



Intersection Improvements at Route 3 and Orange Plank Road Spotsylvania County

UPC: 120977 Project No: 0003-088-763, P101, N501

Project Team

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Project Background

- **Historical Information:**
 - **Signalized intersection w/ FYA (2012)**
 - **Additional Signage for FYA (2018)**
 - **Recommended from Spotsylvania County Transportation Committee**

- **The project is funded through the High-Risk Rural Roads program (HRRR)**

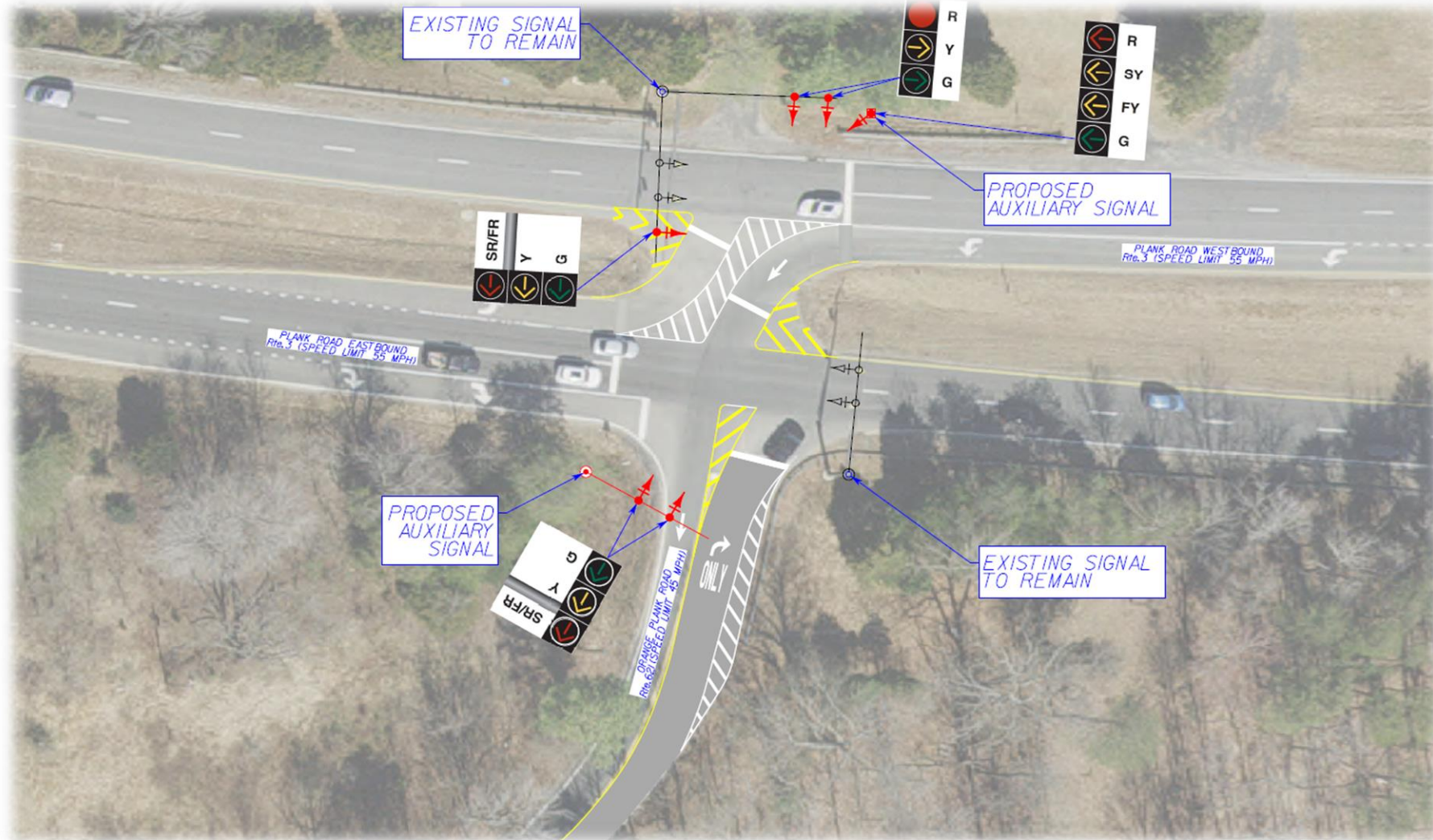
- **Crash Data (3-year period)**
 - **21 crashes**
 - 1 fatality
 - 12 angle
 - 5 rear-end
 - 1 head-on
 - 3 side-swipe

