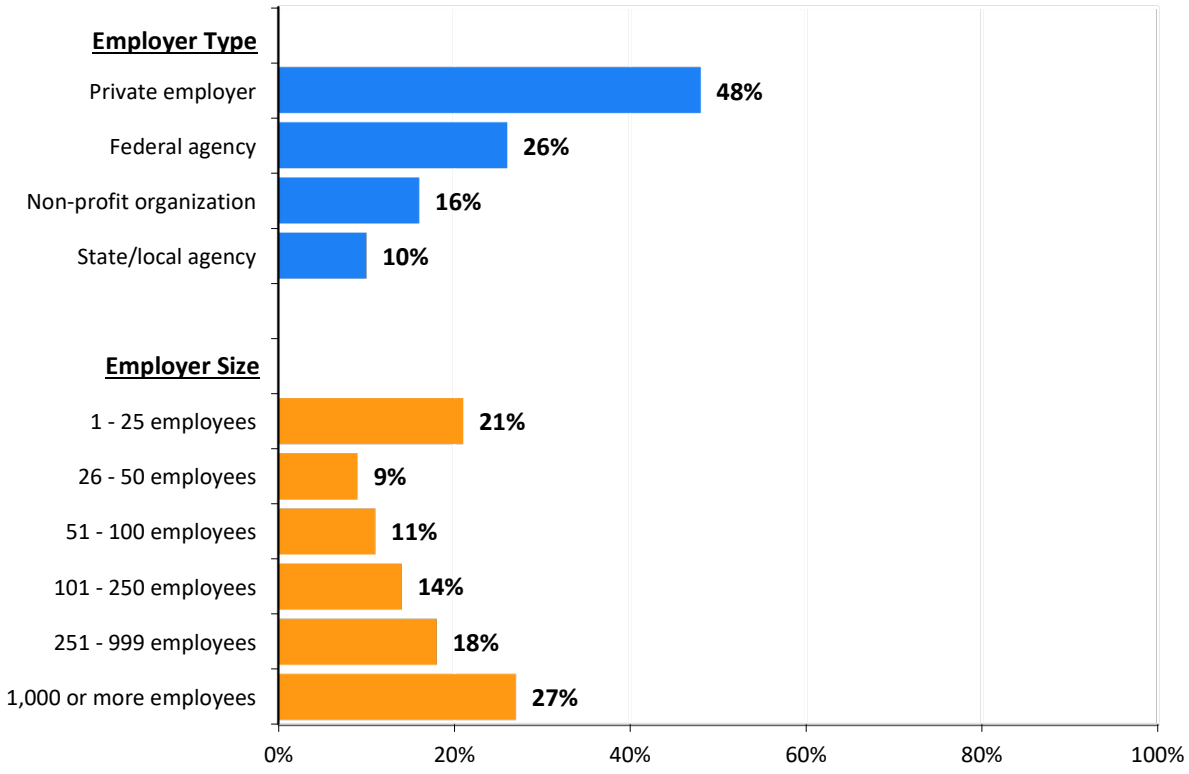
The last column of Table 53 shows the 2022 vehicle availability results, repeated from Table 52 above. In each Home Area/Age group, the percentage of respondents with one or more vehicles per adult in the household declined between 2019 and 2022 to levels that were not statistically different, in any Home Area/Age combination, from the results from 2016. This suggests the 2019 pattern might have been an anomaly. However, auto manufacturers have been greatly affected by supply chain disruptions, making vehicles less available and more expensive; this situation could have depressed auto acquisition rates.

Employment Characteristics

Type and Size of Employer

Respondents were asked the type of employer for which they worked and the number of employees at their worksites. These results are shown in Figure 99.

Figure 99
Employer Type and Size
(Type n = 8,198, Size n = 7,239)



Type – As indicated by the top section of Figure 99, nearly half (48%) of respondents worked for a private sector employer. Federal government agencies employed 26%, 16% worked for a non-profit organization, and state and local agencies employed 10%.

Size – The majority of respondents worked for employers that were either very small or very large (bottom section of Figure 99). Four in ten (41%) worked for firms with 100 or fewer employees. Slightly more than one-quarter (27%) worked for employers that employed 1,000 or more employees.

Occupations

Respondents represented many occupations (Table 53). About six in ten respondents worked in a professional (46%) or executive/managerial occupation (17%). Other common occupations included administrative support (12%), and technicians and technical support (10%).

Table 53
Occupation
(n = 7,243)

Occupation	Percentage	Income	Percentage
Professional/specialty	46%	Other service	3%
Executive/managerial	17%	Precision production, craft	1%
Administrative support	12%	Transportation/equipment	1%
Technicians/support	10%	Military	1%
Sales	4%	Handlers, helpers, laborers	1%
Protective service	3%	Other*	1%

* Each response in Other category was mentioned by less than 1% of respondents.

APPENDICES

Appendix A – Survey and Sampling Methodology

Appendix B – Survey Data Weighting and Expansion

Appendix C – Survey Questionnaire

Appendix D – Comparison of Key SOC Results – 2022, 2019, 2016, 2013, and 2010

APPENDIX A – SURVEY AND SAMPLING METHODOLOGY

Overview

The geographic scope of COG's responsibility encompasses the 11 independent cities and counties that make up the Washington metropolitan non-attainment region. All employed residents who lived within this geographic area were eligible for selection in the study.

The 2022 survey was conducted as an Internet survey of employed adult residents. The survey used an address-based sampling (ABS) method to select a random sample of potential respondents, a postcard survey invitation that was sent through postal mail to selected addresses, and a respondent-administered Internet interview format for respondents to complete the survey. The postcards invited employed persons 18 years of age or older to participate in the survey by accessing the survey website link, www.TraveltoWork2022.org and entering one of two passwords printed on the card. Two passwords were provided to permit two adults in the household to take the survey. Appendix C presents the Internet questionnaire.

The 2019 SOC survey also collected data primarily through the ABS-Internet method, however a telephone "follow-up" survey was conducted with a small sample of residents who had received the postcard survey invitation, but who did not complete the survey via the Internet. The primary function of this component was to test for any statistical differences between responses of Internet respondents and those who had not responded.

In SOC surveys conducted prior to 2016, all SOC interviewing was conducted via telephone, using random-digit-dial (RDD) to select respondents. The 2013 and 2016 SOC surveys included a cell phone component for the sample, to address the growing component of regional residents who used a cell phone as their only telephone. The 2016 SOC survey added a pilot test of the ABS sampling with Internet interview method to determine if this could be an acceptable alternative to the telephone methodology, which had become very costly due to the need to screen for employed residents and the difficulty of reaching willing respondents.

In both the 2016 and 2019 SOC surveys, the ABS/Internet component was found to produce valid survey responses and a more demographically representative sample than the telephone survey, at a lower cost per completed interview. The ABS method also ensured full coverage of the regional residential population. For these reasons, the ABS/Internet approach was chosen as the sole method for the 2022 SOC survey.

The survey was designed to meet multiple objectives, including commute trend analysis and evaluation of Transportation Demand Management (TDM) services administered by COG/TPB's Commuter Connections Program. Wherever possible, questions used in previous SOC surveys were replicated to allow for trend analysis. Additionally, the survey included questions related to the Telework and Mass Marketing TDM program elements administered by Commuter Connections.

Questionnaire Design

The research team and COG/TPB staff prepared the survey questionnaire, with input from a TDM Evaluation Group comprised of representatives from the District of Columbia, Maryland, and Virginia. The 2022 SOC questionnaire was based on the questionnaire used in the 2019 SOC survey. Wherever possible, the study team retained the 2019 questions to allow trend analysis, but changes were made when the revisions were expected to add substantially to the accuracy of the data or to update question or response language for 2022. A small number of questions were deleted from the 2019 survey to make room for new questions of current topical interest, in particular questions on commute changes occurring during the coronavirus pandemic.

The research team developed the online questionnaire using Computer Aided Web Interviewing (CAWI) software. The online questionnaire was thoroughly tested by the research team and COG staff to ensure correct programming. When the questionnaire was finalized, it was translated into Spanish. The Spanish version of the questionnaire was made available to respondents by a toggle switch in the introduction to the online survey. A copy of the English version of the questionnaire is included in Appendix C.

Sample Areas and Sampling Methodology

The survey was conducted using a random selection of residents of the 11 independent cities and counties defined as the COG/TPB non-attainment region. Eligible respondents were at least 18 years old, employed, and living within the study area. The research team set a soft target for 8,000 completed interviews, region-wide, with a minimum target of 600 completed interviews in each of the 11 jurisdictions. Individual targets were set higher for the largest jurisdictions and for jurisdictions that were closest to the center of the region. Additionally, the research team attempted to achieve jurisdiction level samples that approximated the numbers of interviews collected for those jurisdictions in the 2019 SOC survey.

The final jurisdiction targets were broken down by three sub-regions:

- Core area (Alexandria, VA, Arlington, VA, District of Columbia) – Minimum of 700 completed interviews in each of these jurisdictions and a minimum sub-regional total of 2,300
- Middle Ring area (Fairfax VA, Montgomery MD, and Prince George's MD) – Minimum of 800 completed interviews in each of these jurisdictions and a minimum sub-region total of 2,500
- Outer Ring area (Calvert MD, Charles MD, Frederick MD, Loudoun VA, and Prince William VA) – Minimum of 600 completed interviews in each of these five jurisdictions and a minimum sub-region total of 3,200

A total of 8,396 interviews were completed for the survey. This represented a slight increase over the 8,246 total completed interviews in the 2019 survey and a substantial increase over the interview samples from 2016 (5,803) and 2013 (6,335).

On the base of 446,208 postcards that had been distributed, the 2022 sample of 8,396 resulted in a response rate of 1.88%. The confidence interval for the regional sample was 95% +/- 1.1 percentage points. Individual samples collected for each of the 11 jurisdictions ranged from a low of 511 to a high of 971. The confidence interval for the smallest jurisdiction sub-sample (664 interviews) was 95% +/- 4.3 percentage points.

ABS Sampling Method

Potential Internet survey respondents were requested to participate in the survey through a postcard, sent through the U.S. mail service. The postcard described the survey and requested their participation, provided the URL address for the survey website and two entry passwords. The postcard also informed residents that MWCOG was offering a drawing for fifty $250.00 Amazon gift cards to residents completed the survey.

To achieve a balanced sample of responses throughout the region as well as to meet the jurisdictional targets, the research team used an Address-Based Sample (ABS) method to select a random sample of households to receive the survey invitation. The list included both physical mailing addresses and post-office box addresses for residents who receive their mail at central post office locations. Household addresses were chosen randomly by jurisdiction from the ABS database maintained by SDR Consulting. The total number of addresses needed to reach the target for each jurisdiction was determined by dividing the desired final target sample by the anticipated response rate. The rate for a jurisdiction was assumed to be approximately 20% lower than that achieved during the 2019 SOC Internet survey. The survey was conducted in two waves, the first with a postcard mailing of 230,000 and the second with postcards being mailed to an additional 216,208 addresses.

Survey Administration

Internet Survey

Preparation for the Internet survey included design and printing of high-quality, two-color 4.25" x 6" survey invitation postcards. The wording on the postcards invited employed persons 18 years of age or older to participate in the survey by accessing the survey website link, www.TraveltoWork2022.org and entering one of the two passwords printed on the card. Two passwords were provided to permit two adults in the household to take the survey. The invitation to take the survey was also printed in Spanish. To reduce postal costs, COG staff used its non-profit postal rates and arranged for printing and mailing of the postcards by a local firm.

Because response rates could differ by jurisdiction, the mailing of the Internet survey invitation was accomplished in two waves. An initial order of 230,000 postcards was mailed between January 6 and January 12, 2022. The distribution of addresses by jurisdiction was determined by dividing the target for the jurisdiction by the jurisdictional response rates from the 2019 survey. In Wave 1, this distribution resulted in 49,006 cards sent to households in the Core area; 76,844 to the Middle Ring area, and 104,150 mailed to the Outer Ring area.

Two weeks after Wave 1 cards were mailed, the research team analyzed the distribution of completed interviews from Wave 1 and refined the anticipated response rates for Wave 2. The team then selected the Wave 2 mailing distribution to increase the percentage of postcards sent to jurisdictions with lower-than-expected response rates and decrease the percentage sent to high-response areas.

Wave 2 targets were set and a total of 216,208 unique, de-duplicated, addresses were purchased with a distribution of 52,486 to the Core, 67,966 to the Middle Ring, and 95,756 postcards to the Outer Ring. The desired count of new Wave 2 addresses could not be met for one jurisdiction because the total number of households was smaller than the desired sample. Because the response rate for this jurisdiction was lower than anticipated, the research team opted to send reminder cards to a sample of Wave 1 card recipients, resulting in an additional 3,778 cards being sent in Wave 2. The reminder postcards were identical to the postcards sent in Wave 1, with the sole exception that the response date was changed to match that for the other Wave 2 postcards. Wave 2 postcards were printed and distributed by postal mail between February 8 and February 14, 2022.

Wave 1 and Wave 2 combined produced 8,396 completed Internet interviews. On the postcard base of 446,208 unique addresses, this resulted in an overall response rate 1.88%. Response rates for Wave 1 and Wave 2 were approximately the same. As noted earlier, to boost survey response rates, survey respondents were offered the opportunity to participate in a random drawing for one of fifty $250 Amazon gift cards. Following each survey wave, 25 names were drawn from respondents who had completed the interview and requested to participate in the gift card drawing. Each winner was emailed a link to the gift card voucher.

Weighting of Survey Data

Upon completion of the interviews, responses were expanded to represent all employed residents in the Washington metropolitan non-attainment region. Because the jurisdiction-level samples were not collected proportionately, the survey results were expanded at the jurisdiction level to match counts of employed residents in each sample jurisdiction. The results also were adjusted to align survey results to known race/ethnicity and age distributions, an adjustment that also had been applied in the 2016 and 2019 SOC surveys. Analysis of the 2016 survey results showed a significant over-collection of older age groups and an under-collection of younger age groups. The age distribution in the 2019 and 2022 surveys also over-represented older respondents and under-represented young respondents, but to a much lesser extent than in 2016; the ABS sample frame and Internet survey captured a considerably larger share of young respondents. For this reason, the age adjustment, while still necessary in 2019 and 2022, was less extensive than had been needed in 2016.

Population statistics from the U.S. Census Bureau's American Community Survey (ACS) for combinations of employment status, race/ethnicity, and age by jurisdiction were used to calculate expansion values for each jurisdiction in the survey sample. Age categories included 18-34 years, 35-44 years, 45-54 years, and 55 years and older. Race/ethnicity categories included Hispanic, Non-Hispanic Black, Non-Hispanic White, and Other. Details of the weighting/expansion process are found in Appendix B.

This methodology was the same as had been used for the 2019 and 2016 SOC surveys, however it replaced use of employment numbers obtained from the Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS) that had been used in the 2013 SOC and earlier SOC surveys. The need for available employment statistics broken down by race/ethnicity and by age groups was the overlying reason for the change from LAUS to ACS figures.

APPENDIX B – SURVEY DATA WEIGHTING AND EXPANSION

The 2022 SOC Survey was conducted using an address-based sample (ABS), distributed to residential addresses in the 11-county/city, COG/TPB non-attainment region. Survey responses were expanded numerically by jurisdiction-level expansion factors to align them with published employment, race/ethnicity and age group statistics for the region and individual jurisdictions in the study area. The procedure for the expansion is detailed below.

The first step in the expansion process was to align the counts of persons interviewed in each jurisdiction with the total number of employed persons in those jurisdictions. Table B-1 shows the number of employed workers living in each of the 11 areas and the number of employed persons interviewed. These figures were used in computing the initial expansion factors applied to each survey response. The U.S. Census American Community Survey (ACS) data were used to calculate the expansion factor of employed persons by race/ethnicity and by age group. Dividing the ACS estimate for employed residents by the number of interviews yields the expansion factor by jurisdiction. These factors were then applied to each survey response, allowing the survey results to be expanded to the employment totals for each of the 11 areas.

Table B-1 – Estimate of Workers by Survey Area and Expansion Factors

Survey Area	Estimated Employed Workers Totals from ACS	Number of Working Persons Interviewed	Initial Adjustment and Expansion Factors
Alexandria City, VA	108,125	723	149.551
Arlington Co., VA	160,657	931	172.046
Calvert Co., MD	47,303	518	91.319
Charles Co., MD	84,295	692	121.814
District of Columbia	408,084	981	415.987
Fairfax Co., VA	687,486	930	739.232
Frederick Co., MD	141,389	638	221.612
Loudoun Co., VA	227,146	601	377.946
Montgomery Co., MD	617,200	870	709.425
Prince George's Co., MD	546,725	822	665.115
Prince William Co., VA	300,908	690	436.099
Total	3,328,834	8,396	

Second, as was done in the 2016 and 2019 SOC surveys, the research team carried out a series of chi-squared statistical analysis calculations to test the survey sample distribution for race/ethnicity and age groups against published statistics for these groupings. The majority of race/ethnicity and age distributions by jurisdictions were found to be significantly different when compared to the published ACS tables. Based upon these results, adjustments to account for race/ethnicity and age groups were added to the initial expansion factors applied to the survey results to expand the survey responses to the employed population of the region. Race/ethnicity corrections had been applied to previous SOC survey, beginning with 2007. The age adjustment was added in 2016 to correct for an age bias identified during the initial analysis.

Three tables from ACS were used for the development of expansion factors: Tables B01001, B23002, and C23002. Table B01001 contained more complete information for all jurisdiction residents by race/ethnicity and by age groups for persons 18 year of age and older, however not by employed persons. Table B23002 contained information for employed residents for persons 16 years of age and older, and race/ethnicity broken down by age groups, but some race/ethnicity groups were missing, and age categories were not completely broken down into the desired age groups. By using a third table, Table C23002, some missing data was infilled for race/ethnicity and age categories. Using Table B01001 as the base, a percentage of employment was developed from Tables B23002 and C23002 for each race/ethnicity by age groups by jurisdiction and applied to Table B01001 counts. The resulting estimates of employment for residents 18 years of age and over by race/ethnicity were finalized and applied to the SOC Survey responses. The final expansion factors are shown in Table B-2 below.

