



**Northern Virginia Transportation Authority**  
*The Authority for Transportation in Northern Virginia*

**TRANSPORTATION TECHNOLOGY COMMITTEE**

**Wednesday, February 10th, 2021**

**8:30 AM**

**(Electronic Meeting and livestreamed via YouTube)**

**AGENDA**

- I. Call to Order/Welcome** Chairman Snyder

**Action**

- II. Resolution finding need to conduct meeting electronically** Chairman Snyder  
*Recommended action: Adoption of resolution*

- III. Approval of meeting minutes, January 13<sup>th</sup>, 2021** Chairman Snyder  
*Recommended action: Approve*

**Discussion/Information**

- IV. Transportation Technology Strategic Plan (TTSP)** Mr. Jasper, Principal Planner

- V. Member Updates**

- VI. NVTA Updates**

**Adjournment**

- V. Adjourn**

**Next Meeting (Electronic)**

*Suggested: Wednesday, March 24th, 8:30am*

**NORTHERN VIRGINIA TRANSPORTATION AUTHORITY**

**TRANSPORTATION TECHNOLOGY COMMITTEE**

**RESOLUTION FINDING NEED TO CONDUCT MEETING BY ELECTRONIC  
COMMUNICATION MEANS DURING GOVERNOR’S DECLARED STATE OF  
EMERGENCY DURING COVID – 19 PANDEMIC**

**February 10, 2021 MEETING ELECTRONICALLY**

February 10, 2021

**WHEREAS**, on March 12, 2020, the Governor of Virginia declared a state of emergency in Virginia in response to the spread of novel coronavirus, or COVID-19, a communicable disease of public health threat as so declared by the State Health Commissioner on February 7, 2020 (“COVID-19”); and

**WHEREAS**, in subsequent Executive Orders, particularly Executive Order Nos. 53 and 55, as amended, the Governor of Virginia, among other measures designed to ensure safe physical distancing between individuals, prohibited public and private in person gatherings of 10 or more individuals and ordered all individuals in Virginia to remain at their place of residence, with limited exceptions, to mitigate the impacts of COVID-19 and prevent its spread; and

**WHEREAS**, the Northern Virginia Transportation Authority (Authority) – Transportation Technology Committee (Committee) finds that it has a responsibility to demonstrate to the public, through the Authority’s conduct, the importance of maintaining proper physical distance from others and to avoid gathering in public where the risks of infection are highest, and to take measures that promote physical distancing in order to protect the public health and mitigate the impacts and spread of COVID-19, including, among others, conducting meetings electronically whenever possible; and

**WHEREAS**, on April 22, 2020, the Virginia General Assembly adopted, and the Governor signed, budget bill amendments to HB 29 that expressly authorize “any public body, including any state, local, [or] regional body” to “meet by electronic communication means without a quorum of the public body . . . physically assembled at one location when the Governor has declared a state of emergency . . . , provided that (i) the nature of the declared emergency makes it impracticable or unsafe for the public body . . . to assemble in a single location; (ii) the purpose of the meeting is to discuss or transact the business statutorily required or necessary to continue operations of the public body . . . and the discharge of its lawful purposes, duties, and responsibilities” among other provisions; and

**WHEREAS**, member jurisdictions of the Northern Virginia Transportation Authority have adopted continuity of government ordinances pursuant to Va. Code Ann. § 15.2-1413 which ordinances, among other provisions, contemplate regional bodies of which the locality is a member meeting electronically to transact business to assure the continuity of government; and

**NOW, THEREFORE, BE IT RESOLVED**, that the Northern Virginia Transportation Authority Transportation Technology Committee hereby finds that meeting by electronic means is authorized because the nature of the declared emergency makes it both impracticable and unsafe for the Committee to assemble in a single location on February 10, 2021, to discuss and transact the business of the Authority listed on the February 10, 2021 Committee Meeting Agenda; and

**BE IT FURTHER RESOLVED**, that the Committee hereby finds that meeting by electronic means is authorized because the items on the February 10, 2021 Committee Meeting Agenda are statutorily required or necessary to continue operations of the Authority and the discharge of the Authority's lawful purposes, duties, and responsibilities; and

**BE IT FURTHER RESOLVED**, that the items on the February 10, 2021 Committee Meeting Agenda are encompassed within the continuity of operations ordinances adopted by member localities of the Northern Virginia Transportation Authority to assure the continued operation of the government during the disaster posed by the public health emergency resulting from COVID-19.

