

**NORTHERN VIRGINIA TRANSPORTATION AUTHORITY**

**Technical Advisory Committee**

**March 19, 2014 at 7pm**

**NVTA Office – 3060 Williams Drive (Suite 510)**

**AGENDA**

- I.      **Call to Order/Welcome** Chair Boice
  
- II.     **Approval of Summary Notes – February 19, 2014**
  
- III.    **Update on Project Selection Process and Nominations** Kanti Srikanth, VDOT
  
- IV.    **Discussion of Potential Initiative** John Mason, Interim Executive Director
  
- V.     **Adjournment**

**Next Meeting**

**Wednesday, April 16, at 7pm**

**NVTA Office**

# NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

## Technical Advisory Committee

February 19, 2014 at 7pm

NVTA Office – 3050 Williams Drive (Suite 510)

### SUMMARY NOTES

#### I. Call to Order/Welcome

Chair Boice

- Chair Boice called the meeting to order at 7:01pm.
- Attendees:
  - ✓ Members: Chair Boice; Doug Fahl (arrived 7:22pm); Meredith Judy (arrived 7:06pm); Chris Tacinelli; Pat Turner; Shangjiang Zhu.
  - ✓ Staff: John Mason (NVTA); Kanti Srikanth (VDOT); Rick Canizales (PIWG); Camela Speer (NVTA).
  - ✓ Visitors: Charles McAndrew; Bob Moore; Valerie Pardo; David Roden; Rob Whitfield.

#### II. Minutes of the January 15, 2014 Meeting

- Ms. Turner moved to approve the minutes of January 15, 2014; seconded by Mr. Zhu. Motion carried with three (3) yeas [with Mr. Tacinelli abstaining as he was not at the January meeting].

#### III. Election of Chair for CY2014

- Mr. Tacinelli moved to nominate Mr. Boice as Chair of the Technical Advisory Committee; seconded by Ms. Turner. Motion passed with three (3) yeas [with Mr. Boice abstaining].

#### IV. Proposed Project Evaluation MOEs and Rating Framework

Kanti Srikanth, VDOT

*(Ms. Judy arrived.)*

- Mr. Srikanth and Mr. Roden presented the VDOT Proposed Project Evaluation MOEs and Rating Framework that is being used to rate projects to develop the Six-Year Plan.
- Mr. Zhu asked for clarification of congestion relief. Mr. Srikanth responded that VDOT will be looking at the impact on a system wide basis.

*(Mr. Fahl arrived.)*

- Mr. Tacinelli asked for clarification of the number of projects that can be evaluated. Mr. Srikanth clarified that more than 40 projects might be submitted to VDOT, but only 40 would be evaluated.

- Mr. Tacinelli asked if the first test is pass/fail. Mr. Srikanth responded that one test is pass/fail, one is quantitative.
- Mr. Fahl asked where the number 40 came from. Mr. Srikanth responded that this is the number VDOT has determined they can afford to do.
- Ms. Turner asked who is paying for the study. Mr. Srikanth responded that VDOT is.
- Mr. Srikanth clarified that the law does not limit projects to coming from any one source.
- Mr. Zhu asked if the law defines “project”. Mr. Srikanth answered no; submissions can be a single project or a package of projects that combine as one multimodal project.
- Ms. Turner asked if an entire corridor can be considered one project. Mr. Srikanth replied yes.
- Mr. Zhu asked if study is this limited to infrastructure projects. Mr. Srikanth answered that this is a transportation initiative, so some transit can be considered. For example, new busses to start a new route could be considered. Old busses to replace busses, probably not.
- Mr. Fahl asked if VDOT is only rating projects that are considered regional. Mr. Srikanth responded that a project must be regional and significant.
- Mr. Roden clarified that technology projects can be considered as well.
- Mr. Zhu asked for clarification of connections in system. Mr. Srikanth answered that there can be many situations that connector roads can be considered significant.
- Mr. Tacinelli suggested the high volume corridor definition is open to interpretation. Mr. Srikanth responded that high volume means high person trips/high volume. Many people traveling in a corridor.
- Mr. Fahl asked how the corridors are defined. Mr. Srikanth responded that it depends on the corridor that the project is on.
- Mr. Fahl suggested that putting an emphasis on emergency mobility is political. Suggested that traffic management techniques be used on I-66 to allow all 6 lanes to be used in one direction.
- Mr. Fahl asked if anyone considered inviting the TAC to sit in on these discussions sooner. Mr. Mason explained that this process was done at an expedited pace and committed to making TAC involved at the right place in the process in the future.
- Mr. Mason clarified that while there are many steps to this approval process, NVTA will still make the final decision as to what NVTA projects get funded with the 70% funds.
- Mr. Tacinelli asked if this is just a briefing; TAC is not being asked for action. Mr. Mason replied that TAC could comment on the process to the NVTA.
- Mr. Zhu asked if the weights for the projects were decided by the stakeholders. Mr. Srikanth responded that a process was used that weighted the input from each stakeholder based on population or ridership. Mr. Roden clarified that it is a blended rating.
- Mr. Zhu asked if projects will be evaluated at a system wide level. Mr. Srikanth clarified that it will be evaluated at a system wide level in Northern Virginia.

