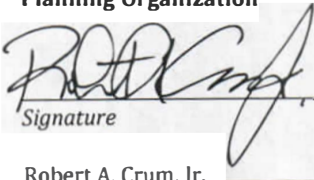


## CERTIFICATION OF THE TRANSPORTATION PLANNING AND PROGRAMMING PROCESS

The Hampton Roads Transportation Planning Organization, Virginia Department of Transportation, and Virginia Department of Rail and Public Transportation hereby certify that the conduct of the metropolitan planning and programming process complies with all applicable requirements as listed below, and that this process includes activities that support the development and implementation of the Long-Range Transportation Plan and associated Regional Conformity Assessment (as applicable), the Transportation Improvement Program and associated Regional Conformity Assessment (as applicable), and the Unified Planning Work Program.

1. 23 U.S.C. 134, 49 U.S.C. 5303, and 23 CFR part 450.336 (a);
2. Sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;
3. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
4. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
5. Section 1101(b) of the FAST Act (Pub. L. 114-357 and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects;
6. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
7. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.* ) and 49 CFR parts 27, 37, and 38;
8. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
9. Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and
10. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

**Hampton Roads Transportation  
Planning Organization**



Signature

Robert A. Crum, Jr.  
Printed Name

Executive Director  
Title

5/8/2023  
Date

**Virginia Department of  
Transportation**



Signature

Christopher G. Hall  
Printed Name

Hampton Roads District Engineer  
Title

5/8/2023  
Date

**Virginia Department of  
Rail & Public Transportation**



Signature

Jennifer DeBruhl  
Printed Name

Director  
Title

5/8/2023  
Date

## ACCOMPLISHMENTS REPORT

The following HRTPO initiatives and accomplishments have been achieved since the previous self-certification in July 2020 through regional transportation planning and programming processes.

### Ongoing Activities:

- 1. Long-Range Transportation Plan (LRTP)** - The Long-Range Transportation Plan (LRTP) is the blueprint for the region's multimodal transportation development and identifies all regionally significant transportation projects for the Hampton Roads metropolitan area. The LRTP has a planning horizon of at least 20 years and is updated every five years to reflect changing conditions such as growth forecasts, anticipated travel demand, advancements in transportation technology, and potential impacts to/from the environment. The public is engaged at every stage throughout the development of the plan. The current 2045 LRTP for Hampton Roads which incorporates the principles of exploratory scenario planning, was approved by the HRTPO Board in June 2021. Since 2021, HRPTO staff has been coordinating with regional stakeholders on the next update to the LRTP, which has a horizon year of 2050. 2045 LRTP efforts are documented on the following HRTPO webpage: ([https://www.hrtpo.org/page/2045-long\\_range-transportation-plan/](https://www.hrtpo.org/page/2045-long_range-transportation-plan/)). Efforts to date related to the 2050 LRTP are documented on this HRTPO website: [https://www.hrtpo.org/page/2050-long\\_range-transportation-plan/](https://www.hrtpo.org/page/2050-long_range-transportation-plan/)
- 2. Transportation Improvement Program (TIP)** - The HRTPO TIP is continually updated to reflect amendments and administrative modifications to the document. In an effort to improve the transparency of the TIP as well as enhance the capability of HRTPO staff to monitor the status of projects in Hampton Roads, staff updated the TIP format in October 2020. The current format significantly improves access to project information, including funding allocations, scheduled obligations, and expenditures. In addition, the TIP website ([www.hrtpotip.org](http://www.hrtpotip.org)) was updated to provide easier access to TIP information with a more robust project information search tool. A full update of the TIP (FY 2024-2027) is scheduled to be approved by the HRTPO Board in May 2023. As a part of the full update, the current TIP website will be completely redone and is scheduled to go live in the late Fall of 2023. Some updates to the TIP website will be the addition of project information for Virginia Department of Rail and Public Transportation (DRPT) projects and all formerly grouped active transportation projects.
- 3. Congestion Management Process** - The Congestion Management Process (CMP) is an on-going process that identifies congested locations, determines the causes of congestion, ranks the most congested segments, and develops transportation strategies to reduce traffic congestion and enhance safety and mobility regionwide. The HRTPO recently produced an update to the CMP Report, with Part I - Introduction and System Monitoring being approved by the HRTPO Board in May 2020. Part II -

System Performance and Part III – Congestion Mitigation were approved by the HRTPO Board in October 2020 and May 2023 respectively.