Adopted the 10<sup>th</sup> day of February, 2021.



# Northern Virginia Transportation Authority

The Authority for Transportation in Northern Virginia

**TRANSPORTATION TECHNOLOGY COMMITTEE**  
**Wednesday, January 13th, 2021, 8:30 am**  
Electronic meeting and livestreamed on [YouTube](#)

## SUMMARY NOTES

### I. Call to Order/Welcome

Chairman Snyder

- Chair Snyder called the meeting to order at 8:32 am.
- Attendees:
  - **TTC Members:** Councilmember/Chairman David Snyder (City of Falls Church and Authority Member); Mayor Jeanette Rishell (City of Manassas Park and Authority Member); Jim Kolb (Summit Strategies and Authority Member); Andrew Meese (TPB/MWCOG); Cathy McGhee (Virginia Transportation Research Council); Hari Sripathi (VDOT); Joe McAndrew (Greater Washington Partnership); Martin Walker (Virginia Tech Transportation Institute); Michele Blackwell (Uber); Dr. Richard Mudge (Compass); Dr. Robert Schneider (OmniRide); Sean Schweitzer (FCDOT).
  - **NVTA Staff:** Monica Backmon (Executive Director); Keith Jasper (Principal, Transportation Planning and Programming); Michael Longhi (Chief Financial Officer); Mackenzie Jarvis (Transportation Planner); Ria Kulkarni (Transportation Planner).
  - **Other:** John King (FCDOT).
  - **Others:** On YouTube livestream.

## Action

### II. **Resolution finding the need to conduct meetings electronically**

Chairman Snyder noted that as a result of the COVID-19 and Governor Northam's declaration of a State of Emergency, the Authority's Transportation Technology Committee Meeting was being held electronically. He noted that the passage of the amendments to HB 29 (the FOIA Bill) allowed regional bodies such as the Authority, and their committees to conduct business meetings electronically. He added that the meeting by electronic means is authorized because the items on the Committee Meeting Agenda are statutorily required or necessary to continue operations of the Authority. The resolution was approved unanimously.

### III. **Approval of December 4<sup>th</sup>, 2019 meeting**

The meeting summary was approved unanimously, with abstention from members not present. One change, to correct Patricia Happ's employer, was subsequently requested via email and incorporated into the final meeting minutes.

## Discussion/Information

### IV. **Transportation Technology Strategic Plan (TTSP)**

Mr. Keith Jasper, the NVTA Planning and Programming Principal, presented the progress that had been made on development of the Transportation Technology Strategic Plan (TTSP) since the Committee last met, and noted that the process had been delayed, due to the onset of the COVID-19 pandemic.

- He began with an overview of the draft TTSP core materials that were shared with Committee members on December 10<sup>th</sup>, 2020. These included:
  - Two-page descriptions for each of eight strategies. These were developed based previous input and guidance from TTC members, who recommended that the Plan be needs-driven and explore how technology can help or hinder the goals set forth in TransAction, NVTA's Long Range Transportation Plan. The strategies are:
    1. Reduce Congestion
    2. Maximize access to jobs, employees and housing
    3. Maximize cybersecurity and maximize privacy for members of the public
    4. Minimize potential for Zero Occupancy Vehicles
    5. Develop pricing mechanisms that manage travel demand and provide sustainable travel options
    6. Maximize the potential of physical and communication infrastructure to serve existing and emerging modes
    7. Enhance regional coordination and encourage interoperability in all systems
    8. Create a network of charging infrastructure, for use by private and fleet vehicles
  - Descriptions of three core values. Here Mr. Jasper expressed appreciation to other NVTA Committees that helped clarify NVTA's thinking on address Core Values, and ensure everything NVTA does is mindful of them.
    1. Safety
    2. Equity
    3. Sustainability
  - Identification of nine potential roles NVTA may take on in regard to transportation technologies. These include roles for Authority Members and staff, as well as shared roles.
    1. Funding (Authority Members)
    2. Policy (Authority Members)
    3. Advocate (Authority Members)
    4. Champion (Shared Role)
    5. Facilitate (Shared Role)
    6. Stakeholder (Shared Role)
    7. Planning (Staff)
    8. Outreach/ Education (Staff)
    9. Observer (Staff)
- Next, Mr. Jasper went over the outline of the draft TTSP and how it had been expanded/adjusted since the first round of review materials were provided to the Committee, and feedback received. He explained that content for