- Mr. Tacinelli asked how the 100 score was determined. Mr. Srikanth answered that 100 reduces the most congestion, 0 is no change in congestion.
- Ms. Judy asked for clarification that the projects are scaled against each other, what happens when new projects are added. Mr. Srikanth explained that each rating cycle will be rated against just those projects, ratings will not be redone on already rated projects.
- Mr. Zhu asked if peer review had been done yet. Mr. Srikanth answered that the peer review was done before the stakeholders' review.
- Mr. Srikanth clarified that once the projects are proposed, VDOT will be meeting informally with the peer review group to be sure this is the best method. Mr. Zhu asked if there will be a report from this. Mr. Srikanth replied yes.
- Mr. Srikanth agreed to send website links for VDOT reports to Chair Boice. [Note: Information was provided to TAC members on February 20.]
- Mr. Roden suggested TAC members could be invited to the peer review meeting.
- Mr. Fahl suggested that in 2040 Northern Virginia will not be Northern Virginia as we know it. Outlying suburbs will grow and will have an ever increasing impact on Northern Virginia, as well as creating new external travel through the Northern Virginia region. He expressed concern that the study is not addressing this future increase. Suggested that as we move forward, we map projects so that there can be a better focus on a network. Mr. Roden explained that the study is dealing with the whole COG region, so all through trips will be in this model. However, VDOT will only quantify the impacts inside Northern Virginia.
- Chair Boice asked if NVTA is considering doing what VDOT is doing in considering a larger region. Mr. Srikanth responded that the NVTA is constrained by its mandate as to what projects it can propose and fund. CTB is also proposing projects and are not constrained by the same mandate. Mr. Canizales clarified that VDOT and CTB can look at expanding the region, but NVTA cannot based on the legislation.
- Ms. Turner asked if NVTA will be choosing which projects get funded weighed against their costs. Mr. Mason replied that VDOT will evaluate the projects, then the NVTA will determine what projects are funded. Noted that each of the nine jurisdictions must receive proportionate "benefit" for their contribution in the near future. Mr. Mason commented that definition of "benefit" has not yet been agreed.
- Mr. Mason commented that there is a need to consider a different approach to thinking on a more strategic level. Current process is a "call-for-projects" based approach. Projects lists are generated by the jurisdictions. Suggested that the next plan should take the approach as to what the regional perspective is and what projects support that. Need new methodology as to how project lists are determined.
- Mr. Tacinelli suggested that VDOT could create a report on what was learned from this study and may propose some areas that need help and evaluation in the future. Mr. Mason replied that NVTA is very interested in "lessons learned" from this process.
- Chair Boice suggested that the lessons learned could come to TAC and TAC could be the voice to suggest future improvements to NVTA.

## **V. Proposed Nominations for VDOT Evaluation and Rating Study**

Ric Canizales, PIWG

- Mr. Canizales presented the proposed project nominations from PIWG to the NVTa for the VDOT Evaluation and Rating Study. He highlighted:
  - ✓ Unlike the VDOT study, this is the very beginning of developing the next Six-Year Plan.
  - ✓ This list is only for projects to go to the VDOT study to get evaluated.
  - ✓ PIWG is recommending that transit projects not be included in the VDOT study. Mr. Tacinelli asked why. Mr. Canizales responded that the legislation did not call for it, so transit agencies decided not to put their projects into this first step, since it was not necessary. Mr. Mason clarified that in general transit increases capacity, so does not need to be debated. Also, when this project started, there was concern that there would be more than 40 projects without transit. Mr. Tacinelli suggested that some transit projects should be included to help with lessons learned.
  - ✓ There are 32 projects in the transportation list.
  - ✓ NVTa did a call for projects from jurisdictions and transit agencies. Since this is only a 2 ½ year plan, only projects that could be funded were proposed at this time.
  - ✓ Summarized that in the 2 ½ year period there are currently \$4.3 million in project funding. There is approximately \$800 million in projects to be funded. Chair Boice noted that all projects have been on lists for a while. Mr. Canizales responded yes, and most have been through CLRP.
  - ✓ Project list does include studies as well. Alignments will be presented with studies for VDOT review.
  - ✓ Mr. Fahl noted that the Bi-County Parkway is not on the list.
  - ✓ There is a timeline challenge to create a Six-Year Plan since the VDOT report will not come in until December. Mr. Mason suggested as this process moves along TAC should weigh in as to what projects should be funded.
- Mr. Tacinelli asked if transit projects will not get any attention until December. Mr. Mason suggested that TAC can make a recommendation to NVTa about this for meeting tomorrow evening.
- Ms. Judy asked what the process will be to determine project funding after the VDOT study is done. Mr. Canizales answered that there is a previous project rating system that PIWG and NVTa can use to create the final list. Ms. Judy asked if transit projects will be hurt by not going through VDOT rating process. Mr. Canizales answered he does not believe so. Transit projects will be evaluated in the second round.
- Mr. Boice asked how transit would be evaluated against roads in the VDOT evaluation. Mr. Roden responded the same as roads. Mr. Boice suggested that in order to have a balanced approach to choosing projects, the transit projects need to be in the VDOT study.
- Mr. Tacinelli asked for clarification for 70% versus 30% funding. Mr. Canizales stated that if a project does not get chosen for the 70% funding, a jurisdiction can choose to use its 30% funding.

- Mr. Fahl suggested taking the 2040 plan and submitting it to VDOT as an entire project for evaluation. Chair Boice responded that this is the beginning of the process.
- Mr. Fahl asked what the realistic chance is that all the projects in the 2020 CLRP will be funded. Mr. Srikanth responded that the last time this was analyzed in 2010, revenues showed that all projects could be funded. New study is being done now to determine where funding projections are now.
- Discussion followed to clarify projects in CLRP versus NVTa funding and where some specific projects are, since they are not in the current list to go to VDOT.

## **VI. Committee Comments on Proposed Nominations**

Chair Boice

- Mr. Mason asked if there was consensus to suggest to the NVTa that the transit projects be included in the list of potential projects for VDOT to assess in first step.
- Mr. Zhu asked for clarification of what influence the rating study will have on project selection for funding. Mr. Mason responded that it is a set of scores that will be produced by VDOT, but NVTa will make the final decision and the VDOT study will be used as information.
- Mr. Fahl asked why only 33 projects were proposed, instead of including 40. Mr. Canizales answered that these are the only projects that were proposed by the jurisdictions.
- Ms. Judy suggested that TAC is not happy with the process and NVTa should consider this going forward.
- Mr. Tacinelli suggested that a transit project should be included in the VDOT study and invited discussion about how many and what projects should be included. Mr. Boice suggested nominated projects should be those that are in the CLRP and Transaction 2040. It was also suggested that they should reduce congestion. Mr. Srikanth added that in order to propose a project the transit agency must also project how the project will reduce congestion.
- Discussion followed regarding how many and which transit projects to recommend to VDOT for the study.
- Mr. Mason suggested that the TAC suggest to NVTa that transit projects be included in the VDOT list and not take on which projects.

There was consensus to recommend to NVTa to add transit projects to the VDOT nomination list.