Table B-2 – Race/Ethnicity and Age Weighting Factors by Survey Area

Survey Area	Race/Ethnicity and Age Weighting Factors			
	18 – 34 Years	35 – 44 Years	45 – 54 Years	55+ Years
Alexandria City, VA				
Non-Hispanic Black	435.495	254.004	195.764	235.072
Non-Hispanic White	125.674	98.410	104.401	89.943
Hispanic	285.305	389.726	301.450	325.509
Other	243.846	163.010	322.457	163.359
Arlington Co., VA				
Non-Hispanic Black	195.193	345.947	849.218	169.158
Non-Hispanic White	154.066	160.038	136.489	106.875
Hispanic	212.226	388.684	330.677	297.938
Other	198.870	301.295	270.361	307.190
Calvert Co., MD				
Non-Hispanic Black	458.156	147.849	102.032	74.564
Non-Hispanic White	229.961	94.927	110.683	43.180
Hispanic	170.260	74.226	50.984	44.486
Other	289.603	166.929	137.015	70.873
Charles Co., MD				
Non-Hispanic Black	369.470	126.212	106.976	70.992
Non-Hispanic White	332.614	125.456	105.294	73.912
Hispanic	265.950	109.811	164.043	65.278
Other	316.169	96.308	87.125	63.479
District of Columbia				
Non-Hispanic Black	1240.954	535.832	730.408	677.982
Non-Hispanic White	326.396	245.362	298.246	210.614
Hispanic	576.424	740.249	684.471	1397.196
Other	557.905	477.885	501.502	780.938
Fairfax Co., VA				
Non-Hispanic Black	1437.381	832.129	820.122	656.521
Non-Hispanic White	814.194	559.275	482.118	439.483
Hispanic	1691.964	2125.900	2211.667	1098.228
Other	1540.276	941.394	714.479	861.939

Table B-2 continued on following page

Table B-2 – Race/Ethnicity and Age Weighting Factors by Survey Area (continued)

Survey Area	Race/Ethnicity and Age Weighting Factors			
	18 – 34 Years	35 – 44 Years	45 – 54 Years	55+ Years
Frederick Co., MD				
Non-Hispanic Black	678.039	222.608	286.866	163.581
Non-Hispanic White	322.438	153.879	194.874	170.137
Hispanic	476.408	483.215	357.763	230.365
Other	512.236	218.291	352.145	190.825
Loudoun Co., VA				
Non-Hispanic Black	1615.755	653.509	394.933	343.346
Non-Hispanic White	623.858	353.002	299.314	196.751
Hispanic	738.244	972.660	709.122	751.131
Other	873.553	353.322	330.819	297.205
Montgomery Co., MD				
Non-Hispanic Black	1718.751	974.081	813.974	568.002
Non-Hispanic White	878.800	402.594	439.255	364.907
Hispanic	1999.251	1464.906	1169.784	1404.527
Other	1533.098	1295.619	907.997	811.342
Prince George's Co., MD				
Non-Hispanic Black	1776.191	579.218	581.288	417.573
Non-Hispanic White	530.857	199.571	304.905	206.628
Hispanic	1276.110	1191.013	1032.305	1131.072
Other	2128.476	1217.548	1295.806	657.784
Prince William Co., VA				
Non-Hispanic Black	760.053	588.164	427.934	301.633
Non-Hispanic White	555.140	329.941	274.451	185.161
Hispanic	996.870	989.675	789.888	606.189
Other	897.469	556.275	504.166	352.943

The expansion factors allow for the proper representation of workers in each geographical area when analyzing the survey results. By using the expansion/weighting factors shown in the table above for each sub-area, the number of workers by race/ethnicity and age groups has been adjusted so that each worker is equally represented within the region.

Level of Confidence for Analysis

The level of confidence for analysis of the region and the county/city sub-areas will differ because the sample sizes in each category differ. Table B-3 shows the level of confidence for each of these geographic divisions for the 2022 State of the Commute survey sample. In addition, the level of confidence has been calculated for several other non-geographic key sub-populations of interest in the study. Note that some questions were answered by smaller numbers of respondents, and therefore the confidence level for these questions will be lower.

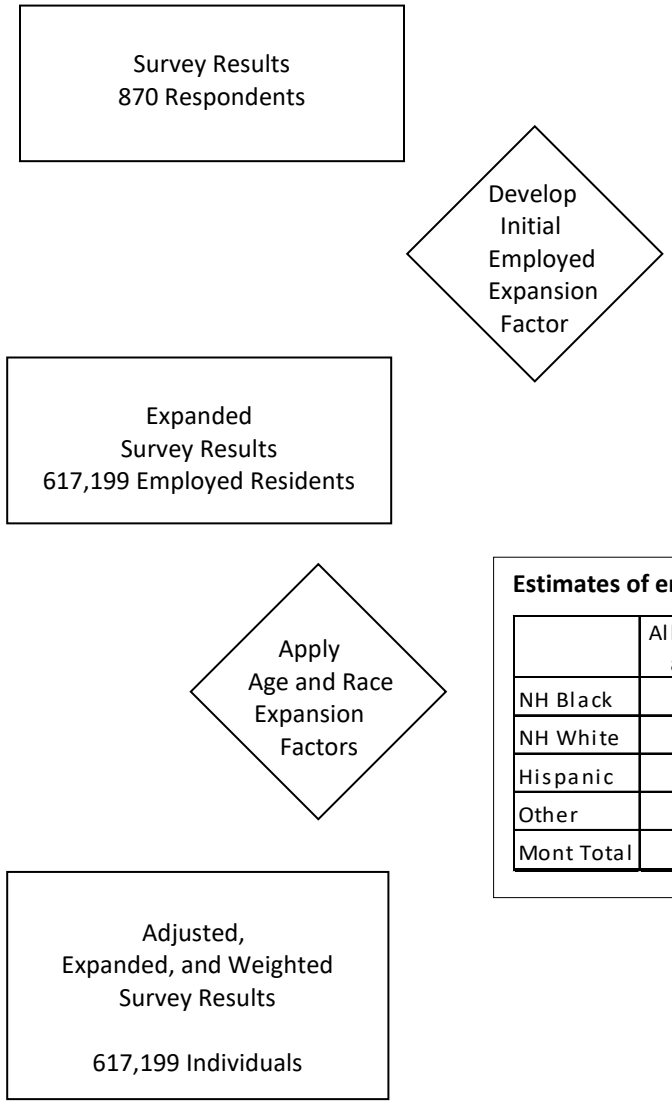
Table B-3 – Level of Confidence for Analysis

Sub-Area or Sub-Population	Sample Size	Level of Confidence
Geographic Sub-Areas		
Study Region – Eleven Areas	8,396	95% ± 1.1%
Study Portion of Virginia	3,875	95% ± 1.6%
Study Portion of Maryland	3,540	95% ± 1.6%
District of Columbia	981	95% ± 3.1%
Individual County or City Level*	518	95% ± 4.3%
Sub-Area or Sub-Population	**Sample Size**	**Level of Confidence**
Sub-Populations		
Telecommuters	5,529	95% ± 1.3%
Carpoolers (including casual)/Vanpoolers	167	95% ± 7.6%
Transit Users	903	95% ± 3.3%
Bike Users or Walkers	294	95% ± 5.7%

* Smallest sample – minimum level of confidence for jurisdiction level samples

Figure B-1. Weighting and Expansion for Working Households

Example: Montgomery County, MD
Objective: Apply the survey results (870 respondents) to the American Community Survey Statistics (617,199) for Montgomery County, MD, to equally represent employed individuals by race/ethnicity and age groups.



Estimates of employment by race/ethnicity and age for Montgomery

	All 18 and above	18 - 34	35 - 44	45 - 54	55 or older
NH Black	97,555	30,938	23,378	22,791	20,448
NH White	247,156	59,758	46,298	55,346	85,753
Hispanic	106,304	37,986	27,833	22,226	18,259
Other	166,185	52,125	42,755	37,228	34,076
Mont Total	617,199	180,807	140,265	137,591	158,536

Note: 1. 870 x 709.425 = 617,199 estimated, employed individuals
2. Final expansion estimates for workers by race/ethnicity and by age group for Montgomery County.
3. Sum of Race/Ethnicity and Age Groups represents workers in Montgomery County.

APPENDIX C – SURVEY QUESTIONNAIRE

Commuter Connections State of the Commute Survey – FY22

INTRO: The Metropolitan Washington Council of Governments is conducting this online survey of residents of Maryland, Virginia, and the District of Columbia about their travel to work. Your answers will be kept completely confidential.

MWCOG is offering a drawing for $250.00 Amazon gift cards for residents who complete the survey by the response date noted on the postcard that you received in the mail. If you would like to participate in the free drawing for one of the fifty gift cards, please provide your name and email address at the end of the survey.

To begin the survey, please enter the 6-digit Password on the postcard, then click "SUBMIT." If there is more than one employed person 18 years or older in your household, they may use the other password.

PASSWORD _____
SUBMIT

Thank you for your participation.

SCREENING QUESTIONS (Age, Employment, Home location)

ASK EVERYONE:

S4. Are you an employed person who is at least 18? By employed, we mean a wage or salaried employee, military, or self-employed.

01 Yes
02 No → **THANK AND TERMINATE**

Q1. Are you employed full-time or part-time? If you work more than one job, please respond for your primary job. **(OPTIONAL.)**

01 Employed full-time
02 Employed part-time
03 Self-employed full-time
04 Self-employed part-time
05 Not employed, keeping house, retired, disabled, full-time student, looking for work → **THANK AND TERMINATE**
95 Other **(specify)**
98 Don't know
99 Left blank

EMPLEV. EMPLOYMENT LEVEL
EMPLEV (1)=Full-time (Q1(01,03))
EMPLEV (2)=Part-time (Q1(02,04))
EMPLEV (7)=Undefined (Q1(95,98,99))
EMPLEV (8)=Not employed (Q1(05))

IF EMPLEV(8) (not employed), THANK AND TERMINATE
IF EMPLEV(1,2,7) CONTINUE

Q1A. What is your home ZIP code? **(OPTIONAL.)**

_____

99 Left blank → **SKIP TO Q2**

HOME CLASSIFICATION

AUTOCODE COUNTY FOR CHANTILLY

IF Q1A = 20151, AUTOCODE Q2 = 06 (Fairfax), THEN SKIP TO Q3
IF Q1A = 20152, AUTOCODE Q2 = 08 (Loudoun), THEN SKIP TO Q3

AUTOCODE ALEXANDRIA (EXCEPT 22311)

IF Q1A = 22301, 22302, 22304, 22305, OR 22314, AUTOCODE Q2 = 01 (Alexandria), THEN SKIP TO Q3
IF Q1A = 22303, 22306, 22307, 22308, 22309, 22310, OR 22315, AUTOCODE Q2 = 06 (Fairfax), THEN SKIP TO Q3

AUTOCODE TAKOMA PARK, MD, TAKOMA DC

IF Q1A = 20903, 20912, OR 20913, AUTOCODE Q2 = 09 (Montgomery), THEN SKIP TO Q3
IF Q1A = 20011 OR 20012, AUTOCODE Q2 = 05 (DC), THEN SKIP TO Q3

AUTOCODE LAUREL

IF Q1A = 20707 OR 20708, AUTOCODE Q2 = 10 (Prince George's), THEN SKIP TO Q3
IF Q1A = 20723 OR 20724, AUTOCODE Q2 = 12 (Other –out of area), THEN THANK AND TERMINATE

AUTOCODE SILVER SPRING

IF Q1A = 20901, 20902, 20904, 20905, 20906, OR 20910, AUTOCODE Q2 = 09 (Montgomery), THEN SKIP TO Q3

AUTOCODE STERLING

IF Q1A = 20164, 20165, OR 20166, AUTOCODE Q2 = 08 (Loudoun), THEN SKIP TO Q3

AUTOCODE FAIRFAX AND FALLS CHURCH CITIES

IF Q1A = 22030, 22041, 22042, 22043, 22044, OR 22046, AUTOCODE Q2 = 06 (Fairfax), THEN SKIP TO Q3

AUTOCODE WALDORF (EXCEPT 20601)

IF Q1A = 20602 OR 20603, AUTOCODE Q2 = 04 (Charles), THEN SKIP TO Q3

AUTOCODE MANASSAS, MANASSAS PARK

IF Q1A = 20110 OR 20113, AUTOCODE Q2 = 11 (Prince William), THEN SKIP TO Q3

IF [Q1A NOT (20011-20012, 20110, 20113, 20151-20152, 20164-20166, 20602-20603, 20707-20708, 20723-20724 20901-20906, 20910, 20912-20913, 22030, 22041-22044, 22046, 22301-22310, 22314-22315)], ASK:

Q2. In what county (or Independent City) do you live now? **(ACCEPT ONE RESPONSE ONLY.) (SHOW RESPONSES 01-98.)**

1 Alexandria City, VA
2 Arlington Co., VA
3 Calvert Co., MD
4 Charles Co., MD
5 Washington, DC (District of Columbia)
6 Fairfax Co., VA (incl. City of Falls Church, City of Fairfax)
7 Frederick Co., MD (incl. City of Frederick)
8 Loudoun Co., VA
9 Montgomery Co., MD (incl. City of Rockville, City of Gaithersburg, City of Takoma Park, Silver Spring)
10 Prince George's Co., MD (incl. City of Greenbelt, City of College Park, City of Bowie)
11 Prince William Co., VA (incl. City of Manassas, City of Manassas Park)
95 Other **(specify)** → **THANK AND TERMINATE**
98 Not sure → **THANK AND TERMINATE**

HMST. HOME STATE
HMST(1)=District of Columbia (Q2(05))
HMST(2)=Maryland (Q2(03,04,07,09,10))
HMST(3)=Virginia (Q2(01,02,06,08,11))

ASK EVERYONE:

Q3. In what county (or independent city) do you work? If you are working from home full-time due to the coronavirus pandemic, indicate where you would work if you returned to an outside workplace. **(SHOW RESPONSES 1-11, 95, AND 98. DO NOT SHOW 12-20, 90, OR 99. ACCEPT ONE RESPONSE ONLY.) (OPTIONAL.)**

1 Alexandria City, VA
2 Arlington Co., VA
3 Calvert Co., MD
4 Charles Co., MD
5 Washington, DC (District of Columbia)
6 Fairfax Co., VA (incl. Fairfax City and Falls Church City)
7 Frederick Co. (MD)
8 Loudoun Co. (VA)
9 Montgomery Co. (MD)
10 Prince George's Co. (MD)
11 Prince William Co. (VA, incl Manassas City and Manassas Park City)
95 Other **(specify)**
98 Not sure
99 Left blank

DO NOT SHOW 12-90 ON SCREEN. RESERVE FOR POST-SURVEY CODING FROM OTHER RESPONSES.
12 Anne Arundel County, MD
13 Howard County, MD
14 Baltimore County, MD
15 Baltimore City, MD
16 Carroll County, MD
17 St. Mary's County, MD
18 Stafford County, VA
19 Spotsylvania County, VA
20 Fredericksburg, VA
90 Varies, all over, no set location

WKST. WORK STATE
WKST(1)=District of Columbia (Q3(05))
WKST(2)=Maryland (Q3(03,04,07,09,10,12,13,14,15,16,17))
WKST(3)=Virginia (Q3(01,02,06,08,11,18,19,20))
WKST(4)=UNDEFINED (Q3(90,95,98,99))

COMMUTE PATTERNS / WORK SCHEDULE / TW STATUS

ASK EVERYONE:

Now, please answer some questions about your commute to and from work. If you have more than one job, answer for your primary job. If your work schedule or work location has changed due to the coronavirus pandemic, please answer for your current work situation.

Q4. First, in a TYPICAL week, how many days are you assigned to work? If your work schedule varies from week to week, please indicate the number that is most typical.

01 1 day
02 2 days
03 3 days
04 4 days
05 5 days
06 6 days
07 7 days
00 0, not currently working → **THANK AND TERMINATE**

Q5. How many of those days are weekdays (Monday-Friday)? **(SHOW ONLY DAY COUNT RESPONSES THAT ARE ≤Q4.)**

01 1 day
02 2 days
03 3 days
04 4 days
05 5 days
00 0 (work only on weekends) → **SKIP TO DEFINE SURVTYPE**

IF [EMPLEV(2)], AUTOCODE Q14M(06), THEN SKIP TO Q6 INSTRUCTIONS

IF [EMPLEV(1,7)], ASK:

Q14M. Which of the following best reflects your work schedule? Please select only one. **(ACCEPT ONE RESPONSE ONLY.) (OPTIONAL.)**

1 Standard, five or more days per week
2 Work four 10-hour days per week, total of 40 hours (4/40 compressed schedule)
3 Work nine days every 2 weeks, total of 80 hours (9/80 compressed schedule)
4 Work three 12-hour days per week, total of 36 hours (3/36 compressed schedule)
95 Other **(specify)**
06 *Work part-time* ***(AUTOCODE ONLY, DON'T SHOW ON SCREEN)***
98 Not sure
99 Left blank

IF WORK AT LEAST 1 WEEKDAY, [Q5(01-05)], ASK:

Q6. At the PRESENT TIME, do you work from home or from a telework/co-working center on some or all of your regularly assigned workdays? You might call this telecommuting, teleworking, or working remotely. Please include only days that you telework during an entire workday. **(OPTIONAL.)**

01 Yes, work from home or telecommute/telework **all** of my workdays → **SKIP TO Q9**
02 Yes, work from home or telecommute/telework **some** of my workdays → **SKIP TO DEFINE SURVTYPE**
03 No, do not currently work from home or telecommute/telework any workdays → **SKIP TO DEFINE SURVTYPE**
98 Not sure
99 Left blank

IF [Q6(02 OR 03)], SKIP TO DEFINE SURVTYPE.
IF [Q6(01)], SKIP TO Q9.

IF [Q6(98 OR 99)], ASK:

Q7. To clarify, you might be working from home now, due to the pandemic or because you are self-employed and your primary work location is in your home. Please select the response that best represents your current situation, even if you expect this to be a temporary arrangement. **(OPTIONAL.)**

01 I work from home **all** of my workdays
02 I work from home **some** of my workdays → **SKIP TO DEFINE SURVTYPE**
03 I do not currently work from home any days; I go to a work location outside my home all workdays) → **SKIP TO DEFINE SURVTYPE**
98 Not sure
99 Left blank → **SKIP TO DEFINE SURVTYPE**

IF [Q7(02, 03, 99)], SKIP TO DEFINE SURVTYPE.