additional sections of the plan had also been drafted, to provide context for the core content. This included most of the sections covered in the outline, with the key exception being the Action Plan, which would include implementation plan, schedule, process and assignments of responsibilities, as well as an approach to measuring progress. Mr. Jasper indicated that NVTAs Staff would be working on the Action Plan in the next couple of weeks, after ensuring that the Plan approved of the progress and direction of materials drafted hereto.

- Mr. Jasper shared a table that demonstrates how the nine roles identified for NVTAs may apply to each of the eight strategies.
  - He noted the importance of “Observer”, as a foundational role. However, it is only specifically called out when NVTAs role will not go beyond observation for the time being, due to stature and/or resources.
  - The “Planning” role is identified for many of the Plan’s strategies, as there is a goal for the TTSP to interact directly with TransAction. NVTAs Long Range Transportation Plan is updated on a 5-year cycle, the current iteration of which launched one year ago with a Public Listening Session and is currently ramping up with an ongoing procurement process to bring a consultant team on board. NVTAs Staff hopes to progress the TTSP to the point of approval of the Authority in spring of this year, after which it would become available to the TransAction consultant team, to integrate into the Long-Range Plan.
    1. Chairman Snyder asked Mr. Jasper to elaborate on the significance of TransAction, driving home the point that this is more than a theoretical or academic exercise. To that end, Mr. Jasper explained that the Authority cannot fund any projects that are not included in the TransAction, and thus that arranging the TTSP to flow into TransAction will enable it to impact future funding.
    2. Chairman Snyder requested contextualization of the level of funding provided/available through TransAction. Mr. Jasper explained that the Authority had allocated 10 years of regional (70 percent) revenues, accounting for two and a half billion dollars, through the TransAction and associated Six Year Program processes. An estimated additional one billion dollars will be allocated to member jurisdictions over the same period, using local distribution (30 percent) revenues, which are used at the sole discretion of NVTAs nine member jurisdictions.
    3. Mr. Jasper indicated that it is the goal that the next update of TransAction will be adopted by November 2022.
  - Mr. McAndrew asked who the champion of this [TTSP] effort would be, and how we avoid elements like cyber security and privacy, from falling through the cracks.
    1. Mr. Jasper explained that the last iteration of TransAction included recommendations regarding technologies and during the process of making those additions, Monica Backmon, the NVTAs Executive Director, realized that we should be much more proactive on technology. She established the TTC as an advisory Committee, to explore how to achieve the associated

benefits and mitigate challenges. As such, this Committee will be the champion of the TTSP.

2. Ms. Backmon added that it was important for membership of the TTC to be diverse, including elected officials, subject matter experts and industry representatives, to create the opportunity to get the most broad buy-in for the TTSP. She expressed a hope that the Committee members would also take the Plan back to their own entities, to further this type of diverse review. She also acknowledges that it was important to seek synergy with other entities, such as the Commonwealth, which can do things NVTA cannot.
  3. Ms. Jarvis added that cyber security and privacy are addressed in the current drafts of the TTSP, but it is the iterative review process underway with this and other NVTA Committees that will be the first step in ensuring things do not fall through the cracks. Additionally, the next step in developing the TTSP will be to create an Action Plan that will include both a review/update cycle and metrics for evaluating progress, making the TTSP a living document that can adapt to future needs.
- Mr. Jasper thanked the Committee members for feedback on the TTSP materials that had been shared prior to this meeting. He indicated that this input, along with feedback received from members of the RJACC (a Committee of staff representatives of NVTA member jurisdictions and regional partners), is currently being incorporated into TTSP materials.
    - Draft TTSP materials will next be worked through NVTA's pattern of institutional review.
    - Mr. Jasper indicated that the NVTA team had been pleased with feedback received thus far and would keep an open mind regarding any additional input (including changes to the number/topics of strategies included in the Plan.)
  - A full draft of the TTSP had been shared with the Committee immediately before this meeting. The draft integrated much of the feedback received but no substantive changes had been made to the core content that was shared with the TTC in early December. Mr. Jasper requested that the Committee members review the new materials and provide any feedback by the end of January.
    - This would facilitate advancing the Plan through the NVTA Committee cycle in February. The draft would be presented to the Technical Advisory Committee (TAC), Planning Coordination Advisory Committee (PCAC), and Planning and Programing Committee (PPC), which is the final filter to harmonize all Committee feedback for the Authority. Staff would also continue to engage the RJACC throughout this process.
    - Ms. Backmon added that we want to get this review from the Committees and do so on a schedule that aligns with the TransAction planning cycle, given that the TTSP will flow into the updated TransAction Plan.

