



**RSTP Project Profile – Candidate Project #2**

1. **Project Sponsor(s):** Roanoke County
2. **Proposed Implementing Agency:** Roanoke County
3. **Project Description and Attached Aerial Showing Proposed Improvement Location:**

The Lila Drive intersection is a critical component of the Plantation Road Bicycle, Pedestrian and Streetscape Improvement project (Plantation Road Project). Overall Plantation Road Project improvements include shared use paths, sidewalks, pedestrian crosswalks and signals, street trees, pedestrian-scaled lighting, a Hollins community identification sign, landscaping and drainage improvements.

The Lila Drive intersection lies in the middle of the Plantation Road project between the three largest employers in the area: Wells Fargo, Exelis, and BSC Ventures/Double Envelope. The intersection is currently controlled by a stop sign on Lila Drive, which is a privately-owned road. A traffic signal with pedestrian crosswalks and signals is proposed for the intersection as a safety improvement, an access management strategy and a location for pedestrians and bicyclists to safely cross Plantation Road.

Several private entrance closures and reconfigurations are also proposed as part of the four-legged traffic signal installation. To relocate the Exelis entrance currently situated on Plantation Road, about 420 linear feet of Lila Drive will be reconstructed to public road standards to serve the new entrance. This relocated Lila Drive Exelis entrance will be utilized by tractor trailers to access the loading dock for deliveries. Internal site reconfigurations at Exelis will be needed in order to facilitate this new entrance.

The project qualifies for the Regional Surface Transportation Program under the following eligibility categories:

***Pedestrian and/or Bicycle Improvements:***

- ADA Ramps, Crosswalks and Signalization

***Highway Capacity, Accessibility, and Operational Improvements:***

- Intersection Improvements
- Corridor Operational Improvements

4. **Detailed Scope of Work, proposed Schedule and Relation to Other Projects or Project Phases, Project Status and Other Funding Sources:**

***Detailed Scope of Work***

1. Surveying
2. Final Design
3. Right-of-Way Acquisition
4. Advertisement
5. Construction

***Proposed Schedule***

| Tentative Date    | Activity                   |
|-------------------|----------------------------|
| Summer, 2015      | Award Notification         |
| Winter, 2015/2016 | Surveying/Final Design     |
| Spring, 2016      | Right-of-Way Acquisition   |
| Fall, 2016        | Construction Advertisement |
| Spring, 2017      | Construction               |

***Relation to Other Projects or Project Phases***

The Plantation Road Bicycle, Pedestrian and Streetscape Improvement Project was conceived in 2009 as a means to begin implementing several strategies included in the Hollins Area Plan which was adopted by the Roanoke County Board of Supervisors in November, 2008, as a component of the Roanoke County Comprehensive Plan. The Plantation Road Project has received about \$3.8 million (including matching funds) in funding from the Revenue Sharing Program, the Transportation Enhancement Program, the Transportation Alternatives Program and the Regional Surface Transportation Program.

Roanoke County contracted with Whitman, Requardt and Associates in August, 2013, to begin preliminary



engineering of the project. Outreach to area businesses, organizations and other stakeholders started in September and continued into December, 2013. Substantial feedback was received from a Citizen Information Meeting held in January, 2014, where conceptual project plans were presented to the public. In March, 2014, VDOT determined that the Lila Drive traffic signal, crosswalks, 420 feet of road reconstruction to public road standards, entrance changes and on-site reconfigurations at Exelis and BSC Ventures/Double Envelope were allowable project costs as all of these improvements would contribute to enhanced access management on the corridor. While Roanoke County welcomed this determination, the newly-allowable project costs had not previously been included in Plantation Road Project estimates because until this time, Roanoke County had been advised that the traffic signal and road reconstruction could not be paid for with VDOT funds. Roanoke County is now requesting additional VDOT funds to construct the Lila Drive intersection and associated road reconstruction.