4. **Roadway Safety** – Because of the impacts that roadway safety has on both the transportation system and the quality of life in Hampton Roads, HRTPO incorporates roadway safety into the transportation planning process. This planning began in earnest in 2000, when HRTPO initiated the Hampton Roads Regional Safety Study. HRTPO released an update to the Hampton Roads Regional Safety Study in 2014. This update introduces previous HRTPO safety planning efforts, reports the recent trends in roadway safety, details the characteristics of crashes in Hampton Roads, specifies the number and rate of crashes for each mile of freeway and approximately 600 of the busiest intersections throughout the region, highlights efforts to improve roadway safety, provides a list of general crash countermeasures, and provides a recommended list of countermeasures for high crash locations. HRTPO is currently updating the Regional Safety Study, with an expected completion date of Summer 2023.
5. **Regional Performance Measures and Targets** – Recent federal legislation requires that States and Metropolitan Planning Organizations (MPOs) prepare and use a set of federally-established performance measures that are tied to national performance goals. Each MPO must set regional targets in the areas of roadway safety, transit asset management and safety, pavement condition, bridge condition, roadway performance, and freight.

Setting HRTPO targets is a collaborative effort. The Transportation Technical Advisory Committee (TTAC) recommends targets for the HRTPO Board to consider. In order to assist the TTAC, the committee formed a Performance Measure Working Group. This Working Group includes staff from localities, transit agencies, VDOT, and subject-matter experts.

The Regional Performance Measures – System Performance Report includes a description of the methodology used to calculate each measure, historical data trends for each of the areas, information on statewide targets, a description of the targets that have been established by the HRTPO, and the progress being made towards meeting the established targets. This report is updated on an annual basis to reflect updated targets as well as progress towards meeting the established targets. The initial System Performance Report was approved by the HRTPO Board in April 2019, and updated versions of the report were approved in July 2020, July 2021, and July 2022.

6. **Operations Strategy** – With the 2004 Hampton Roads Intelligent Transportation System Strategic Plan becoming dated, the HRTPO Board allocated funds in 2014 for an update to the plan. The first phase of the new plan – the Hampton Roads Transportation Operations Strategy – was completed in May 2016. The initial task of the Operations Strategy was to identify the Regional Vision for Transportation System Management and Operations (TSM&O), assess each individual locality’s TSM&O

capabilities, and identify the challenges and opportunities of the localities and the region in developing a TSM&O strategy. In recent years, subsequent reports have been completed based on the Operations Strategy, including Corridors of Regional Significance, Common Controller Standard Migration Assessment for Regional Signal System Operators, and Regional Traffic Operations Center – Expanded Analysis.

7. **Updates to the HRTPO Project Prioritization Tool** – Evaluation criteria for the HRTPO Project Prioritization Tool are based on the current regional vision and can be modified to address changing regional priorities. In 2017, per the direction of the LRTP Subcommittee, HRTPO staff initiated a formal process to review and update the Project Prioritization Tool to incorporate feedback received from regional stakeholders as well as ensure continued alignment with Federal and State planning factors. Recommended enhancements to the Tool were developed through a collaborative process with various HRTPO committees, regional stakeholders, and the public, and were approved by the HRTPO Board in July 2020. The HRTPO Project Prioritization Tool has been used in the development of three LRTPs, two Rural Long Range Transportation Plans (RLRTP), and expanded to evaluate projects for Regional Surface Transportation Program (RSTP) funding. HRTPO project prioritization efforts have been noted as a best practice among peer agencies. More information can be accessed on the HRTPO Project Prioritization webpage: <https://www.hrtpo.org/page/project-prioritization/>
8. **Long-Range Transportation Plan: Scenario Planning** – For the 2045 LRTP, in coordination with the Regional Connectors Study, HRTPO staff applied exploratory scenario planning to analyze several plausible futures and their potential impacts in terms of how the region may grow and on the transportation system. The scenario planning framework was developed in partnership with regional stakeholders and included considerations for various growth and land use scenarios, changes in transportation mode preference and technology, and other factors such as climate change that can affect connectivity, resiliency, and communities across the region. HRTPO exploratory scenario planning efforts have been recognized as a best practice among peer agencies. More information can be accessed on the 2045 LRTP Scenario Planning webpage: <https://www.hrtpo.org/page/2045-long-range-transportation-plan:-scenario-planning/>. Exploratory scenario planning is also being applied in the 2050 LRTP update.
9. **Active Transportation Planning** – HRTPO staff continually work on efforts to help promote and generate discussion on bicycle and pedestrian modes of transportation. This includes providing administrative support for the Active Transportation Subcommittee, providing staff support in the planning of regional trails, researching best practices in the field, producing reports, and maintaining regional bicycle/pedestrian datasets.
10. **Resiliency and Equity Planning** – HRTPO staff continues to enhance tools and explore best practices to improve the consideration of resiliency and equity in the Long-Range Transportation Plan. HRTPO staff continues to work with the US

