



# 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 NVT A 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, ...

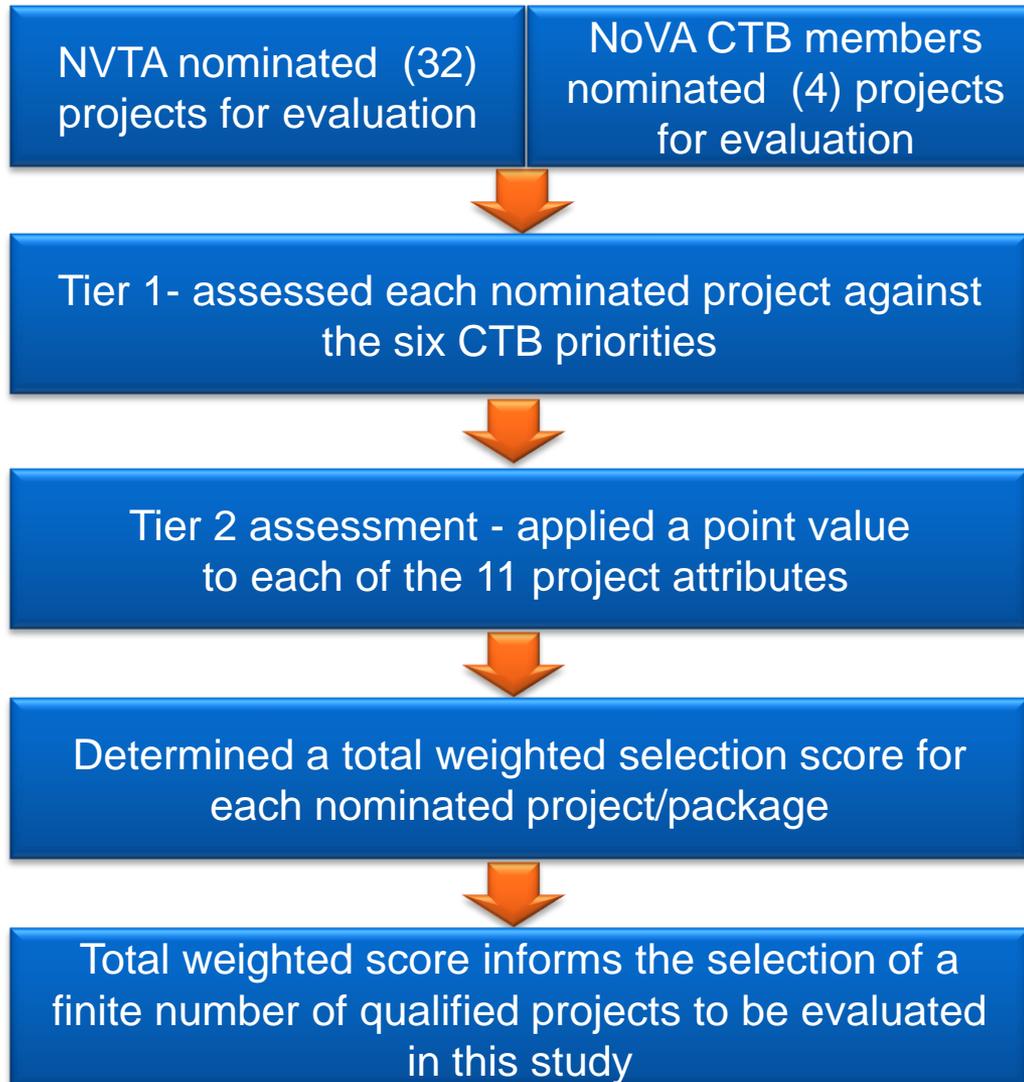
# Project Selection Criteria and Weights

Criteria		NVTA Assigned Weights	Possible Points Value
<b>Project Significance</b>			
	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
<b>Congestion Reduction Potential</b>			
	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
<b>Homeland Security Mobility</b>			
	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

ID	Name	Score	ID	Name	Score	ID	Name	Score
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

N-# = NVTA 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