IF WORK AT HOME EVERY WEEKDAY THEY WORK OR NOT SURE [Q6(01) OR Q7(01, 98)], ASK:

Q9. Which of the following best describes your current work situation? **(OPTIONAL.)**

01 Self-employed with my primary work location at home
02 Work for an employer in the Washington metro region, but I work from home/telecommute all of my workdays
03 Work for an employer outside the Washington metro region, but I work from home/ telecommute all of my workdays
95 Other situation **(specify)**
99 Left blank

DEFINE SURVEY TYPE

SURVTYPE(1)=WKALL – all workdays on weekends	**(Q5(00))**
SURVTYPE(2)=SEWAH – self-employed work at home	**(Q9(01))**
SURVTYPE(3)=TELEALL – full-time telework	**(Q9(02,03))**
SURVTYPE(4)=COMMUTER – work outside home some days	**(Q6(02-03) OR Q7(02-03))**
SURVTYPE(5)=HOMEOTHER – WAH/unknown reason	**((Q6(01) OR Q7(01)) AND Q9(95,99))**
SURVTYPE(6)=SEUNK – Self-employed, unknown if home only (RESERVE FOR POST-PROCESSING)	
SURVTYPE(9)=UNDEFINED – undefined work arrangement	**(Q6(98,99) AND Q7(99)) OR (Q6(98,99) AND Q7(98) AND Q9(95,99))**

IF [SURVTYPE(1)], SKIP TO Q61
IF [SURVTYPE(2)], SKIP TO DEFINE Check Q15 Days INSTRUCTIONS

IF [SURVTYPE(3,5)], AUTOCODE Q12(07), DO NOT SHOW, THEN SKIP TO Q12A
IF [SURVTYPE(4) AND ((Q6(03) OR Q7(03))], AUTOCODE Q12(01), DO NOT SHOW,THEN SKIP TO Q12A

IF [SURVTYPE(4) AND ((Q6(02) OR Q7(02))], ASK:
IF [SURVTYPE(9), ASK:

Q12. Currently, how often do you usually telecommute/telework for an entire workday? **(OPTIONAL.)**

01 Do not currently work from home/telecommute
02 Less than one time per month/only in emergencies
03 1-3 times per month
04 1 day per week
05 2 days per week
06 3-4 days per week
07 5 or more days per week (or all of my workdays)
95 Other **(specify)**
99 Left blank

IF [SURVTYPE(3,4,5,9), ASK:

Q12A. How often did you usually telecommute/telework before the coronavirus pandemic started? **(OPTIONAL.)**

01 Never, I did not telecommute/telework before the pandemic
02 Less than 1 time per month/only in emergencies
03 1 to 3 times per month
04 1 day per week
05 2 days per week
06 3 or 4 days per week
07 5 or more days per week (or all of my workdays)
95 Other **(specify)**
99 Left blank

IF [Q12(01,99)], SKIP TO Q14D
IF [SURVTYPE(5)], SKIP TO DEFINE Check Q15 Days INSTRUCTIONS .

IF [(SURVTYPE(3,4,9) AND (Q12(02-95))], ASK:

Q44. If given a choice by your employer, how often would you want to telecommute/telework in the future?

01 Not interested in continuing to work at home/telework at all
02 Less than one day per month
03 1 to 3 days per month
04 1 to 2 days per week
05 3 to 4 days per week
06 All of my workdays (or 5 or more days per week)
98 Not sure
99 Left blank

Q13A. Does your employer have a formal telecommute/telework program at your workplace or do you telecommute under an informal arrangement between you and your supervisor? **(OPTIONAL.)**

01 Formal program
02 Informal arrangement
98 Not sure
99 Left blank

IF [(SURVTYPE(4,9) AND (Q12(02-95))], SKIP TO DEFINE Check Q15 Days INSTRUCTIONS

IF [(SURVTYPE(3), ASK:

Q13B. When you are working from home, how often do you make a trip during your usual work hours for work purposes (e.g., meeting/appointment)? How often do you make a personal trip (e.g., errand/appointment, meal) during your usual work hours? **(OPTIONAL.)**

Trip purpose	Number of workdays per week making a trip			
	Less than one day per week	One day per week	Two days per week	Three or more days per week
1 Work (e.g., meeting/appointment)	01	02	03	04
2 Personal (e.g., errand/appointment/meal)	01	02	03	04

IF [(SURVTYPE(3)], SKIP TO DEFINE Check Q15 Days INSTRUCTIONS:

IF NON TELEWORKER, [SURVTYPE(4,9) AND Q12(01,99), ASK:

Q14D. Does your employer have a formal telecommute/telework program at your workplace or permit any employees to telecommute under an informal arrangement with the supervisor? **(OPTIONAL.)**

01 Yes, formal program
02 Yes, informal arrangement
03 No, telecommuting is not permitted, neither formal or informal
98 Not sure
99 Left blank

Q14E. Considering your job responsibilities, how often would you be able to work remotely at home or at another location other than your main workplace? **(OPTIONAL.)**

1 Never → **SKIP TO DEFINE Check Q15 Days INSTRUCTIONS**
2 Less than once per month
3 1-3 days per month
4 1-2 days per week
5 3 or more days per week
98 Not sure → **SKIP TO DEFINE Check Q15 Days INSTRUCTIONS**
99 Left blank → **SKIP TO DEFINE Check Q15 Days INSTRUCTIONS**

THOSE WHO COULD WORK REMOTELY [Q14E(02-05)] ASK:

Q14F. Would you be interested in telecommuting/teleworking on an occasional or regular basis? **(OPTIONAL.)**

1 Yes, occasional basis
2 Yes, regular basis
3 Not interested in telecommuting
98 Not sure
99 Left blank

Q14K. In the past year, about how many days did you work at home all day on a regular workday, instead of traveling to your main workplace? **(OPTIONAL.)**

01 0, never worked at home during the past year
02 1 - 2 days
03 3 - 4 days
04 5 - 6 days
05 7 - 9 days
06 10 – 30 days
07 More than 30 days (or all or most of my workdays)
98 Not sure
99 Left blank

CURRENT COMMUTE PATTERNS

[SURVTYPE(2,3,4,5,9):

DEFINE Check Q15 Days
CKQ15DAYS. CHECK Q15 DAYS
IF Q14M(02,03,04), SET CKQ15DAYS = 5
IF Q14M(01,06,95,98,99), SET CKQ15DAYS = Q5

IF [SURVTYPE(2)], DO NOT SHOW Q15. AUTOCODE TO RESPONSE 18 IN Q15 – RANDOMLY CODE ENOUGH DAYS TO EQUAL CKQ15DAYS. IF CKQ15DAYS(01-04), CODE REMAINING DAYS TO RESPONSE 20, TO EQUAL TOTAL OF 5 DAYS. THEN SKIP TO DEFINE Q15 MODES USED.

IF [SURVTYPE(3,5)] DO NOT SHOW Q15. AUTOCODE TO RESPONSE 16 IN Q15 – RANDOMLY CODE ENOUGH DAYS TO EQUAL CKQ15DAYS. IF CKQ15DAYS(01-04), CODE REMAINING DAYS TO RESPONSE 20, TO EQUAL TOTAL OF 5 DAYS. THEN SKIP TO DEFINE Q15 MODES USED.

IF [SURVTYPE(4,9)], ASK:

Q15. Next, please think about your travel to work. In a typical work week, what type of transportation do you use on each of the days you work? If your travel to work varies from week to week, report for the MOST typical week.

- If you use more than one type of transportation on a single day (e.g., walk to the bus stop then ride the bus), check only the type you use for the longest distance part of your trip.
- For any days that you typically work from home all day on an assigned workday, check telecommute/telework.
- ***[IF Q14M(02,03,04):*** *For any weekdays that you are not assigned to work, check compressed schedule (e.g., 4/40, 9/80) day off.**]***

PROGRAMMER NOTES ON CHECK OF Q15 WITH Q5 AND PROMPTS TO RESPONDENTS
ALLOW ONLY ONE MODE RESPONSE FOR EACH DAY

Check workdays reported Q15WORK = sum of Mon-Fri responses to modes 1-18 plus 95.

IF RESPONDENT ENTERS TOO FEW TRAVEL MODE DAYS - TOTAL Q15 DAYS IS LESS THAN CKQ15DAYS WEEKDAYS WORKED, [IF Q15WORK < CKQ15DAYS], SHOW PROMPT: Please report for a total of **[CKQ15DAYS]** workdays. If you typically telecommute/work from home or work a compressed schedule (e.g., 4/40, 9/80) day off, please count those as workdays. Check regular day off for any other days you are not assigned to work.

IF CKQ15DAYS = 5 AND RESPONDENT CHECKS MORE THAN ONE TRAVEL MODE ON A SINGLE DAY (E.G., TRAIN AND WALK ENTERED ON MONDAY), SHOW PROMPT FOR THAT DAY: Please check only one box for (list day or days with more than one mode checked).

IF CKQ15DAYS < 5 AND RESPONDENT ENTERS TOO MANY TRAVEL MODE DAYS - TOTAL Q15 DAYS IS MORE THAN CKQ15DAYS, [IF CKQ15DAYS < 5 AND Q15WORK > CKQ15DAYS], SHOW PROMPT: Please report how you travel only on the **[CKQ15DAYS]** days that you work Monday through Friday and report only one transportation type for each day. If you typically telecommute/work from home or have a compressed schedule day off, please count those as workdays. For all other days that you do not work, indicate regular day off.

SHOW MODES IN MON-FRI GRID FORMAT IN ORDER SHOWN (ALLOW ONLY ONE MODE FOR EACH DAY MON-FRI)

Type of transportation	(Check only one Button for each day)				
	Mon	Tues	Wed	Thur	Fri
1 Drive alone in a car, truck, SUV, or van	01	02	03	04	05
2 Taxi	01	02	03	04	05
3 Uber, Lyft, Via	01	02	03	04	05
4 Motorcycle	01	02	03	04	05
5 Carpool (Including carpool w/family member, dropped off)	01	02	03	04	05
6 Casual carpool (slugging)	01	02	03	04	05
7 Vanpool	01	02	03	04	05
8 Buspool (including commuter bus, subscription bus)	01	02	03	04	05
9 Bus (public bus, shuttle)	01	02	03	04	05
10 Metrorail	01	02	03	04	05
11 MARC (MD commuter rail)	01	02	03	04	05
12 VRE (Virginia commuter rail)	01	02	03	04	05
13 Amtrak/other train	01	02	03	04	05
14 Bicycle/scooter/e-scooter (including bikeshare, dockless) bike)	01	02	03	04	05
15 Walk (entire trip from home to work)	01	02	03	04	05
95 Other **(specify)**	01	02	03	04	05
16 Telecommute/telework	01	02	03	04	05
17 Compressed schedule day off	01	02	03	04	05
20 Regular day off (not compressed schedule)	01	02	03	04	05
21 NA – do not show on screen, do not reuse number					
18 SE-WAH days, other than telework **(AUTOCODE ONLY)**	01	02	03	04	05

IF [SURVTYPE(2,3,4,5,9)]:
DEFINE Q15 MODES USED (ALLOW MULTIPLE MODES) – AUTOCODE ONLY:

Individual modes (valid codes = 0, 1, 2, 3, 4, 5)
PVDAYS = SUM OF Q15.1
TXDAYS = SUM OF Q15.2
ULDAYS = SUM OF Q15.3
MCDAYS = SUM OF Q15.4
RCDAYS = SUM OF Q15.5
CCDAYS = SUM OF Q15.6
VPDAYS = SUM OF Q15.7
BPDAYS = SUM OF Q15.8
RBDAYS = SUM OF Q15.9
MRDAYS = SUM OF Q15.10
MDDAYS = SUM OF Q15.11
VRDAYS = SUM OF Q15.12
AMDAYS = SUM OF Q15.13
BKDAYS = SUM OF Q15.14
WKDAYS = SUM OF Q15.15
OTDAYS = SUM OF Q15.95
TWDAYS = SUM OF Q15.16
CWDAYS = SUM OF Q15.17
SEDAYS = SUM OF Q15.18

Grouped modes (drive alone, carpool, bus, commuter rail, train, public transit)
DADAYS (Total drive alone) = SUM OF (Q15.1 + Q15.2 + Q15.3 + Q15.4) – MODES 1, 2, 3, 4
CPDAYS (Total carpool) = SUM OF (Q15.5 + Q15.6) – MODES 5, 6
BUDAYS (Total bus) = SUM OF (Q15.8 + Q15.9) – MODES 8, 9
CRDAYS (Total commuter rail) = SUM OF (Q15.11 + Q15.12 + Q15.13) – MODES 11, 12, 13
TRDAYS (Total train) = SUM OF (Q15.10 + Q15.11 + Q15.12 + Q15.13) – modes 10, 11, 12, 13
PTDAYS (Total public transportation) = SUM OF (Q15.8 + Q15.9 + Q15.10 + Q15.11 + Q15.12 + Q15.13) – modes 8, 9, 10, 11, 12, 13

DEFINE Q15 MODES – MULTI-PUNCH VARIABLE
IF CWDAYS > 0, Q15 MODE = 1 COMPRESSED SCHEDULE
IF TWDAYS > 0, Q15 MODE = 2 TELECOMMUTE
IF DADAYS > 0, Q15 MODE = 3 DRIVE ALONE
IF CPDAYS > 0, Q15 MODE = 4 CARPOOL
IF VPDAYS > 0, Q15 MODE = 5 VANPOOL
IF BUDAYS > 0, Q15 MODE = 6 BUS
IF MRDAYS > 0, Q15 MODE = 7 METRORAIL
IF CRDAYS > 0, Q15 MODE = 8 COMMUTER TRAIN
IF BKDAYS > 0, Q15 MODE = 9 BICYCLE/SCOOTER
IF WKDAYS > 0, Q15 MODE = 10 WALKING
IF OTDAYS > 0, Q15 MODE = 11 OTHER
IF SEDAYS > 0, Q15 MODE = 18 SELF-EMPLOYED, WORK AT HOME

DEFINE PRIMARY MODE

CODE Q15 MODE WITH HIGHEST NUMBER OF DAYS AS "PRIMARY MODE" (PRMODE). IF TIE FOR HIGHEST NUMBER, CHOOSE PRIMARY MODE FROM THE FOLLOWING PRIORITY ORDER.
IF A RESPONDENT HAS A TIE FOR PRIMARY MODE WITH Q15 MODE=COMPRESSED (1), DO NOT CHOOSE COMPRESSED(1).

5 VANPOOL
4 CARPOOL
7 METRORAIL
6 BUS
8 COMMUTER RAIL
9 BICYCLE/SCOOTER
10 WALKING
2 TELECOMMUTE
3 DRIVE ALONE
11 OTHER
18 SELF-EMPLOYED, WORK AT HOME

DEFINE CALTDAYS = TOTAL Q15 DAYS USING MODES 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 = SUM OF (Q15.5 + Q15.6 + Q15.7 + Q15.8 + Q15.9 + Q15.10 + Q15.11 + Q15.12 + Q15.13 + Q15.14 + Q15.15)

DEFINE TELEWORKER USING Q15.16 (number of TW days reported in Q15) and Q12
TELEWORKER.

TELEWORKER(1)=Yes	**(TWDAYS > 0 OR Q12(02,03,04,05,06,07,95)**
TELEWORKER(2)=No	**(TWDAYS = 0 AND Q12(01,99)**

IF [SURVTYPE(2,3,5)], SKIP TO Q15E INSTRUCTIONS.
IF [SURVTYPE(4,9) AND BKDAYS = 0], SKIP TO Q15B INSTRUCTIONS.
IF [SURVTYPE(4,9) AND BKDAYS > 0], ASK:

Q15A. On the day(s) that you bike or ride a scooter/e-scooter to work, is it a…? Select all that apply. **(MULTIPLE RESPONSES ACCEPTED.) (OPTIONAL.)**

01 Capital Bikeshare bike
02 Personal bike (including bike borrowed from friend or family member)
03 Dockless bike
04 Rented scooter/e-scooter
05 Personal scooter/e-scooter
98 Not Sure
99 Left Blank

IF [SURVTYPE(4,9) AND ULDAYS = 0], SKIP TO Q15E INSTRUCTIONS.
IF [SURVTYPE(4,9) AND ULDAYS > 0], ASK:

Q15B. You mentioned using Uber, Lyft, or Via for some of your trips to work. Which of these ride-hailing services do you use for these trips? Select all that apply. **(MULTIPLE RESPONSES ACCEPTED.) (OPTIONAL.)**

01 Lyft (riding alone as a passenger)
02 Uber (riding alone as a passenger)
03 UberPool or Uber Express Pool (riding with other passengers)
04 Via
05 Lyft Shared Ride or Lyft XL
95 Other **(specify)**
98 Not sure
99 Left blank

Q15C. How would you likely have made these trips if this/these ride-hailing services were not available? Select all that apply. **(MULTIPLE RESPONSES ACCEPTED.) (OPTIONAL.)**

01 Drive alone (personal car, SUV, truck, van, motorcycle)
02 Taxi
03 Public transit (bus, buspool, Metrorail, commuter train)
04 Carpool or vanpool, casual carpool/slug
05 Bicycle
06 Walk
95 Other **(specify)**
98 Not sure
99 Left blank

IFONLY RESPONSES TO [Q15B(01,02,95,98,99)], SKIP TO Q15E INSTRUCTIONS.

IF TAKE AN UBER POOL, VIA, OR LYFT SHARED RIDE TO WORK AT LEAST ONCE A WEEK AND NEVER TAKE A CARPOOL OR VANPOOL [Q15B(03,04,05) AND CPDAYS = 0 AND VPDAYS = 0], ASK:

Q15D. On the days that you ride UberPool, Uber Express Pool, Via, Lyft Shared Ride, or Lyft XL to or from work, how many people, including yourself, but excluding the driver, usually ride in the vehicle?

_____ total people in pool **(RANGE 1-10.) (OPTIONAL.)**
998 Not sure
999 Left blank

IF [SURVTYPE(2)], DO NOT SHOW Q15E. AUTOCODE Q15E(05), THEN SKIP TO DEFINE COMMSTAT (DEFINE COMMUTER STATUS).

