



## Route 29 Corridor Assessment Update

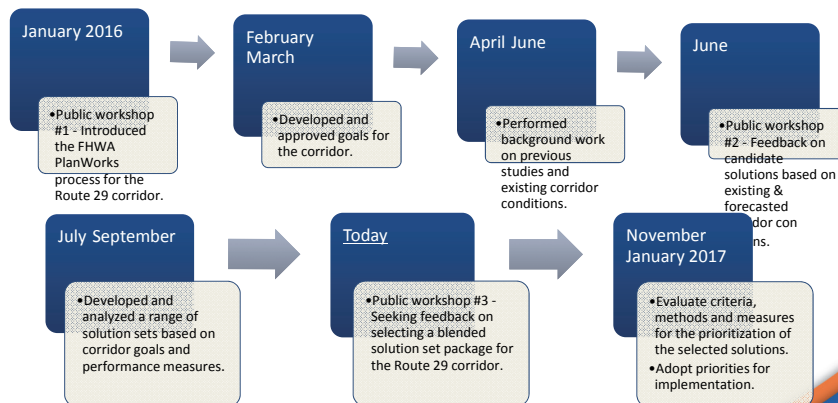
### Development of Possible Solutions

Public Workshop #3  
October 27, 2016



### Purpose of Developing Possible Solutions

*Recap of where we've been and timeline for moving forward*



## Purpose of Developing Possible Solutions

Support corridor goals and objectives to

- Promote a safe transportation system on Route 29
- Promote an effective transportation system on Route 29
- Promote a transportation system compatible with existing and future land uses

Identify a wide range of possible solutions and

- Discuss tradeoffs
- Discuss costs and funding options
- Make recommendations for implementation

3



## Solution Development Process

1. Identify local priorities based on past studies and public comments:

- Concern with congestion along the northern segments (approaching the U.S. Route 460 interchange)
- Safety is a consistent concern, particularly when traffic waiting to turn is backed up into the travel lanes
- Access to/from side driveways can be challenging, especially with heavy traffic volumes
- Land use and transportation planning should be coordinated

4



## Solution Development Process

2. Research previous studies and current transportation designs to identify possible solutions
3. Evaluate potential solutions according to
  - Selected Performance Measures
  - Costs
  - Anticipated change with current Route 29 conditions

5

VDOT

## Summary of Findings

### **ISSUES**

- Roadway and intersection designs based on earlier standards and previous zoning
- Numerous parcels with limited frontage on Route 29
- Frequent median crossovers without turn lanes
- High number of driveways and access points along the corridor
- High volume of heavy trucks

### **RECOMMENDATIONS**

- Address high crash rate areas
- Selective closure of median crossovers
- Apply access management principles to current and future development
- Consider installation of frontage roads
- Identify options for new/enhanced local street connections
- Consider options for traffic signal functions and locations

VDOT

## Route 29 Bypass Discussion

### ISSUES

- ❑ The Route 29 Bypass has been studied and discussed for several decades
- ❑ Planning level cost estimate of at least \$100 million dollars (2016)
- ❑ Limited funding opportunities
- ❑ This project would not score well versus other projects in competitive funding sources (i.e. Smart Scale)

### RECOMMENDATIONS

- ❑ Route 29 Bypass was dropped from consideration as a feasible short to mid-term (5-15 years) solution for improving the corridor



## Solution Elements Matrix (handout)

Solution Elements	Emphasis Areas (Theme)				Solution Element Planning Level Cost Range Per Location
	Arterial Capacity and Throughput	Corridor Safety	Economic Development	*SMART* and Alternative Transportation Solutions	
Closure of median crossovers	++	++	--	+	\$
Existing median crossover modification: left-in only with right-in/right-out	++	++	-	+	\$
Restricted crossing U-turn (RCUT) intersection	++	++	-	+	\$\$\$
New turn lanes and improvements to existing turn lanes	++	++	+	+	\$\$
Signal modification: Flashing Yellow Arrow (FYA)	++	-	+	+	\$
Modify current Transportation Corridor Overlay District	↔	++	++	↔	\$
Reduction in existing speed limits along the corridor	-	++	↔	+	\$
Roadway realignment/access modification: Anstey Road, Leland Road, Rangoon Street, Lawyers Road	++	+	++	++	\$-\$\$\$
Two-way left-turn lane (TWLTL)	+	+	++	↔	\$\$\$\$*
Continuous right-turn lane	+	+	++	↔	\$\$\$\$*
Future traffic signals	--	+	++	↔	\$\$
Traffic Management System (TMS) - red light cameras, speed enforcement cameras, updated signal system optimization	+	+	↔	++	\$\$
Multi-modal services: sidewalks and shared-use paths	↔	+	+	++	\$\$\$\$*

#### Emphasis Area Key:

- ❑ Solution element is included in emphasis area
- + + Moderate improvement in current conditions (or very good alignment with funding sources)
- + Minor improvement in current conditions (or good alignment with funding sources)
- Minor reduction in current conditions
- Moderate reduction in current conditions
- ↔ Change from current conditions and/or alignment with funding source will depend upon specification

#### Cost Estimate Key:

- \$ ≤\$50,000
- \$\$ \$50,001 - \$775,000
- \$\$\$ \$775,001 - \$1,500,000
- \$\$\$\$ ≥\$1,500,001
- \* Continuous improvement throughout most of corridor.



