Rolling Road (Rte. 638) Widening Project

From: 0.369 Mile North of Fairfax County Parkway (Route 286)
To: Old Keene Mill Road (Route 644)

State Project No. 0638-029-156, P104, R204, C504; UPC 5559

Public Information Meeting

June 22, 2016
6:30 to 8:30 PM (Presentation at 7 PM)
Meeting Agenda

• Introduction and Project Overview
  Nick Roper, VDOT

• Pedestrian & Bike Facilities
  Tom Biesiadny, Fairfax County

• Conceptual Alternatives
  John Maddox

• Questions and Comments
Project History & Background

- First initiated in 1988
- Project Development initiated early 2000s
- Public Hearing conducted 2008
- Funds removed in 2009 & project put on hold
- Funds restored in 2015; Began Survey & Conceptual Design Fall 2015
- Meetings with Elected Officials & HOA Representatives – May 2016

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Project Purpose & Goals

- Improve safety
- Reduce congestion
- Widen roadway to four lanes
- Reduce right-of-way impacts to adjacent properties
- Provide Pedestrian and Bicycle Facilities
Rolling Road – Existing and Future Traffic Volume vs Capacity

Rolling Road - Traffic Volume Vs Capacity

- Between Hunter Village Dr and Viola St
- Between Taft Dr and Birmingham Ln
- Between Kenwood Ave and Rivington Rd

2014 | 2022 | 2042 | Capacity of a 2-Lane Highway | Capacity of a 4-Lane Highway

VDOT
Project Description

- **Rolling Road Widening Project** – 1.4-mile long roadway

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**Phase 1**

Interim Intersection Improvement

**Phase 2**
Enhancements from 2008 Design

- Reduction in Design Speed from 40 mph to 35 mph
  - Posted Speed Limit 30 mph
- Parking Concept Revised
- Utilities Changed – Located within Typical Section
- More narrow travel lanes
Enhancements from 2008 Design

- Raised Profile of Rolling Road to Minimize Impacts to Driveways
Phasing & Schedule

- Meetings with Homeowners’ Associations – Summer to Early Fall 2016
  - Sign-Up Sheet, if interested
- Design Public Hearing – Anticipated Late Fall 2016
- Right-of-Way Acquisition – Anticipated Spring 2018
  - Anticipated Start of Construction
    - Phase I – Spring 2017
    - Phase II – Spring 2021
  - Total Project Estimate = $36 Million
    - Fully Funded
    - Includes federal funds and is federally eligible
Bicycling and Walking

Federal Highway Administration
- Bicycle & pedestrian needs must be given "due consideration" under Federal surface transportation law
- Decision to not accommodate them should be the exception rather than the rule
- There must be exceptional circumstances for denying bicycle and pedestrian access

VDOT (2004 Commonwealth Transportation Board Policy)
- Presume that highway construction projects shall accommodate bicycling & walking.
- Bicycle and pedestrian accommodations should be provided except where special conditions exist
  - small population, adverse environmental/social impacts, safety, cost, scope, state/federal laws
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Transportation Policy

Comprehensive Plan states need to move people through a multi-modal transportation system

COUNTYWIDE OBJECTIVES AND POLICIES

Objective 1: Provide for both through and local movement of people and goods via a multi-modal transportation system that provides transportation choices, reduces single-occupancy-vehicle (SOV) use and improves air quality.

Policy a. Integrate motorized and non-motorized transportation facilities and services in accordance with transportation elements in the Transportation Plan Map (Figure 1), the Countywide Trails Plan Map (Figure 2), Bicycle Network Map (Figure 3) and the Bicycle Master Plan, chapters 1-4 (Appendix 5).