## **VII. Potential Topic(s) for Committee Focus**

All

Discussion suggests that potential topics might include how to define “benefits” or, perhaps, how to look at planning from a more regional perspective.

**VIII. Closing Comments**

Chair Boice

- Meeting adjourned at 9:48pm.

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# **Evaluation and Rating of Significant Transportation Projects in NoVA**

## **Project Selection Model Results**

**Northern Virginia Transportation Authority**

March 13, 2014



# Presentation Overview

- **Project Selection Model Purpose**
- **Project Selection Model (PSM)**
  - **Project Assessment Criteria**
  - **Criteria Weights and Scoring**
  - **Selection Process**
- **PSM Model Results**

## Project Selection Model Purpose

- **Ensure that projects selected for analysis are consistent with:**
  - **CTB Priorities**
  - **Overall intent of the law (study mandate/objectives)**
    - *Evaluate and rate significant transportation projects that reduce congestion and improve mobility during homeland security emergency situations*
    - *Projects should include significant highway, rail, bus, and/or technology investments that reduce congestion*
    - *Priority should be given to projects that most effectively reduce congestion in the most congested corridors and intersections*
- **Help select a finite number of qualified projects for evaluation and rating in this round of the study**

## Project Selection Model (PSM)

- **The Project Selection Model (PSM) implements the legislative requirements using the following overall structure**
- **Tier One – CTB Priority Principles**
  - The project must meet at least one of the six CTB selected priorities to be considered for selection
- **Tier Two – Study Mandates and Objectives**
  - The project is assessed against a set of criteria related to its significance, congestion reduction potential and Homeland Security mobility
- **PSM framework/structure reviewed by NVTa at December 11, 2013 workshop**

## PSM Tier One – CTB Priority Principles

- **Priority principles applied in a regional context**
- **The project must meet at least one of the following CTB priorities**
  - Preserve and Enhance Statewide Mobility through the Region
  - Increase Coordinated Safety and Security Planning
  - Improve the Interconnectivity of Regions and Activity Centers
  - Reduce the Cost of Congestion to Virginia Residents and Businesses
  - Increase System Performance by Making Operational Improvements
  - Increase Travel Choices to Improve Quality of Life for Virginians
- **ALL SUBMITTED PROJECTS MET THIS CRITERIA**

## PSM Tier Two – Study Mandates and Objectives

- **Three categories of criteria:**

- Project Significance

- 5 sub-criteria / attributes – *project type, designated corridors, high travel volume, connects activity centers, connects major facilities*

- Congestion Reduction Potential

- 5 sub-criteria / attributes – *congestion severity, congestion duration, person hours of delay, adds capacity, reduces vehicle trips*

- Homeland Security Mobility

- 1 sub-criteria / attribute – *facility and operational improvements*

- **All quantitative assessments will be based on 2020 Conditions**

- Facilities, volumes, congestion levels, delays, regional activity center sizes, ...

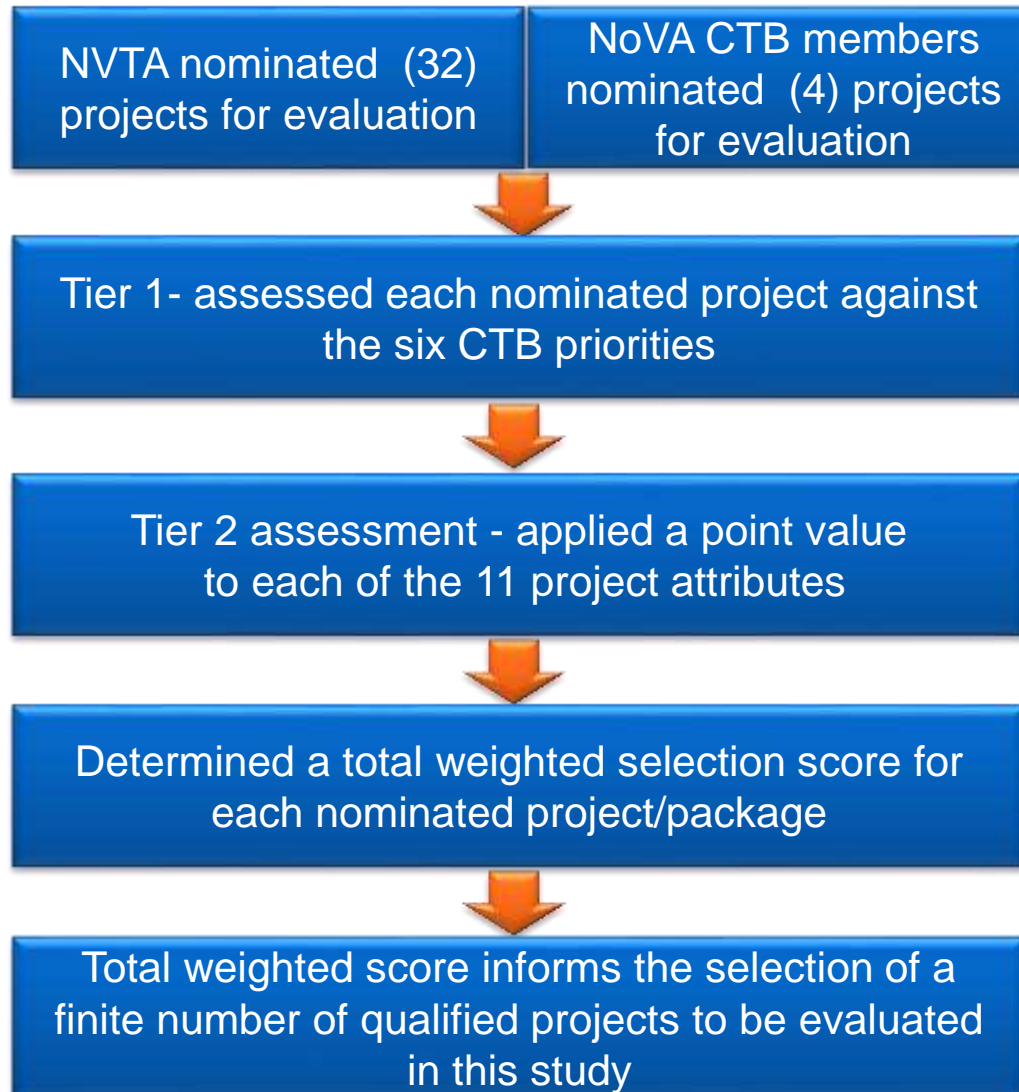
# Project Selection Criteria and Weights