Department of Transportation Volpe team in the development of their Resiliency and Disaster Recovery Tool Suite. Recent improvements that HRTPO staff are helping to test include analyzing potential impacts to transit and vulnerable communities. HRTPO staff has also partnered with Fernleaf as part of the RISE Resilience Innovations efforts to develop tools/approaches in analyzing the impact of flooding events on vulnerable communities' access to core services. Information and outputs from these efforts will help inform project prioritization and fiscal constraint for the 2050 LRTP.

11. **Regional Connectors Study (RCS)** – The HRTPO kicked-off the Regional Connectors Study in June 2018. The study is focused on Hampton Roads connectivity through the lenses of congestion relief, economic vitality, resiliency, accessibility, and quality of life. Some aspects of the RCS have coordinated with the 2045 LRTP update. Products produced as a part of this effort can be found on the RCS webpage: <https://connectorstudy.org/>
  
12. **Public Participation** – The HRTPO employs a number of strategies to engage the public in the regional transportation planning process, including the HRTPO website, the Community Advisory Committee, Facebook, NextDoor, LinkedIn, and YouTube, special surveys, library outreach, and public meetings. These strategies are documented in the HRTPO **Public Participation Plan**. Specific public participation and communications activities include:
  - a. **Extensive Public Outreach for the LRTP** - includes a variety of methods to inform the public about the LRTP process, solicit feedback and ideas of transportation needs, and facilitate a shared vision for the future of transportation in the region. As part of the 2045 LRTP outreach, HRTPO staff invested extra effort to present transportation-related information in a clear, concise, and engaging format. Wherever applicable, staff utilized various visualization techniques to present information in an easy-to-understand manner to accommodate a wide range of audiences. For detailed information, please refer to the 2045 LRTP Public Involvement Documentation report: [https://www.hrtpo.org/uploads/docs/HR\\_2045LRTP\\_Public\\_Involvement\\_Documentation.pdf](https://www.hrtpo.org/uploads/docs/HR_2045LRTP_Public_Involvement_Documentation.pdf).

As part of the 2050 LRTP update, HRTPO staff plans to enhance its virtual public involvement efforts. Efforts to date include a web-based region-wide survey to assess regional priorities to help inform the plan's vision and goals, and the development of an interactive candidate project portal for residents to submit transportation needs. Other efforts include an updated LRTP Public Involvement Page on the HRTPO website, meetings with various stakeholder and civic groups, and increased social media opportunities to gain input on the 2050 LRTP. Statistics from the initial public involvement efforts include earned media articles reaching hundreds of thousands of viewers, social media ads reaching 9,550 social media accounts with over 1,400 survey visitors and over 600 survey responses.