**Project Status**

- The Virginia Department of Transportation has agreed to the installation of a traffic signal at the intersection of Plantation Road and Lila Drive based upon a Traffic Signal Warrants Analysis performed by Whitman, Requardt and Associates.
- Preliminary engineering is complete for the traffic signal, crosswalks, entrance relocations and for about 420 feet of Lila Drive road reconstruction to meet VDOT public road standards.
- Plantation Road surveying is complete; Lila Drive surveying is needed.
- Lila Drive was included in the Army Corps of Engineers Jurisdictional Waters Determination Request.
- The Programmatic Categorical Exclusion for the Plantation Road Project will need to be modified.

**Other Funding Sources**

No other sources of funding are available at this time.

**5. Functional Classification:**

- Plantation Road: Urban Principal Arterial
- Lila Drive: Private Road (Propose about 420 feet will be constructed to public road standards)

**6. Existing Traffic Volume and Level of Service with Improvement:**

| <b>2010 Existing Level of Service for Plantation Road (2012 Plantation Road Corridor Study)</b> |                                     |           |               |           |
|---|-------------------------------------|-----------|---------------|-----------|
| <b>Direction</b>  | <b>Plantation Road Cross Street</b> | <b>AM</b> | <b>Midday</b> | <b>PM</b> |
| Northbound  | Williamson Road                     | F         | F             | F         |
|   | Friendship Lane/Gander Way          | B         | A             | B         |
|   | Overall                             | D         | C             | D         |
| Southbound  | Williamson Road                     | C         | C             | D         |
|   | Friendship Lane/Gander Way          | B         | C             | D         |
|   | Overall                             | C         | C             | D         |

**7. Existing Volume/Capacity:**

| <b>Plantation Road Segment</b>              | <b>Average Daily Traffic (2012 Plantation Road Corridor Study)</b> | <b>Annual Average Daily Traffic Volume Estimates (2013 VDOT)</b> |
|---|--|--|
| Interstate 81 to Friendship Lane/Gander Way | 16,327   | 12,000<br>(I-81 to Indian Road)                                  |
| Friendship Lane/Gander Way to Walrond Drive | 15,642   |  |
| Hitech Road to Milk-A-Way Drive             | 17,609   |  |
| Indian Road to Williamson Road (Route 11)   |  | 15,000   |



| Time Period      | Vehicles per Hour | Highest Hour      |
|------------------|-------------------|-------------------|
| 6 a.m. – 9 a.m.  | 670 - 1,760       | 8 a.m. – 9 a.m.   |
| 9 a.m. – 12 p.m. | 847 - 1,021       | 11 a.m. – 12 p.m. |
| 12 p.m. – 3 p.m. | 1,033 - 950       | 12 p.m. – 2 p.m.  |
| 3 p.m. – 6 p.m.  | 1,064 - 1,779     | 5 p.m. – 6 p.m.   |

8. **Future Traffic Volume or Projected Ridership with Service Implementation:** The proposed Lila Drive traffic signal will allow the current volume of vehicles from Lila Drive and from BSC Ventures/Double Envelope to more easily turn onto Plantation Road. Pedestrian signals and crosswalks proposed for the intersection will also enable pedestrians and bicyclists to safely cross five lanes of traffic.
9. **Future Volume/Capacity and Level of Service:** By consolidating two BSC Ventures/Double Envelope entrances into one entrance at the proposed Lila Drive signal and by relocating one of the main Exelis entrances onto Lila Drive, the traffic volume utilizing the intersection and Lila Drive will increase. The proposed traffic signal will control this increase in traffic and will result in a better Level of Service, which is particularly needed between the peak hours of 8 a.m. and 9 a.m. as well as between 5 p.m. and 6 p.m.
10. **Estimated Project Cost by Phase:** (see attached Project Budget for additional detail)

| Activity Phase for Project Phases 2 and 3 | Total            |
|---|------------------|
| Preliminary Engineering                   | <b>\$77,500</b>  |
| Right-of-Way                              | <b>Unknown</b>   |
| Construction                              | <b>\$891,250</b> |
| <b>Total Cost</b>                         | <b>\$968,750</b> |
| <b>Total RSTP Request</b>                 | <b>\$968,750</b> |