Criteria		NVTA Assigned Weights	Possible Points Value
Project Significance			
	Project Type	3%	0, 100
	Designated Corridor	13%	0, 100
	High Travel Volume	15%	0 to 100
	Connects RACS	16%	0 to 100
	Connects Major Facilities	8%	0, 50, 100
Congestion Reduction Potential			
	Congestion Severity	6%	0, 25, 75, 100
	Congestion Duration	9%	0, 25, 75, 100
	Person Hours of Delay	8%	0, 25, 75, 100
	Adds Capacity	9%	0, 50, 100
	Reduces Vehicle Trips	5%	0, 25, 75, 100
Homeland Security Mobility			
	Facility Improvements	8%	0, 50, 100
		100%	



**Selection Score**

## Project Selection Process



## CTB Nominated Projects

- **Prince William Parkway (Rt. 294) grade separated interchanges**
  - Construct two grade separated interchanges along Prince William Parkway at Minnieville Road and Smoketown Road
  - Project also includes pedestrian improvements
- **Route 7 widening between Reston Avenue and Jarrett Valley Drive**
  - Widen Route 7 from four to six lanes
  - Add shared use paths on both sides of roadway
- **I-395 southbound widening between Duke St. and Edsall Road**
  - Add a fourth through lane on southbound I-395
- **Fairfax County Parkway improvements from I-95 to Route 1**
  - Construct improvements to the Fairfax County Parkway and I-95 interchange
  - Widen the Fairfax County Parkway from four to six lanes between I-95 and US 1
  - Construct grade separated interchanges at the Parkway and US 1 and the Parkway and John Kingman Road



## Project Selection Results

- **36 projects nominated (32 NVTA, 4 NoVA CTB)**
  - 24 roadway improvements/widenings, 1 HOV widening
  - 5 interchange construction
  - 4 intersection improvements
  - 2 ITS projects
- **Tier 1 selection criteria:**
  - All projects submitted met at least one of the CTB priorities
  - 16 met all 6 CTB priorities, 20 met multiple CTB priorities
- **Tier 2 selection criteria:**
  - Project PSM scores ranged from a high of 78 to a low of 24
  - All projects are in designated corridors (COSS, TA2040, SuperNova, SMS)
  - One project affects over 200,000 persons per day, 15 projects affect fewer than 50,000 persons per day
  - 23 projects are within or connect activity centers
  - 27 projects are congested during the peak hour or longer
  - 31 projects add more than 10% to their person moving capacity

## Project Selection Scores

N-01	Columbia Pike	62	N-13	Route 15 Bypass	35	N-25	Main-Maple Purcellville	24
N-02	Rolling Road	53	N-14	Northfax (US 29/50)	46	N-26	Route 7/Battlefield	47
N-03	US 29 Widening	57	N-15	Jermantown/US 50	52	N-27	East Elden Street	42
N-04	Braddock Rd HOV	68	N-16	Frying Pan Road	45	N-28	Route 1 - PW	41
N-05	Van Dorn-Franconia	67	N-17	Kamp Washington	51	N-29	Route 15 Widening	30
N-06	Frontier Dr	48	N-18	Alex. Adaptive Controls	53	N-30	Route 28 Fairfax	67
N-07	Fairfax Co.Pkwy	78	N-19	Glebe Rd ITS	56	N-31	Route 28 - PW	44
N-08	Belmont Ridge	43	N-20	Pohick Road	39	N-32	Godwin Drive	53
N-09	Loudoun Co.Pkwy	61	N-21	Shirley Gate Rd	49	C-1	PW Pkwy Interchanges	46
N-10	Route 7 Bridge	54	N-22	Northstar Blvd	49	C-2	Route 7 Widening	56
N-11	US 1 - Dumfries	48	N-23	Route 7/690 Interchange	28	C-3	I-395 SB Lane	71
N-12	US 1 - Fairfax	54	N-24	Route 234/Grant Ave	30	C-4	Fairfax Co.Pkwy US 1	52
						C-5	Fairfax Co.Pkwy US 1 (Alt)	48

N-# = NVT A Project Number

C-# = NoVA CTB Project Number



*Questions / Comments*

**THANKS!**

Evaluation and Rating of Significant Transportation Projects in Northern Virginia  
Northern Virginia Transportation Authority  
March 13, 2014

Project ID	Project Name
NVTA-1	Columbia Pike Multimodal Streets
NVTA-2	Rolling Road Widening
NVTA-3	US 29 Widening
NVTA-4	Braddock Road HOV Widening
NVTA-5	South Van Dorn St & Franconia Rd Interchange
NVTA-6	Frontier Dr Extension
NVTA-7	Fairfax County Pkwy Improvements
NVTA-8	Belmont Ridge Rd
NVTA-9	Loudoun County Parkwy
NVTA-10	Route 7 Bridge Widening
NVTA-11	US 1 Widening and Relocation - Dumfries
NVTA-12	US 1 Widening - Fairfax
NVTA-13	Route 15 Bypass/Edwards Ferry Road Interchange
NVTA-14	Northfax Intersection Improvements (US29/50 @ VA123)
NVTA-15	Jermantown/US 50 Roadway Improvements
NVTA-16	Frying Pan Road Widening
NVTA-17	Kamp Washington Intersection Improvements (US 50/29 @ VA236)
NVTA-18	Real-Time Adaptive Traffic Control & Data Management System
NVTA-19	Glebe Rd Corridor ITS Improvements
NVTA-20	Pohick Road Widening
NVTA-21	Shirley Gate Road Extension
NVTA-22	Northstar Blvd Extension
NVTA-23	Route 7/690 Interchange
NVTA-24	Route 234/Grant Avenue Reconstruction
NVTA-25	Main St & Maple Ave Intersection Improvements
NVTA-26	Route 7/Battlefield Pkwy Interchange
NVTA-27	East Elden Street Widening
NVTA-28	Route 1 Widening - Prince William
NVTA-29	Route 15 Widening
NVTA-30	Route 28 Widening - Fairfax
NVTA-31	Route 28 Widening - Prince William
NVTA-32	Route 28 - Godwin Drive Extension
CTB-1	Route 294 (Prince William Pkwy) Grade Separated Interchanges
CTB-2	Route 7 Widening
CTB-3	I-395 Southbound Widening
CTB-4	Fairfax County Pkwy. Improvements Between I-95 and Route 1
CTB-5	Fairfax County Pkwy. I-95 to US 1 (County Alternative)