- b. **Extensive Public Outreach for the FY 2024-2027 TIP** – The HRTPO staff is conducting extensive public outreach during the development of the FY 2024-2027 TIP. Efforts include postings on the HRTPO website, Facebook, NextDoor, and LinkedIn pages; as well as Facebook campaign to help educate the public on the TIP and provide another invitation for comments on the document. In the Facebook campaign – which ran 11,680 times from March 23, 2023 through April 5, 2023 – 330 individuals clicked on the ad and were taken to the HRTPO TIP Education Webpage specifically created for this effort. The Nextdoor posting reaching over 14,000 people. The online document received over 8,000 page visits, a cumulative total of all visitors and pages.
  - c. **Regional Connectors Study Public Outreach** – In coordination with Michael Baker International, HRTPO staff conducted three pop-up information sessions, four open houses in localities along the mandated RCS segments, and one online open house, all geared toward gathering qualitative input from the public on the project.
13. **Title VI, Environmental Justice, and Limited English Proficiency** – The HRTPO strives to assure compliance with the rules and regulations associated with Title VI of the Civil Rights Act of 1964 and subsequent nondiscrimination laws, Executive Order 12898 on Environmental Justice (EJ), and Executive Order 13166 on Limited English Proficiency (LEP). The measures taken by the HRTPO to assure compliance are documented in the HRTPO **Title VI and LEP Plan**. The most recent administrative update to the Plan was approved by the HRTPO Board in January 2023. Specific activities include:
- a. **Development of Title VI/Environmental Justice Methodology** – The HRTPO staff developed a methodology by which a candidate LRTP project could be assessed with respect to potential disparate impacts to on Environmental Justice communities. This process is used to help inform and support the current LRTP planning process and support the project prioritization tool. Some indicators that are currently utilized during this process include the following: elderly populations, disabled populations, populations with a high concentration of LEP individuals, socioeconomic status, minority populations, and households receiving cash and public assistance. The HRTPO team and Title VI Administrator are continually working towards refining this process to ensure its relevance, accuracy, and ability to represent the needs of Hampton Roads residents, with the incorporation of equity frameworks in the HRTPO’s programs and initiatives being a chief consideration.
  - b. **Community Advisory Committee (CAC)** – The HRTPO has been working alongside the CAC to keep members, who are active in their respective localities, informed and engaged in the transportation and planning processes for the region. The members are encouraged to provide feedback and to help

spur innovation within the planning process that better accounts for the everyday needs of Hampton Roads Region. This group is constantly evolving to better meet the purpose of providing a platform for regional community feedback.

- c. **Focus on Community Connection** - The Title VI Administrator, alongside leadership for the HRTPO, is actively looking for ways to further engage with non-governmental organizations (NGOs) and community groups and members to ensure that the residents of Hampton Roads are informed of and are active participants in the planning process. There is a specific focus on ensuring that our communication and engagement processes account for vulnerable and disadvantaged communities and groups. The HRTPO regularly evaluates their workgroups, committees, and planning processes to improve ease of accessibility.

14. **Legislative Agenda** – The HRTPO Board developed and approved a list of legislative priorities for the first time in October 2010, to form the 2011 Legislative Agenda for the purpose of conveying the information to the Virginia General Assembly (GA) for its review, consideration, and approval for the 2011 GA session. The Board has developed and approved a Legislative Agenda every year since.

#### **Special Studies and Other Activities:**

1. **Congestion Mitigation and Air Quality (CMAQ)/RSTP Project Selection Process 2019 (Oct 2020)** – This report summarizes the work of selecting CMAQ and RSTP projects during the 2019 CMAQ/RSTP Project Selection Process.
2. **Unified Planning Work Program 2021 (Oct 2020)** – This report summarizes the HRTPO Fiscal Year (FY) 2021 Unified Planning Work Program (UPWP). The report describes the transportation planning work and associated funding for the Hampton Roads MPA for the period from July 1, 2021 to June 30, 2022.
3. **Historic Triangle Comprehensive Transportation Study (Jul 2020)** – The purpose of this report is to assist James City County, Williamsburg, and York County officials with the transportation sections of their respective Comprehensive Plan updates. This report is broken down into separate sections for current and future conditions in the Historic Triangle. Roadway travel and congestion, safety, commuting patterns, rail, active transportation, public transportation, bridges, freight, air service, and sea level rise/storm surge are all examined in this report.
4. **State of Transportation in Hampton Roads 2020 (Jan 2021)** – This report details the current status of all facets of the transportation system in Hampton Roads. Many aspects of the highway system are highlighted, including roadway usage, bridge conditions, costs of congestion, commuting characteristics, roadway safety, truck data, transit usage, bicycle and pedestrian facilities, highway funding, and operations.

