



**RSTP Project Profile – Candidate Project #5**

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

The Friendship Lane Reconstruction Project is directly related to and is a significant 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.

Prior to the construction of Interstate 81, Friendship Lane carried traffic over Carvin’s Creek to the Carvin’s Cove community and later to the dam and reservoir. The construction of the interstate severed the road, leaving the terminus of today’s Friendship Lane at the Interstate 81 Limited Access Right-of-Way boundary. The bridge over Carvin’s Creek was no longer needed and guardrail was installed to prevent vehicle traffic from using the bridge. Plantation Road continued north over the interstate and then turned right to connect to the northern segment of Friendship Lane; that road segment is now named Plantation Road.

Before the interstate, this area of Roanoke County was primarily agricultural and rural with mid-century commercial development focused on Williamson Road, Route 11. Friendship Lane was developed residentially with 40 percent of the remaining homes on Friendship Lane and Keaton Drive constructed prior to 1950. The three major Plantation Road businesses, Wells Fargo, Exelis and BSC Ventures/Double Envelope, were constructed in the 1950s and 1960s. Industrial business parks were also developed off of Friendship Lane in the 1990s (Interstate Commerce Industrial Park) and the 2000s (New Century Industrial Park). The character of Friendship Lane continued to change with the installation of a traffic signal in 2007/2008 at Plantation Road to serve both Friendship Lane and the new businesses on Gander Way.

Wells Fargo has expanded several times since its construction and now employs about 2,000 people. Employees access Wells Fargo’s 17 acres of parking lots through Friendship Lane or Lila Drive. Vehicle and tractor trailer traffic from Wells Fargo and the growing industrial parks frequently back up and overwhelm the rural, 20-foot-wide, ditch section road. Beyond Garland Circle and Meyers Drive, the road width shrinks to 12 feet.

Through outreach on the Plantation Road project, it became clear that adding a 10-foot-wide shared use path to Friendship Lane was premature as the road itself needed significant investigation. Roanoke County proposes to reconstruct Friendship Lane with curb, gutter, pedestrian and bicycle accommodations in a manner that will accommodate both current and anticipated vehicle counts. In addition, the proposed pedestrian and bicycle accommodations will connect to the Friendship Lane/Carvins Creek Bridge Reconstruction project and beyond to the Tinker Creek Greenway.

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

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

- Pedestrian and bicycle improvements connecting Walrond Park to the Tinker Creek Greenway and Carvins Cove Natural Reserve; and
- Crosswalks, pedestrian signalization and ADA ramps.

***Highway Capacity, Accessibility, and Operational Improvements:*** Access management 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 and Proposed Schedule***

Tentative Date	Activity
Summer, 2015	Award Notification
Winter, 2015/2016	Final Design
Spring, 2016	Right-of-Way Acquisition
Winter, 2016/2017	Construction Advertisement
Spring/Summer, 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 June, 2014, the project was broken into phases due to funding constraints. Friendship Lane was broken out as a separate project due to the need for and significant cost of road reconstruction.

**Project Status**

- Surveying – Complete
- Army Corps of Engineers Jurisdictional Waters Determination Request – Submitted
- Programmatic Categorical Exclusion – Submitted
- Preliminary Engineering, Right-of-Way, Final Design – Needed and dependent upon funding

**Other Funding Sources**

No other sources of funding are available at this time.

**5. Functional Classification:** Urban Local

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

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

**7. Existing Volume/Capacity:**

Friendship Lane Segment	Annual Average Daily Traffic Volume Estimates (2013 VDOT)
Plantation Road to Keaton Drive	1,900
Keaton Drive to End	1,900

**8. Future Traffic Volume or Projected Ridership with Service Implementation:** The proposed road reconstruction project with pedestrian and bicycle accommodations will improve conditions and functionality for vehicular traffic and will also provide a safe facility for walkers, runners, bicyclists and others to access the pedestrian signals at the Plantation Road/Friendship Lane/Gander Way traffic signal and to access the Friendship Lane/Carvins Creek Bridge and Tinker Creek Greenway.