11. **RSTP Candidate Project Rating Factors**

**A. Regional Project Consideration**

The Lila Drive intersection and road reconstruction project is an instrumental component of the Plantation Road Bicycle, Pedestrian and Streetscape Improvement Project. While the Plantation Road Project is located within and sponsored by Roanoke County, its benefits and impacts will reach far beyond the County line.

**Gateway to the Roanoke Valley:** The Plantation Road exit off of Interstate 81 is the first entrance into the Roanoke Valley from the north. This important commercial and tourism corridor should present a safe and welcoming gateway to visitors.

**Regional Employee Distribution and Mass Transit Opportunities:** Hundreds of employees headed to Plantation-area businesses use Exit 146 and Plantation Road every day; thousands more leave Hollins using Plantation Road to access other parts of the Roanoke Valley and beyond. Several Plantation Road businesses have asked for bus service to the area and a park and ride has also been discussed as a need.

**Regional Greenway Network:** One of the primary goals of the overall Plantation Road Project is to connect Walrond Park to the Tinker Creek Greenway which leads north to Carvins Cove Natural Reserve and will intersect to the south with the Roanoke River Greenway. The localities and organizations involved in these resources include Botetourt County, the City of Roanoke, the Town of Vinton, the City of Salem and the Western Virginia Water Authority.

**B. Support the Economic Vitality of the Metropolitan Area**

Improving and expanding the bicycle and pedestrian infrastructure at the Lila Drive intersection and within the Plantation Road area will not only help Roanoke County to retain existing Plantation Road-area businesses, but will also encourage new businesses to locate on this corridor. The overall Plantation Road Project is fully expected to encourage new commercial and industrial development in the Plantation Road area, thus providing new tax revenue and new jobs.

**C. Increase the Safety and Security of the Transportation System**

| Source | Identified Safety Issues | Proposed Safety Improvements |
|--------|--------------------------|------------------------------|
|--------|--------------------------|------------------------------|



|  |  |  |
|--|--|--|
| <i>Plantation Road Corridor Study</i> (2012) | 8 crashes (no fatalities, 5 injuries) Lila Drive/Plantation Road intersection; sight distance inadequate | New traffic signal with pedestrian signalization and crosswalks at Lila Drive/Plantation Road intersection |
|  | Pedestrian traffic without accommodations  | Construct sidewalks, shared use paths, pedestrian signals and crosswalks with pedestrian-scaled lighting   |

***Plantation Road Safety Issues and Challenges (not included above):***

- Most crashes involve Lila Drive traffic turning left (south) onto Plantation Road
- Heavy traffic volume with a (mostly) undivided, five-lane, shoulder and ditch section with some wide, paved shoulders and only one traffic signal at Friendship Lane/Gander Way;
- Heavy truck traffic due to the proximity of the interstate and business deliveries; and
- Left turn movements onto Plantation Road frequently utilize the center lane to merge into traffic.

***Resulting Behaviors:***

- Exelis employees traveling between the Plantation Road and Hitech Road buildings are encouraged to drive;
- Pedestrians walk along the paved, gravel or grass shoulders;
- Employees leaving and retrieving cars at Sunnybrook Garage run across Plantation Road; and
- Bicyclists riding with traffic are challenged by heavy automobile and truck traffic volumes and frequent commercial entrances.

***Anticipated Changes due to Proposed Safety Improvements listed above:***

- Exelis employees will use the Lila Drive crosswalks and pedestrian signals to safely walk between buildings;
- Employees will safely cross Plantation Road to walk to area businesses and recreational facilities at lunchtime; and
- Bicycle travel will be safer when the shared use path and signalized crosswalk are used.