5. **HRTPO Annual Roadway Performance Report 2021 (Oct 2021)** – HRTPO has annually prepared a report detailing average weekday traffic volumes for major roadways in Hampton Roads since 2006. Since 2012, this document has included an analysis of roadway speed data collected by INRIX, and an analysis of peak period roadway congestion levels based on these volumes and speeds.
6. **Gloucester County Transportation Study (Oct 2021)** – This report was prepared by HRTPO to assist Gloucester County officials with their transportation planning efforts, including future updates to their Comprehensive Plan. This report is broken down into separate sections for current and future conditions in Gloucester County. Roadway travel, safety, commuting patterns, public transportation, freight, bridges, active transportation facilities, air service, and resiliency are all examined in this report
7. **State of Transportation in Hampton Roads 2021 (Feb 2022)** – This report details the current status of all facets of the transportation system in Hampton Roads. Many aspects of the highway system are highlighted, including roadway usage, bridge conditions, costs of congestion, commuting characteristics, roadway safety, truck data, transit usage, bicycle and pedestrian facilities, highway funding, and operations.
8. **CMAQ/RSTP Project Selection Process 2020 (Oct 2021)** – This report summarizes the work of selecting CMAQ and RSTP projects during the 2020 CMAQ/RSTP Project Selection Process.
9. **Unified Planning Work Program 2022 (Oct 2021)** – This report summarizes the HRTPO Fiscal Year (FY) 2022 Unified Planning Work Program (UPWP). The report describes the transportation planning work and associated funding for the Hampton Roads MPA for the period from July 1, 2022 to June 30, 2023.
10. **HRTPO Annual Roadway Performance Report 2022 (Oct 2022)** – HRTPO has annually prepared a report detailing average weekday traffic volumes for major roadways in Hampton Roads since 2006. Since 2012, this document has included an analysis of roadway speed data collected by INRIX, and an analysis of peak period roadway congestion levels based on these volumes and speeds.
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12. **Hampton Roads 2045 Long-Range Transportation Plan: Transportation Challenges and Strategies (October 2020)** – This report summarizes challenges related to the transportation system for the region and strategies that are planned or in place to help address these challenges.



13. **Hampton Roads 2045 Long-Range Transportation Plan: Candidate Project Evaluation and Prioritization Report (January 2021)** – This report summarizes the evaluation and prioritization of candidate projects being considered for the 2045 LRTP, utilizing the regional scenario planning framework and updated HRTPO Project Prioritization Tool. Results from this analysis served as a guiding tool in developing regional transportation priorities.
14. **Hampton Roads 2045 Long-Range Transportation Plan: Funding Plan (March 2021)** – This report summarizes the fiscal constraint process, identifying reasonably available transportation revenues that will help to preserve the regional transportation system and support additional investments over the next 20 years to keep people and goods moving as efficiently as possible.
15. **Hampton Roads 2045 Long-Range Transportation Plan: Project Information Guide (March 2021)** – This report provides summarized project information of the fiscally constrained list of projects identified in the 2045 LRTP. This report serves as a resource for project information and to help monitor the implementation of projects in the Plan.
16. **CMAQ/RSTP Project Selection Process 2021 (Oct 2022)** – This report summarizes the work of selecting CMAQ and RSTP projects during the 2021 CMAQ/RSTP Project Selection Process.
17. **Unified Planning Work Program 2023 (Oct 2022)** – This report summarizes the HRTPO Fiscal Year (FY) 2023 Unified Planning Work Program (UPWP). The report describes the transportation planning work and associated funding for the Hampton Roads MPA for the period from July 1, 2023 to June 30, 2024.
18. **Hampton Roads 2045 Long-Range Transportation Plan: Plan Performance (June 2021)** – This report summarizes the forecasted performance of the 2045 LRTP and includes the 2045 forecasted volumes and congestion data developed using the Hampton Roads Regional Travel Demand Model.
19. **Hampton Roads 2045 Long-Range Transportation Plan: Regional Transportation Vision Plan, Unfunded Priorities (June 2021)** – This report includes the unfunded prioritized candidate projects evaluated as part of the LRTP process that are not included in the fiscally constrained 2045 LRTP. These unfunded projects warrant future consideration for inclusion in an amended 2045 LRTP should additional funding be identified.
20. **Hampton Roads 2045 Long-Range Transportation Plan: Public Involvement Documentation (June 2021)** – This report provides an overview of the public involvement activities conducted for the plan and serves as an informational guide for public use.