**9. Future Volume/Capacity and Level of Service:** Improvements to the road and the addition of pedestrian and bicycle accommodations will result in a better Level of Service for all types of users.

**10. Estimated Project Cost by Phase:** (see attached Project Budget for additional detail)



Activity Phase for Project Phases 2 and 3	Total
Preliminary Engineering	\$139,186
Right-of-Way	Unknown
Construction	\$1,893,626
<b>Total Cost</b>	<b>\$2,032,812</b>
<b>Total RSTP Request</b>	<b>\$2,032,812</b>

## 11. RSTP Candidate Project Rating Factors

### A. Regional Project Consideration

The Friendship Lane road reconstruction project is an important 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, Plantation Road and Friendship Lane 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. Friendship Lane provides a direct connection between the planned Plantation Road improvements, the Friendship Lane/Carvins Creek bridge and beyond to the Tinker Creek Greenway.

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

All of the proposed improvements will not only help Roanoke County to retain existing Plantation Road-area businesses, but will also encourage new businesses to locate on this corridor. This project is fully expected to encourage new commercial and industrial development in the Plantation Road area, thus providing new tax revenue and new jobs.

Plantation Road and Friendship Lane are unique to Roanoke County as both roads are developed by industrial uses, commercial businesses and private residences. Recreational facilities such as Walrond Park, Carvins Cove Natural Reserve and a segment of the Tinker Creek Greenway are also located in the vicinity of Plantation Road and Friendship Lane. Sidewalks, shared-use trails, pedestrian signals, crosswalks and bicycle accommodations will provide new and safe facilities for both pedestrians and bicyclists. These facilities will also connect Roanoke County's Walrond Park to the Tinker Creek Greenway and the Carvins Cove Natural Reserve. When the Plantation Road Project was discussed with area businesses, the following guest amenities and features for were discussed:

- Hotels will endorse easy exercise opportunities accessible from their front doors; currently, guests are advised to drive to Walrond Park to walk or jog;
- Connections to Walrond Park will allow youth sports teams in town for tournaments to easily walk to the park and to nearby businesses; and
- Camping World will send their customers on foot or by bicycle to Walrond Park, to the Tinker Creek Greenway and to Carvins Cove while their vehicles are being serviced.

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



Crash data indicates that there are far fewer accidents at the Friendship Lane/Gander Way intersection than at other intersections along the Plantation Road corridor. While accident rates are lower, Friendship Lane residents have told Roanoke County and VDOT that a significant number of automobiles and tractor trailers turn onto Friendship Lane prematurely while aiming for the Interstate 81 northbound on-ramp. Tractor trailers have no space to turn around and cause backups trying to return to Plantation Road.

In addition, many walkers utilize Friendship Lane. A group from Wells Fargo takes daily walks on the road down to the bridge for exercise during breaks. Reconstructing Friendship Lane, coupled with better directional signage to Interstate 81, will improve the safety and security of vehicles as well as pedestrians and bicyclists.

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

The planned pedestrian and bicycle accommodations as well as the Plantation Road/Friendship Lane/Gander Way intersection crosswalks and pedestrian signals will be designed and constructed to ADA standards with accessibility ramps. The connecting Friendship Lane/Carvins Creek bridge will also be constructed to ADA standards. 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 pedestrian and bicycle accommodations, crosswalks, pedestrian signals and Friendship Lane/Carvins Creek bridge 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 intersection of Plantation Road/Friendship Lane/Gander Way will allow pedestrians and bicyclists to safely cross five lanes of traffic from sidewalks on the west side of Plantation Road to accommodations along Friendship Lane. The planned bicycle and pedestrian accommodations along Friendship Lane will connect the proposed Plantation Road improvements to the Friendship Lane/Carvins Creek bridge and beyond 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 two major considerations for the reconstruction project include:

- Utilizing access management strategies where feasible to minimize the number of private entrances and conflict points, as well as determining if and where tapers and turn lanes should be included; and
- Analysis of the current Friendship Lane/Plantation Road signal approach to determine if changes are needed to better manage Friendship Lane queues at peak hours.