**D. Increase the Accessibility and Mobility Options Available to People and/or Freight**

The planned Plantation Road sidewalks, shared-use paths, Lila Drive intersection crosswalks and pedestrian signals will be designed and constructed to ADA standards with accessibility ramps. Area employees, residents, students, customers and visitors of all abilities will be able to utilize the new accommodations.

**E. Protect and Enhance the Environment, Promote Energy Conservation, and Improve Quality of Life**

When the proposed traffic signal, crosswalks, pedestrian signals, connecting sidewalks and shared-use paths are complete, reduced vehicle trips and therefore reduced fuel consumption and vehicle emissions are anticipated due to the expected increase in pedestrian and bicycle trips. Reduced vehicle emissions will lead to air quality improvements. These proposed improvements will promote healthy habits by permitting employees, residents, visitors and others to walk and bike for recreation, to walk and bike to restaurants for lunch and to walk and bike to and from work.

**F. Enhance the Integration and Connectivity of the Transportation System, Across and Between Modes, for People and/or Freight**

The pedestrian signals and crosswalks planned for the proposed Lila Drive intersection will allow pedestrians and bicyclists to safely cross five lanes of traffic on Plantation Road from a planned shared use path on the west side of Plantation Road to a planned sidewalk on the east side of Plantation Road. The planned bicycle and pedestrian accommodations along Plantation Road will connect to Walrond Park and to the Tinker Creek Greenway which accesses over 40 miles of trails at Carvins Cove Natural Reserve.

**G. Promote Efficient System Management and Operation**

The *Plantation Road Corridor Study* includes the following recommendations regarding Lila Drive to improve the functionality of Plantation Road:



- Install a traffic signal at Lila Drive and connect it with the Friendship Lane/Gander Way signal; and
- Realign/reconstruct/combine several commercial entrances.

Both of these recommendations are proposed for the Lila Drive Intersection project.

#### **H. Emphasize the Preservation of Existing Transportation System**

The proposed Lila Drive intersection pedestrian signalization and crosswalks connecting to planned shared use paths and sidewalks will promote walking and bicycling while reducing the number of short vehicle trips. Fewer vehicles on the road should extend the life of the existing transportation facility and will reduce the future need to widen Plantation Road to six lanes.

#### **I. Cost/Benefit Considerations**

The completion of the Lila Drive Intersection project will result in numerous and incalculable safety benefits for bicycle, pedestrian and vehicular users of the Plantation Road corridor. While also providing safety improvements, the overall Plantation Road Project is also anticipated to increase economic development opportunities, expand transportation options, improve environmental quality and enhance overall quality of life for users.

#### **J. Projects included in previous plans that had a public input process associated with the plan:**

##### ***Roanoke County Comprehensive Plan (2005)***

***Hollins Area Plan:*** Adopted by the Board of Supervisors in 2008 as a component of the Comprehensive Plan; the Plantation Road Project begins to implement the Hollins Area Plan

***Constrained Long Range Transportation Plan (CL RTP) 2035:*** Plantation Road is in the Primary System, Vision List

##### ***Bikeway Plan for the Roanoke Valley Area MPO – 2012 Update:***

- Priority alignment: Plantation Road
- Vision alignments: Walrond Drive, Enon Drive, Williamson Road

***2013 Virginia Outdoors Plan:*** “Develop the Tinker Creek-Carvin Creek trail to connect Carvins Cove with the Roanoke River Greenway and eventually with the Appalachian Trail.” (page 10.58)