21. **Hampton Roads 2045 Rural-Long-Range Transportation Plan (July 2022)** – This report is a financially unconstrained vision plan, serving as a blueprint to address the needs of the transportation system for the rural localities of the City of Franklin and Southampton County. The 2045 RL RTP update provides guidance and information to decision makers on which transportation recommendations to advance and helps position the rural localities for SMART SCALE and other potential funding opportunities.
22. **Hampton Roads 2045 Long-Range Transportation Plan: Amendments and Current List of Projects (February 2023 Update)** – this report summarizes amendments to the Hampton Roads 2045 Long-Range Transportation Plan and the current list of projects for the Plan.
23. **Hampton Roads 2045 Long-Range Transportation Plan Story Map** – a visually appealing summary of the Hampton Roads 2045 Long-Range Transportation Plan, which includes interactive maps for the public and stakeholders to learn more about the projects in the plan.
24. **Hampton Roads 2045 Rural Long-Range Transportation Plan Story Map** – a visually appealing summary of the Hampton Roads 2045 Rural Long-Range Transportation Plan, which includes interactive maps for the public and stakeholders to learn more about the projects in the rural vision plan.
25. **Level of Traffic Stress Analysis for the City of Hampton (March 2022)** – this report documents a local case study of the Level of Traffic Stress for bicycle users in the City of Hampton. The report is intended to be used for future analysis and planning for the city and for regional trails.
26. **Hampton Roads Regional Trails Report (October 2022)** – this report serves as a resource for trail planning in the Hampton Roads region. The report provides history, existing conditions, current project status, planned future trails, and level of traffic stress information for regional trails in Hampton Roads.
27. **Procedures for Inter-Agency Consultation for Conformity for Hampton Roads (April 2023)** – this report was produced in partnership with VDOT staff and specifies the procedures for Inter-Agency Consultation for Conformity (IACC) for all amendments and updates to the Hampton Roads Long-Range Transportation Plan and Transportation Improvement Program. The report also includes an overview of the current air quality planning status and regulatory context for the region, key principles for IACC, and detailed key steps for the conformity consultation process and development of Regional Conformity Assessments.
28. **Impact of Trails and Sidewalks on Home Values (Nov 2020)** – The purpose of this report is to estimate the impact of trails on residential property values. With the help of the Project Steering Team, HRTPO staff selected a segment of the Virginia Capital Trail in James City County, obtained house characteristics data and sale data from

James City County, and used a regression model to estimate the impact of the proximity of the Virginia Capital Trail segment in James City County on property values.

29. **Hampton Boulevard Corridor Study (Apr 2021)** – Over recent decades, the citizens and government of Norfolk have been concerned about the interaction of modes—truck, pedestrian, auto, rail—on the heavily used Hampton Blvd corridor, which serves the world’s largest naval base, a major Port of Virginia terminal, a state university, a regional medical center, and multiple neighborhoods. In response to a request from the City of Norfolk, HRTPO staff analyzed the corridor and provided options for reducing trucks, improving safety, mitigating train conflicts, and reducing flooding.
30. **Drive Thru Queue Stacking Requirements of Virginia Cities (Jul 2021)** – In its design standards, the City of Virginia Beach currently requires developers to provide space for ten (10) vehicles in drive-thru queues, regardless of the type of commercial use. Having dealt recently with queues at some fast-food restaurants spilling back into adjacent roadways, and understanding that some cities vary their stacking requirements by commercial use (e.g. fast-food, drug store, bank, etc.), the City asked the HRTPO to research and document other cities’ queue stacking requirements, by commercial use. Localities evaluating the appropriateness of their stacking requirements can use the above research to compare their stacking requirements to those of other cities.
31. **Hampton Roads Gateways (Oct 2021)** – HRTPO staff examined opportunities to improve highway access into and out of Hampton Roads. The study begins by investigating the auto and truck volumes, safety, and congestion of the seven primary gateway highways. Staff completed the study by estimating the costs and benefits of projects proposed for three of the gateways, covering auto and truck trip-making, hurricane evacuation, etc.
32. **Funding of Upgrading Private Roads to VDOT System (May 2022)** – Across Virginia, citizens often call county offices asking that the maintenance of their private road be taken over by VDOT. The cost to upgrade private roads to VDOT standards usually being significant, HRTPO staff researched the options available for funding those improvements and for responding to citizen requests.
33. **Scoring Applications for CMAQ Funding (Oct 2022)** – Since 1993, staff has analyzed the effectiveness of projects proposed for CMAQ funding by estimating their ability to reduce emissions of volatile organic compounds (VOCs), also known as hydrocarbons, and nitrogen oxides (NO<sub>x</sub>). In 2022, HRTPO staff updated its methodology based on research by others, comments by local government staff members, and a federal CMAQ scoring toolkit.
34. **Potential Criteria for Requiring TIAs- a Review of Current Practice (Oct 2022)** – Gloucester County requested research to establish criteria for when a Traffic Impact