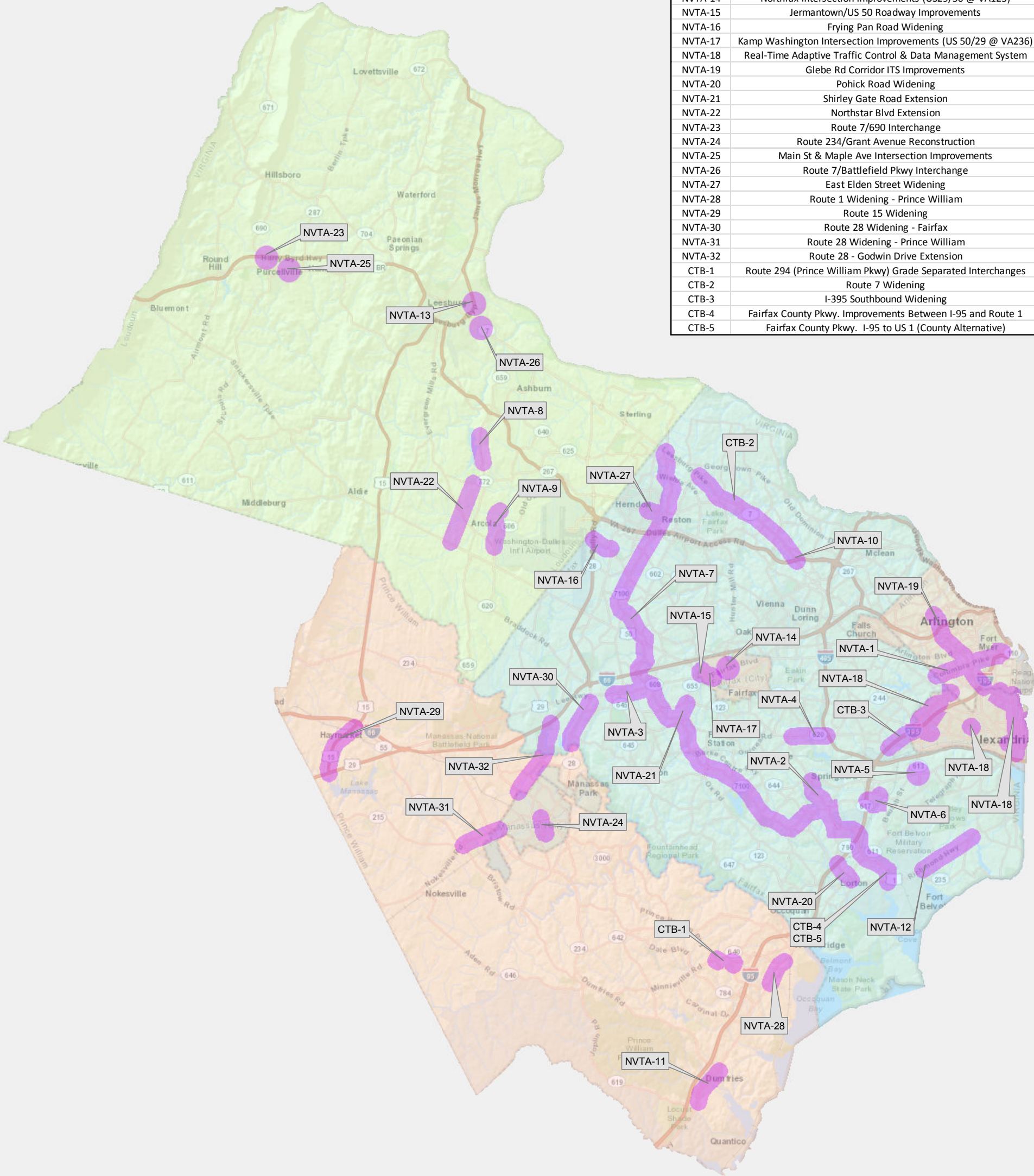
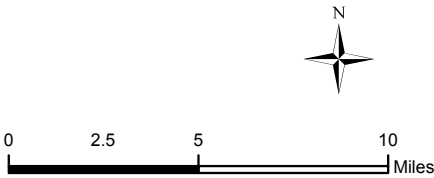


Figure 1  
NoVA Significant  
Projects Ratings Study-  
Projects Nominated for  
Evaluation and Rating