- Ms. Jarvis provided a brief overview of the types of feedback to the TTSP that had been received, which included requests for rewording, explanation of acronyms, and some instances of clarification and/or improved (such as differentiating between “shared vehicles” and “shared occupancy vehicles.”) She described how the feedback was documented in the second round of draft materials and assured the Committee that all input was being duly considered.
  - Mr. Jasper added that the Core Values of the Plan are embedded in the recently adopted Vision Statement for TransAction. To ensure that the TTSP remains consistent with the Long Rang Plan, feedback received on the Core Values may be considered in the TransAction update process instead, and then allowed to flow down to the TTSP.
  - Mayor Rishell expressed concern that the language drafted around the topic of cybersecurity constituted a “feel-good” approach that could be stronger. She did acknowledge the potential legal implications of addressing this topic in the Plan, and thus a need to not overstep, however she still felt that privacy is a factor in “quality of life” and thus the TTSP’s treatment of it should be strengthened.
  - Dr. Mudge said that he liked a lot about the draft materials but that more could have been said about Autonomous Vehicles (AVs.) He advised that there were several private companies working on autonomous private vehicles, transit and local freight and predicted that intercity freight testing would begin in the next year or two. He asserted that the technology would have “non-linear” impacts on both access to jobs and congestion.
    1. Dr. Mudge went on to point out examples of localities taking an active role in setting the parameters of testing, including Michigan and Puget Sound, and expressed hope that Northern Virginia could do the same.
    2. Chairman Snyder mused that, in our context, the question is no longer if AVs will happen, but how will NVTA link them to its Core Values.
      - He noted that there have been concerns about AV safety that have caused a slowing in their development.
    3. Dr. Mudge agreed with the Chairman Snyder regarding concerns about safety, saying that the safety benefits of AVs had been overstated. He then went on to say that AVs could make travel easier for persons who cannot afford to own a car, in regard to equity.
    4. Mayor Rishell advised that while there are some automated features in current vehicles, drivers should remain aware of their driving environment.
      - Chairman Snyder agreed that the leap to fully autonomous vehicles will not happen immediately (though there will be increasing automation), but these technologies are coming and thus should be addressed.
    5. Cathy McGhee agreed with Dr. Mudge, that there will be more autonomy in the transportation system. She explained that VDOT is working to understand what that will mean in terms of infrastructure and is seeking to be as supportive as possible.

- She highlighted several pilots and tests in the Commonwealth, including active test beds in Northern Virginia and a recent expansion of the SMART Road, which is a closed test track at the Virginia Tech Transportation Institute (VTTI.) This facility creates opportunities for researchers to test AVs in different lighting and weather conditions.
  - The test beds in NOVA have been expanded to live roads, including I-66, Routes 29 and 50 and Gallows Road. This is made possible through the installation of RSUs (Roadside Units.)
  - VDOT has had a number of AV related projects over the last 10 years, including exploring how AVs will interact with emergency services.
  - Chairman Snyder asked how the SMART Road can contribute to evaluating impacts on congestion and/or safety.
    - Ms. McGhee said she would like to see the use of V2V (Vehicle to Vehicle) and V2I (Vehicle to Infrastructure) technologies to evaluate/further these benefits, through things like speed harmonization. However, she noted, success of this will depend on public acceptance.
    - Dr. Mudge agreed but said that private companies will not wait for that type of connectivity to happen and will deploy without it.
    - Ms. McGhee agreed but reaffirmed her assertion that safety and capacity would be enhanced by such connectivity.
    - Dr. Mudge responded saying that he does not disagree, and that it will take a thoughtful public sector approach to make that possible.
6. Mayor Rishell expressed concern that Congress will give AV manufacturers immunity from liability regarding accidents related to their software.
- Ms. Backmon added to Mayor Rishell's point by posing a question: are there any liability/insurance concerns transit providers should take into account when discussing/considering autonomous busses or trains?
    - Chairman Snyder stated that the world of transit insurance is fairly specialized and suggested reaching out to local transit to follow up on this concept. Some agencies may be self-insured.
  - Mr. Jasper suggested, in response to comments from Dr. Mudge and Mayor Rishell, that NVRTA Staff explore what an additional TTSP Strategy focusing on AVs could look like.