IF [SURVTYPE(3,5) AND Q12A(07)], DO NOT SHOW Q15E. AUTOCODE Q15E(01), THEN SKIP TO DEFINE COMMSTAT (DEFINE COMMUTER STATUS).

IF [SURVTYPE(3,5) AND Q12A(01,02,03,04,05,06,95,99)], DO NOT SHOW Q15E. AUTOCODE Q15E(02), THEN SKIP TO DEFINE COMMSTAT (DEFINE COMMUTER STATUS).

IF [SURVTYPE(4,9)] ASK:

Q15E. Is your current travel to work as you just described it about the same as your commute before the coronavirus pandemic began, or is it different than before the pandemic? (**SHOW RESPONSES 03, 04, 98 ON SCREEN; DO NOT SHOW 01, 02, 05, OR 99)**

01 Full-time telework now, full-time TW pre-pandemic (AUTOCODE...)
02 Full-time telework now, NOT full-time TW pre-pandemic (AUTOCODE...)
03 Current commute is about the same now as before the pandemic
04 Current commute is substantially different than before the pandemic
05 Self-employed, work at home (AUTOCODE...)
98 Not sure
99 Left blank

IF [SURVTYPE(2,3,4,5,9)]:

DEFINE COMMSTAT. COMMUTER STATUS

COMMSTAT(1)=NONTW-SAME (Q15E(03))
COMMSTAT(2)=FTTW-DIFF (Q15E(02))
COMMSTAT(3)=NONTW-DIFF (Q15E(04,98,99))
COMMSTAT(4)=FTTW-SAME (Q15E(01))
COMMSTAT(5)=SEWAH-SAME (Q15E(05))

IF [COMMSTAT(5)], SKIP TO Q61.
IF [COMMSTAT(4)], SKIP TO Q34 INSTRUCTIONS.

IF [COMMSTAT(1,2,3)] ASK:

Q15F. The coronavirus pandemic has disrupted work schedules and work places for many people. Is your **current** work situation or commute different in any of the following ways, compared with the time before the pandemic began in early 2020? Select all that apply. **(ACCEPT MULTIPLE RESPONSES FOR 1-95) (OPTIONAL.)**

1 Now working from home/telecommuting
2 Work from home/telecommute more days per week
3 Use different type(s) of transportation to get to work
4 Work at a different job/employer
5 Work different days or hours, increased/decreased work hours
95 Some other change **(please describe)** _____
97 Have not made any changes in my work situation or commute
99 Left blank

Q15H. Please think back to early 2020, before the pandemic began. In a typical week then, what types of transportation did you use at least one day per week **for your trip to work**? Select all that apply. **(OPTIONAL.)**

01 Drive alone in a car, truck, SUV, van, or motorcycle
02 Taxi, Uber, Lyft, Via
03 Carpool, casual carpool/slug, or vanpool
04 Bus, buspool/commuter bus
05 Metrorail
06 Commuter train (MARC, VRE, Amtrak)
07 Bicycle/scooter/e-scooter
08 Walk (entire distance from home to work)
09 Telecommute/telework (all day)
95 Other **(specify)**
99 Left blank

If MORE THAN ONE RESPONSE IN Q15H, ASK:

Q15J. Of the types of transportation that you just checked, which single type of transportation did you use MOST days for your trip to work before the pandemic. Select only one option. If you usually used two or more types on the same day (e.g., bus and train or bicycle and bus), please select the type that you used for the longest distance part of your trip. **(ACCEPT ONE RESPONSE ONLY.) (SHOW ONLY OPTIONS REPORTED IN Q15H.) (OPTIONAL.)**

01 Drive alone in a car, truck, SUV, van, or motorcycle
02 Taxi, Uber, Lyft, Via
03 Carpool, casual carpool/slug, or vanpool
04 Bus, buspool/commuter bus
05 Metrorail
06 Commuter train (MARC, VRE, Amtrak)
07 Bicycle/scooter/e-scooter
08 Walk (entire distance from home to work)
09 Telecommute/telework (all day)
95 Other **(specify)** _____
99 Left blank

IF [COMMSTAT(1,3)], SKIP TO Q16.

IF [COMMSTAT(2)], ASK Q15M, THEN SKIP TO Q34 INSTRUCTIONS:

Q15M. You said you are working from home full-time now. How many miles is it one-way from your home to where you would work if you were not working from home? **(PERMIT UP TO ONE DECIMAL PLACE) (OPTIONAL.)**

Number of miles _____
998 Not sure
999 Left blank

IF [COMMSTAT(1,3)], ASK:

Q16. How long is your typical daily commute one-way? First, how many miles? Please enter numeric value only. **(OPTIONAL.)**

Number of miles _____ **(ALLOW FOR ONE DECIMAL PLACE.)**

998 Not sure
999 Left blank

Q16A. How many minutes does it typically take you to travel from home to work? If the time varies from day to day, enter what would be most typical. **(OPTIONAL.)**

Number of minutes_____ **(WHOLE NUMBERS ONLY.)**

998 Not sure
999 Left blank

Q17A. At what time do you typically arrive at work? If your schedule varies, please select what is most typical. **(OPTIONAL.)**

01 12:01 am – 5:59 am
02 6:00 am – 6:29 am
03 6:30 am – 6:59 am
04 7:00 am – 7:29 am
05 7:30 am – 7:59 am
06 8:00 am – 8:29 am
07 8:30 am – 8:59 am
08 9:00 am – 9:29 am
09 9:30 am – 9:59 am
10 10:00 am – 5:59 pm
11 6:00 pm – 12 midnight
98 Not sure
99 Left blank

USE OF ALTERNATIVE MODES

IF [SURVTYPE(2)], SKIP TO Q61.
IF [SURVTYPE(3,5)], SKIP TO INSTRUCTIONS BEFORE Q34.

IF [SURVTYPE(4,9) AND (ALL OF (Q15.1, Q15.2, Q15.3, Q15.4, 15.5, Q15.6, Q15.7, Q15.8, Q15.9, Q15.10, Q15.11, Q15.12, Q15.13, Q15.14, Q15.15)=(0))], SKIP TO Q34 INSTRUCTIONS. (THAT IS, Q15 RESPONSES = ONLY 16, 17, 18, 20, 95)

IF [SURVTYPE(4,9) AND (ANY OF (Q15.1, Q15.2, Q15.3, Q15.4, 15.5, Q15.6, Q15.7, Q15.8, Q15.9, Q15.10, Q15.11, Q15.12, Q15.13, Q15.14, Q15.15) > 0))], ASK:

Q18 . How long have you been using the type or types of transportation shown below to get to work? Please enter the number of months. **Hover here for a years-to-months conversion table**. **(INSERT MODES USED IN Q15, EXCLUDING 16,17,18,20,95. USE THE MODE NAMES SHOWN.)**

Type of transportation	Number of months	Don't recall
1 Drive alone in a car, truck, SUV, or van		998
2 Taxi		998
3 Uber, Lyft, Via		998
4 Motorcycle		998
5 Carpool (Including carpool w/family member, dropped off)		998
6 Casual carpool (slugging)		998
7 Vanpool		998
8 Buspool (including commuter bus, subscription bus)		998
9 Bus (public bus, shuttle)		998
10 Metrorail		998
11 MARC (MD commuter rail)		998
12 VRE (Virginia commuter rail)		998
13 Amtrak/other train		998
14 Bicycle/scooter/e-scooter (including bikeshare, dockless) bike)		998
15 Walk		998

DEFINE MOST RECENT MODE = Q18 MODE WITH FEWEST NUMBER OF MONTHS
IF TIE FOR RECENT MODE, DESIGNATE BOTH MODES AS MOST RECENT MODE

IF MOST RECENT MODE DURATION Q18 ≥ 36 MONTHS, SKIP TO INSTRUCTIONS BEFORE Q28
IF MOST RECENT MODE DURATION < 36, ASK:
INSERT MODE NAME AS FOLLOWS:
IF MOST RECENT MODE IS 1 (DRIVE ALONE), INSERT " driving alone"
IF MOST RECENT MODE IS 2 (TAXI), INSERT "riding in a taxi"
IF MOST RECENT MODE IS 3 (UBER/LYFT/VIA), INSERT "riding Uber, Lyft, or Via"
IF MOST RECENT MODE IS 4 (MOTORCYCLE), INSERT "riding a morotcycle"
IF MOST RECENT MODE IS 5 (CARPOOL) OR 6 (CASUAL CARPOOL), INSERT "carpooling"
IF MOST RECENT MODE IS 7 (VANPOOL), INSERT "vanpooling"
IF MOST RECENT MODE IS 8 (BUSPOOL) OR 9 (BUS), INSERT "riding a bus"
IF MOST RECENT MODE IS 10 (METRORAIL), INSERT "riding Metrorail"
IF MOST RECENT MODE IS 11 (MARC), 12 (VRE), OR 13 (Amtrak), INSERT "riding commuter rail"
IF MOST RECENT MODE IS 14 (BIKE), INSERT "riding a bicycle or scooter"
IF MOST RECENT MODE IS 15 (WALK), INSERT "walking"

Q20. You began **[INSERT MOST RECENT MODE FROM TABLE BELOW]** *riding Metrorail, riding a bus, riding a bicycle or scooter, walking, carpooling, vanpooling, riding commuter rail, driving alone, riding a motorcycle, riding in a taxi, riding Uber, Lyft, or Via* > in the past three years for your trip to work. For what reasons did you make this change? **(OPTIONAL.) (LIST MOST RECENT MODE(S).)**

_____

Q20 OPEN-ENDED RESPONSE – CODE IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

Personal circumstances/preferences

1 Changed jobs/work hours
2 Moved to a different residence
3 Employer or worksite moved
4 Spouse started new job
5 Save money
6 Save time
7 Gas prices too high
8 Tired of driving
9 Prefer to drive, wanted to drive
10 Safety
11 No vehicle available
12 Car became available, additional car in household
13 To stay with family/children
14 HOV lanes available
50 Express lanes available
15 Congestion (other)
16 Always used
17 Close to work or transportation pick up/drop off location
18 Afraid of or didn't like previous form of transportation
19 Stress
20 Weather
21 Bought hybrid vehicle
22 Convenient
23 To get exercise
24 Concerned about the environment, global warming
53 Coronavirus pandemic, job/work location closed

Commuter Services/Programs
- 25 New option that became available
- 26 Protected bike lanes available
- 27 Pressure or encouragement from employer, special program at work
- 28 GRH
- 29 Air Quality Action Days
- 30 No parking
- 31 Parking expense, parking cost too high
- 32 Found carpool partner (Commuter Connections, ZimRide, Waze, UberPool, craigslist, other)
- 33 NuRide (VA carpool incentive)
- 34 SmartTrip/SmartBenefit, transit subsidy, vanpool subsidy, Commuter Choice Maryland
- 35 'Pool Rewards carpool/vanpool incentive
- 50 Flextime Reward
- 51 CarpoolNow mobile app
- 52 incenTrip

Information/Promotion
- 36 Advertising
- 37 Initiated request/looked for information on my own
- 38 Info. From Commuter Connections/Council of Governments/COG/800 number
- 39 Commuter Connections Website
- 40 Other Website
- 41 Word of mouth/recommendation
- 42 Information from transit agency
- 43 Saw highway sign
- 44 Social media – Facebook, Twitter, Instagram, YouTube
- 95 Other
- 98 Not sure
- 99 Left blank

ALTERNATIVE MODE PATTERNS

IF (CPDAYS = 0 AND VPDAYS = 0 AND BUDAYS = 0 AND MRDAYS = 0 AND CRDAYS = 0), SKIP TO INSTRUCTIONS BEFORE Q34
IF CPDAYS = 0 AND VPDAYS = 0 AND (BUDAYS > 0 OR MRDAYS > 0 OR CRDAYS > 0), SKIP TO INSTRUCTIONS BEFORE Q29

IF [(CPDAYS > 0 OR VPDAYS > 0)],ASK:

Q28. On the days that you **[IF CPDAYS > 0 AND VPDAYS = 0:** carpool/slug**][IF CPDAYS ≥ 0 AND VPDAYS > 0:** vanpool**],** how many people, including yourself, usually ride in the vehicle? **(OPTIONAL.)**

_____ total people in pool **(RANGE 1-16)**
999 Left blank

IF [(CPDAYS ≥ 0 AND VPDAYS > 0)], SKIP TO INSTRUCTIONS BEFORE Q29

IF [(CPDAYS > 0 AND VPDAYS = 0)], ASK:

Q28A. How did you find the people with whom you now carpool? Select all that apply. **(MULTIPLE RESPONSES ACCEPTED.) (OPTIONAL.)**

01 I carpool with family members
02 Referral/asked or was asked by a friend, co-worker, or neighbor
03 Regional or local public agency that helps find carpool partners
04 Through my employer
05 Waze
06 UberPool/Uber Express Pool
07 ZimRide
08 Craigslist
09 Via
10 Slug/casual carpool, so different people each day
95 Other **(specify)**
98 Not sure, don't recall
99 Left blank

IF [(CPDAYS = 0 OR VPDAYS = 0) AND (BUDAYS > 0 OR MRDAYS > 0 OR CRDAYS > 0)) OR (CPDAYS > 0 OR VPDAYS > 0)], ASK:

MODE SELECT FOR Q29-Q31:
IF [CPDAYS = 0 AND VPDAYS = 0 AND BUDAYS ≥ (MRDAYS + CRDAYS)], USE BUS
IF [CPDAYS = 0 AND VPDAYS = 0 AND BUDAYS < (MRDAYS + CRDAYS)], USE TRAIN
IF [CPDAYS > 0 AND VPDAYS = 0], USE CARPOOL
IF [CPDAYS ≥0 AND VPDAYS > 0], USE VANPOOL

Q29. How do you get from home to where you meet your **[INSERT SELECTED MODE:** carpool, vanpool, bus, train**]**? **(IF SELECTED MODE IS TRAIN OR BUS, DO NOT SHOW RESPONSES 01, 02, OR 03.) (OPTIONAL.)**

1 Picked up at home by car/van pool or leave from home with household member → **SKIP TO INSTRUCTIONS BEFORE Q34**
2 I always drive the carpool/van pool and pick up riders → **SKIP TO Q31 INSTRUCTIONS**
3 Drive alone to driver's home or drive alone to passenger's home
4 Drive to a central location, like park & ride, or train or subway station
5 Dropped off or ride in another car/van pool → **SKIP TO Q31 INSTRUCTIONS**
6 Bicycle
07 Walk
08 Bus/Transit
95 Other **(specify)**
99 Left blank → **SKIP TO Q31 INSTRUCTIONS**

THOSE WHO DRIVE, BICYCLE, WALK, OR TAKE ANOTHER FORM OF TRANSIT TO THEIR CARPOOL, VANPOOL, BUS, OR TRAIN [Q29(02,03,04,06,07,08,95)], ASK:

Q30. How many miles is it one way from your home to where you meet your **[INSERT SELECTED MODE:** carpool, vanpool, bus, train**]**? **(ALLOW ONLY NUMERIC ENTRIES, ALLOW ONE DECIMAL PLACE.) (OPTIONAL.)**

_____ miles
998 Not sure
999 Left blank

IF [CPDAYS > 0 OR VPDAYS > 0], SKIP TO Q34 INSTRUCTIONS

IF [CPDAYS = 0 AND VPDAYS = 0 AND (BUDAYS > 0 OR MRDAYS > 0 OR CRDAYS > 0)], ASK:

Q31. And how do you get from where you get off the **[IF BUDAYS ≥ (MRDAYS + CRDAYS):** bus**][IF BUDAYS < (MRDAYS + CRDAYS):** train**]** to your workplace? If you take more than one bus or train on your trip, answer for when you get off the final bus or train of your trip. **(OPTIONAL.)**

1 Walk
2 Taxi
3 Uber, Lyft, or Via
4 Capital Bikeshare bike
5 Personal bike
6 Dockless bike
7 Scooter/e-scooter
95 Other **(specify)**
99 Left blank

TELECOMMUTE

Programmer note: SURVTYPE = 1 and 2 have already been skipped out of this section. The following instructions clarify skips for SURVTYPES 3, 4, 5, 9

IF NOT TELEWORKER [TELEWORKER (2) AND SURVTYPE (3,4,5,9)], SKIP TO Q45 INTRO.

IF [TELEWORKER(1) AND (SURVTYPE(3,4,5,9)], ASK:

Q34. Next, please answer a few more questions about telecommuting/teleworking or working from home. How long have you been telecommuting/teleworking? Please enter as the number of months.
Hover here for a years-to-months conversion table. **(RANGE 1-500.) (OPTIONAL.)**

Duration of Telework Use	Number of months
Number of months	

998 Not sure
999 Left blank

IF [Q34 > 26 MONTHS OR 998 OR 999)], SKIP TO Q36 INSTRUCTIONS

If [Q34 ≤ 26 MONTHS], ASK:

Q35. You started teleworking since the start of the coronavirus pandemic. How significant a factor was the pandemic in your decision to start telecommuting/teleworking? **(OPTIONAL.)**

01 Pandemic was the only factor
02 Pandemic was a major factor
03 Pandemic was a minor factor
04 Pandemic was not a factor at all
98 Not sure
99 Left blank

If [SURVTYPE(3,5)], DO NOT SHOW Q36 . SEE BELOW FOR AUTOCODE INSTRUCTIONS

IF [SURVTYPE(4,9) AND TELEWORKER(1))], ASK:

Q36. Where do you work when you telecommute/telework? If you telecommute from multiple locations, please check the location where you telecommute most often. **(ACCEPT ONE RESPONSE ONLY.) (OPTIONAL.)**

1 **[IF SURVTYPE(3,5), AUTOCODE AS:** Always/only at home] → **SKIP TO Q41**
2 Telework or co-working center
3 Satellite office provided by employer
04 Business/retail center (FedEx/Kinkos) or library/community
95 Other location **(specify)**
19 Both at home and another location → **SKIP TO Q41**
99 Left blank → **SKIP TO Q42**

IF [Q36(01,19)], SKIP TO Q41.
IF[Q36(99)], SKIP TO Q42.

