

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

MEMORANDUM

FOR: Chair Phyllis J. Randall and Members
Northern Virginia Transportation Authority

FROM: Monica Backmon, CEO

DATE: December 3, 2021

SUBJECT: Approval of the Weighting of the Performance Measures for the TransAction Update

1. **Purpose.** To seek Northern Virginia Transportation Authority approval of the weightings of the performance measures for the TransAction update.
2. **Suggested Motion:** *I move Authority approval of the weightings of the performance measures for the TransAction update.*
3. **Background.** The Authority adopted the current version of TransAction, the long-range transportation plan for Northern Virginia, on October 12, 2017. NVTA updates the long-range transportation plan every five years. This TransAction update will occur in three phases, starting with a review of transportation needs and priorities. The consultant team will conduct much of the transportation planning and analytical work in the second of these phases, during winter 2021/2022. In the third phase, the public will have an opportunity to provide comment on the draft plan. Each phase includes differing planning and public engagement activities.

Since summer 2021, over the course of multiple meetings, three NVTA committees have reviewed the goals, objectives and performance measures for the TransAction update. The three NVTA committees are:

- a. Technical Advisory Committee (TAC)
 - b. Planning Coordination Advisory Committee (PCAC)
 - c. Planning and Programming Committee (PPC)
4. The TAC and PCAC are the Authority's Statutory Committees, while the PPC is one of the Authority's Standing Committees, comprising five Authority members.

In the first part of a two-part action process, the Authority approved the proposed goals, objectives, and performance measures (with the addition of a footnote stating that 'HOV may include Transit') for the TransAction update at its meeting on November 18, 2021.

Since then, NVTA staff have worked with the TAC, PCAC, and PPC to develop recommendations for the weightings associated with each of the ten performance measures approved in November 2021. This memorandum describes the importance of, and the approach leading up to, this second part of the two-part action process.

It is important to note that the recommendations provided in the attachment to this memo represent a starting point for discussion among Authority members. The Authority may choose to approve the recommendations as-is or make changes as desired, subject to compliance with the Code of Virginia.

Subject to Authority action, approval of weightings for the ten performance measures will enable the process of updating TransAction to advance from phase 1 to phase 2.

- 5. Development of Weighting Recommendations.** Prior to each committee meeting since the November 2021 Authority meeting, NVTA staff provided guidance on the development of weighting recommendations and requested committee members develop their initial weighting suggestions. NVTA staff collated these initial suggestions at each committee meeting, which then served as the starting point for each committee's deliberations. Each committee in turn developed its recommended weightings for the ten performance measures. NVTA staff did not share recommendations from other committees ahead of each individual committees' actions. (Note: the order of committee meetings was TAC, PPC, and finally PCAC.)

NVTA staff, guided by the Council of Counsels, have ensured that the weighting recommendations are consistent with the intent of the various sections of the Code of Virginia that direct NVTA to give priority to reducing congestion.

Subsequent to the committee meetings, NVTA staff tabulated the recommendations, and calculated two values for each performance measure – the average 'precise' value and a 'rounded' value (rounded to the nearest five percent). Consistent with the weightings used for the current TransAction, rounded values have negligible impact on the overall evaluation compared to precise values but are much easier to communicate to the public.

NVTA staff have focused on facilitating the process of developing weighting recommendations, but not influencing them. Consequently, NVTA staff have not developed weighting recommendations as part of this process, other than from an arithmetical perspective.

- 6. Committee Recommendations.** The TAC and PCAC unanimously recommended weightings for the performance measures at their respective meetings in November/early December 2021. At its meeting in late November 2021, the PPC also recommended weightings for the measures, albeit with one abstention. The attachment provides individual committee recommendations, average weightings, and rounded weightings. The rounded weightings

provided in the attachment represent the starting point for Authority member discussion.

- 7. Discussion.** While there was no expectation that each committee would make identical recommendations, they did nonetheless make similar recommendations. In part, this is due to the number of performance measures (ten), meaning that it was always likely that weighting recommendations would fall into a relatively narrow range between five and fifteen percent. Averaging and rounding the recommendations of the three committees further smoothed the relative weighting recommendations for each performance measure.

Nonetheless, the recommendations (individually and collectively) appear well balanced across the potentially conflicting priorities of different sub-regions within Northern Virginia. While the recommendations are firmly in keeping with NVTAs legislatively mandated charge to reduce traffic congestion, they also demonstrate a clear desire to ‘reward’ projects that support travel choices that go beyond driving alone:

