Envision Route 7
Phase IV Mobility Study
Community Chat

May 16, 2023
Agenda and Format

▪ 7:00 PM – 7:15 PM: Overview of Envision Route 7 Project
  ▪ Project background
  ▪ Overview of BRT
  ▪ Proposed BRT scenarios
  ▪ Analysis of BRT scenarios
  ▪ Next steps

▪ 7:15 PM – 8:00 PM: Q/A at Information Boards
Project Background and Overview
Envision Route 7 Project Overview

- Bus Rapid Transit (BRT) system from Mark Center to Tysons Corner
- Second busiest bus ridership corridor in Northern Virginia (currently at 106% of pre-pandemic ridership)
Envision Route 7 Project Benefits

- Connects **major job centers**
- Provides connection to two **Metrorail Stations** and one **BRT service**
- Improves transit **quality of service**
- Enhanced **access** to transit
Envision Route 7

Project Phases

- **Phase I** identified transit options
- **Phase II** selected BRT as a solution
- **Phase III** developed BRT concept
- **Phase IV** assessed multiple BRT scenarios and their mobility benefits within the City of Falls Church
Envision Route 7
Phase IV:
Study Corridor and Objectives

- 3.5 miles corridor in the City of Falls Church
- Connection to East Falls Church Metrorail Station
- Study objectives:
  - Determine the mobility effects of BRT
  - Facilitate public understanding of BRT
  - Test multiple BRT scenarios
Overview of Bus Rapid Transit (BRT)
Bus Rapid Transit (BRT) Overview

- BRT is a high-capacity and high-quality transit system
- Provides fast and reliable service

Source: Madison Corridor Bus Rapid Transit, SDOT 2015
Bus Rapid Transit (BRT) Overview

Business Access and Transit (BAT) Lanes (Washington, DC)
Off-Board Fare Payment (New York City)
Level Boarding (Eugene, Oregon)
Real Time Info (Minneapolis)
All Door Boarding (Los Angeles)
Proposed Bus Rapid Transit (BRT) Scenarios
Proposed BRT Scenarios

**NO BUILD SCENARIO**

**SCENARIO 1**

**SCENARIO 2**

**SCENARIO 3**

**LEGEND**

- **Study Corridor**
  - Broad St
  - Washington St
  - Washington Blvd
  - Roosevelt St

- **Assumptions**
  - Business Access and Transit Lane
  - Quick Jump

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Business Access and Transit (BAT) Lanes:
Broad Street & West Street, Scenario 1

NOTES
- THIS RENDERING IS INTENDED FOR ILLUSTRATIVE PURPOSES ONLY
- LEFT TURN L  ANES: 10 FEET WIDE 
- BUSINESS ACCESS AND TRANSIT LANES: 11 FEET WIDE 
- TRAVEL L ANES: 11 FEET WIDE 

KEY
BUSINESS ACCESS AND TRANSIT LANES
SHARED BUS / RIGHT TURN LANES
BRT STATIONS

N  0  25  50  75  100 FEET
Queue Jump Lanes and Signals
N Sycamore St. & 19th St. N, Scenario 2

NOTES
- THIS RENDERING IS INTENDED FOR ILLUSTRATIVE PURPOSES ONLY
- TRAVEL LANES: 11 FEET WIDE

KEY
→ QUEUE JUMP
.queue jump signal
BRT STATION

N 0 25 50 75 100 FEET
BAT Lanes with Left Turn Pockets
N. Washington St. & N Westmoreland St., Scenario 3

NOTES
- THIS RENDERING IS INTENDED FOR ILLUSTRATIVE PURPOSES ONLY
- LEFT TURN LANE: 10 FEET WIDE
- BUSINESS ACCESS AND TRANSIT LANES: 11 FEET WIDE
- TRAVEL LANES: 11 FEET WIDE

KEY
- BUSINESS ACCESS AND TRANSIT LANES
- SHARED BUS / RIGHT-TURN LANES

N 0 25 50 75 100 FEET

KEY MAP SHOWING LOCATION OF SCENARIO 3

NORTHERN VIRGINIA TRANSPORTATION COMMISSION
15
Analysis of Bus Rapid Transit (BRT) Scenarios
BRT and Vehicle Corridor Travel Times (minutes)
AM Peak Hour

<table>
<thead>
<tr>
<th>Scenario</th>
<th>NO BUILD SCENARIO</th>
<th>SCENARIO 1</th>
<th>SCENARIO 2</th>
<th>SCENARIO 3</th>
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</thead>
<tbody>
<tr>
<td>AM Peak Hour</td>
<td>16.5 min</td>
<td>15.6 min</td>
<td>16.5 min</td>
<td>15.8 min</td>
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<tr>
<td></td>
<td>12.3 min</td>
<td>13.4 min</td>
<td>12.4 min</td>
<td>11.9 min</td>
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<tr>
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<td>17.2 min</td>
<td>17.3 min</td>
<td>16.1 min</td>
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<tr>
<td></td>
<td>22.8 min</td>
<td>20.2 min</td>
<td>21.1 min</td>
<td>20.8 min</td>
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</tbody>
</table>

**Legend:**
- Bus Corridor Travel Time
- Vehicle Corridor Travel Time

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## BRT and Vehicle Corridor Travel Times (minutes)  
### PM Peak Hour

<table>
<thead>
<tr>
<th>Scenario</th>
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<th>SCENARIO 1</th>
<th>SCENARIO 2</th>
<th>SCENARIO 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRT</td>
<td>19.8 mins</td>
<td>17.0 mins</td>
<td>19.4 mins</td>
<td>18.6 mins</td>
</tr>
<tr>
<td>Vehicle</td>
<td>13.8 mins</td>
<td>16.4 mins</td>
<td>14.0 mins</td>
<td>13.2 mins</td>
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<tr>
<td>Corridor</td>
<td>14.8 mins</td>
<td>16.7 mins</td>
<td>14.8 mins</td>
<td>15.5 mins</td>
</tr>
<tr>
<td>Travel Time</td>
<td>18.4 mins</td>
<td>17.1 mins</td>
<td>18.4 mins</td>
<td>17.8 mins</td>
</tr>
</tbody>
</table>

### Legend

- **Bus Corridor Travel Time**
- **Vehicle Corridor Travel Time**

### Study Corridor Travel Time

- **Eastbound Bus Toward Seven Corners**
- **Westbound Bus Toward Tysons**
- **Northbound Vehicle Toward Seven Corners**
- **Southbound Vehicle Toward Tysons**

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WHERE ARE VEHICLES DIVERTING DURING THE RUSH HOURS?

Note: The vehicle diversion estimates presented in the figures above for Scenario 1 and Scenario 3 are representative of rush-hour traffic volumes. Additionally, they reflect vehicles being diverted in both directions of traffic.
Next Steps

- This study
  - Survey closes June 4
  - Final report expected to be completed in July
  - Study findings are expected to be presented to the NVTC Commissioners in September

- Project next steps
  - Currently scoping final planning and environmental work (planning to start fall/winter 2023)
  - Coordination with stakeholders is ongoing
Thank You.

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https://novatransit.org/programs/route7/