Project Location





**Table 1: NoVA Significant Projects Ratings Study – Summary Project Description and Selection Scores**

Project ID	Project Name	Agency	Project Description	PSM Score
NVTA-1	Columbia Pike Multimodal Streets	Arlington	Improve Columbia Pike with left turn lanes, signalized intersections, bicycle & ped improvements and removal of 2 loop ramps at VA 27 interchange.	62
NVTA-2	Rolling Road Widening	Fairfax County	Widen Rolling Rd from 2 to 4 lanes between Old Keene Mill Rd and Springfield/Franconia Pkwy. Will include pedestrian and bike facilities.	53
NVTA-3	US 29 Widening	Fairfax County	Widen Lee Highway (US 29) from Union Mill Rd to Buckley's Gate Drive including bicycle and pedestrian improvements.	57
NVTA-4	Braddock Road HOV Widening	Fairfax County	Widen Braddock Road to include a HOV lane in each direction from Burke Lake Rd to I-495 and improve bicycle and pedestrian facilities.	68
NVTA-5	South Van Dorn St & Franconia Rd Interchange	Fairfax County	Construct a grade-separated interchange at FranconiaRoad /South Van Dorn St.	67
NVTA-6	Frontier Dr Extension	Fairfax County	Extend Frontier Dr from Franconia - Springfield Pkwy to Loisdale Rd including access to Metro Station.	48
NVTA-7	Fairfax County Pkwy Improvements	Fairfax County	Widening from 4 to 6 lanes of segments of Fairfax County Parkway between Rolling Rd and the Dulles Toll Rd.	78
NVTA-8	Belmont Ridge Rd	Loudoun County	Widen Belmont Ridge Rd (VA 659) from 2 lanes to 4 lanes between Turo Parish Rd and Croson Ln including turn lanes and signalization.	43
NVTA-9	Loudoun County Parkwy	Loudoun County	Construct 4-lane Loudoun County Parkway between Creighton Rd and US 50.	61
NVTA-10	Route 7 Bridge Widening	Fairfax County	Widen VA Route 7 Bridge over Dulles Toll Road from 4 to 6 lanes, including pedestrian/bike facilities.	54
NVTA-11	US 1 Widening and Relocation - Dumfries	Town of Dumfries	Widen US 1 from 2 to 3 lanes in each direction, while relocating southbound US1 to the same alignment as the northbound lanes.	48
NVTA-12	US 1 Widening - Fairfax	Fairfax County	Widen US 1 from 4 lanes to 6 lanes between Napper Rd and Mt. Vernon Memorial Hwy (VA235) in Fairfax County.	54
NVTA-13	Route 15 Bypass/Edwards Ferry Road Interchange	Leesburg	Construct a grade-separated interchange at the Route 15 Bypass and Edwards Ferry Road.	35
NVTA-14	Northfax Intersection (US29/50 @ VA123)	City of Fairfax	Geometric improvements at Route 29/50 at Route 123 including extension of a third NB lane on Route 123 and a dual left turn from SB Route 123.	46
NVTA-15	Jermantown/US 50 Roadway Improvements	City of Fairfax	Geometric improvements at US 50 and Jermantown Rd including addition of a third WB lane to Bevan Lane and widening of NB Jermantown Rd.	52
NVTA-16	Frying Pan Road Widening	Fairfax County	Widen Frying Pan Road to 4 lanes between VA 28 and Centreville Rd.	45
NVTA-17	Kamp Washington Intersection (US 50/29 @ VA236)	City of Fairfax	Geometric and signalization improvements at US 29/50 and VA 236, including addition of a third southbound lane on VA 236.	51
NVTA-18	Real-Time Adaptive Traffic Control & Management	Alexandria	Phase II of the Real-Time Adaptive Traffic Control & Data Management System to monitor congestion in real-time and redirect traffic.	53
NVTA-19	Glebe Rd Corridor ITS Improvements	Arlington	Adaptive Traffic Control System on Glebe Road in Arlington County.	56
NVTA-20	Pohick Road Widening	Fairfax County	Widen Pohick Road from 2 to 4 lanes between Richmond Highway (US1) and I-95.	39
NVTA-21	Shirley Gate Road Extension	Fairfax County	Extend Shirley Gate Road from Braddock Rd to Fairfax County Parkway.	49
NVTA-22	Northstar Blvd Extension	Loudoun County	Extend Northstar Blvd from Evergreen Mills Rd to US 50.	49
NVTA-23	Route 7/690 Interchange	Loudoun County	Construct an interchange at VA 7 and VA 690 in Purcellville.	28
NVTA-24	Route 234/Grant Avenue Reconstruction	Manassas	Reconstruct VA 234/Grant Ave between Lee Ave and Wellington Rd to include wider travel lanes, a dedicated turn lanes, and ped/bike improvements.	30
NVTA-25	Main St & Maple Ave Intersection	Purcellville	Intersection improvements at Maple Ave and Main St in Purcellville, including the addition of dedicated turn lanes.	24
NVTA-26	Route 7/Battlefield Pkwy Interchange	Leesburg	Construct a grade-separated interchange VA 7 and Battlefield Parkway.	47
NVTA-27	East Elden Street Widening	Herndon	Widen East Elden St from Fairfax County Parkway to Van Buren St in Herndon.	42
NVTA-28	Route 1 Widening - Prince William	Prince William	Widen US 1 from 4 lanes to 6 lanes between Featherstone Rd and Marys Way in Prince William County.	41
NVTA-29	Route 15 Widening	Prince William	Widen US 15 from 2 to 4 lanes between US 29 and VA 55, including construction of a new railroad overpass.	30
NVTA-30	Route 28 Widening - Fairfax	Fairfax County	Widen VA 28 from 4 to 6 lanes south of US 29 in Fairfax County.	67
NVTA-31	Route 28 Widening - Prince William	Manassas/PWC	Widen VA 28 from 4 to 6 lanes between Godwin Drive and Linton Hall Rd.	44
NVTA-32	Route 28 - Godwin Drive Extension	Manassas	Extend Godwin Drive north from VA 234 Business to a new interchange with I-66. Also includes grade separation of Godwin Drive at Sudley Rd.	53
CTB-1	Route 294 (PW Pkwy) Grade Separation	NoVA CTB	Construct two grade separated interchanges along VA294 (Prince William Pkwy): at Minnieville Rd and Smoketown Rd.	46
CTB-2	Route 7 Widening	NoVA CTB	Widen VA 7 from 4 to 6 lanes and add shared-use paths between Reston Parkway and Jarrett Valley Dr.	56
CTB-3	I-395 Southbound Widening	NoVA CTB	Add a fourth through lane on southbound I-395 between Duke Street and Edsall Rd.	71
CTB-4	Fairfax County Pkwy - I-95 to US1	NoVA CTB	Improve Fairfax County Pkwy/I-95 interchange, widen from 4 to 6 lanes between I-95 and US 1, and grade-separations at US1 and John Kingman Rd.	52
CTB-5	Fairfax County Pkwy – I 95 to US 1 (County Alternative)	NoVA CTB	Improve Fairfax County Pkwy/I 95 Interchange, intersections at Loisdale Rd. and Terminal Rd., and grade separations at John Kingman Rd. and US 1	48