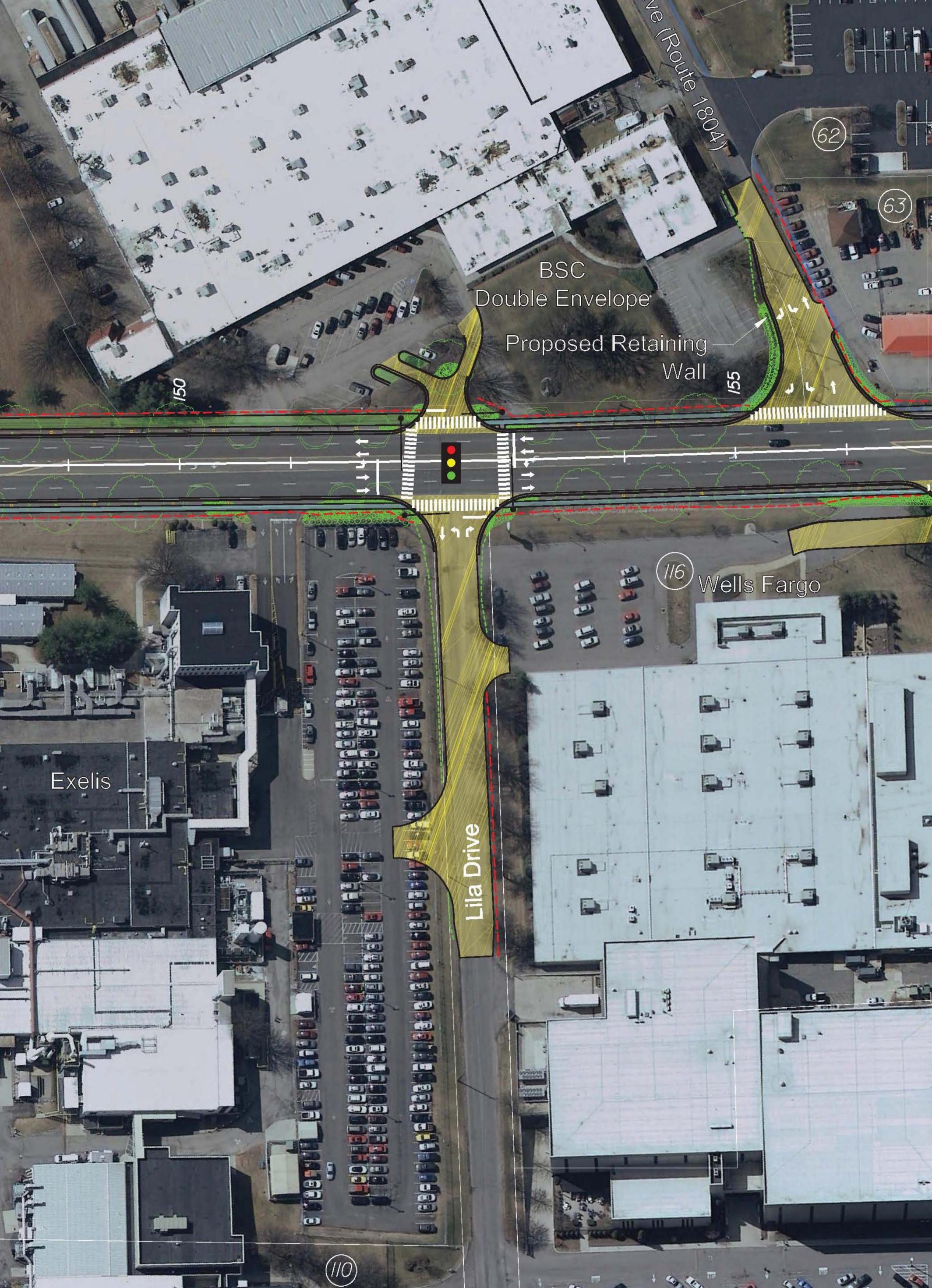
***VDOT Policy for Integrating Bicycle and Pedestrian Accommodations:*** Endorses bicycling and walking as fundamental travel modes and integral components of an efficient transportation network.

***2007 Update to the Roanoke Valley Greenway Plan:*** The planned shared use path network will connect to the Tinker Creek Greenway (Priority #2 in the Plan) located on Hollins University’s campus. The Tinker Creek Greenway will ultimately connect the Roanoke River Greenway to the extensive network of established trails at Carvins Cove Natural Reserve.

