



Date of Council Meeting: September 12, 2016

**TOWN OF LEESBURG
TOWN COUNCIL WORK SESSION**

Information Only

Subject: Pedestrian Crosswalk at the Intersection of Edwards Ferry Road and the Route 15 Bypass

Staff Contact: Renée M. LaFollette, P.E., Director of Public Works & Capital Projects
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Tom Brandon, Capital Projects Manager, Public Works & Capital Projects
Calvin K. Grow, Transportation Engineer, Public Works & Capital Projects

Council Action Requested: Information only.

Staff Recommendation: Information only.

Commission Recommendation: Not applicable.

Fiscal Impact: The estimated cost to install a pedestrian crosswalk at the intersection of Edwards Ferry Road and the Route 15 Bypass is approximately \$1 million.

Work Plan Impact: Constructing a crosswalk at this intersection will require design, land acquisition, and construction time from the Capital Projects division. In order for this to be programmed sooner than Fiscal Year 2023, other projects must be re-prioritized in the adopted Capital Improvement Program.

Executive Summary: The Department of Public Works and Capital Projects was requested by Council to prepare information regarding the need for a crosswalk at the intersection of the Route 15 Bypass and Edwards Ferry Road, and to estimate the cost to install the crosswalk.

The purpose of this crosswalk would be to allow pedestrians to safely and conveniently walk from the residential areas along Heritage Way and Edwards Ferry Road to the shopping center area on the east side of the Route 15 Bypass.

Background: The Route 15 Leesburg Bypass (Bypass) acts as a barrier that separates the residential areas to the west from the commercial centers on the east. Pedestrians and bicyclists routinely cross the Bypass at various locations on a mile-long segment from East Market Street to north of Edwards Ferry Road.

Safety

It has long been perceived that these pedestrian and bicycle movements are dangerous, even though pedestrian related accidents have been rare. Prior to three years ago, there have been no known pedestrian or bicycle accidents at this location. However, during the past three years, two accidents have occurred involving injuries when pedestrians or bicyclists attempted to cross the Bypass:

1. September 5, 2014, 6:00 am: A pedestrian was struck crossing the bypass near Fort Evans Road.
2. July 26, 2016, 9:00 pm: A bicyclist was struck crossing the Bypass near Edwards Ferry Road.

The major safety issues associated with pedestrians and bicyclists crossing the Bypass are:

- Route 15 is a high speed, high volume highway that serves local traffic, large retail centers, and commuters;
- There are numerous pedestrians and bicyclists crossing the highway;
- There is no single location where pedestrians cross the bypass, but rather there are significant crossings at the Edwards Ferry Road intersection, the Ft. Evans Road intersection and locations between and beyond these intersections;
- The area has complex traffic movements involving two major intersections, and short areas where vehicles merge, weave and turn; and
- The width of the crossing is relatively wide due to the multiple through traffic and turn lanes.

Previous Studies and Analyses

Over the past 25 years, the Town has evaluated conditions and potential solutions to safety and conveniently get pedestrians and bicyclists across the Bypass. These included:

- Pedestrian safety studies (which included pedestrian counts, pedestrian opinion surveys, and other analyses) performed in 2004 and 2008,
- Pedestrian bridge analysis performed in 2005,
- Pedestrian counts were conducted in 2010 and 2015, and
- Updates and recommendations to Council in six different reports (05/19/93, 11/08/10, 02/22/11, 09/24/12, 11/24/14, and 12/08/14).

Many of the studies and reports evaluated interim or short term solutions to mitigate the safety issues. Generally the recommended solutions involved either providing ways for residents to safely and conveniently cross the highway, or adding barriers to deter people from crossing at the most hazardous locations. The recommendations have generally included:

Bus Service: Several studies recommended implementation and subsequent modifications to the Safe-T Ride bus system to transport residents across the Bypass. This bus system was implemented in July 2001 as a free service to transport residents. Since then the routes and

hours have been adjusted several times to better serve the community. In addition, a bus shelter was installed near the Shenandoah Building in 2008. Currently the route provides service from 7:00 am to 7:00 pm weekdays and 9:00 am to 6:00 pm on weekends. The route has stops in residential areas on Ft. Evans Road (near the Montessori school) and along Heritage Way. Bus stops serve the Shenandoah Building, Walmart shopping center, Battlefield Marketplace (Target), Battlefield Shopping Center (Michael's and Dick's), and the route has recently been expanded to serve the Leesburg Premium Outlets and Home Depot on Fort Evans Road.