1. He noted that VDOT and VTTI are already doing a lot of work on operations and safety, and NVTA would not want to duplicate those efforts. However, there may be an opportunity for NVTA to take a role at the regional scale, concerning implementation and how that would impact end-users and/or the economy.
  - Mr. Jasper committed to working with Dr. Mudge and Ms. McGhee to develop this concept further and explore the benefits of drafting an additional strategy.
- Chairman Snyder and Mr. Jasper discussed next steps for development of the Plan.
  - Mr. Jasper asked Committee members to review the most recently shared materials, and to not only think about what is not in the drafts, but to also consider what may be missing. The deadline for feedback was set at January 27<sup>th</sup>.
  - Chairman Snyder again emphasized the importance of ensuring elements of the Plan are put in the context of the Core Values.
- TTC members agreed to February 10<sup>th</sup> as the date for the next Committee meeting.

V. **Member Updates**

No additional member updates were provided at this time.

VI. **NVTA Updates**

- Ms. Backmon noted the TransAction update was underway and committed to keeping the TTC apprised of progress.
- Mr. Jasper asked the Committee Members to save the date for the upcoming 6<sup>th</sup> Annual Northern Virginia Transportation Roundtable, which is scheduled for Wednesday, March 10<sup>th</sup>.

Chairman Snyder thanked everyone in attendance for their investment of time and expertise. Mayor Rishell thanked Chairman Snyder for his leadership.

**Adjournment**

**b. Adjourn**

The meeting adjourned at 9:48 am.

# Draft Transportation Technology Strategic Plan (TTSP) – Action Plan



*February 10, 2021*



# Recap – Pathway to TTSP Approval

December 2020: Shared draft TTSP 'core content' with TTC and RJACC

- 8 Strategies, 9 NVTA Roles, 3 Core Values

January 2021: Shared draft TTSP (minus Action Plan) with TTC and RJACC

- TTC discussed draft TTSP (full document without Action Plan)
- Comment deadline January 27, 2021

February/March 2021: Expanded review

- Develop draft Action Plan
- Share/discuss draft TTSP with TAC, PCAC, and PPC

April 2021: NVTA consider/approve draft TTSP

May 2021 onwards: Implement Action Plan

- Integrate into TransAction



# Action Plan

- What, When, Who?
- Actions must be traceable to at least one strategy, and include measure(s) of effectiveness;
- Some actions may be triggered by external events, e.g. federal/state legislation, market penetration thresholds;
- Most actions will be initiated by NVTA staff; not all will be implemented by NVTA staff;
- Define a monitoring plan; and
- Define a review and update cycle.



# TTSP Draft Action Plan

## Proposed Structure

- Introduction
- Strategy-Specific Summaries
  - *Overview*
  - *Assumptions Made*
  - *Action Plan*
- Consolidated Actions Table
- Next Steps
  - *Monitoring Progress and Update Cycle*
  - *The Review/Update Process*



# TTSP Draft Action Plan

## Strategy-Specific Summaries

Strategy #\_: TITLE

### Overview

A paragraph describing the predicted time frame in which it will be appropriate to take action, in keeping with the roles described in the draft Transportation Technology Strategic Plan (TTSP), in pursuit of a Strategy.

### Assumptions Made

- Generally, 2 – 5 bullet points.