IF [Q36(02,03,04,95)], ASK:

Q38. How many miles is it one way from your home to this location? **(OPTIONAL.)**

_____ miles **(ALLOW FOR ONE DECIMAL PLACE.)**
999 Left blank

Q39. And how do you get from home to this location? Select all that apply. **(MULTIPLE RESPONSES ACCEPTED.) (OPTIONAL.)**

01 Drive alone, motorcycle, or taxi/Uber/Lyft
02 Carpool (including dropped off) or casual carpool/slug
03 Vanpool
04 Bus or train (Metrorail/commuter rail)
05 Bicycle/scooter/e-scooter (including bikeshare, dockless bike)
06 Walk
99 Left blank

IF [Q36(02,03,04,95,99)], SKIP TO Q42

IF [Q36(01,19)], ASK:

Q41. How strongly do you agree or disagree with the following statements about your experience working from home? Please rate each statement on a scale from 1 to 5, where 1 means you "strongly disagree" with the statement and 5 means you "strongly agree." **(RANDOMIZE.) (OPTIONAL.)**

		Level of agreement				
		1 – Strongly Disagree	**2 Disgree**	**3 Neutral**	**4 Agree**	**5 – Strongly Agree**
A.	I am productive working at home	01	02	03	04	05
B.	I am better able to concentrate on work tasks	01	02	03	04	05
C.	I find it difficult to unplug from work	01	02	03	04	05
D.	I am able to coordinate with co-workers on tasks	01	02	03	04	05

IF [SURVTYPE(3,4,5,9) AND TELEWORKER(1)], ASK:

Q42. Did you find out about telecommuting or obtain telecommute/telework information from any of the following sources? Select all that apply. **(ALLOW MULTIPLE RESPONSES FOR 1-95.) (OPTIONAL.)**

1 Advertising
2 Program at work, employer provided information, or employer required work from home
3 Word of mouth, referral
4 Newspaper or magazine article, radio or TV story
5 Website **(please specify)**
6 County/City or jurisdiction program **(please specify)**
7 Social media source (Twitter, Facebook, Instagram, tictok, other)
8 Business or trade/industry organization
9 Telework!VA
95 Other **(specify)**
96 Did not use any of these sources
98 Not sure
99 left blank

Q43. Did you receive any telecommute/telework information from Commuter Connections or from the Metropolitan Washington Council of Governments? **(OPTIONAL.)**

01 Yes
02 No
98 Not sure
99 left blank

AVAILABILITY OF TRANSPORTATION OPTIONS

IF [SURVTYPE(3,4,5,9)], ASK:

Next, please answer some questions about transportation services that might be available in your area.

IF [SURVTYPE(3,5)], SKIP TO Q53A INSTRUCTIONS

IF [SURVTYPE(4,9) AND (SUM OF (CPDAYS + VPDAYS + BUDAYS + MRDAYS + CRDAYS) = 0 OR 1)], SKIP TO Q46 INSTRUCTIONS.

IF [SURVTYPE(4,9) AND (SUM OF (CPDAYS + VPDAYS + BUDAYS + MRDAYS + CRDAYS) = 2-5)], ASK:

Q45. **[IF SUM OF (DADAYS + CPDAYS + VPDAYS) = 4 OR 5:** What Interstate highways or major U.S. or state routes do you use on your trip to work?**]**
[IF SUM OF (DADAYS + CPDAYS + VPDAYS) = 1, 2, OR 3: On days that you drive or ride to work in a personal vehicle, what Interstate highways or major U.S. or state routes do you use?**]**
[IF SUM OF (DADAYS + CPDAYS + VPDAYS) = 0: If you were to drive to work, what Interstate highways or major U.S. or state routes would you use?**] (MULTIPLE RESPONSES ACCEPTED.) (OPTIONAL.)**

Maryland/DC Roads

1 Capital Beltway (I-495) (MD)
2 I-95 (MD)
3 I-270 (MD)
4 I-295 (DC / MD)
5 I-695 (DC - Southeast-Southwest Freeway, Southwest Expressway)
6 I-695 (MD - Baltimore Beltway)
7 BW Parkway (US 295, Baltimore-Washington Parkway - MD)
8 GW Parkway (George Washington Parkway)
9 ICC (Inter-County Connector, Route 200)
10 US Route 1 (MD)
11 US Route 29 (MD - Colesville Road, Columbia Pike)
12 US Route 50 (MD – John Hanson Highway)
13 US Route 301 (MD)

Virginia Roads

14 Capital Beltway (I-495) (VA)
15 I-66 OUTSIDE the Beltway (VA)
16 I-66 INSIDE the Beltway (VA)
17 I-95 (VA)
18 I-395 (VA)
19 Dulles Toll Road (Dulles Greenway, Route 267)
20 GW Parkway (George Washington Parkway)
21 US Route 1 (VA - Richmond Highway (previously Jefferson Davis Highway))
22 US Route 29 (VA – Lee Highway)
23 US Route 50 (VA – Lee Jackson Highway, Arlington Blvd, Fairfax Blvd)

96 Do not / would not use any of these roads
99 Left blank

IF [SURVTYPE(4,9) AND DADAYS = 0 AND CPDAYS = 0 AND VPDAYS = 0 AND BUDAYS = 0 AND MRDAYS = 0 AND CRDAYS = 0], SKIP TO Q52.

IF [WKDAYS>0], AUTOCODE Q46(96), DO NOT SHOW, THEN SKIP TO Q52 INSTRUCTIONS.

IF [SURVTYPE(4,9) AND (DADAYS ≠ 0 OR CPDAYS ≠ 0 OR VPDYS ≠ 0 OR BUDAYS ≠ 0 OR MRDAYS ≠ 0 OR CRDAYS ≠ 0)], ASK:

Q46. Is there a special HOV (High Occupancy Vehicle) lane, toll lane, or express lane along your route to work? **(OPTIONAL.)**

01 HOV lane only
02 Toll lane/express lane only → **SKIP TO Q47A**
03 Both HOV lane and toll/express lane
04 No, HOV/toll/express lane not available → **SKIP TO Q52**
96 No, walk to work ***(AUTOCODE ONLY - DO NOT SHOW ON SCREEN)***
98 Not sure → **SKIP TO Q52**
99 Left blank → **SKIP TO Q52**

THOSE WITH HOV LANES ALONG THEIR ROUTE AND NOT WALKING [Q46(01,03) AND WKDAYS=0], ASK:

Q47. How often do you use the **HOV lane** to get to or from work? **(OPTIONAL.)**

1 Never
2 Less than once per month
3 1-3 days per month
4 1-2 days per week
5 3 or more days per week
99 Left blank

IF [Q46(01) AND Q47(01,99)], SKIP TO Q52.
IF [Q46(01) AND Q47(02, 03, 04, 05), SKIP TO Q47B.

THOSE WITH EXPRESS LANES ALONG THEIR ROUTE AND NOT WALKING [Q46(02,03) AND WKDAYS=0], ASK:

Q47A. How often do you use a **toll/express lane** to get to or from work? **(OPTIONAL.)**

1 Never → **SKIP TO INSTRUCTIONS BEFORE Q50**
2 Less than once per month
3 1-3 days per month
4 1-2 days per week
5 3 or more days per week
99 Left blank → **SKIP TO INSTRUCTIONS BEFORE Q50**

THOSE WHO USE HOV OR TOLL/EXPRESS LANES TO GET TO WORK [Q47(02,03,04,05) OR Q47A(02,03,04,05)], ASK:

Q47B. Which HOV and/or toll/express lanes do you use to get to or from work? Select all that apply. **(MULTIPLE RESPONSES ACCEPTED FOR 1-95.) (OPTIONAL.)**

Maryland/DC Roads
01 Capital Beltway (I-495) (MD)
02 I-270 (MD)
03 I-295 (DC / MD)
04 US Route 50 (MD)
05 ICC (Inter-County Connector, Route 200)

Virginia Roads
06 Capital Beltway (I-495) (VA)
07 I-66 OUTSIDE the Beltway (VA)
08 I-66 INSIDE the Beltway (VA)
09 I-95 (VA)
10 I-395 (VA)
11 Dulles Toll Road (Dulles Greenway, Route 267)
12 US Route 1 (VA - Richmond Highway, Jefferson Davis Highway)

95 Other road **(please specify)**
99 Left blank

IF [Q46(01)], SKIP TO Q50 INSTRUCTIONS.
IF [Q46(02,03) AND Q47A(01,99), SKIP TO Q50 INSTRUCTIONS.

THOSE WHO USE TOLL/EXPRESS LANES [Q47A(02,03,04,05)], ASK:

Q47C. On the days you use the toll/express lanes are you …? Select all that apply. **(MULTIPLE RESPONSES ACCEPTED.) (OPTIONAL.)**

1 Driving alone
2 Riding in a carpool/vanpool
3 Riding transit (bus, commuter bus)
98 Not sure
99 Left blank

IF Q47(01,96,99) AND Q47A(01,96,99), SKIP TO Q52.

THOSE WHO USE HOV OR EXPRESS LANES TO GET TO WORK [Q47(02-05) OR Q47A(02-05)], ASK:

Q50. How much time (in minutes) does the HOV or toll/express lane save you in your one-way trip to or from work? **(OPTIONAL.)**

_____ minutes
98 Not sure
99 Left blank

Q51. Did availability of the HOV or toll/express lane influence you to make any of the following changes in how you commute? Select all that apply. **(MULTIPLE RESPONSES ACCEPTED.) (OPTIONAL.)**

01 NA – DO NOT USE AND DO NOT SHOW ON SCREEN
02 No - HOV/express lanes did not influence me to make changes in my commute
03 Started carpooling, slugging, or vanpooling to use the lanes
04 Started riding a commuter/express bus to use the lanes
05 Increased the number of riders in my carpool to meet the minimum rider requirement
06 Started going to work earlier or later to avoid the lane restriction hours
07 Started/increased how often I drive alone to work, knowing I could pay the toll
95 Other action **(specify)**
99 Left blank

IF SURVTYPE(4,9), ASK:

Q52. Do you know the locations of Park 'n Ride lots along the route that you take to work? **(OPTIONAL.)**

1 Yes
2 No
3 There aren't any
98 Not sure
99 Left blank

THOSE WHO KNOW THE LOCATIONS OF PARK 'N RIDE LOTS ALONG THEIR ROUTE [Q52(01)], ASK:

Q53. In the past year have you used Park 'n Ride lots when commuting to work? **(OPTIONAL.)**

1 Yes
2 No
98 Not sure
99 Left blank

IF [SURVTYPE(3,4,5,9)], ASK:

Q53A. About how far from your home is the nearest bus stop and train station? You may report the distance in EITHER miles or blocks. **(ACCEPT MILES OR BLOCKS, NOT BOTH. ALLOW 1 DECIMAL PLACE FOR MILES.) (OPTIONAL.)**

Distance to …	Miles	Blocks	Not sure
1. Bus stop			998
2. Train station			998

ATTITUDES TOWARD TRANSPORTATION MODES

Programmer note: If respondent reported any current bus/train use in Q15 (PTDAYS > 0) or in Q29, do not ask Q53C - Q54

IF [SURVTYPE(3,5)], SKIP TO Q60 INSTRUCTIONS.
IF [SURVTYPE(4,9) AND ((PTDAYS > 0) OR Q29(08))], SKIP TO Q55 INSTRUCTIONS.

IF [SURVTYPE(4,9) AND PTDAYS = 0 AND NOT Q29(08)], ASK:

Q53C. You said earlier that you don't regularly use public transit (bus, Metrorail, or commuter rail) to get to work. In the past three years, did you ever use public transit for your commute? **(OPTIONAL.)**

1 No, didn't use transit at all → **SKIP TO Q53G INSTRUCTIONS**
2 Used transit a few times → **SKIP TO Q53G INSTRUCTIONS**
3 Used transit occasionally, but less than one day per week
4 Used transit regularly, one or more days per week
98 Not sure → **SKIP TO Q53G INSTRUCTIONS**
99 Left blank → **SKIP TO Q53G INSTRUCTIONS**

IF [Q53C(03,04)], ASK:

Q53D. How significant a factor was the coronavirus pandemic in your decision to stop riding transit for your commute? **(OPTIONAL.)**

01 Pandemic was the only factor → **SKIP TO Q53G INSTRUCTIONS**
02 Pandemic was a major factor
03 Pandemic was a minor factor
04 Pandemic was not a factor at all
98 Not sure
99 Left blank

IF [Q53D(01)], SKIP TO Q53G INSTRUCTIONS

IF [Q53D(02-99)], ASK:

Q53E. What other factors influenced your decision to stop using public transit for your commute? **(OPTIONAL.)**

_____

OPEN-ENDED RESPONSE – CODE IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

1 I still use transit occasionally
2 Moved to different residence where transit was not available
3 Started a new job where transit was not available or did not operate at the time I needed
4 Needed my car for work
5 Needed my car before or after work or for emergencies/overtime
6 Didn't feel safe on bus/train or at bus stops or train stations
7 Bus/train was unreliable/late
8 Distance was too far
9 Took too much time
10 Prefer to be alone during commute
11 Too expensive
12 Buses/train was too uncomfortable/crowded
13 Had to transfer/too many transfers or had to wait too long between buses/trains
14 Had a bad experience with the bus or train
15 Started using Uber, Lyft, Via
16 Started bicycling/e-scooter
17 Pandemic – didn't feel safe on transit
18 Pandemic - Workplace closed, working at home, not commuting
95 Other
98 Not sure
99 Left blank

IF [SURVTYPE(4,9) AND TRDAYS = 0 AND NOT Q29(08)], ASK:

Q53G. Considering your work and personal schedules, how often might you be able to use public transit to get to work now? **(OPTIONAL.)**

1 Never
2 Occasionally, but less than one day per month
3 1 to 3 days per month
4 1 to 2 days per week
5 3 or more days per week
98 Not sure
99 Left blank

IF [Q53C(03,04)], SKIP TO Q55 INSTRUCTIONS.

THOSE WHO COMMUTE TO WORK OUTSIDE THEIR HOME SOME DAYS, DID NOT USE TRANSIT REGULARLY OR OCCASIONALLY IN THE PAST THREE YEARS TO COMMUTE OR THOSE WHO DID USE TRANSIT REGULARLY OR OCCASIONALLY IN THE PAST THREE YEARS TO COMMUTE BUT DO NOT NOW [Q53C(01,02,98,99)], ASK:

Q54. What reasons keep you from regularly using public transit for your commute to work now? **(OPTIONAL.)**

_____

OPEN-ENDED RESPONSE – CODE IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

1 No bus service available (in home area or in work area/bus too far away
2 No train service available (in how area or in work area/train too far away)
3 Don't know if service is available/don't know location of bus stops / train stations
4 Need my car for work
5 Need car before or after work
6 Need car for emergencies/overtime
7 It might not be safe/I don't feel safe on bus or at bus stops
8 It might not be safe/I don't feel safe on trains or train stations
9 Bus / train is unreliable/late
10 Trip is too long/distance too far
11 Takes too much time
12 Don't like to ride with strangers
13 Prefer to be alone during commute
14 Work schedule irregular
15 Too expensive
16 Buses are too uncomfortable/crowded
17 Trains are too uncomfortable/crowded
18 Buses or trains too dirty
19 Have to transfer/too many transfers
20 Had a bad experience with the bus or train in the past
21 Have to wait too long for the bus or between buses
22 Have to wait too long for the train or between train
23 Prefer to use bikeshare or e-scooter
24 Prefer to use Uber, Lyft, Via
95 Other
98 Not sure
99 Left blank

If [SURVTYPE(4,9) AND (CPDAYS > 0 OR VPDAYS > 0 OR Q29(01,02,05))], SKIP TO Q56B INSTRUCTIONS.

IF [SURVTYPE(4,9) AND CPDAYS = 0 AND VPDAYS = 0 AND NOT Q29(01,02,05)], ASK:

Q55. You said earlier that you do not regularly carpool or vanpool to work. In the past three years, did you ever use carpool or vanpool for your commute? **(OPTIONAL.)**

01 No, did not carpool/vanpool to work at all → **SKIP TO Q56 INSTRUCTIONS**
02 Carpooled/vanpooled a few times → **SKIP TO Q56 INSTRUCTIONS**
03 Carpooled/vanpooled to work occasionally, but less than one day per week
04 Carpooled/vanpooled to work regularly, one or more days per week
98 Not sure → **SKIP TO Q56 INSTRUCTIONS**
99 Left blank → **SKIP TO Q56 INSTRUCTIONS**

IF [Q55(03,04)], ASK:

Q55A. How significant a factor was the coronavirus pandemic in your decision to stop carpooling/vanpooling for your commute? **(OPTIONAL.)**

01 Pandemic was the only factor → **SKIP TO Q56 INSTRUCTIONS**
02 Pandemic was a major factor
03 Pandemic was a minor factor
04 Pandemic was not a factor at all
98 Not sure
99 Left blank

IF [Q55A(02-99)], ASK:

Q55B. What other factors influenced your decision to stop carpooling/vanpooling for your commute? **(OPTIONAL.)**

_____

OPEN-ENDED RESPONSE – CODE IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

1 Don't know anyone to carpool/vanpool with
2 Need my car for work
3 Need car before or after work
4 Need car for emergencies/overtime
5 It might not be safe/I don't feel safe
6 Carpool/vanpool partners are/could be unreliable/late
7 Trip is too long/distance too far
8 Takes too much time
9 Doesn't save time
10 Don't like to ride with strangers
11 Prefer to be alone during commute
12 Work schedule irregular
13 Too expensive
14 Had a bad experience with carpooling/vanpooling in the past
15 Pandemic – don't feel safe riding with others
16 Pandemic - Workplace closed, working at home, not commuting
95 Other (specify) _____
98 Not sure
99 Left blank

IF [Q55(03,04)], SKIP TO Q56B INSTRUCTIONS.

THOSE WHO COMMUTE TO WORK OUTSIDE THEIR HOME SOME DAYS, DID NOT USE CP/VP REGULARLY OR OCCASIONALLY IN THE PAST THREE YEARS TO COMMUTE OR THOSE WHO DID USE CP/VP REGULARLY OR OCCASIONALLY IN THE PAST THREE YEARS TO COMMUTE BUT DO NOT NOW [Q55(01,02,98,99)], ASK:

Q56. What reasons keep you from regularly using carpool/vanpool to get to work now? **(OPTIONAL.)**

_____

OPEN-ENDED RESPONSE – CODE IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

01 Don't know anyone to carpool/vanpool with
02 Need my car for work
03 Need car before or after work
04 Need car for emergencies/overtime
05 It might not be safe/I don't feel safe
06 Carpool/vanpool partners are/could be unreliable/late
07 Trip is too long/distance too far
08 Takes too much time
09 Doesn't save time
10 Don't like to ride with strangers
11 Prefer to be alone during commute
12 Work schedule irregular
13 Too expensive
14 Had a bad experience with carpooling/vanpooling in the past
15 Pandemic – don't feel safe riding with others
16 Pandemic - Workplace closed, working at home, not commuting
95 Other
98 Not sure
99 Left blank

IF [SURVTYPE(4,9) AND CALTDAYS=0], SKIP TO Q56F.