In addition to this free bus service, two of the Loudoun County Transit fixed routes (Route 57 and Route 70) provide regular service across the bypass in this area for a \$1 fee. Finally, Loudoun County Transit provides paratransit service in this area for eligible people who cannot use public transit.

Fencing: Several studies have recommended that fences be installed to discourage pedestrians from crossing the Bypass. Later studies had recommended that the fencing be extended or modified to create more of a barrier to deter pedestrian crossings in the more congested areas.

In 2004, the Town installed fencing along the west side of the Bypass for a portion of the area between Edwards Ferry Road and Fort Evans Road. The fence has since been lengthened so that it currently extends from just north of the East Market Street interchange (near Wolf Furniture) to near the Edwards Ferry Road intersection. Additional improvements to the fence will be made later this year to prevent pedestrians from crossing under the fence where it crosses the roadside drainage ditch near Tractor Supply.

Crosswalks: One potential interim solution to improve safety for pedestrians and bicycles crossing the Bypass is development of a crosswalk at Edwards Ferry Road. Crosswalks at this intersection were considered in several of the previous analyses.

The feasibility of this option has been evaluated by staff. Due to right-of-way, utility and other restrictions, it appears that the most feasible location for a crosswalk would be across the Bypass on the north side of the intersection. The improvements would include connecting the existing sidewalk west of the intersection ending at Heritage Way with the existing sidewalk east of the intersection ending near the Bypass. The crosswalk would include pedestrian signals and appropriate signing and pavement markings.

The advantages and disadvantages of installing a crosswalk at Edwards Ferry Road are:

Advantages:

- Would provide a crossing location that is controlled with pedestrian signals and appropriate signing, marking, and signal timing. The pedestrian walk signal will be concurrent with the Edwards Ferry Road eastbound and westbound traffic movements.

- Would be located near where the highest concentration of pedestrians currently cross the Bypass, as documented by pedestrian counts

Disadvantages:

- Would only serve a portion of the population that currently crosses the Bypass by foot or on bicycles. It is highly unlikely that pedestrians near the Fort Evans Road intersection would walk down the Bypass, where there is no sidewalk, to use the crosswalk.
- Would be significant impacts to adjacent property, especially at the Shenandoah Building parking lot and adjacent to the Exxon gas station. Development of the sidewalk adjacent to these properties will require permanent and temporary easements, retaining walls in both locations, removal of landscaping, and relocation of underground utilities.
- Would promote pedestrians to cross a wide, high volume, high speed highway.
- Pedestrians would be crossing an uncontrolled free-flow right turn lane (from southbound Route 15 to westbound Edwards Ferry Road). With this configuration, the signal phasing would not be modified from current conditions. If the free flow right turn lane is converted to a conventional right turn lane controlled by the signal, significant modifications to the signal equipment and signal timing would be required. This would negatively impact the capacity of the intersection and would increase the construction cost.
- Much of the sidewalk and all of the crosswalk would be removed when the grade separated interchange is constructed.
- The estimated cost of developing this crossing is approximately \$1 million.

Long Term Solution

The conclusions of each of the studies and reports has consistently been that the long term comprehensive solution to the issue is to provide grade-separated crossings for pedestrians and bicyclists at locations where they cross at both Edwards Ferry Road and Fort Evans Road. The detail planning and design of the interchange was begun within the past year. VDOT is administering this project for the Town which will establish the preliminary design of the new interchange. Preliminary alternative designs have been developed and are currently under review. A public hearing for the project is scheduled to be held in early 2017.

With the new interchange, the Bypass profile will be raised as it crosses Edwards Ferry Road. Pedestrians will be able to cross under the Bypass bridge on sidewalks adjacent to Edwards Ferry Road. On either side of the raised Bypass, the new sidewalks will cross the ramps and frontage roads at signalized intersections equipped with pedestrian signals and marked cross walks.

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Attachments: (1) Route 15 Bypass/Edwards Ferry Road Interchange Capital Improvement Project from Fiscal Year 2017 Approved Budget
(2) Aerial of possible sidewalk configuration on Edwards Ferry Road

TITLE: Rt. 15 Bypass/Edwards Ferry Rd. Interchange (09307)

STATUS: Ongoing

PROGRAM DESCRIPTION: The project consists of development of a new grade-separated interchange on Edwards Ferry Road at the Route 15 Leesburg Bypass and will include the intersection at Fort Evans Road. The existing signalized at-grade intersection at this location is heavily congested. Route 15 serves as a major commuter route, and there are numerous large retail developments in the area that generate significant traffic volumes. Also, currently there is a large volume of pedestrian traffic, which crosses the bypass between the residential areas inside the bypass and the commercial development outside the bypass.