Project Purpose

The purpose of the project is to:

- **Enhance safety**
 - Route 621 onto Route 3 right turn only
 - Route 3 westbound onto Route 621 controlled by flashing red arrow with new auxiliary signal
 - Route 3 eastbound U-turns controlled by new auxiliary signal
 - Median stopping point moved to reduce crossing distance
- **Improve sight distance**
 - Tree clearing along median at east crossover

Proposed Plan - Restricted U-Turn (R-Cut)



East Crossover



Project Funding & Estimate

Preliminary Engineering	\$50,000
Construction	\$178,182
Total	\$228,182

Frequently Asked Questions

FAQs Available at www.VirginiaDOT.org/Route3andOrangePlankRoad



Route 3 and Route 621 (Orange Plank Road)
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Project Frequently Asked Questions (FAQ)

Aug. 26, 2022

Why is VDOT recommending this project design?

Over the past three years, a high number of angle crashes have occurred near the intersection of Route 3 and Route 621 (Orange Plank Road). These crashes occur when two vehicles collide at an angle, such as when a turning vehicle is struck by oncoming traffic.

To reduce this type of crash, and reduce the risk of fatalities and injuries, VDOT recommends changing the intersection configuration to reduce conflict points where vehicles could collide.

An additional benefit of the recommended design is improved traffic flow, with increased green signal time for Route 3 traffic. This means through traffic on Route 3 will need to stop less frequently.

Can VDOT extend the left turn lane on Route 3 westbound approaching the Orange Plank Road intersection?

VDOT wants to implement improvements at this intersection as soon as possible to address the crash risk. While extending the left turn lane on Route 3 westbound is possible, the recommended project can be implemented much sooner and is located within the intersection's existing footprint and state right-of-way. And most critically, it is expected to deliver the same benefits as a turn lane extension.

During the citizen comment opportunity for this project July 25 - August 12, many citizens expressed concern over westbound Route 3 traffic overflowing from the left turn lane into the left through lane at peak times. Based on these comments, VDOT adjusted traffic signal timing at the intersection in early August to provide an additional 20 seconds of green time for westbound Route 3 traffic turning left onto Orange Plank Road.

Installing the recommended design would prohibit left turns from Orange Plank Road, which will provide more green signal time for other phases at the intersection, and will reduce delays. And, allowing left turns on a flashing red arrow signal will help to clear the waiting line of vehicles in the Route 3 westbound left turn lane, reducing the risk of overflow.

In the future, extending the Route 3 westbound left turn lane may be recommended to meet traffic demand. But a turn lane extension will require additional funding and may involve the acquisition of right-of-way, and these factors would increase the time needed to develop and build the project. In contrast, the current recommended project is estimated to cost around \$228,162 and is anticipated to be implemented by mid-2023.

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Why doesn't VDOT install a traffic signal that would only allow left turns from Route 3 westbound on a green arrow signal?

The traffic signal will have a dedicated green arrow for left turns. But, only allowing left turns on a green arrow will not provide enough time to clear the line of vehicles on Route 3 westbound waiting to turn left onto Orange Plank Road. To ensure efficient operation at the intersection, traffic needs to be permitted to turn while yielding to oncoming traffic. But moving to a flashing red arrow provides stronger guidance to drivers that they must come to a complete stop and yield to oncoming traffic before proceeding, just as they would at a stop sign.

VDOT will closely monitor the traffic signal timing and phasing once it is implemented to maximize safety and mobility. During peak hours, VDOT could evaluate whether the flashing red arrow is needed.

Can rumble strips and/or flashing warning lights be added to Route 3 in advance of the Orange Plank Road intersection, to alert drivers that they are approaching a traffic signal?

After the project is complete and the traffic pattern change is implemented, VDOT could add rumble strips to the intersection approaches as an additional safety measure, if warranted. But, they may not be needed. With improved traffic flow, drivers may not be required to stop as often.

Can the 55 mph speed limit on Route 3 be lowered on the approach to the intersection?

Speed limits are set based on traffic data. It is imperative that VDOT sets realistic speed limits that allow traffic to travel the appropriate speed based on the geometry of the roadway. As long as sight distance is met for turning movements, vehicles can reasonably travel 55 mph through this section of Route 3. It is important to note that artificially lowering speed limits below the actual need can cause safety concerns.