Policy b. Provide motorized and non-motorized transportation facilities or improvements that best meet county goals as determined by detailed corridor and/or subarea studies. Provide for full public participation in such studies.
Bicycle Master Plan

- Process initiated by Board of Supervisors in 2009
- Final Plan adopted by Board of Supervisors on October 28, 2014
- Plan is a long-term vision of how to improve bicycling in Fairfax County and make it a regular part of the transportation network
Bicycle Master Plan

• Process involved data collection, bicycle advisory committee, stakeholder meetings, and multiple public meetings

• Recommendations include:

  ➢ New facility types
  ➢ Upgrading existing facilities
  ➢ Maintenance strategies
  ➢ Policy recommendations
  ➢ Funding suggestions
  ➢ Performance measures
Bicycle Master Plan – Rolling Road

• Current bike master plan calls for bike lanes on 4-lane section of Rolling Road and sharrows on 2-lane section

• Sharrows not recommended on 4-lane, 35mph roadways

• Based on existing conditions and constraints, not the ultimate based on future road widening
Countywide Trails Plan – Rolling Road

- Current countywide trails plan calls for a paved shared use path along one side of Rolling Road
- Combined with bike plan need for bike lanes on 4-lane, 35mph roadway
- FCDOT recommending separate bike and pedestrian facilities adjacent to one another
On-Road Facilities

- Bicycle Master Plan has long list of facility types with varying range of comfort and protection for bicyclists
- A majority of the implementation of the Bicycle Master Plan has occurred concurrently with VDOT repaving
- In 2015, 35 bicycle lane miles implemented
- Approximately 16 miles will be added in 2016
On-Road Facilities

• Bicycle Lanes; Standard design treatment for bicycle infrastructure. Width and design varies based on roadway placement (next to curb, parking lanes, right turn lanes). The wider the bicycle lane, the higher the level of comfort and more likely it is to be used.
Bicycle Master Plan

• Bicycle Facility Recommendations
  • Off-Road
    • Shared Use Paths
    • Cycletracks or Protected bike lanes

• Shared use paths represent a standard design that VDOT is familiar with: 10’ wide, 8’ buffer

• Cycletracks (can be on-road or off-road) are a new type of facility that is like a shared use path, but only for bicyclists, separate from pedestrian facility 1-way or 2-way
Off-Road Facilities

Fairfax County Parkway Shared Use Path

Cambridge, MA – Off-Road Protected Bike Lane
Bicycle Master Plan

• This section of Rolling Road provides connection to the existing Fairfax County Parkway Trail and future Old Keene Mill bike infrastructure

• Board of Supervisors approved $9.10 million for bike infrastructure on Old Keene Mill (Design starting January 2019)
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• Questions and Comments
Project Description

- **Rolling Road – 1.4-mile long roadway**
  - Segment One: Viola Street to Birmingham Lane
  - Segment Two: Birmingham Lane to Barnack Drive
  - Segment Three: Barnack Drive to Old Keene Mill Road
Existing Conditions

Segment One: Viola Street to Birmingham Lane
ALTERNATIVE A
Raised Median

Segment One
Viola Street to Birmingham Lane

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ALTERNATIVE B
Two-Way Left Turn Lane

Segment One
Viola Street to Birmingham Lane
ALTERNATIVE C
Separated Bike Lanes

Segment One
Viola Street to Birmingham Lane
ALTERNATIVE A
Raised Median

- Median Reduced to 4 Feet

Segment Two
Birmingham Lane to Barnack Drive
ALTERNATIVE B
Two-Way Left Turn Lane

Segment Two
Birmingham Lane to Barnack Drive
ALTERNATIVE C
Separated Bike Lanes

Segment Two
Birmingham Lane to Barnack Drive

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ALTERNATIVES A & B
Raised Median

- Raised Median
- Potential for Noise Walls/Retaining Walls

Segment Three
Barnack Lane to Old Keene Mill Road

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ALTERNATIVE C
Separated Bike Lanes

- Raised Median
- Potential for Noise Walls/Retaining Walls

Segment Three
Barnack Drive to Old Keene Mill Road
Phase I: Interim Improvements at Old Keene Mill Road