Funding required for right-of-way acquisition, utility relocations, and construction will be identified after design is completed. This project will accumulate 70% NVTa and VDOT Regional Surface Transportation Program funding as it is available.

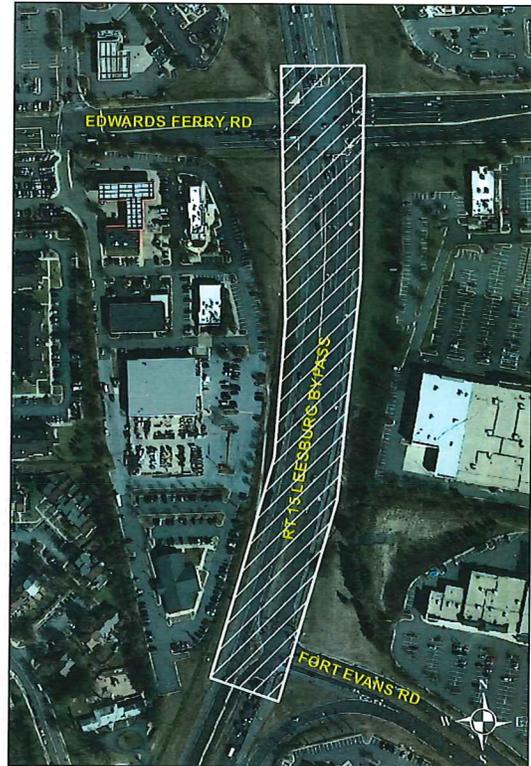
OPERATING IMPACT: TBD

GOAL ADDRESSED: 2012 Town Plan

- The Transportation Corridor Objectives call for a grade-separated interchange at this location.
- Transportation Objective calls for providing a safe, convenient, continuous, comfortable, and aesthetically pleasing transportation environment that promotes bicycling and walking.

Significant Dates

| UTILITY RELOCATION START | CONSTRUCTION START | ESTIMATED COMPLETION |
|--------------------------|--------------------|----------------------|
| TBD | TBD | TBD |



Funding Sources

| Sources | Total Required Project Funding | Funded through 6/30/15 | Fiscal Year | | | | | | Total for 6 Yr CIP | Future Funds Required |
|----------------------------|--------------------------------|------------------------|---------------------|-------------------|-------------------|----------|----------|----------|---------------------|-----------------------|
| | | | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | | |
| GO Bonds | \$ 160,200 | — | \$ 89,600 | \$ 52,300 | \$ 18,300 | — | — | — | \$ 160,200 | — |
| Transfer from General Fund | 43,600 | — | — | 28,500 | 15,100 | — | — | — | 43,600 | — |
| NVTa 70% | 99,000,000 | — | 1,000,000 | 600,000 | 400,000 | — | — | — | 2,000,000 | 97,000,000 |
| State - VDOT | 10,000,000 | — | — | — | — | — | — | — | — | 10,000,000 |
| Total Sources | \$ 109,203,800 | — | \$ 1,089,600 | \$ 680,800 | \$ 433,400 | — | — | — | \$ 2,203,800 | \$ 107,000,000 |

Planned Uses

| Uses | Total Project Cost | Expended through 6/30/15 | Fiscal Year | | | | | | Total for 6 Yr CIP | Future Project Cost |
|--------------------|-----------------------|--------------------------|---------------------|-------------------|-------------------|----------|----------|----------|---------------------|-----------------------|
| | | | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | | |
| Project Management | \$ 203,800 | — | \$ 89,600 | \$ 80,800 | \$ 33,400 | — | — | — | \$ 203,800 | — |
| Land | 5,000,000 | — | — | — | — | — | — | — | — | 5,000,000 |
| Design/Engineering | 10,000,000 | — | 1,000,000 | 600,000 | 400,000 | — | — | — | 2,000,000 | 8,000,000 |
| Utility Relocation | 2,000,000 | — | — | — | — | — | — | — | — | 2,000,000 |
| Construction | 92,000,000 | — | — | — | — | — | — | — | — | 92,000,000 |
| Total Uses | \$ 109,203,800 | — | \$ 1,089,600 | \$ 680,800 | \$ 433,400 | — | — | — | \$ 2,203,800 | \$ 107,000,000 |

Operating Impact

| Operating/Maintenance | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | Total for 6 Yr CIP |
|-----------------------|------|------|------|------|------|------|--------------------|
| N/A | — | — | — | — | — | — | — |



Potential Sidewalk and Crosswalk
North Side of Edwards Ferry Road at the Route 15 Leesburg Bypass