



Northern Virginia Transportation Authority FY2022-2027 Six Year Program

Northern Virginia ITS/ICM Improvements

Date Submitted: 09/30/2021

APPLICATION #: LDN-023

Route 7 Corridor ITS Implementation Program

Project Description

Loudoun County has been a rapidly-growing leader in various aspects of technology in community and business life and is the fastest-growing County in Virginia. This growth has coincided with a rapid increase in traffic congestion, roadway construction, and a rise in multimodal transportation options. Despite its status as a leader in technology in community and business life, however, Loudoun County lacks baseline technologies to provide improved traffic operations and information to travelers. This Implementation Plan defines a program of projects for the County to achieve this baseline of technology and provide situational awareness to operators and travelers. The following actions are proposed:

- Integrate with Waze via its Connected Citizens Program (CCP) to share information on work zones, road closures, planned events, and incidents.
- Provide additional camera coverage at known bottleneck and high-crash locations.
- Provide overhead and portable message sign deployments for traveler information and alerts.
- Implement systems for monitoring road conditions during severe weather events, including devices for monitoring flooding at known hotspot locations.

- Deploy intelligent safety improvements for bicycles and pedestrians at trail crossings and intersections.
- Deploy smart parking infrastructure at targeted garages, lots, or streets to inform travelers of parking space availability and aid in wayfinding.
- Provide dynamic traveler information displays at transit hubs and activity centers to inform users of travel options and enhance economic development.
- Build out a communication network to support transportation technology, including a County-owned fiber optic network for transportation
- Improve incident management on Route 28, Route 7, and US 50 using County-funded safety service patrols
- Increase use of novel data source for transportation planning, including third-party probe data and smart sensor data.
- Pilot active real-time traffic signal management of an arterial corridor.
- Pilot an autonomous shuttle circulator service in a transit-oriented urban development.
- Establish a Loudoun County Transportation Operations Center (TOC) of appropriate scale to actively monitor and manage the transportation network. This application is specifically directed at the Route 7 Corridor in Loudoun County

Primary Mode(s)	Secondary Mode(s)
Application Number	LDN-023
Primary TransAction ID Number	339
Submitting Jurisdiction/Agency	Loudoun County
Location	Route 7 corridor in Loudoun County from Clarke County to Fairfax County
Requested NVTA Funds	\$2,500,000.00
NVTA Funds Approved	N/A
Previous NVTA Funds Received	\$0.00
Total Cost to Complete Project	\$3,777,000.00

Project Location



Project Milestones

	Study	Design / Engineering / Environmental	ROW and Utilities	Construction	Asset Acquisition
Earlier					
FY21					
FY22					
FY23					
FY24		X			
FY25			X		
FY26				X	
FY27					
Beyond					

Project Funding

Source	Study	Design / Engineering / Environmental	ROW and Utilities	Construction	Asset Acquisition	Total
Total Cost	\$0	\$277,000	\$1,000,000	\$2,500,000	\$0	\$3,777,000
NVTA Funds Applied	\$0	\$0	\$0	\$2,500,000	\$0	\$2,500,000
Local		\$277,000	\$1,000,000	\$0		\$1,277,000
Total Other	\$0	\$277,000	\$1,000,000	\$0	\$0	\$1,277,000
Gap	\$0	\$0	\$0	\$0	\$0	\$0

Project Analysis Highlights

Congestion Reduction Relative to Cost (CRRC) Rating	2,064.26
Congestion Reduction Relative to Cost (CRRC) Rank	1
TransAction Project Rating	20.10
TransAction Project Rank	9
Project's Past Performance (Percentage of expected funds that was reimbursed by 12/31/2021)	N/A
Jurisdiction/Agency's Past Performance on All Projects (Percentage of expected funds that was reimbursed by 12/31/2021)	56 %
Percentage of Total Project Cost Covered by Funds from Sources Other than NVTA	34 %
Local Priority	5
Number of Supporting Resolutions (does not include resolution from applicant's own Board/Council)	0
Number of NVTA-Funded Project(s) Nearby	1
Regional Funds allocated to NVTA-Funded Project(s) Nearby	\$58,000,000