- a. The highest weighted performance measures for each committee were:
 - TAC – A1: Total Person-Hours of Delay in autos (16 percent)
 - PCAC – C2: Access to jobs by car, transit, and bike for EEA populations (15.9 percent)
 - PPC – D1: Quality of access to transit and the walk/bike network (14 percent)
 - b. The lowest weighted performance measures for each committee were:
 - TAC – A2: Total Person-Hours of Delay in transit (6 percent)
 - PCAC – C1: Access to jobs by car, transit, and bike (5.8 percent)
 - PPC – G1: Transportation System Redundancy (5 percent)
 - c. The six performance measures that most closely align with congestion reduction (A1, A2, B1, B2, C1, and G1) attracted a rounded weighting recommendation of 55 percent. Given the mandates on congestion reduction included in HB599 (2012) and HB2313 (2013), this is considered both appropriate and compliant;
 - d. At the same time, the five performance measures that most closely align with improving transit and travel choices (A2, B2, C1, D1, and G1) attracted a rounded weighting recommendation of 50 percent;
 - e. Significantly, the six performance measures that most closely align with NVTAs equity core value (A2, B2, C2, D1, F1, and G1) attracted a rounded weighting recommendation of 60 percent;
- 8.** The evaluation of grouped projects (TransAction) and individual projects (Six Year Program) will use the weighted performance measures. As such, the evaluation process will assess how well each project (or groups of projects) performs under each performance measure. The evaluation will then aggregate these impacts across all performance measures using the approved weights. Most projects will have impacts that will apply to multiple performance measures.

It is noted that for the evaluation of grouped projects in TransAction, the combination of weighted performance measures represents the major quantitative rating approach. However, since TransAction is a geographically and fiscally unconstrained plan, ratings do not commit the Authority to specific project selections. For the evaluation of individual candidate projects for the Six Year Program, the TransAction project ratings derived using weighted performance measures are one of three quantitative analyses, with the others being congestion reduction relative to cost and Long-Term Benefit. Further, the evaluation for the Six Year Program takes account of qualitative considerations such as past performance, external funding, modal/geographic balance, and public comment.

As important as the weighted performance measures are, it is also necessary for a comprehensive blend of regional projects to be included in TransAction. Without this blend of projects, it may be challenging to achieve the desired priorities as expressed by the weighting recommendations. For example, performance measure B2 will ‘reward’ projects that incorporate dedicated or priority treatments for transit passengers. However, if no such projects are included in the TransAction analyses, this performance measure will have no impact regardless of how significant the B2 weighting is.

- 9. Next Steps.** Subject to Authority action on weightings for performance measures, NVTA staff and the consultant team will begin the transition from Phase 1 to Phase 2 of the TransAction update. During Phase 2, the consultant team will incorporate the weighted performance measures into the development of TransAction Project Ratings, consistent with the requirement of HB599 (2012). TransAction Project Ratings are an important analytical component of the TransAction update, and a requirement for NVTA’s funding programs.

Simultaneously, the consultant team will incorporate the weighted performance measures into the evaluation of candidate regional transportation projects submitted for inclusion into NVTA’s FY2022-2027 Six Year Program.

Currently, it is envisioned that the Authority will adopt the FY2022-2027 Six Year Program in July 2022 and the final TransAction Plan in November 2022.

Attachment – Summary of Recommended Weightings for Performance Measures

Attachment: Summary of Recommended Weightings for Performance Measures

In the following table:

- Performance Measures A1, A2, B1, and B2 support the Mobility goal
- Performance Measures C1, C2, and D1 support the Accessibility goal
- Performance Measures E1, F1, and G1 support the Resiliency goal

Performance Measure	Committee Recommendations (percent)			Average (percent)	Rounded (percent)	Rounded by Objective (percent)	Rounded by Goal (percent)
	TAC	PCAC	PPC				
A1: Total Person-Hours of Delay in autos	16	10.7	12	12.9	10*	20	40
A2: Total Person-Hours of Delay on Transit	6	11.8	11	9.6	10		
B1: Duration of Severe Congestion	12	10.2	9	10.4	10	20	
B2: Transit person-miles in dedicated/priority ROW	8	7.5	9	8.2	10		
C1: Access to jobs by car, transit, and bike	10	5.8	9	8.3	10	20	35
C2: Access to jobs by car, transit, and bike for EEA populations	10	15.9	10	12.0	10		
D1: Quality of access to transit and the walk/bike network	12	13.6	14	13.2	15	15	
E1: Potential for safety and security improvements	9	8.0	9	8.7	10	10	25
F1: Vehicle Emissions	8	10.2	12	10.1	10	10	
G1: Transportation System Redundancy	9	6.3	5	6.8	5	5	
	100	100	100	100.2	100	100	100

Notes

- (*) indicates Performance Measure A1 rounded down to 10 instead of up to 15 in order to total to 100
- Transit may include High Occupancy Vehicles (HOV)
- ROW – Right of Way
- EEA – Equity Emphasis Areas (designated by MWCOG/TPB)
- TAC – Technical Advisory Committee
- PCAC – Planning Coordination Advisory Committee
- PPC – Planning and Programming Committee
- ‘Average’ – average weighting for the TAC, PCAC, and PPC
- ‘Rounded’ – average weightings rounded to the nearest multiple of five percent