



Northern Virginia Transportation Authority FY2024-2029 Six Year Program

Roundabout at Route 28 and Sudley Rd

Date Submitted: 07/27/2023

APPLICATION #: MAN-003

Project Description

The City's Transportation Master Plan (TMP) recommends replacing the existing signalized intersection at Centreville Road/Sudley Road/Prescott Avenue with a two-lane roundabout. This project is identified as a key transportation project in the Manassas 2040 Comprehensive Plan. The roundabout will have two approach lanes in each direction. There will be two receiving lanes at each exit, with the exception of Prescott Avenue which will have one receiving lane. In addition to the improvement in the Level of Service at this intersection in both peak and off-peak periods, This project is in alignment with NVTAs core values of Safety, Sustainability, and Equity. In terms of Safety, the roundabout will improve pedestrian safety and connectivity between the City's two historic districts. Raised medians will be installed at all four approaches with pedestrian refuge islands and marked crosswalks. Sidewalks will be included in all four quadrants of the roundabout to connect to the City's existing sidewalk network. The roundabout will be effective at reducing: the frequency of angle collisions, crash severity due to reduced vehicle speeds and narrower lane widths, and rear-end crashes due to decreases in stopped vehicles

at the intersection. The roundabout is expected to reduce the total number crashes from 49 to 32, and will also reduce fatalities for all crashes by 35% and injuries by 76% compared to other intersection types. In terms of Sustainability, the roundabout will reduce total daily emissions by 607.042 kg/day of carbon dioxide equivalent and total energy consumption by 7.978 MMBTU. This reduction in emissions is the equivalent of driving 550,000 fewer miles or saving 25,000 gallons of gas in one year. Transportation noise associated with idling, acceleration, and deceleration is also expected to be reduced as full stops are not always necessary when navigating a roundabout, especially during off-peak hours. This creates a more harmonious and serene environment. The roundabout increases resiliency as it will eliminate dependence on electric stoplights. This is crucial during power outages as extreme weather events increase in frequency. The roundabout will help improve access and connectivity to the UVA Health Prince William Medical Center for emergency service vehicles as well as to numerous Equity Emphasis Areas located in the City and surrounding areas. The roundabout will also create an attractive gateway to Downtown Manassas

Primary Mode(s)	Secondary Mode(s)
Application Number	MAN-003
Primary TransAction ID Number	353
Submitting Jurisdiction/Agency	City of Manassas
Location	Intersection of Sudley Road, Prescott Avenue, and Centreville Road (Route 28) in the City of Manassas.
Requested NVTA Funds	\$4,020,000.00
NVTA Funds Approved	N/A
Previous NVTA Funds Received	\$0.00
Total Cost to Complete Project	\$5,495,000.00

Project Location



Leaflet | Tiles © Esri — Source: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012

Project Milestones

	Study	Design / Engineering / Environmental	ROW and Utilities	Construction	Asset Acquisition
Earlier	X	X			
FY23		X			
FY24		X	X		
FY25					
FY26					
FY27					
FY28				X	
FY29					
Beyond					

Year of expected project completion: FY2028

Project Funding

Source	Study	Design / Engineering / Environmental	ROW and Utilities	Construction	Asset Acquisition	Total
Total Cost	\$40,000	\$535,000	\$900,000	\$4,020,000	\$0	\$5,495,000
NVTA Funds Applied	\$0	\$0	\$0	\$4,020,000	\$0	\$4,020,000
NVTA 30%	\$40,000	\$535,000	\$475,000	\$0		\$1,050,000
Other Local			\$425,000			\$425,000
Total Other	\$40,000	\$535,000	\$900,000	\$0	\$0	\$1,475,000
Gap	\$0	\$0	\$0	\$0	\$0	\$0

Project Analysis Highlights

Congestion Reduction Relative to Cost (CRRC) Rating	113.76
Congestion Reduction Relative to Cost (CRRC) Rank	5
TransAction Project Rating	23.34
TransAction Project Rank	13
Project's Past Performance (Percentage of expected funds that was reimbursed by 12/31/2023)	N/A
Jurisdiction/Agency's Past Performance on All Projects (Percentage of expected funds that was reimbursed by 12/31/2023)	100.00%
Percentage of Total Project Cost Covered by Funds from Sources Other than NVTA	26.84%
Local Priority	1
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	\$8,851,639