IF [SURVTYPE(4,9) AND (BKDAYS>0 OR WKDAYS>0 OR CPDAYS>0 OR VPDAYS>0 OR BUDAYS>0 OR MRDAYS>0 OR CRDAYS>0)], ASK:

Q56B. You said you **[IF BKDAYS>0:** ride a bicycle or scooter**] [IF WKDAYS>0:** walk**] [IF CPDAYS>0:**carpool**] [IF VPDAYS>0:** vanpool**] [IF BUDAYS>0 OR MRDAYS>0 OR CRDAYS >0:** ride public transportation**]*** to work some days. What benefits have you personally received from traveling to work this way? **(*SELECT MODE BASED ON MOST USED MODE FROM Q15. IF A TIE, USE THE FOLLOWING PRIORITY: 1. BICYCLE/RIDE A SCOOTER, 2. WALK, 3. VANPOOL, 4. PUBLIC TRANSPORTATION, 5. CARPOOL) (OPTIONAL.)**

_____

OPEN-ENDED RESPONSE – CODE IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

1 Save money
2 Avoid stress
3 Not need to have a car
4 Less wear and tear on car
5 Use travel time productively (e.g., read, work, sleep)
6 Have companionship when they travel
7 Arrive at work on time, less likely to be late
8 Get exercise, health benefits
9 Help the environment
10 Reduce greenhouse gases, reduce carbon footprint
11 Can use HOV lane
95 Other (specify) _____
96 No benefits
98 Not sure
99 Left blank

COMMUTE SATISFACTION AND CURRENT COMMUTE COMPARED TO LAST YEAR

IF [SURVTYPE(4, 9)], ASK:

Q56F. Overall, how satisfied are you with your trip to work? **(OPTIONAL.)**

1 1 – Not at all satisfied
2 2
3 3
4 4
5 5 – Very satisfied
98 Not sure
99 Left blank

Q57. Would you say your commute is easier, more difficult, or about the same now as it was one year ago? **(OPTIONAL.)**

1 Easier
2 More difficult
3 About the same
98 Not sure
99 Left blank

IF [(SURVTYPE(4,9)], ASK:

Q59. Have you changed your work location in the last two years?

01 Yes, work location is different than two years ago
02 No, work location is the same as two years ago → **SKIP TO Q60**
98 Not sure → **SKIP TO Q60**
99 Left blank → **SKIP TO Q60**

IF [Q59(01)], ASK:

Q59A. Where was your previous work location?

1 Also in the Washington metropolitan region
2 In Maryland, but outside the Washington metropolitan region
3 In Virginia, but outside the Washington metropolitan region
04 Outside the Washington metropolitan region and outside Maryland and Virginia
98 Not sure
99 Left blank

IF [SURVTYPE(3,4,5,9)], ASK:

Q60. Have you moved to a different residence in the last two years? **(OPTIONAL.)**

01 Yes
02 No
98 Not sure
99 Left blank

IF [(Q59(02,03,98,99) AND (Q60(02,98,99)], SKIP TO Q61
IF [(SURVTYPE(3,5)) AND (Q60(02,98,99)], SKIP TO Q61
IF [(Q59(01) AND (Q60(02,98,99)], SKIP TO Q60B

THOSE WHO CHANGED THEIR HOME LOCATIONS IN THE PAST YEAR [Q60(01)], ASK:

Q60A. Where was your previous residence location? **(OPTIONAL.)**

01 Also in the Washington metropolitan region
02 In Maryland, but outside the Washington metropolitan region
03 In Virginia, but outside the Washington metropolitan region
04 Outside the Washington metropolitan region and outside Maryland and Virginia
98 Not sure
99 Left blank

THOSE WHO CHANGED THEIR WORK AND/OR HOME LOCATIONS IN THE PAST YEAR [Q60(01) OR Q59(01)], ASK:

Q60B. What factors did you consider in your decision to make this home or work location change? **(ALLOW MULTIPLE RESPONSES FOR 01-95.) (OPTIONAL.)**

Commute Factors
- 1 Length of commute (distance or time)
- 16 Ease or difficulty of commute
- 2 Cost of commuting
- 3 Commuting options that would be available (e.g., transit)
- 14 Number of days working from home/teleworking

Residential Factors
- 04 Space to work from home
- 05 Cost of living, cost of housing
- 06 Size of house
- 07 Quality of neighborhood
- 08 Closeness to family or friends
- 09 Entertainment, shopping, services nearby

Job Factors
- 10 Income, salary
- 11 Job satisfaction
- 12 Career advancement, job opportunities
- 13 Office was relocating – moved to stay with my employer
- 95 Other **(specify)**
- 98 Not sure
- 99 Left blank

IF [SURVTYPE(3,5) AND COMMSTAT(4)], DO NOT SHOW Q60C AND SKIP TO Q61.
IF [((SURVTYPE(3,5) AND COMMSTAT(2)) OR SURVTYPE(4,9)) AND Q60B(01,16) ONLY, DO NOT SHOW. AUTOCODE Q60C(04), THEN SKIP TO Q60F INSTRUCTIONS.

THOSE WHO CHANGED WORK OR HOME LOCATION FOR REASONS OTHER THAN LENGTH/EASE OF COMMUTE [((SURVTYPE(3,5) AND COMMSTAT(2)) OR SURVTYPE(4,9)) AND Q60B(02-15,17-99)], ASK:

Q60C. How important to your decision was the length or ease of getting to work compared to the other factors you just mentioned? **(OPTIONAL.)**

- 01 Less important
- 02 About the same importance
- 03 More important
- 04 Commute ease/difficulty, length of commute was the only factor mentioned **(AUTOCODE ONLY – DO NOT SHOW ON SCREEN)**
- 98 Not sure
- 99 Left blank

THOSE WHO CHANGED THEIR WORK AND/OR HOME LOCATIONS IN THE PAST YEAR [Q59(01) OR Q60(01)], ASK:

Q60F. Did the change shorten either the distance or time from your home **[IF SURVTYPE(4,9):** to work**][IF SURVTYPE(3,5) AND COMMSTAT(2):** to where you would work if you were not working at home**]**? **(OPTIONAL.)**

01 Shortened the distance
02 Shortened the time
03 Shortened BOTH distance and time
04 Didn't shorten distance or time
98 Not sure
99 Left blank

Q60G. When you were considering making this change, did you consider how close your new location would be to any of the following transportation services? Select all that apply. **(ACCEPT MULTIPLE RESPONSES FOR 01-95.) (OPTIONAL.)**

01 Park & Ride lots
02 HOV lanes
03 Toll/express lanes
04 Protected bike lanes
05 Metrorail stations
06 Bus stops
07 Bikeshare stations
08 Scooter/e-scooter service
09 Dockless bike service
10 Carshare service
95 Other service **(specify)**
98 Did not consider the distance to any of these services
99 Left blank

AWARENESS OF ADVERTISING

ASK EVERYONE:

Q61. Next are a few questions about advertising messages. Have you heard, seen, or read any advertising about commuting in the past year? **(OPTIONAL.)**

01 Yes
02 No →**SKIP TO Q81**
98 Not sure →**SKIP TO Q81**
99 Left blank →**SKIP TO Q81**

THOSE WHO HAVE HEARD, SEEN, OR READ ADVERTISING ABOUT COMMUTING IN THE PAST YEAR [Q61(01)], ASK:

Q62. What messages do you recall from this advertising? **(OPTIONAL.)**

_____

96 None, don't recall specific message
98 Not sure
99 Left blank

CODE OPEN ENDED RESPONSES IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

02 That you should rideshare, carpool, vanpool)
03 That new trains and/or buses are coming
04 That you can call for carpool or vanpool info
05 Call 1-800-745-RIDE / call Commuter Connections
06 Commuter Choice Maryland
07 Contact the Commuter Connections website (www.commuterconnections.org, www.commuterconnections.com)
08 It saves money
09 It saves time
10 It is less stressful
11 Guaranteed Ride Home (GRH)
12 Employer would give me SmartTrip/SmartBenefit benefits
13 It would help the environment
14 It reduces traffic
15 It saves wear and tear on the car
16 Ozone Action Days / Code Red Days
17 Telecommuting / telework
18 HOV lanes
19 Regional services/programs are available to help with commute
20 Use the bus or train, use Metrobus, Metrorail
21 Way to Go, Way to Go Arlington, Car Free Diet
22 Virginia MegaProjects, Dulles rail extension
23 HOT lanes / express lanes / toll roads
24 Inter-County Connector (ICC)
25 Bike to work Day
26 Car Free Day
27 Capital Bikeshare
28 Transit fare increase
29 Toll rate increase
30 Carshare, Zip car, Car2Go, Hertz on Demand
31 Coronavirus and transit (e.g., cleaning procedures, wear mask, etc)
32 Coronavirus and carpool/vanpool
95 Other
96 None
98 Not sure
99 Left blank

Q63. What organization or group sponsored the ad you recall? **(OPTIONAL.)**

_____

98 Not sure
99 Left blank

CODE OPEN ENDED RESPONSES IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

1 Commuter Connections
2 Metropolitan Washington Council of Governments, MWCOG, COG
3 Metro, WMATA
4 MARC, Maryland Commuter Rail
5 VRE, Virginia Railway Express
6 VDOT (Virginia Department of Transportation)
7 DDOT (District of Columbia Department of Transportation)
8 MDOT (Maryland Department of Transportation)
9 VDRPT, Virginia Department of Rail and Public Transportation
10 Maryland State Highway Administration
11 MTA, Maryland Mass Transit Administration
12 WABA, Washington Area Bicycling Association
13 Arlington County Commuter Services
14 Loudoun County (Transit / Commuter services)
15 goDCgo
16 Federal government, federal agency (DOD, US DOT)
95 Other
98 Not sure
99 Left blank

Q64. Where did you see, hear, or read this advertisement? **(MULTIPLE RESPONSES ACCEPTED FOR 1-95.) (OPTIONAL.)**

1 MWCOG or Commuter Connections website
2 Other website, internet **(specify)**
3 Radio
4 TV
5 Postcard in mail
6 Newspaper
7 In train station
8 On train or bus
9 At work
10 Billboard, poster, road sign
11 Facebook / Twitter (social media)
12 Smart phone / tablet (text message, email, ad)
95 Other **(specify)**
98 Not sure
99 Left blank

Attitude changes/Actions taken after hearing ads

IF [SURVTYPE(1,2,3,5), SKIP TO Q81 INTRO.
IF [SURVTYPE(4,9) AND Q61(02, 98,99)], SKIP TO Q81 INTRO.

IF [SURVTYPE(4,9) AND Q61(01) AND (Q62 NOT 96,98,99)], ASK:

Q65. After seeing or hearing this advertising, were you more likely to consider carpooling, vanpooling, or public transportation? **(OPTIONAL.)**

01 Yes
02 No
98 Not sure
99 Left blank

Q66. After seeing or hearing this advertising, did you try or start using any of the following forms of transportation for your trip to work or increase how often you use them **for your trip to work**? **(ACCEPT MULTIPLE RESPONSES FOR 11-15.) (OPTIONAL.)**

11 Carpool
12 Vanpool
13 Bus
14 Train (Metrorail, commuter train)
15 Bicycle or walking
96 Did not try, start, or increase use of any of these types of transportation for my trip to work
99 Left blank

Q67. Did you take any other actions to try to change how you get to work? Select all that apply. **(ALLOW MULTIPLE RESPONSES WITH 02-95.) (OPTIONAL.)**

02 Looked for commute information on the internet
03 Asked friend, family member, or co-worker for commute information (referral)
04 Contacted a local or regional organization for commute information
05 Looked for a carpool or vanpool partner
06 Contacted a transit operator to ask about schedules or routes
07 Asked employer about commuter services (e.g., telework, SmartTrip, SmartBenefits),
08 Registered for Guaranteed Ride Home (GRH) program
09 Started using HOV or express lane to get to work
95 Other action **(specify)**
96 Didn't take any of these actions
98 Not sure
99 Left blank

THOSE WHO USED OTHER FORMS OF TRANSPORTATION OR TOOK OTHER ACTIONS REGARDING THEIR COMMUTE AFTER SEEING/HEARING ADVERTISING [Q66(11-15) OR Q67(02-95)], ASK:

OTHERWISE, SKIP TO Q81.

Q68. Did the advertising you saw or heard encourage you to try to change how you get to work? **(OPTIONAL.)**

01 Yes
02 No
98 Not sure
99 Left blank

IF Q66(11) AND CPDAYS > 0, DO NOT SHOW. AUTOCODE Q71.1(993)
IF Q66(12) AND VPDAYS > 0, DO NOT SHOW. AUTOCODE Q71.2(993)
IF Q66(13) AND BUDAYS > 0, DO NOT SHOW. AUTOCODE Q71.3(993)
IF Q66(14) AND (MRDAYS > 0 OR CRDAYS > 0), DO NOT SHOW. AUTOCODE Q71.4(993)
IF Q66(15) AND (BKDAYS > 0 OR WKDAYS > 0), DO NOT SHOW. AUTOCODE Q71.5(993)

AFTER ALL ELIGIBLE MODES HAVE BEEN AUTOCODED, SKIP TO Q72B INSTRUCTIONS.

THOSE WHO WERE NOT AUTOCODED IN Q71 AND USED OTHER FORMS OF TRANSPORTATION FOR THEIR COMMUTE AFTER SEEING/HEARING ADVERTISING [Q66(11-16)], ASK:
OTHERWISE, SKIP TO Q81.

Q71. You said you changed how you get to work after seeing or hearing the advertising message. How long did you use each of the following to get to work? Please enter the number of months or check one of the other options. Hover … for years to months conversion. **(INSERT MODES USED IN Q66.) (RANGE 1-500.)**

Type of transportation	Number of months used	Tried once or a few times	Still use occasionally	Still using (1+ d/wk)	Don't recall
1. Carpool or casual carpool (slug)		991	992	993	998
2. Vanpool		991	992	993	998
3. Bus		991	992	993	998
4. Train (Metrorail or commuter rail)		991	992	993	998
5. Bicycle or walk		991	992	993	998

IF Q71.1,2,3,4,AND 5(991,992,998) ONLY, SKIP TO Q81.

THOSE WHO USED NON-SOV FORMS OF TRANSPORTATION AFTER SEEING/HEARING ADVERTISING [Q66(11-15) AND Q71.1,2,3,4, OR 5(001-990,993 FOR ANY)], ASK:

Q72B. **[**You said you changed how you get to work after seeing or hearing the advertising message.**]*** Before making this change to **[INSERT MODE(S) SELECTED IN Q66/Q71**:** carpooling, vanpooling, riding a bus, riding a train, and riding a bike or walking**]**, about how many days per week did you use each of the following types of transportation for your trip to work in a typical week? **(*INSERT IF Q71 AUTOCODED.) (**IF Q71 IS AUTOCODED FOR ANY MODE, INSERT THESE MODES. IF MULTIPLE MODES SELECTED IN Q66, INSERT MODE USED FOR LONGEST TIME IN Q71. IF MORE THAN ONE MODE USED SAME AMOUNT OF TIME, INSERT ALL MODES USED THE LONGEST.)**

IF TOTAL > 5, SHOW PROMPT: "You've entered more than 5 weekdays. If you use more than one type of transportation on a single day, indicate only the type you use for the longest distance part of your trip."

IF TOTAL < 5, SHOW PROMPT: "You've entered fewer than 5 weekdays. Please also report days you teleworked and had regular days off."

Type of transportation you used for the longest distance part of your trip to work	Number of weekdays used (0-5)
1. Drive alone, motorcycle, taxi (incl. Uber, Lyft, Split)	
5. Carpool or casual carpool (slugging)	
7. Vanpool	
9. Bus (public or private bus, shuttle)	
10. Train (Metrorail or commuter rail)	
15. Bicycle or walking	
16. Telecommute/telework	
95. Other **(specify)**	
17. DO NOT SHOW ON SCREEN	
20. Regular day off	
TOTAL DAYS REPORTED	

Awareness of Commute Programs/Services

ASK EVERYONE:

Now please answer a few questions about commute information and assistance services that might be available to commuters in your home or work areas.

Q81. Is there a phone number, website or mobile app you can use to obtain information on carpooling or vanpooling, public transportation, HOV lanes, toll/express lanes, and telecommute/telework in the Washington metropolitan region? **(OPTIONAL.)**

01 Yes
02 No → **SKIP TO Q86**
98 Not sure → **SKIP TO Q86**
99 Left blank → **SKIP TO Q86**

THOSE AWARE OF TRANSPORTATION ASSISTANCE PHONE NUMBER OR WEBSITE [Q81(01)], ASK:

Q82. Have you used this number, website, or mobile app in the past year? **(OPTIONAL.)**

01 Yes
02 No → **SKIP TO Q86**
98 Not sure → **SKIP TO Q86**
99 Left blank → **SKIP TO Q86**

THOSE WHO HAVE USED TRANSPORTATION ASSISTANCE PHONE NUMBER OR WEBSITE [Q82(01)], ASK:

Q83. What was that number, website, or mobile app? **(OPTIONAL.)**

_____

98 Not sure/Don't remember
99 Left blank

CODE OPEN ENDED RESPONSES IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

1	800-745-RIDE (7433)	Commuter Connections (COG)
2	888-730-6664	PRTC, Potomac Rappahannock Transportation
3	703-324-1111	Fairfax County RideSources
4	301-770-POOL	Montgomery County Commuter Services
5	240-777-RIDE	Montgomery County Commuter Services
6	202-637-7000	WMATA, METRO (Washington Metro. Area Transit Authority)
7	www.mwcog.org	Commuter Connections (COG)
8	www.commuterconnections.org	Commuter Connections (COG)
9	www.commuterconnections.com	Commuter Connections (COG)
10	www.vre.org	Virginia Railway Express (VRE)
11	www.commuterdirect.com	Arlington County Commuter Services
12	www.commuterpage.com	Arlington County Commuter Services
13	703-228-RIDE	Arlington County Commuter Services
14	www.maryland.com	Maryland Mass Transit Admin. (MTA), MARC Commuter Rail
13	www.wmata.com	WMATA, Metro
14	www.HOVcalculator.com	VDOT
15	www.commuterchoicemaryland.com	Maryland Mass Transit Admin (MTA)
16	866-RIDE-MTA (1-800-743-3682)	Maryland Mass Transit Admin (MTA)
17	www.metroopensdoors.org	WMATA, Metro
95	Other	
98	Not sure/Don't remember	

IF [Q43(01) OR Q64(01)], DO NOT SHOW. AUTOCODE Q86(01), THEN SKIP TO Q87.