- NB Rolling Rd. dual left turn lanes
  - Turning volumes indicate need
  - Utilizes width of existing painted median
- Signal Upgrade
Phase I: Interim Improvements at Old Keene Mill Road

- **Maximum benefits of northbound dual left turn lanes are obtained during the PM peak hour when the traffic volume is highest**
- **Future Traffic Conditions**
  - NB Left Turn Delay is Reduced by 2 min/veh
Phase I & II Corridor Improvements
Travel Time from Viola Street to Old Keene Mill Road Intersections

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Direction</th>
<th>No-Build</th>
<th>Phase I Improvements</th>
<th>Phases I &amp; II Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak</td>
<td>NB</td>
<td>15</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>SB</td>
<td>36</td>
<td>33</td>
<td>28</td>
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<tr>
<td>PM Peak</td>
<td>NB</td>
<td>41</td>
<td>41</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>SB</td>
<td>50</td>
<td>47</td>
<td>30</td>
</tr>
</tbody>
</table>
Vehicle Speeds on Rolling Road Approaching Viola Street

- Average speed on southbound Rolling Road is 34 mph
- Average speed on northbound Rolling Road is 31 mph
- On average, vehicles travel 1-5 mph higher than the posted speed limit of 30 mph
- On southbound Rolling Road, there is a “Watch for Turning Vehicles” warning sign with an advisory speed limit sign of 20 mph in advance of the Viola Street intersection
Speed Profiles on Rolling Road Approaching Viola Street

**Speed Profile of Vehicles Traveling on SB Rolling Rd**

- 85th Percentile Speed = 38.5 MPH
- Average Speed = 34.1 MPH

**Speed Profile of Vehicles Traveling on NB Rolling Rd**

- 85th Percentile Speed = 35.7 MPH
- Average Speed = 31.7 MPH

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## Traffic Signal Warrant Analysis

<table>
<thead>
<tr>
<th>Warrant Number and Title</th>
<th>Base Condition</th>
<th>Minimum Threshold for Major Street (Both Directions Combined)</th>
<th>Study Intersections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Eight-Hour Vehicular Volume</td>
<td>Traffic Volume thresholds are met for any 8 hours of an average weekday</td>
<td>630 vph on major street; 53 vehicles on minor street (6 out of 8 hours)</td>
<td>Rolling Rd at Greeley Blvd</td>
</tr>
<tr>
<td>2 Four-Hour Vehicular Volume</td>
<td>Traffic Volume thresholds are met for any 4 hours of an average weekday</td>
<td>900 vph on major street; 60 vph on minor street (4 out of 4 hours)</td>
<td>Rolling Rd at Springfield Village Dr</td>
</tr>
<tr>
<td>3 Peak Hour Volume</td>
<td>Traffic Volume threshold is met for one peak hour of an average weekday</td>
<td>1200 vph on major street; 75 vph on minor street</td>
<td>Rolling Rd at Viola St</td>
</tr>
<tr>
<td>4 Pedestrian Volume</td>
<td>Intended where traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street</td>
<td>800 vph and 75 ped/hr for any four hours</td>
<td>Rolling Rd at Greeley Blvd</td>
</tr>
<tr>
<td>5 School Crossing</td>
<td>Intended where there are minimum 20 school children crossing the major street during the highest crossing hour</td>
<td>N/A</td>
<td>Warrant Not Applicable</td>
</tr>
<tr>
<td>6 Coordinated Signal System</td>
<td>Progressive movement in a coordinated system necessitates installing a traffic signal</td>
<td>N/A</td>
<td>Warrant Not Applicable</td>
</tr>
<tr>
<td>7 Crash Experience</td>
<td>Five or more &quot;Angle Crashes&quot; in one year that can be corrected by installation of traffic signal</td>
<td>5 or more &quot;Angle&quot; crashes in one year</td>
<td>Rolling Rd at Springfield Village Dr</td>
</tr>
<tr>
<td>8 Roadway Network</td>
<td>Intended for the common intersection of two or more major routes</td>
<td>N/A</td>
<td>Warrant Not Applicable</td>
</tr>
</tbody>
</table>