I'm concerned about the ability of drivers to safely make a U-turn from Route 3 eastbound to Route 3 westbound at the crossover east of the Orange Plank Road intersection. How will this project enhance this crossover area, and how will drivers making a U-turn safely merge into the westbound Route 3 travel lanes, where the speed limit is 55 mph? Can the deceleration lane be extended on Route 3 eastbound approaching this crossover?

As part of this project, VDOT will work to clear trees and debris within the median to improve sight distance at the crossovers.

Around 5 vehicles turn left from Orange Plank Road to Route 3 westbound each hour. We acknowledge that limiting left turns from Orange Plank Road will increase U-turn movements

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Route 3 and Route 621 (Orange Plank Road)
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slightly. However, U-turn movements are preferred over unrestricted left turns. Motorists making a U-turn have fewer decision points to navigate, with fewer conflict points.

Can Route 3 westbound be widened to build a double turn lane onto Orange Plank Road, and widen Orange Plank Road to have two southbound lanes to receive the traffic?

A project of this scope could be designed and built, but it would require significantly more time to implement due to the amount of right-of-way acquisition that would be needed. The project would also have a higher cost. The current alternative is a lower-cost improvement that can be installed quickly to improve safety and mobility in the existing intersection and median. Future road improvements can be explored for this location, but the proposed project lets us take action within the next year.

Has a project been evaluated to build an overpass or a flyover at this location, allowing for free-flowing turning movements over Route 3 through travel lanes?

Building flyover bridges would require significant acquisition of additional right-of-way outside the intersection footprint, which may conflict with National Park Service property. Building structures would also substantially increase the amount of required funding.

What is the intersection's crash history?

During a three year period, there have been 21 crashes at the intersection. The crashes resulted in a fatality, and 20 injuries.

Among the 21 crashes, the following types of crashes occurred:

- 12 angle crashes
- 5 rear-end crashes
- 1 head-on
- 3 sideswipe - same direction

Just over half of the crashes that occurred (13 crashes) were property-damage-only crashes, in which no one was injured. All of the rear-end crashes only involved property damage.

Reducing conflict points through the recommended project intends to reduce the risk of angle crashes. And, by reducing stops for Route 3 motorists, it also seeks to reduce rear-end crashes.

Can VDOT remove trees in the median and surrounding the Orange Plank Road and Route 3 intersection?

Yes, trees will be cleared in the median to improve sight distance.

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Will it be possible for emergency vehicles to turn left from Orange Plank Road onto Route 3 westbound, or will they also have to proceed on Route 3 eastbound and U-turn to respond to a call?

Yes, emergency vehicles will be able to safely traverse this area. All lane designations will be on existing pavement with pavement markings.

Are there any improvements planned at another nearby intersection, the four-way stop at Orange Plank Road and Brock Road?

There is not a funded project at this time. VDOT and Spotsylvania County have discussed potential improvements at Orange Plank Road and Brock Road that would improve safety at this four-way-stop intersection, such as a roundabout.

Spotsylvania County and the National Park Service have an agreement signed in 2008 that does not permit alterations to this intersection. With this agreement, VDOT and Spotsylvania County cannot perform any improvements outside of the existing footprint of the roadway.

Given the existing constraints, there are no improvements planned that will reduce congestion at the intersection. Since improvements cannot be made within the existing intersection footprint, significant investment may be needed to realign Brock Road.

If this project is approved, when would construction begin? When would it open to traffic?

Construction at the Route 3 and Orange Plank Road intersection could begin as early as late 2022 and be complete as soon as spring-summer 2023. Traffic will be able to travel through the intersection during construction, and single lane closures would be scheduled to occur at off-peak hours. In addition to road construction, motorists can expect tree clearing in the median and around the intersection.

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UPC120977 State Project #0003-088-763,P101,N501

Estimated timeline



How to submit your comments

Please submit your comments regarding the design presented in this Public Hearing Presentation by using any of the four methods below by our deadline of October 8, 2022.



Call

(540) 899-4288



Email

fred.comments@vdot.virginia.gov



Mail

Virginia Department of Transportation
87 Deacon Road
Fredericksburg, VA 22405
ATTN: Jessica Graves



Online

Visit:
[www.VirginiaDOT.org/Route3
andOrangePlankRoad](http://www.VirginiaDOT.org/Route3andOrangePlankRoad)

Thank you for your participation!



Design Public Hearing Presentation