THOSE WHO EITHER DID NOT RECEIVE INFORMATION ABOUT TELECOMMUTING OR DID NOT SEE, HEAR, OR READ ADVERTISING FROM COMMUTER CONNECTIONS OR FROM MWCOG [Q43 NOT (01) AND Q64 NOT (01)], ASK:

Q86. Have you heard of an organization in the Washington region called Commuter Connections? **(OPTIONAL.)**

01 Yes
02 No → **SKIP TO Q88C**
98 Not sure → **SKIP TO Q88C**
99 Left blank → **SKIP TO Q88C**

THOSE WHO HAVE HEARD OF COMMUTER CONNECTIONS [Q86(01)], ASK:

Q87. **[**You mentioned knowing about Commuter Connections.**]*** How did you learn about Commuter Connections? **(*INSERT IF Q43(01) OR Q64(01).) (OPTIONAL.)**

_____

98 Not sure
99 Left blank

CODE OPEN ENDED RESPONSES IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

1 TV
2 Magazine
3 Newspaper ad
4 Newspaper article
5 Sign/billboard
6 Mail/postcard
7 Brochure
8 Transportation fair/special event
9 Radio
10 Employer
11 Library
12 Phonebook, yellow pages
13 Word of mouth (family, friend, co-worker)
14 Internet/Web
15 InfoExpress kiosks
16 Ozone Action/Code Red days
17 Smart phone/Tablet (text, email, ad)
95 Other
98 Not sure
99 Left blank

Q88A. Have you contacted Commuter Connections in the past year or visited a website sponsored by this organization? **(OPTIONAL.)**

01 Yes
02 No
98 Not sure
99 Left blank

ASK EVERYONE:

Define Local Program for Q88D

***SET ORGANIZATIONS TO ASK ABOUT IN* Q88D.**

IF Q2(01) OR Q3(01) (Alexandria), INSERT GO Alex AS <PROGRAM> IN Q88D
IF Q2(02) OR Q3(02) (Arlington), INSERT Arlington County Commuter Services AS <PROGRAM> IN Q88D
IF Q2(03) OR Q3(03) (Calvert), INSERT Tri-County Council for Southern Maryland AS <PROGRAM> IN Q88D
IF Q2(04) OR Q3(04) (Charles), INSERT Tri-County Council for Southern Maryland AS <PROGRAM> IN Q88D
IF Q2(06) OR Q3(06) (Fairfax Co, Ffx City, Falls Church), INSERT Fairfax County Commuter Services AS <PROGRAM> IN Q88D
IF Q2(07) OR Q3(07) (Frederick), INSERT TransIT Services of Frederick County AS <PROGRAM> IN Q88D
IF Q2(08) OR Q3(08) (Loudoun), INSERT Loudoun County Commuter Services AS <PROGRAM> IN Q88D
IF Q2(09) OR Q3(09) (Montgomery), INSERT Montgomery County Commuter Services AS <PROGRAM> IN Q88D
IF Q2(10) OR Q3(10) (Prince Georges), INSERT Ride Smart AS <PROGRAM> IN Q88D
IF Q2(11) OR Q3(11) (Prince William, Manassas, Manassas Park), INSERT PRTC OmniMatch AS <PROGRAM> IN Q88D
IF Q2(05) OR Q3(05) (District of Columbia), INSERT goDCgo AS <PROGRAM> IN Q88D

Q88D. Have you heard of the following organization(s) or service(s)? If so, have you contacted them in the past year or visited their website(s)? **(OPTIONAL.)**

Program Name	Heard of and contacted	Heard of but NOT contacted	Have not heard of this organization	Not sure	Left Blank
1 Alexandria GO Alex	01	02	03	98	99
2 Arlington County Commuter Services	01	02	03	98	99
3 Tri-County Council for Southern Maryland (Calvert, Charles)	01	02	03	98	99
4 Fairfax County Commuter Services	01	02	03	98	99
5 TransIT Services of Frederick County	01	02	03	98	99
6 Loudoun County Commuter Services	01	02	03	98	99
7 Montgomery County Commuter Services	01	02	03	98	99
8 Ride Smart (Prince Georges Commuter Solution	01	02	03	98	99
9 PRTC OmniMatch (Prince William)	01	02	03	98	99
10 goDCgo (District of Columbia)	01	02	03	98	99

Employer Services

IF [SURVTYPE(2)], SKIP TO Q105A
IF [SURVTYPE(3,5) AND (COMMSTAT(4)], SKIP TO Q105

IF [SURVTYPE(1,4,9) OR (SURVTYPE(3,5) AND (COMMSTAT(2))], ASK:

Q89. Does your employer make any of the following commuter services or benefits available to you to help with your commute, and if so, have you used the services. **(RANDOMIZE.) (OPTIONAL.)**

Employer service	Available and USED	Available but NOT USED	Not Available	Not sure
1. Information on commuter transportation options	01	02	03	98
2. Special parking spaces for carpools or vanpools	01	02	03	98
3. SmarTrip, SmartBenefit or other benefits/subsidies for public transportation or vanpooling	01	02	03	98
4. Cash payments or other subsidies for carpooling	01	02	03	98
5. Facilities or programs for employees who bike or walk to work	01	02	03	98
6. Guaranteed rides home (GRH) in case of emergencies or unscheduled overtime	01	02	03	98
7. Carshare membership (Zipcar, Turo, Free2move, getaround)	01	02	03	98
8. Bikeshare membership (Capital Bikeshare, Jump)	01	02	03	98
9. Work schedule with flexible start and end times	01	02	03	98

THOSE WHO HAVE SMARTRIP, SMARTBENEFIT OR OTHER SUBSIDIES AVAILABLE TO THEM [Q89.3(01,02)], ASK:

Q89B. Which of the following best describes the transit or vanpool benefit that is available to you? **(OPTIONAL.) (ALLOW MULTIPLES FOR 01-95.)**

01 Employer-paid direct cash payment or reimbursement
02 Pre-tax deduction for employee-paid transit or vanpool costs
95 Another arrangement **(specify)**
98 Not sure
99 Left blank

IF [SURVTYPE(3,5)], SKIP TO Q105A
IF [SURVTYPE(1,4,9)], ASK:

Q90. Does your employer make free on-site parking available to all employees at your worksite? **(OPTIONAL.)**

01 Yes → **SKIP TO Q90B**
02 No
98 Not sure
99 Left blank

THOSE WHO COMMUTE AND THEIR EMPLOYER MAY NOT OFFER FREE ONSITE PARKING TO ALL EMPLOYEES [Q90(02-99)], ASK:

Q90A. Does your employer make free on-site parking available to YOU? **(OPTIONAL.)**

01 Yes
02 No → **SKIP TO Q91**
98 Not sure → **SKIP TO Q102**
99 Left blank → **SKIP TO Q102**

THOSE WITH COMMUTE WHO HAVE FREE ONSITE PARKING AVAILABLE [Q90(01) OR Q90A(01)], ASK:

Q90B. Was on-site parking free before the pandemic?

01 Yes
02 No
98 Not sure
99 Left blank

Q90C. Have you used this free parking?

01 Yes → **SKIP TO Q102**
02 No → **SKIP TO Q102**
98 Not sure → **SKIP TO Q102**
99 Left blank → **SKIP TO Q102**

THOSE WHO COMMUTE WITHOUT FREE ONSITE PARKING AVAILABLE TO THEM [Q90A(02)], ASK:

Q91. Does your employer pay part of your parking cost or do you have to pay the entire cost if you drive to work? **(OPTIONAL.)**

1 Employer pays part and I pay part
2 I pay the entire cost
3 Employer offers free offsite parking
98 Not sure
99 Left blank

Q92. Does your employer offer parking discounts for carpools or vanpools? **(OPTIONAL.)**

01 Yes
02 No
98 Not sure
99 Left blank

Guaranteed Ride Home

IF [SURVTYPE(1,4,9)], ASK:

Q102. Do you know if there is a regional GRH or Guaranteed Ride Home program available in the event of unexpected emergencies and unscheduled overtime for commuters who carpool, vanpool, use public transportation, or bicycle to work? **(OPTIONAL.)**

01 Yes, there is
02 No, there isn't → **SKIP TO Q105A**
98 Not sure → **SKIP TO Q105A**
99 Left blank → **SKIP TO Q105A**

THOSE AWARE OF GRH [Q102(01)], ASK:

Q104. Who sponsors or offers the service? **(OPTIONAL.)**

_____

98 Not sure
99 Left blank

CODE OPEN ENDED RESPONSES IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

1 Commuter Connections/Council of Governments/COG
2 Employer
3 VRE
4 TMA (TyTran)
95 Other _____
98 Not sure

Social Media, Travel Apps, and Driverless Cars

ASK EVERYONE:

Q105A. Have you used any of the following types of travel or trip information services or mobile applications? Select all that apply. **(MULTIPLE RESPONSES ACCEPTED FOR 01-95.) (OPTIONAL.)**

1 Traffic alerts (e.g., radio, TV, text)
2 Ride-hailing apps (ex., Uber, Lyft, Via)
3 Wayfinding apps (ex., Waze, Google maps)
4 Trip/fitness tracking apps (ex., Strava, Map My Ride)
5 Transit schedule, bus/train arrival mobile apps (ex. Next Bus, Next Train, Transit)
6 Traveler information displays (e.g. screen at workplaces and public locations)
7 Bikeshare/ dockless bike service apps (e.g., Capital Bikeshare, Jump)
8 E-scooter service apps (e.g.,Bird, Skip, Lime, Spin)
9 Carshare service apps (e.g., Zipcar, Turo, Free2move, getaround)
95 Other **(specify)**
96 None of these, I don't use those types of services or applications
99 Left blank

Q106. You might have heard of self-driving cars, also known as driverless cars or automated vehicles. These are cars that can sense their surroundings and drive themselves. How familiar are you with the concept of these vehicles? **(OPTIONAL.)**

1 Not at all, I haven't heard of them
2 Somewhat familiar, I have read or heard of them, but do not know much about them
3 Very familiar, I have read or heard a lot about them
98 Not sure
99 Left blank

Q106B. What concerns, if any, do you have about driverless cars? **(OPTIONAL.)**

_____

98 Not sure
99 Left blank

CODE OPEN ENDED RESPONSES IN POST-PROCESSING INTO THE FOLLOWING CATEGORIES; ADD OTHERS AS NECESSARY

1 No concerns
2 Driving safety
3 Pedestrian safety
4 Security/privacy concerns
5 Legal/regulations
6 Liability for accidents
7 Cost/vehicles too expensive
98 Not sure
99 Left blank

Q106C. How interested would you be in using a driverless car in the following situations or conditions? Please use a scale from 1 (not at all interested) to 5 (very interested). (RANDOMIZE.) (OPTIONAL.)

	1 – Not at all interested	2	3	4	5 – Very interested	Not sure
1 Buy a driverless car for personal use	01	02	03	04	05	98
2 Ride in a driverless taxi/Uber/Via vehicle	01	02	03	04	05	98
3 Ride in a driverless bus or shuttle vehicle	01	02	03	04	05	98
4 Ride in a driverless carpool or vanpool	01	02	03	04	05	98

Demographics

EVERYONE:

The last few questions are for classification purposes only.

IF [(SURVTYPE(3,5)) AND (COMMSTAT(1,2,3)], SKIP TO Q110A
IF [SURVTYPE(2)], DO NOT SHOW. AUTOCODE Q110=Q1A, THEN SKIP TO Q111.
IF [(SURVTYPE(3,5)) AND (COMMSTAT(4)], DO NOT SHOW. AUTOCODE Q110=Q1A, THEN SKIP TO Q111

IF SURVTYPE(1,4,9), ASK:

Q110. What is your ZIP code at work?

_____

IF SURVTYPE(1,4,9), SKIP TO Q110B.

IF [(SURVTYPE(3,5)) AND (COMMSTAT(1,2,3)], ASK:

Q110A. You said you are teleworking full-time now. What is the zip code at the location where you would work if you were not working from home? **(OPTIONAL.)** _____

IF [SURVTYPE(1,4,9) OR ((SURVTYPE(3,5) AND COMMSTAT(2))], ASK:

Q110B. About how many employees work at that location? **(OPTIONAL.)**

01 1 – 25
02 26-50
03 51-100
04 101-250
05 251-999
06 1,000 or more
98 Not sure
99 Left blank

ASK EVERYONE:

Q111. What is your occupation? **(OPTIONAL.)**

_____

IF SURVTYPE(2), DO NOT SHOW. AUTOCODE Q112(04), THEN SKIP TO Q113.

IF SURVTYPE(1,3,4, 5,9), ASK:

Q112. What type of employer do you work for? **(OPTIONAL.)**

1 Federal agency
2 State or local government agency
3 Non-profit organization/association
4 Private sector employer
5 NA – DO NOT SHOW ON SCREEN
95 Other **(specify)**
98 Not sure
99 Left blank

ASK EVERYONE:

Q113. In total, how many motor vehicles, in working condition, including automobiles, trucks, vans, and highway motorcycles are available to your household? They could be owned or leased by members of your household or provided by a company for your use. **(OPTIONAL.)**

_____ vehicles
998 Not sure
999 Left blank

IF [Q113=0] SKIP TO Q114
IF [Q113 > 0 OR 998,999] ASK:

Q113A. In the past year, did your household buy, lease, or acquire any motor vehicles? **(OPTIONAL.)**

01 Yes, but it replaced an existing vehicle
02 Yes, acquired another vehicle, in addition to vehicles owned/leased previously
03 No, did not acquire any additional vehicles
98 Not sure
99 Left blank

Q114. How many persons live in your home at the present time? Please count yourself, family and friends, and anyone who may be unrelated to you such as live-in housekeepers or boarders. **(OPTIONAL.)**

_____ persons
998 Not sure
999 Left blank

IF Q114=1, DO NOT SHOW. AUTOFILL Q114A=1, THEN SKIP TO Q121

IF MORE THAN ONE PERSON LIVES IN THEIR HOUSEHOLD [Q114>1], ASK:

Q114A. And, including yourself, how many of these household members are 18 or older? **(OPTIONAL.)**

_____ household members
988 Not sure
999 Left blank

ASK EVERYONE:

Q121. Which of the following groups includes your age? **(OPTIONAL.)**

01 Under 18
02 18 - 24
03 25 - 34
04 35 - 44
05 45 - 54
06 55 - 64
07 65 or older
98 Prefer not to answer
99 Left blank

Q122. Do you consider yourself to be any of the following: Latino, Hispanic, or Spanish? **(OPTIONAL.)**

01 Yes
02 No
98 Prefer not to answer
99 Left blank

Q123. Which of the following best describes your race? You may select more than one category. **(ACCEPT MULTIPLES FOR 1 – 95) (OPTIONAL.)**

01 White
02 Black or African-American
03 American Indian or Alaska Native
04 Asian
05 Native Hawaiian or Other Pacific Islander
95 Other **(specify)**
98 Prefer not to answer
99 Left blank

Q123A. Are you…? **(OPTIONAL.)**

1 Female
2 Male
3 Non-binary
98 Prefer not to answer
99 Left blank

Q124. Last, is your household's total annual income…? **(OPTIONAL.)**

1 Less than $100,000
2 $100,000 or more **→SKIP TO Q124B**
98 Prefer not to answer **→SKIP TO Q126**
99 Left blank **→SKIP TO Q126**

IF HOUSEHOLD INCOME <$100,000 [Q124(01)], ASK:

Q124A. Which category best represents your household's total annual income? **(OPTIONAL.)**

1 less than $20,000
3 $20,000 - $29,999
4 $30,000 - $39,999
5 $40,000 - $59,999
6 $60,000 - $79,999
7 $80,000 - $99,999
98 Prefer not to answer
99 Left blank

IF HOUSEHOLD INCOME $100,000 OR MORE [Q124(02)], ASK:

Q124B. Which category best represents your household's total annual income? **(OPTIONAL.)**

1 $100,000 - $119,999
2 $120,000 - $139,999
3 $140,000 - $159,999
4 $160,000 - $179,999
5 $180,000 - $199,999
6 $200,000 to $249,000
7 $250,000 or more
98 Prefer not to answer
99 Left blank

EVERYONE:

Thank you very much for your time and cooperation!

Q126. The Metropolitan Washington Council of Governments is offering a drawing for fifty $250.00 Amazon gift cards for residents who respond to the survey by the response date noted on the postcard. If you would like to participate in the drawing, please provide your name and email address, so we can send you the card if you are one of the winners. Please be assured that we will not sell or use your information for anything other than sending you the gift card. **(OPTIONAL.)**

01 Yes, please include my name in the drawing
02 No, I do not want to participate in the drawing
99 Left Blank

Q127 Please provide your name and email address so we can contact you if you are one of the winners.

First Name:
Last Name:
Email Address:

98 I've changed my mind; I do not want to participate in the drawing.

Thank you for taking the time to complete this survey.