### Potential Solution: Closure of Select Median Crossovers

- ❑ Would bring crossovers into compliance with current VDOT standards for minimum spacing between crossovers and intersections
  - Reduces number of vehicular movements within a defined area
  - Helps reduce crashes
  - Redirects travelers currently using these medians to nearby intersections (or other crossovers)
- ❑ Proposed at 8 locations
- ❑ Depending on location, closure of median crossover may be combined with:
  - Addition of new access point nearby (e.g. near Leland Road)
  - New alignment to connect with an existing nearby access point (e.g. for Rangoon Street)



### Potential Solution: Existing Median Crossover Modification

- ❑ Left-in only at median crossings along Route 29 to side streets
- ❑ Provides for safer configuration by eliminating left-out maneuvers from side streets (right-in/right-out only)
  - Reduces number of conflicts
  - Helps to reduce crashes
  - Maintains partial access
  - Redirects travelers currently using these medians to nearby intersections (or other crossovers)
- ❑ Proposed at 3 locations



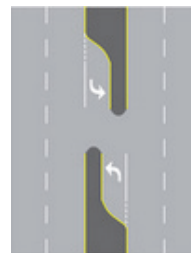
### Potential Solution: Restricted Crossing U-Turn Intersection (RCUT)

- ❑ Allows left turns from Route 29 onto the side street
  - Reduces number of movements through a median crossing
  - Helps to reduce crashes
- ❑ No left turns allowed from the side streets onto Route 29
  - Upstream/downstream U-turn areas would be needed to change direction on Route 29
- ❑ 4 specific areas where this could be implemented (Moorman Mill Road, Patterson Road, Lynbrook Drive, and Hyland Drive)



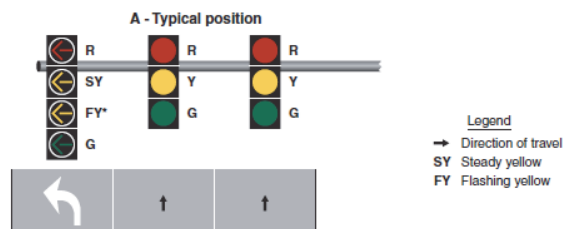
### Potential Solution: Add/Extend Turn Lanes at Intersections and Median Crossings

- ❑ Turn lanes built to VDOT standards increase storage space for turning vehicles
  - Helps to reduce crashes
  - Helps improve through-travel time and flow
- ❑ 16 areas where existing left turn lanes could be extended
- ❑ 8 areas where new left turn lanes could be added
- ❑ 5 areas where existing right turn lanes could be extended
- ❑ 4 areas where new right turn lanes could be added



## Potential Solution: Install Flashing Yellow Left Turn Arrow Traffic Signals

- ❑ **Flashing Yellow Left Turn Signals are a new way to display permitted (yielding) indications**
  - Safer
  - Allows for more efficient signal operations
- ❑ **Proposed Flashing Yellow Arrow installation at the Calohan Road and Route 29 intersection**



VDOT

## Potential Solution: Modify Corridor Overlay District (zoning changes)

- ❑ **Further strengthen the existing Corridor Overlay District to minimize access points and encourage lot consolidation and shared entrances**
- ❑ **Expand the minimum lot frontage to 200 feet in width**
- ❑ **Expand the minimum lot size to 1 acre**

VDOT

**Potential Solution:  
Reduction in Existing Speed Limits**

- ❑ Many public comments focused on speeding issues and their concern for safety
- ❑ Proposed change from 60 MPH to 55 MPH from Colonial Highway (Route 24) to Calohan Road
- ❑ Proposed change from 60 MPH to 45 MPH from Calohan Road to Lawyers Road
- ❑ Proposed change from 45 MPH to 35 MPH from Lawyers Road to the U.S. Route 460 interchange
- ❑ Other reductions were considered



**Potential Solution:  
Roadway Realignment/Access Modification**

Anstey Road



Leland Road



Lawyers Road



Rangoon Street





**Potential Solution:  
Two-Way Left-Turn Lane (TWLTL)**

- ❑ Provides maximum access
- ❑ Can be unsafe
- ❑ Does not conform to VDOT Access Management Regulations



VDOT

**Potential Solution:  
Continuous Right Turn Lane**

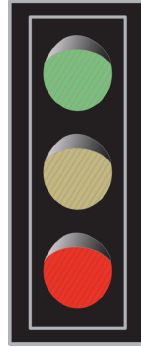
- ❑ Provides for deceleration lane into multiple adjacent driveways



VDOT

## Potential Solution: Future Traffic Signals

- ❑ Possible locations when warranted in the future:
  - ❑ Moorman Mill Road
  - ❑ Patterson Road
  - ❑ Lynbrook Road
  - ❑ Hyland Drive
  
- ❑ Introduces delay on Route 29
  
- ❑ Provides more direct and efficient access to development on Route 29



VDOT

## Potential Solution: Traffic Management System

- ❑ Red Light Cameras
- ❑ Speed Enforcement Cameras
- ❑ Updated Signal System to include video of intersections



VDOT

**Potential Solution:  
Multi-Modal Services: Sidewalks and Shared-Use Paths**

- Sidewalks**
  - 5' wide
- Shared-use paths**
  - 10' wide
- Implement from North to South as density warrants**



**Route 29 Corridor Assessment Update  
Public Workshop #3  
October 27, 2016**

**QUESTIONS AND COMMENTS**