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

The proposed Friendship Lane reconstruction with bicycle and pedestrian accommodations, Plantation Road intersection pedestrian signalization with crosswalks, reconstruction of the Friendship Lane/Carvins Creek bridge and connection to the Tinker Creek Greenway 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 Friendship Lane reconstruction project will result in many safety improvements for bicycle, pedestrian and vehicular users of Friendship Lane. 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:*** 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.

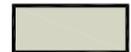
***2007 Update to the Roanoke Valley Greenway Plan:*** The planned shared-use trail network will connect to the Tinker Creek Greenway (Priority #2 in the Plan) located on Hollins University’s campus. The Tinker Creek Greenway will ultimately connect the Roanoke River Greenway to the extensive network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

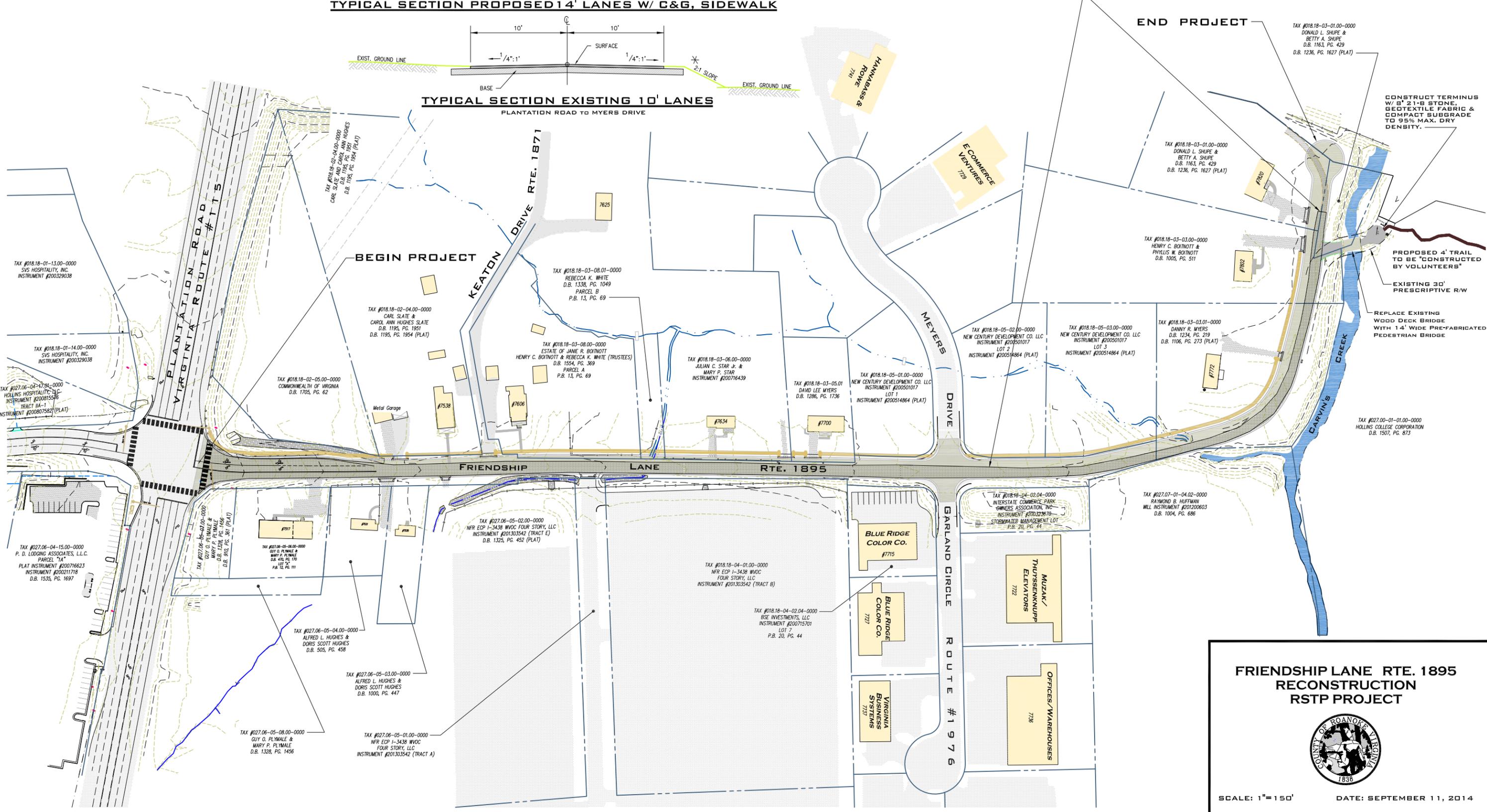
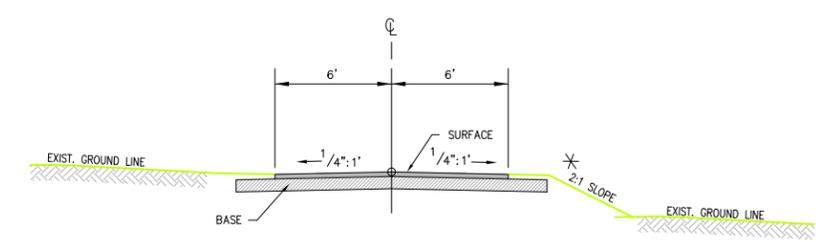
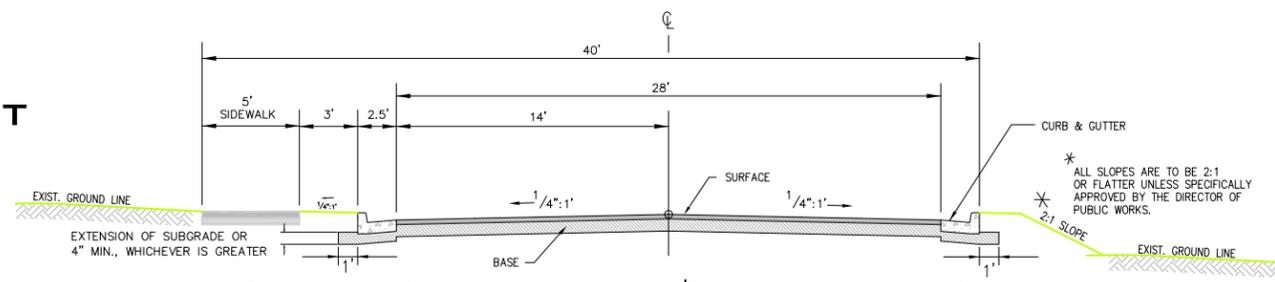
***2004 Hollins University Master Plan:*** References and endorses the proposed regional greenway connection through Hollins University property.