APPENDIX D – COMPARISON OF KEY SOC RESULTS
2022, 2019, 2016, 2013, and 2010

Commute Patterns

- **Current mode split** – Percentage of weekly commute trips (including CWS and TW days)

	2022	2019	2016	2013	2010
DA/Motorcycle/taxi/ridehail	41.2%	58.3%	61.0%	65.8%	64.2%
Carpool	1.7%	4.4%	5.0%	6.5%	6.9%
Vanpool	<0.1%	0.2%	0.4%	0.2%	0.1%
Bus	2.5%	5.9%	4.9%	4.7%	5.7%
Metrorail	4.8%	16.6%	14.3%	11.6%	13.5%
Commuter Rail	0.5%	1.6%	0.9%	1.0%	1.0%
Bike/walk/scooter	1.7%	3.3%	3.3%	2.2%	2.3%
Compressed work schedule	0.5%	1.7%	1.1%	1.0%	0.6%
Telework	47.1%	8.0%	9.1%	7.0%	5.7%

- **Regular mode use** – Percentages of weekly "on the road" commuter trips (excluding telework/CWS)

	2022	2019	2016	2013	2010
DA/Motorcycle/taxi/ridehail	78.4%	64.6%	67.9%	71.5%	68.5%
CP/VP	3.3%	5.1%	6.0%	7.3%	7.5%
Bus	4.8%	6.5%	5.5%	5.1%	6.0%
Train	10.2%	20.2%	16.9%	13.7%	15.5%
Bike/walk/scooter	3.3%	3.6%	3.7%	2.4%	2.5%

- **Average length of commute**

	2022	2019	2016	2013	2010
Distance	16.7 mi	17.1 mi	17.3 mi	16.0 mi	16.3 mi
Time	37 min	43 min	39 min	36 min	36 min

- **Work compressed schedules**

	2022	2019	2016	2013	2010
No	89%	88%	93%	93%	94%
Yes	11%	12%	7%	7%	6%
9/80 compressed schedule	5%	6%	4%	3%	4%
4/40 compressed schedule	4%	4%	2%	3%	2%
Other compressed schedule	2%	2%	1%	1%	---

- **Carpool/Vanpool occupancy**

	2022	2019	2016	2013	2010
Carpool/slug	2.3	2.6	2.5	2.4	2.5
Vanpool	N/A*	7.7	7.5	10.8	7.6

*Insufficient sample to calculate average vanpool occupancy in 2022.

- **Access mode to rideshare/transit modes**

	2022	2019	2016	2013	2010
Picked-up at home	13%	9%	12%	16%	10%
Drive to driver's home	1%	2%	10%	10%	10%
Drive to central location	21%	30%	16%	19%	18%
Another pool/dropped off	3%	5%	3%	2%	3%
Walk	45%	38%	40%	34%	35%
Drive CP/VP	2%	1%	5%	6%	11%
Bus/transit	13%	14%	12%	13%	12%
Other	2%	1%	2%	0%	1%
Average access distance (mi)	**2.6 mi**	**2.8 mi**	**2.8 mi**	**2.9 mi**	**2.6 mi**

Commute Changes, Ease of Commute, and Commute Satisfaction

- **Length of time using current alternative modes** – commuters who use alternative modes

	2022	2019	2016	2013	2010
1 – 11 months	28%	23%	18%	16%	18%
12 – 24 months	21%	24%	22%	17%	11%
25 – 36 months	9%	10%	9%	8%	11%
37 – 60 months	14%	13%	16%	16%	13%
More than 60 months	28%	30%	34%	43%	47%
Average duration (months)	**56**	**62**	**72**	**90**	**83**

- **Motivations to start using current alternative modes** – commuters who used alternative modes.

	2022	2019	2016	2013	2010
Save money/gas price too high	11%	16%	14%	16%	18%
Save time	6%	14%	12%	12%	10%
Changed jobs	21%	12%	14%	18%	15%
Moved residence	20%	12%	4%	10%	7%
No parking / parking expense	3%	9%	4%	6%	4%
Convenient / close to work	9%	9%	4%	5%	8%
Avoid congestion	2%	7%	6%	5%	4%
Employer/worksite moved	4%	5%	8%	6%	4%
Employer offered transit subsidy	---	5%	1%	3%	4%
No vehicle available	7%	4%	11%	11%	10%
Flexibility, need car	3%	4%	1%	---	2%
Found carpool partner	2%	3%	3%	5%	8%
Tired of driving	1%	2%	3%	2%	5%
Get exercise	3%	2%	3%	1%	3%
Avoid stress	1%	2%	3%	3%	1%
Concerned about environment	2%	2%	---	1%	3%
Reliability	2%	---	---	---	---
Reduce coronavirus exposure	4%	---	---	---	---
Coronavirus (not specific)	4%	---	---	---	---

- **Commute easier, more difficult, or same as one year ago** – all regional commuters

	2022	2019	2016	2013	2010
Easier	24%	15%	16%	17%	12%
More difficult	50%	28%	22%	23%	25%
About the same	26%	57%	62%	60%	63%

- **Satisfied with trip to work** – all regional commuters

	2022	2019	2016	2013	2010
Rating of 1 – not at all satisfied	8%	11%	9%	6%	7%
Rating of 2	12%	13%	10%	10%	9%
Rating of 3	28%	26%	23%	20%	22%
Rating of 4	26%	28%	27%	28%	24%
Rating of 5 – very satisfied	26%	22%	31%	36%	38%

- **Personal benefits of alternative mode use** – commuters who use alternative modes for commuting

	2022	2019	2016	2013	2010
Save money/receive subsidy	32%	32%	33%	39%	55%
Get exercise, health benefit	20%	12%	13%	10%	----
Less traffic, avoid traffic	17%	19%	6%	2%	4%
Save time, faster	14%	18%	7%	5%	---
Avoid stress/relax	14%	29%	22%	26%	17%
Use time productively	13%	20%	18%	17%	17%
Convenient/easy	11%	8%	---	---	---
No need to park	10%	8%	2%	0%	---
Flexible option	5%	5%	---	---	---
Reliable/arrive at work on time	5%	3%	10%	11%	5%
Reduce wear/tear on car	4%	6%	3%	7%	11%
Have companionship	4%	3%	7%	7%	10%
No need for car	3%	3%	8%	7%	6%
Help environment/save energy	3%	6%	3%	5%	15%
Reduce greenhouse gas	1%	2%	3%	2%	4%
Use HOV lane	1%	1%	2%	2%	5%
Arrive at work on time	--	3%	10%	11%	5%

Telework

- **Telework incidence in region** – all commuters (workers who are not self-employed and working only at home)

	2022	2019	2016	2013	2010
% regional commuters who telework	66.1%	34.7%	32.0%	26.5%	25.0%
Home-based teleworkers	96%	98%	98%	99%	97%

- **Employer telework programs –** all regional commuters + FT teleworkers

	2022	2019	2016	2013	2010
Employees with formal program	50%	34%	30%	30%	29%
Employees with informal TW	21%	27%	23%	21%	25%
No telework program at work	29%	39%	47%	49%	46%

- **Potential for additional regional telework –** all regional commuters

	2022	2019	2016	2013	2010
Non-TW (percent of commuters)	34%	65%	68%	73%	75%
Job tasks allow TW ("could TW")	12%	31%	27%	29%	30%
Interested in TW ("could and would TW")	9%	25%	18%	18%	21%

- **Telework frequency** – teleworkers

	2022	2019	2016	2013	2010
Less than 1 day per month	1%	17%	17%	17%	22%
1 – 3 times per month	4%	24%	25%	26%	30%
1 day per week	6%	27%	23%	25%	19%
2 days per week	14%	18%	15%	11%	12%
3 or more times per week	75%	14%	20%	21%	17%
Mean (days per week)	**3.4**	**1.2**	**1.4**	**1.4**	**1.3**

- **Length of time teleworking** – teleworkers

	2022	2019	2016	2013	2010
Less than one year	9%	17%	12%	14%	16%
One to two years	72%	24%	24%	27%	22%
More than two years	19%	59%	64%	59%	62%

- **How learned about telework** – teleworkers (multiple responses permitted)

	2022	2019	2016	2013	2010
Program at work/employer	55%	79%	73%	73%	71%
Word of mouth	8%	8%	9%	7%	5%
Initiated request on my own	---	3%	10%	17%	15%
Commuter Connections/COG	**1%**	**7%**	**9%**	**10%**	**6%**
Did not use any of these sources	32%	---	---	---	---

Awareness/Attitudes Toward Transportation Options

- **HOV/Express/Toll Lane availability and use** – all regional commuters

	2022	2019	2016	2013	2010
With HOV lane on route to work	31%	34%	30%	29%	30%
Use HOV lanes (if available)	29%	32%	34%	34%	27%
With Express/Toll Lane on route	26%	18%	15%	---	---
Use Express/Toll Lanes (if available)	54%	44%	53%	---	---
Ave time saving – one-way trip (min)	16 min	19 min	20 min	24 min	23 min

- **Park & Ride awareness and use** – all regional commuters

	2022	2019	2016	2013	2010
Know locations of P&R lots	31%	32%	38%	38%	45%
Used P&R in past year	3%	7%	6%	7%	9%

- **Reasons for not riding bus or train** – commuters who did not use bus or train in past three years

	2022	2019	2016	2013	2010
No train service, don't know service	7%	24%	55%	69%	---
No bus service, don't know service	5%	30%	41%	49%	31%
Transit schedule limited/not convenient	12%	---	---	---	---
Transit not available (general)	19%	---	---	---	---
Coronavirus pandemic (general)	4%	---	---	---	---
Trips takes too much time	26%	35%	25%	20%	32%
Need car for work	7%	12%	7%	7%	11%
Need car before or after work	4%	10%	7%	5%	9%
Trip too long – distance too far	2%	6%	5%	6%	8%
Work schedule irregular	6%	6%	5%	5%	10%
Bus unreliable/late	6%	3%	5%	4%	3%
Too expensive	6%	3%	5%	4%	5%
Don't like riding with strangers, prefer to be alone	1%	7%	4%	2%	4%
Have to transfer	1%	5%	3%	4%	4%
Didn't feel safe	2%	4%	---	2%	2%
Buses/trains uncomfortable/crowded	1%	1%	---	2%	2%
Commute too short/prefer to walk	7%	2%	3%	5%	5%
Prefer to drive/want freedom/flexibility	14%	3%	3%	4%	4%
Prefer other alternative mode	---	1%	2%	---	---
Health reasons	---	3%	---	---	---

- **Reasons for not carpooling/vanpooling** – commuters who did not CP or VP in past three years

	2022	2019	2016	2013	2010
Don't know anyone to CP/VP with	26%	32%	43%	47%	45%
No CP/VP services/options at work	9%	---	---	---	---
Don't know how to arrange CP/VP	5%	---	---	---	---
Coronavirus pandemic (general)	5%	---	---	---	---
Work schedule irregular	12%	17%	18%	23%	28%
Prefer to use transit/more convenient	5%	9%	5%	3%	---
Close to transit/close to work	6%	7%	6%	5%	6%
Not feasible/practical, not interested	---	5%	---	2%	2%
Not convenient	5%	5%	2%	---	2%
Don't like riding with strangers, prefer to be alone	5%	5%	6%	4%	6%
Need car for emergencies	---	5%	10%	---	3%
Need car before or after work	4%	5%	8%	7%	11%
Need car for work	4%	5%	7%	8%	10%
Carpool partners could be unreliable/late	2%	4%	3%	3%	2%
Takes too much time	2%	2%	6%	5%	5%
Doesn't save time	---	1%	4%	3%	2%

Advertising/Messages

- **Heard, seen, or read commute advertising in past year** – all respondents (includes both commuters and respondents who work at home/telework from home full-time)

	2022	2019	2016	2013	2010
Yes	27%	45%	54%	55%	58%
Ad messages recalled					
Metro cleaning, coronavirus safety	9%	---	---	---	---
Carpool/vanpool	8%	12%	4%	4%	5%
Use bus/train, Metro	7%	15%	13%	15%	14%
Other general WMATA/Metro	7%	---	---	---	---
WMATA service improvements	6%	---	---	---	----
Other local transit service	3%	---	---	---	----
Call CC, CC web site	3%	5%	7%	4%	4%
Transit schedule changes/road closures	3%	3%	1%	1%	1%
Ride bike to work / bike issues	2%	2%	2%	1%	1%
GRH	1%	5%	6%	5%	9%
Telecommuting	1%	0%	1%	2%	2%
New buses/trains coming	---	3%	9%	7%	6%
Be alert/See something, say something	---	3%	---	---	---
Uber/Lyft/Via ad	---	2%	---	---	---
Regional commute services available	---	2%	2%	1%	1%
HOT/Express lanes	---	2%	5%	7%	---
Capital Bikeshare ad	---	1%	2%	1%	---
You can call for CP/VP info	---	1%	8%	8%	11%
HOV lanes	---	1%	5%	6%	3%
It would help the environment	---	1%	2%	3%	6%
It reduces traffic	---	1%	2%	3%	4%
It saves money	---	1%	2%	2%	5%
It saves time	---	1%	2%	2%	2%
Employer give financial incentive	---	1%	2%	1%	2%

- **Attitudes/actions after hearing/seeing commute ads** (respondents who remembered ads)

	2022	2019	2016	2013	2010
More likely to consider RS/transit	17%	18%	25%	25%	24%
Took actions to change commute	34%	21%	10%	9%	19%
Advertising encouraged action taken (of respondents who took action)	35%	43%	61%	84%	83%

- **Actions after hearing/seeing commute ads** (all commuters regionwide)

Actions taken					
Sought commute info (internet, family, commute organization, other source)	3.6%	4.7%	1%	1%	2%
Tried alt mode	1.9%	2.7%	1%	2%	1%

- **Awareness and use of regional commute info phone/web site** – all respondents

	2022	2019	2016	2013	2010
Know regional number/web site	32%	32%	53%	62%	66%

- **Know of CC** (prompted or unprompted) – all respondents

	2022	2019	2016	2013	2010
Yes – unprompted	---	---	---	3%	2%
Yes – prompted	40%	48%	61%	62%	64%

Employer Services

- **Employer offers parking services** – all non-self-employed commuters

	2022	2019	2016	2013	2010
Free on-site parking (all employees)	69%	60%	64%	63%	63%
Free on-site parking (some employees)	6%	5%	6%	N/A	N/A
Free off-site parking	1%	1%	1%	2%	2%
Employee pays full parking charge	22%	28%	24%	23%	22%
Employer pays part of parking charge	3%	5%	5%	7%	7%
CP/VP parking discount (when parking is not free)	6%	9%	14%	14%	16%

- **Employer offers TDM services** – all non-self-employed commuters

	2022	2019	2016	2013	2010
Employer offers any services	56%	60%	55%	57%	61%
Discount/free transit pass	43%	45%	37%	38%	45%
Information on commute options	23%	26%	27%	28%	26%
Bike/ped facilities or services	23%	22%	23%	24%	24%
Preferential parking for CPVP	15%	17%	21%	21%	21%
Carpool financial incentive	10%	8%	8%	7%	7%
GRH	9%	10%	12%	13%	14%
Bikeshare	9%	9%	6%	3%	N/A
Carshare	6%	7%	5%	4%	N/A

- **Respondent used TDM services** (respondents who have access to services)

	2022	2019	2016	2013	2010
Discount/free transit pass	56%	60%	59%	57%	54%
Information on commute options	34%	39%	30%	34%	33%
Carpool financial incentive	19%	25%	12%	18%	16%
Preferential parking for CPVP	15%	19%	15%	18%	18%
Bike/ped facilities or services	18%	22%	17%	19%	18%
Bikeshare	16%	18%	25%	4%	N/A
GRH	17%	18%	15%	20%	26%
Carshare	15%	15%	15%	15%	N/A

Demographics

- **States of Residence and Employment** – all respondents

Residence	2022	2019	2016	2013	2010
District of Columbia	12%	12%	12%	12%	12%
Maryland	43%	45%	44%	44%	44%
Virginia	45%	43%	44%	44%	44%

Employment	2022	2019	2016	2013	2010
District of Columbia	34%	34%	31%	31%	34%
Maryland	26%	27%	26%	29%	27%
Virginia	37%	36%	39%	37%	37%
Other	3%	3%	4%	3%	2%

- **Employer type** – all respondents

	2022*	2019*	2016	2013	2010
Federal agency	26%	28%	22%	22%	24%
State/local government	10%	10%	11%	12%	12%
Non-profit organization	16%	16%	13%	12%	13%
Private sector	48%	46%	48%	43%	41%
Self-employed*	----	----	6%	11%	10%

*In 2019 and 2022, Self-employed respondents were combined with private sector.

- **Employer size** – all respondents

	2022	2019	2016	2013	2010
1 – 25 employees	21%	19%	27%	27%	25%
26 – 50 employees	9%	11%	11%	10%	8%
51 – 100 employees	11%	10%	10%	11%	11%
101 – 250 employees	14%	14%	13%	13%	13%
251 – 999 employees	18%	19%	15%	14%	16%
1,000 employees	27%	27%	24%	25%	27%

- **Age** – all respondents

	2022*	2019*	2016*	2013	2010
Under 24	5%	5%	9%	5%	4%
25 – 34	27%	29%	25%	12%	13%
35 – 44	24%	24%	23%	22%	24%
45 – 54	22%	22%	23%	31%	31%
55 – 64	16%	15%	15%	23%	22%
65 or older	6%	5%	5%	7%	6%

*In 2016, 2019, and 2022, survey, data were weighted to account for under-representation of respondents under 35 years old and over-representation of respondents 55 and older, compared to U.S. Census American Community Survey (ACS) data. SOC data for previous surveys were not weighted for age.

- **Gender** – all respondents

	2022	2019	2016	2013	2010
Female	51%	52%	49%	55%	56%
Male	49%	48%	51%	45%	44%

- **Income** – all respondents

	2022	2019	2016	2013	2010
Under $30,000	3%	4%	5%	5%	4%
$30,000 – $39,999	4%	2%	4%	3%	4%
$40,000 – $59,999	8%	9%	7%	9%	9%
$60,000 – $79,999	11%	12%	9%	11%	10%
$80,000 – $99,999	11%	12%	8%	8%	9%
$100,000 – $119,999	10%	11%	15%	15%	15%
$120,000 – $139,999	9%	10%	10%	12%	12%
$140,000 – $159,999	8%	10%	10%	11%	10%
$160,000 – $179,999	7%	7%	7%	7%	7%
$180,000 – $199,999	6%	6%	6%	8%	5%
$200,000 or more	23%	17%	19%	11%	15%

- **Race/Ethnicity** – all respondents

	2022	2019	2016	2013	2010
Hispanic/Latino	14%	14%	14%	13%	11%
Non-Hispanic White	43%	43%	45%	50%	53%
Non-Hispanic Black	23%	24%	23%	25%	23%
Asian	15%	15%	13%	10%	10%
Other/Mixed	5%	4%	5%	2%	3%