- Other considerations such as sight distance and safety
- Final Decisions about signal locations and/or other alternatives will be made by VDOT during final design process
Crash Information
(January 2011 – February 2016)

Intersection of Rolling Rd at Greeley Blvd

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Damage</td>
<td>2</td>
</tr>
<tr>
<td>Non-Visible Injury</td>
<td>2</td>
</tr>
<tr>
<td>Visible Injury</td>
<td>0</td>
</tr>
<tr>
<td>Ambulatory Injury</td>
<td>0</td>
</tr>
<tr>
<td>Fatal Injury</td>
<td>0</td>
</tr>
</tbody>
</table>

Intersection of Rolling Rd at Springfield Village Dr

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Damage</td>
<td>4</td>
</tr>
<tr>
<td>Non-Visible Injury</td>
<td>2</td>
</tr>
<tr>
<td>Visible Injury</td>
<td>1</td>
</tr>
<tr>
<td>Ambulatory Injury</td>
<td>0</td>
</tr>
<tr>
<td>Fatal Injury</td>
<td>0</td>
</tr>
</tbody>
</table>

Intersection of Rolling Rd at Viola St

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Damage</td>
<td>2</td>
</tr>
<tr>
<td>Non-Visible Injury</td>
<td>0</td>
</tr>
<tr>
<td>Visible Injury</td>
<td>1</td>
</tr>
<tr>
<td>Ambulatory Injury</td>
<td>1</td>
</tr>
<tr>
<td>Fatal Injury</td>
<td>0</td>
</tr>
<tr>
<td>Fixed Obj.</td>
<td>3</td>
</tr>
</tbody>
</table>
Public Input Points

Type of Median

• Raised Median

• Two-Way Left Turn Lane
Public Input Points

Type of Median

• Raised Median

• Two-Way Left Turn Lane
Public Input Points

- Key Differences in Median Type
  - Driveway Access
  - Number of Traffic Movement Conflict Points
  - U-Turns
  - Pedestrian Crossings
  - Aesthetics
  - Right-of-Way Width

- Question on Comment Sheet for Public Input

4. One of the major elements that we would like your input on is the center portion of the roadway between Viola Street and Barnack Drive. Which of these do you prefer?

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 Raised Median

 Two Way Left Turn Lane
Public Input Points

Pedestrian and Bicycle Facilities

• **Balance Right of Way with Use and Need**
  • Shared-Use Paths and Sidewalks
  • Separated Bike Lane

• **Questions on Comment Sheet for Public Input**

  2. As a pedestrian or bicyclist, what type of facility do you prefer?
     
     **Pedestrian**
     \[\_\] Shared Use Path \[\_\] Sidewalk \[\_\] No Preference \[\_\] Other _____________________
     
     **Bicycle**
     \[\_\] Shared Use Path \[\_\] Separate Bicycle Lane \[\_\] No Preference \[\_\] Other __________

  3. How often would you use the following facilities?
     
     **Pedestrian**
     \[\_\] Frequently \[\_\] Occasionally \[\_\] Rarely
     
     **Bicycle**
     \[\_\] Frequently \[\_\] Occasionally \[\_\] Rarely
Public Input Points

On-Street Parking

- **7 Foot Width Proposed (typically 8 foot)**
- **Question on Comment Sheet for Public Input**

5. Do you have any suggestions to improve the proposed 7-foot wide parking lane, which will accommodate a mid-size vehicle?
Future Design Considerations

- Utility Relocations
- Noise Walls
- Stormwater Management
- Maintenance of Traffic
QUESTIONS & COMMENTS

http://www.virginiadot.org/RollingRoad

Thank you for your participation