### Actions

Item	Responsible Party	Trigger Point	Time Frame	Current Status	Actions	Stakeholders	Metric(s) of Success
					•	•	•



Strategy	Action	Immediate				Near Term				Mid Term	Long Term	
		Jan - March, 2021	April - June, 2021	July - Sept, 2021	Oct - Dec, 2021	Jan - March, 2022	April - June, 2022	July - Sept, 2022	Oct - Dec, 2022	2023 - 2025	2026 - 2029	2030 and Beyond
Major NVTA Milestones		TransAction kick-off			Completion of TransAction Phase 1		TransAction adoption		Development of legislative program			
					Development of legislative program	Six Year Program Update FY2022-2027						
1	Reduce congestion	Increase consideration of innovative technologies in TransAction	▶									
		Consider transportation technology and innovation in NVTA procurements										
		Advocate for jurisdictional policies that leverage technology to reduce congestion				▶						
2	Maximize access to jobs, employees and housing	Increase consideration of innovative technologies in TransAction	▶									
3	Maximize cybersecurity and maximize privacy for members of the public	Increase consideration of cyber security and privacy in TransAction	▶									
		Increase consideration of cyber security and privacy in NVTA procurements										
4	Minimize Potential for Zero Occupancy Vehicles	Consider minimization of ZOV Miles Traveled in long-range planning efforts	▶									
		Develop Policies that discourage ZOV Miles Traveled.				▶						
		Advocate for the Commonwealth to provide local jurisdictions the ability to levy fees on autonomous vehicles.				▶			▶			
		Advocate for legislation that limits ZOV miles traveled.				▶			▶			
		Advocate for state entities to continue to provide, and perhaps expand, funding for innovative pilot projects and/or research efforts.										
5	Develop pricing mechanisms that manage travel demand and provide sustainable travel options	Develop and support policy(s) that support technology-based pricing mechanisms				▶						
		Further integrate consideration of pricing mechanisms into planning efforts	▶									
6	Maximize the potential of physical and communication infrastructure to serve existing and emerging modes	Consider preparations for emerging modes and innovations in TransAction	▶									
		Consider preparations for emerging modes and innovations in NVTA procurements										
7	Enhance regional coordination and encourage interoperability in all systems	Increase consideration of interoperability in TransAction	▶									
		Consider the creation of a committee or panel of experts to review procurement documents										
8	Create a network of charging infrastructure, for use by private and fleet vehicles	Increase consideration of EV technology in TransAction	▶									
		Develop and adopt policies regarding EVs and charging infrastructure.			▶				▶			

Key						
▶	▶	▶	▶	▶	▶	▶
TransAction Trigger point	Legislative Trigger Point	External Trigger Point	Possible Trigger Point	Direct Action	Follow Up Action	Potential Follow Up Action



# TTSP Draft Action Plan

## Monitoring Progress and Update Cycle

The TTSP will be reviewed for possible update annually. Typically, the annual review will take place around the anniversary of adoption of the TTSP by the Authority, however, other happenings may trigger the cycle, including:

- Development/adoption of TransAction.
- Adoption or enactment of any new Federal/Commonwealth laws that directly or indirectly pertain to transportation technologies and/or any concept covered within the then-current iteration of the TTSP.
- Relevant actions of NVTA member jurisdictions or other regional bodies.



## Next Steps

- Share draft Action Plan for TTC review and comment by February 19<sup>th</sup> with two-week response deadline.
- The draft TTSP will be presented to the following NVTA Committees, for their initial review, during the February meeting cycle:
  - Technical Advisory Committee (TAC) – 7:00pm on Wednesday, February 17<sup>th</sup>
  - Planning Coordination and Advisory Committee (PCAC) – 6:30pm on Wednesday, February 24<sup>th</sup>
  - Planning and Programming Committee (PPC) – 5:00pm on Monday, March 1<sup>st</sup>
- NoVA Transportation Roundtable – 8:00am on Wednesday March 10<sup>th</sup>
- Next TTC meeting – 8:30am on Wednesday March 24<sup>th</sup> (suggested)



# TTC Feedback Requested

- Thoughts on what you have heard today?
- Beyond NVTA Committees, who should we seek feedback from?
- Are there any related initiatives we should be aware of?
- What level of detail is required for the public-facing versions of the TTSP/Action Plan?
- Suggestions on low-cost visualizations? Examples?



**THANK YOU!**