***2004 Hollins University Master Plan:*** References and endorses the proposed regional greenway connection through Hollins University property.

#### **Attachments:**

1. Graphic – Proposed Lila Drive Traffic Signal and Partial Road Reconstruction
2. Graphic – Plantation Road/Lila Drive Intersection Simulation with Future Traffic Signal
3. Map – Plantation Road Project
4. Site Photographs
5. Project Budget
6. Resolution of Support – Roanoke County Board of Supervisors



ve (Route 1804)

62

63

BSC  
Double Envelope

Proposed Retaining  
Wall

150

155



116

Wells Fargo

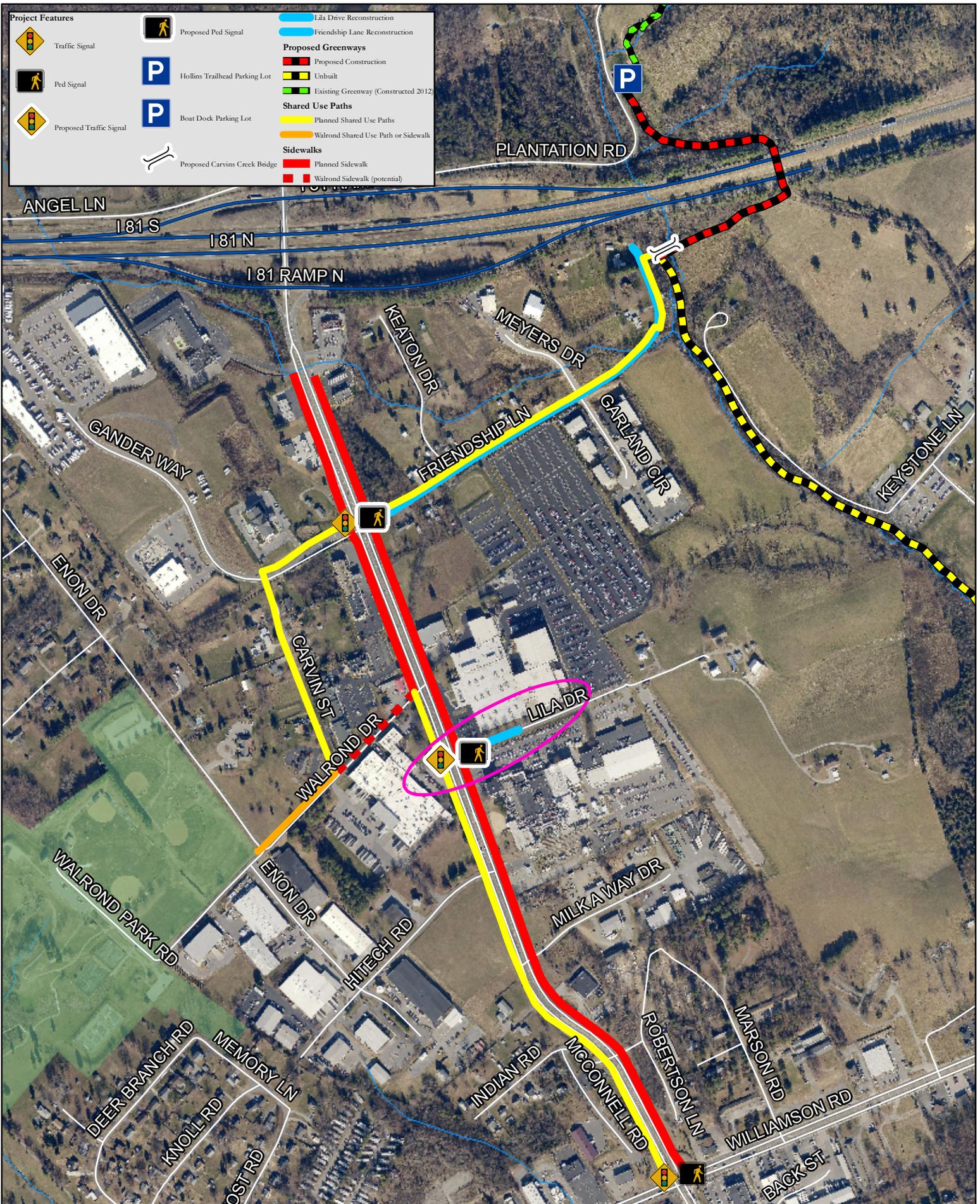
Exelis

Lila Drive

110



Simulation With Future Signal



Plantation Road Project - Lila Drive Intersection  
 FY 2016 Regional Surface Transportation Program



Lila Drive Traffic Signal and  
Road Reconstruction:  
Site Photographs

# Plantation Road and Lila Drive Intersection (September, 2009) Looking northeast



# Pedestrian Crossing Plantation Road (Sept, 2009)

Looking east, crossing from  
BSC Ventures/Double Envelope to Exelis



# Pedestrian Crossing Plantation Road (Sept, 2011)

Looking northeast, crossing from Hitech Road to Exelis



# Lila Drive (September, 2011)

Looking west towards Plantation Road  
Exelis on left, Wells Fargo on right





AT A REGULAR MEETING OF THE BOARD OF SUPERVISORS OF ROANOKE COUNTY, VIRGINIA, HELD AT THE ROANOKE COUNTY ADMINISTRATION CENTER, ON TUESDAY, SEPTEMBER 23, 2014