**Attachments:**

1. Map – Friendship Lane Reconstruction Project
2. Map – Plantation Road Project
3. Project Budget
4. Site Photographs
5. Resolution of Support – Roanoke County Board of Supervisors

# LEGEND

-  28' PAVEMENT
-  5' SIDEWALK

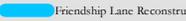
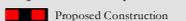
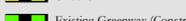
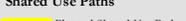
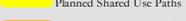


**FRIENDSHIP LANE RTE. 1895 RECONSTRUCTION RSTP PROJECT**



SCALE: 1"=150'      DATE: SEPTEMBER 11, 2014

**Project Features**

	Traffic Signal		Proposed Ped Signal		Lala Drive Reconstruction
	Ped Signal		Hollins Trailhead Parking Lot		Friendship Lane Reconstruction
	Proposed Traffic Signal		Boat Dock Parking Lot		Proposed Construction
	Proposed Carvins Creek Bridge		Unbuilt		Existing Greenway (Constructed 2012)
			Planned Shared Use Paths		Walrond Shared Use Path or Sidewalk
			Planned Sidewalk		Walrond Sidewalk (potential)



Plantation Road Project - Friendship Lane Reconstruction  
 FY 2016 Regional Surface Transportation Program



**Friendship Lane Reconstruction Project, Rte. 1895  
Fiscal Year 2016 Regional Surface Transportation Program**

SPEC	ITEM	QUANTITIES	UNIT	UNIT COST	EXTENDED
1	FEMA Flood Study	1	EA	\$ 10,000.00	\$10,000
2	FEMA Map Revision	1	EA	\$ 20,000.00	\$20,000
3	Utility relocations (power, water and sewer)	1	LS	\$ 50,000.00	\$50,000
4	Pavement Demolition	4,717	SY	\$ 6.00	\$28,302
5	Excavation (cut) 1.5'	2,358	CY	\$ 25.00	\$58,950
6	Pavement Line Markings 4"	8,080	LF	\$ 1.00	\$8,080
7	2" Asph. Conc. Typ. SM-9.5A	820	Ton	\$ 137.00	\$112,340
8	6" Asph. Conc. Type BM-25	2,550	Ton	\$ 153.00	\$390,150
9	8" Aggr. Base Matl. Type 1 No. 21B	4,973	Ton	\$ 54.00	\$268,542
10	Std. Comb. Curb & Gutter CG-6	4,716	LF	\$ 42.00	\$198,072
11	5' Wide (4" thick) Conc. Sidewalk	2,018	LF	\$ 15.80	\$31,884
12	Curb Drop Inlet DI-3B (8')	20	EA.	\$ 3,620.00	\$72,400
13	End Wall EW-1	1	EA.	\$ 1,200.00	\$1,200
14	15" Reinforced Concrete Pipe	320	LF	\$ 40.00	\$12,800
15	18" Reinforced Concrete Pipe	600	LF	\$ 44.00	\$26,400
16	24" Reinforced Concrete Pipe	800	LF	\$ 60.00	\$48,000
17	36" Reinforced Concrete Pipe	460	LF	\$ 119.00	\$54,740
	<b>Sub-Total</b>				<b>\$1,391,860</b>
18	Traffic Control (2%)				\$27,837
19	E & S Control Items (5%)				\$69,593
20	Engineering/Surveying (10%)				\$139,186
21	Stormwater Management & Quality (10%)				\$139,186
	<b>Sub-Total</b>				<b>\$1,767,663</b>
	Mobilization (10%)				\$176,766
	Contingency (5%)				\$88,383
	<b>TOTAL:</b>				<b>\$2,032,812</b>

Friendship Lane Reconstruction Project:  
Site Photographs

# Plantation Road/Friendship Lane/Gander Way Intersection (August, 2009)

Looking north; Friendship Lane is to the right



# Friendship Lane (September, 2011)

Looking East from Plantation Road



# Friendship Lane and (Portion) Wells Fargo Parking Lot (August, 2009) Looking southeast



# Friendship Lane (September, 2011)

Looking East, Intersection of Meyers Dr. and Garland Cir. Visible



# Friendship Lane (September, 2011)

Looking south, guardrail visible blocking  
Friendship Lane/Carvin's Creek Bridge



# Wells Fargo Walkers on Friendship Lane (Nov, 2013)

Looking south away from the bridge



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

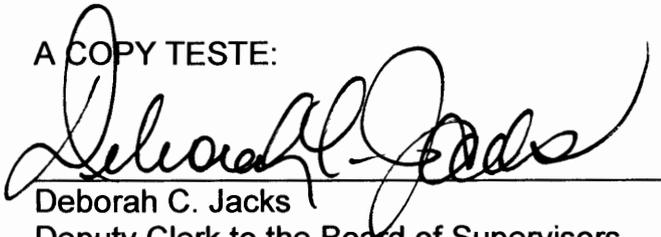
6. West Main Street Pedestrian Improvements – Phase 2

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