Table 2: NoVA Significant Projects Ratings Study – Detailed Project Selection Scores

Criteria #		1	2	3	4	5	6	7	8	9	10	11	Total
Project ID	Project Name	Project Type	Designated Corridor	Travel Volume	Connects Activity Centers	Connects Major Facilities	Congestion Severity	Congestion Duration	Person-Hours of Delay	Adds Capacity	Reduces Vehicle Trips	Emergency Mobility	PSM Score
Attribute Weight		3.1%	12.9%	15.2%	16.3%	8.0%	5.7%	9.3%	8.1%	8.9%	4.6%	8.0%	0-100
NVTA-1	Columbia Pike Multimodal Streets	100	100	20	82	100	75	75	25	0	0	100	62
NVTA-2	Rolling Road Widening	100	100	28	0	50	75	100	75	100	0	0	53
NVTA-3	US 29 Widening	100	100	24	67	50	25	25	25	100	0	100	57
NVTA-4	Braddock Road HOV Widening	100	100	45	0	50	100	100	100	100	25	100	68
NVTA-5	South Van Dorn St & Franconia Rd Interchange	100	100	71	0	0	100	100	100	100	0	100	67
NVTA-6	Frontier Dr Extension	100	100	12	25	50	75	75	25	100	0	0	48
NVTA-7	Fairfax County Pkwy Improvements	100	100	43	91	100	75	75	100	100	0	50	78
NVTA-8	Belmont Ridge Rd	100	100	15	0	0	75	100	25	100	0	0	43
NVTA-9	Loudoun County Parkwy	100	100	31	0	50	100	100	100	100	0	50	61
NVTA-10	Route 7 Bridge Widening	100	100	42	25	0	25	75	25	100	0	100	54
NVTA-11	US 1 Widening and Relocation - Dumfries	100	100	32	0	50	25	25	25	100	0	100	48
NVTA-12	US 1 Widening - Fairfax	100	100	24	25	0	75	75	25	100	0	100	54
NVTA-13	Route 15 Bypass/Edwards Ferry Road Interchange	100	100	40	25	0	0	0	0	100	0	0	35
NVTA-14	Northfax Intersection (US29/50 @ VA123)	100	100	41	25	0	75	100	25	50	0	0	46
NVTA-15	Jermantown/US 50 Roadway Improvements	100	100	38	25	0	75	75	25	50	0	100	52
NVTA-16	Frying Pan Road Widening	100	100	15	0	50	75	75	25	100	0	0	45
NVTA-17	Kamp Washington Intersection (US 50/29 @ VA236)	100	100	45	25	0	75	100	25	0	0	100	51
NVTA-18	Real-Time Adaptive Traffic Control & Management	100	100	10	60	100	75	75	25	0	0	50	53
NVTA-19	Glebe Rd Corridor ITS Improvements	100	100	20	64	100	100	75	25	0	0	50	56
NVTA-20	Pohick Road Widening	100	100	17	25	50	25	25	0	100	0	0	39
NVTA-21	Shirley Gate Road Extension	100	100	17	0	50	75	75	75	100	0	0	49
NVTA-22	Northstar Blvd Extension	100	100	17	0	0	75	100	100	100	0	0	49
NVTA-23	Route 7/690 Interchange	100	100	26	0	50	0	0	0	0	0	50	28
NVTA-24	Route 234/Grant Avenue Reconstruction	100	100	6	25	50	0	0	0	50	0	0	30
NVTA-25	Main St & Maple Ave Intersection	100	100	15	0	0	25	0	0	50	0	0	24
NVTA-26	Route 7/Battlefield Pkwy Interchange	100	100	64	25	0	0	0	0	100	0	100	47
NVTA-27	East Elden Street Widening	100	100	17	59	0	25	0	0	100	0	50	42
NVTA-28	Route 1 Widening - Prince William	100	100	42	0	0	0	0	25	100	0	100	41
NVTA-29	Route 15 Widening	100	100	10	0	50	0	0	0	100	0	0	30
NVTA-30	Route 28 Widening - Fairfax	100	100	31	37	100	75	100	75	100	0	50	67
NVTA-31	Route 28 Widening - Prince William	100	100	30	30	50	25	25	25	100	0	0	44
NVTA-32	Route 28 - Godwin Drive Extension	100	100	37	25	50	25	75	25	100	0	50	53
CTB-1	Route 294 (PW Pkwy) Grade Separation	100	100	100	25	0	0	0	25	100	0	0	46
CTB-2	Route 7 Widening	100	100	37	25	100	25	25	25	100	0	100	56
CTB-3	I-395 Southbound Widening	100	100	65	49	50	100	25	100	100	0	100	71
CTB-4	Fairfax County Pkwy - I-95 to US1	100	100	29	57	50	25	25	25	100	0	50	52
CTB-5	Fairfax County Pkwy – I 95 to US 1 (County Alternative)	100	100	29	57	50	25	25	25	50	0	50	48

1 = highway, transit or ITS/TDM    2 = COSS, TA2040, SuperNoVa or SMS    3 = based on persons per day    4 = inside or based on pop+emp of connected RACs    5 = highways, principal arterials, transit station or airports    6 = peak hour travel time or load factor    7 = peak hour, peak period or peak and offpeak periods    8 = based on person hours of delay per mile/day    9 = 10-25% or >25% capacity increase    10 = 5-10%, 10-25% or >25% few vehicle trips    11 = mobility between jurisdictions, radial or reversible capacity or rail transit

# Evaluation and Rating of Significant Transportation Projects in Northern Virginia

## Project Selection Weights

# III.D

December 16, 2013

### *Project Selection Weights*

This memo summarizes the rank ordering of the 11 project selection criteria adopted by the Northern Virginia Transportation Authority (NVTA) on December 12<sup>th</sup>.

#### *Category 1: Project Significance*

##### **1. Project Type**

The project includes a highway, rail, bus, technology or large scale travel demand management investment.