**RESOLUTION 092314-4.f REQUESTING THE ROANOKE VALLEY AREA METROPOLITAN PLANNING ORGANIZATION FUND A LIST OF PROJECTS FOR THE FISCAL YEAR 2016-2021 REGIONAL SURFACE TRANSPORTATION PROGRAM**

WHEREAS, the Roanoke Valley Area Metropolitan Planning Organization reviews applications for funding through the Regional Surface Transportation Program and makes recommendations for project funding to the Commonwealth Transportation Board; and

WHEREAS, the Roanoke County Board of Supervisors reviewed a list of six (6) projects for Regional Surface Transportation Program funding at a work session on September 9, 2014; and

WHEREAS, the Roanoke County Board of Supervisors supports the list of six (6) projects for Regional Surface Transportation Program funding.

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of Roanoke County, Virginia requests the Roanoke Valley Area Metropolitan Planning Organization fund the following list of projects for the fiscal year 2016-2021 Regional Surface Transportation Program:

1. Plantation Road Project – Lila Drive Intersection
2. Plantation Road Project – Friendship / Carvin's Creek Bridge Replacement
3. Plantation Road Project – Friendship Lane Reconstruction
4. Plantation Road Project – Phase 2
5. Exit 140 Park and Ride

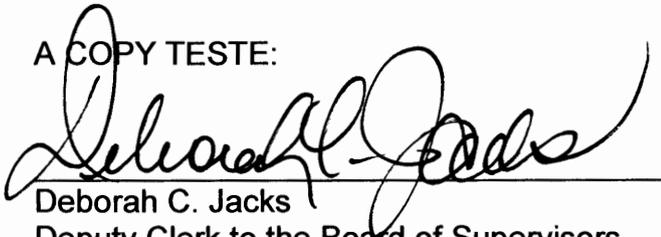
6. West Main Street Pedestrian Improvements – Phase 2

On motion of Supervisor McNamara to adopt the resolution, and carried by the following recorded vote:

AYES: Supervisors Moore, Bedrosian, Church, Peters, McNamara

NAYS: None

A COPY TESTE:



Deborah C. Jacks  
Deputy Clerk to the Board of Supervisors

cc: David Holladay, Planning Administrator  
Roanoke Valley Area Metropolitan Planning Organization