Analysis (TIA) should be required in response to a request for rezoning or a conditional use permit. HRTPO staff outlined national, state, and local governments in the Hampton Roads region and other local governments in Virginia guidelines. Gloucester County officials can use this comprehensive review of criteria to develop their criteria for TIA. Other localities can use this study to review their existing criteria.

35. **Planning Deployment of Zero-Emission Bus for WATA (Oct 2022)** – Zero-Emission Bus (ZEB) deployment is one approach to decarbonizing the transportation sector and reducing air pollution. This report reviews: the ZEB deployments in Virginia, WATA’s existing conditions, capital costs and funding, battery-electric bus technology, training, route assignment and future considerations. Finally, the report outlines the HRTPO staff’s recommendations for WATA’s first ZEB deployment and additional deployments.
36. **Preserving Travel Times on US 58 (Dec 2022)** – HRTPO staff analyzed the level of success of the Restricted Crossing U-turn (RCUT) design vs. the Median Acceleration Lanes (MAL) design, finding higher Smart Scale scores for the latter. The HRTPO executive director used this information to coordinate the efforts of VDOT staff and interested elected officials.
37. **Planning Locations for IIJA Community EV Charging Stations (Feb 2023)** – The Infrastructure Investment and Jobs Act (IIJA) includes “Charging and Fueling Infrastructure Grants – Community Charging” that will offer funds to install electric vehicle (EV) chargers in locations on public roads, schools, parks, and in publicly accessible parking facilities. To assist localities in applying for these grants, HRTPO staff produced maps for interested localities showing existing chargers, visitor destinations, and High Impact Environmental Justice (EJ) Block Groups.
38. **Reconnecting Communities Pilot (RCP) (Jun 2022)** – The Infrastructure Investment and Jobs Act (IIJA) includes “Reconnecting Communities Pilot” grants that will offer funds to mitigate and/or reverse the impact of earlier transportation projects which physically divided communities. To assist localities in applying for these grants, HRTPO staff 1) identified projects in the HRTPO 2045 Long-Range Transportation Plan that could reconnect communities, 2) identified divided neighborhoods using a regional long-range plan from 1965, 3) examined the history and current impact of I-664 in downtown Newport News, and 4) used Google Maps to identify neighborhoods divided by railroads.
39. **Extending the Elizabeth River Trail- Cost Model and Cost Estimates (Jul 2023)** – In response to a request from the City of Norfolk, HRTPO staff estimated the costs of the two routes identified by Work Program Architects (for the Elizabeth River Trail Foundation) to redirect and extend the Elizabeth River Trail from Dominion Tower to the western terminus of the Virginia Beach Trail. This report documents the preparation of a trail cost model, the application of that model to the subject routes, and route issues noticed in the process.

40. **Rail Planning (Mar 2023)** – Given the environmental difficulty of improvements to enable the six trains planned at “full [statewide-rail-plan] buildout” for Norfolk to use the Richmond Main Street Station (RVM), HRTPO Staff developed a “shuttle” that would make four round-trips per day between the Peninsula (including Providence Forge) and Richmond, serving both RVM (for downtown origins/destinations) and the Richmond Staples Mill Station (RVR) (for connections to trains to/from the north and trains to/from the south).
41. **LRTP Title VI Environmental Justice Candidate Project Evaluation (July 2020).**
42. **HRPDC/HRTPO/Disadvantaged Business Enterprise (DBE) Manual Update (Jan 2021).**
43. **Administrative Update to Title VI and LEP Plan (Jan 2023).**