Yes → 100 points

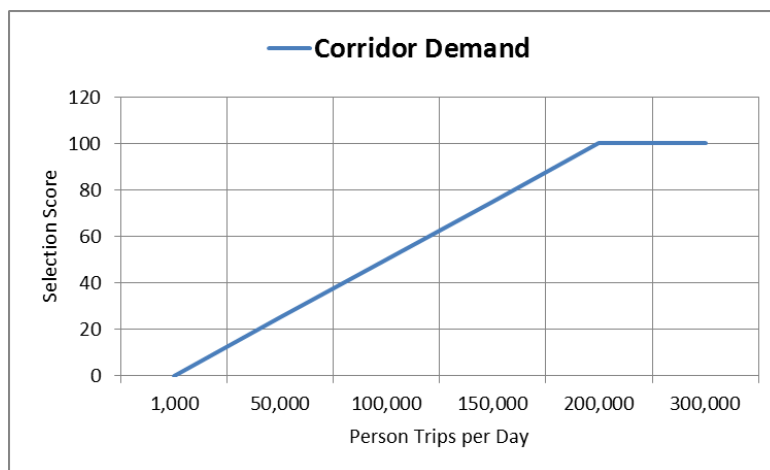
##### **2. Designated Corridors**

The project is on a facility in/near Northern Virginia and included in the Statewide Mobility System, Corridors of Statewide Significance, in a Super NoVA corridor or in a TransAction 2040 corridor.

Yes → 100 points

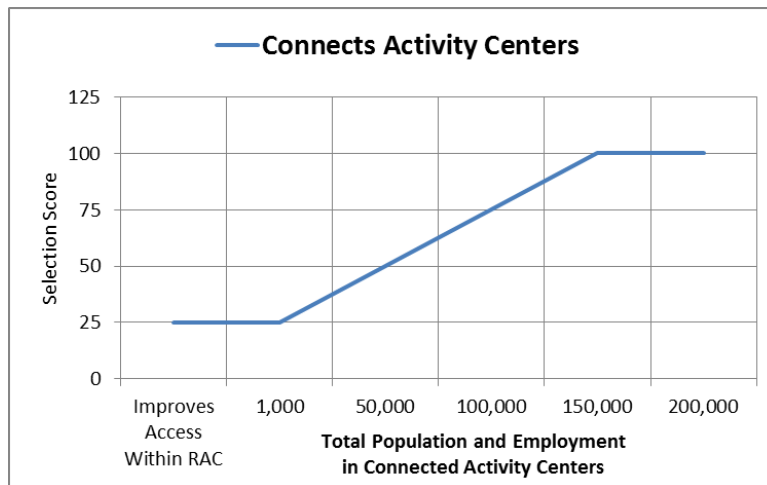
##### **3. High Travel Volume**

The project is in a corridor that serves a high volume of person trips.



##### **4. Connects Regional Activity Centers (RACs)**

The project enhances or expands transit, HOV/HOT or roadway connections between non-contiguous regional activity centers (RACs).



## 5. Connects Major Facilities

The project enhances or completes connections between interstate highways, principal arterials or transit stations, park-&-ride lots and DCA or IAD airports.

Improves or adds one connection → 50 points

Improves or adds two or more connections → 100 points

## Category 2: Congestion Reduction Potential

## 6. Congestion Severity

The project is located in a heavily congested corridor.

Moderate Congestion (peak hour TTI = 1.3-2.0 or Load Factor) → 25 points

Heavy Congestion (peak hour TTI = 2.0-3.0 or Load Factor) → 75 points

Severe Congestion (peak hour TTI > 3.0 or Load Factor) → 100 points

(TTI = travel time index = congested travel time / free flow travel time)

(Load Factor = transit passengers / vehicle seats)

Load Factors	Local Bus	Express Bus	Metrorail	Commuter Rail
Moderate	1.0-1.15	0.9-1.0	100-110 ppc	0.9-1.0
Heavy	1.15-1.3	1.0-1.1	110-120 ppc	1.0-1.1
Severe	> 1.3	> 1.1	> 120	> 1.1

## 7. Congestion Duration

The project corridor experiences moderate to heavy congestion for multiple hours of the day.

Congested during the peak hour only → 25 points

Congested for the whole peak period → 75 points

Congested during peak and off-peak periods → 100 points

## 8. Person Hours of Delay

The project is located in a corridor with significant person hours of delay.

Moderate Delay (100 person hours of delay per mile per day) → 25 points

Substantial Delay (500 person hours of delay per mile per day) → 75 points



Major Delay (1,000 person hours of delay per mile per day) → 100 points

### 9. Adds Capacity

The project adds person moving capacity to a congested location, facility or corridor.

Adds 10% to 25% person moving capacity → 50 points

Adds 25% or more to the person moving capacity → 100 points

### 10. Reduces Vehicle Trips

The project has the potential to reduce vehicle trips on a congested facility or corridor.

Reduce vehicle trips by 5% to 10% → 25 points

Reduce vehicle trips by 10% to 25% → 75 points

Reduce vehicle trips by 25% or more → 100 points

## Category 3: Homeland Security Mobility

### 11. Facility and Operational Improvements

The project improves regional mobility in the event of a homeland security emergency.

Improve mobility between jurisdictions or activity centers → 50 points

Improves radial roadway or bus capacity or reversible capabilities → 100 points

Expands/extends rail transit system → 100 points

## Project Selection Weights

The following weights were assigned to each project selection criteria by NVTa based on the input from stakeholder agency representatives who participated in the December 3<sup>rd</sup> voting process.

Category	Attribute	Category Weights	Attribute Weights	Overall Weights
Project Significance		55.5%		
	Project Type		5.6%	3.1%
	Designated Corridors		23.3%	12.9%
	High Travel Volume		27.3%	15.2%
	Connects Regional Activity Centers		29.3%	16.3%
	Connects Major Facilities		14.4%	8.0%
			100.0%	55.5%
Congestion Reduction Potential		36.5%		
	Congestion Severity		15.6%	5.7%
	Congestion Duration		25.2%	9.3%
	Person Hours of Delay		22.1%	8.1%
	Adds Capacity		24.4%	8.9%
	Reduces Vehicle Trips		12.7%	4.6%
			100.0%	36.5%
Homeland Security Mobility		8.0%		
	Facility and Operational Improvements		100.0%	8.0%
Total		100.0%		