April 2018

US 250/Wilson Workforce and Rehabilitation Center Small Area Study

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US 250/Wilson Workforce and Rehabilitation Center Small Area Study

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Disclaimer

This report has been prepared in cooperation with, and financed in part, by the U.S. Department of Transportation - Federal Highway Administration, the Federal Transit Administration, the Virginia Department of Transportation, and the Virginia Department of Rail and Public Transportation. The contents of this report reflect the views of the Central Shenandoah Planning District Commission and Staunton-Augusta-Waynesboro Metropolitan Planning Organization, which are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Federal Highway Administration, Federal Transit Administration, the Virginia Department of Transportation, or the Virginia Department of Rail and Public Transportation. This report is not a legal document, and does not constitute a standard, specification, or regulation. Although much care was taken to ensure the accuracy of information presented in this document, CSPDC does not guarantee the accuracy of this information.

Acceptance of this report as evidence of fulfillment of the objectives of this planning study does not constitute endorsement/approval of the need for any recommended improvement, nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternatives may be necessary.

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Executive Summary

Purpose

The US 250/Wilson Workforce and Rehabilitation Center (WWRC) Small Area Study conducted by the Staunton-Augusta-Waynesboro Metropolitan Organization (SAWMPO) in collaboration with Augusta County, the Virginia Department of Transportation (VDOT) Staunton District, and the Timmons Group, analyzes operational and safety conditions at the entrance to the WWRC Campus to identify short- and long-term improvement strategies to reduce congestion and delay at the entrance to the WWRC Campus and to identify potential locations for a second entrance to the WWRC Campus.

Study Team

The study team included staff from the SAWMPO, Augusta County, VDOT, and the Timmons Group.

Analysis

The study examines the US 250 corridor between Idlewood Boulevard and Barren Ridge Road in Fishersville, VA to assess existing and forecast future corridor operating conditions. Data examined include traffic counts, turning movements, delays, crashes, and field observations. Using this data, a traffic model of the study area was developed to assess short- and long-term no-build and improvement scenarios.

Improvement Recommendations

Short-term improvement recommendations focus on operational improvements at the entrance to the WWRC Campus. Long-term improvement options identify potential second entrance locations to the WWRC Complex. Short-term improvement recommendations are illustrated on **Figures 10 and 11**. Long-term improvement options are illustrated in **Figure 12**. Short- and long-term improvement scenarios with planning level cost estimates are provided in **Section 5**. Detailed cost estimates are found in **Appendices B and C**.

Short-term Improvements

Short-term improvement recommendations were developed to enhance operational and safety conditions at the entrance to the WWRC Complex by alleviating congestion and reducing vehicle delays and queues during the AM and PM peak hours. Analysis of study area traffic data demonstrated that the following improvements address the study's stated goals and maintain the existing non-motorized facilities parallel to Woodrow Wilson Avenue.

1. Add a channelized westbound right-turn lane at the WWRC Complex entrance on US 250 and an associated northbound receiving lane on Woodrow Wilson Avenue
2. Add a separate southbound right-turn lane on Woodrow Wilson Avenue at the WWRC Complex US 250 entrance
3. Adjust signal timing at the US 250/Woodrow Wilson Avenue/LifeCore Drive intersection

While the short-term recommendations improve operating conditions at the 250/Wilson/Lifecore intersection, a single entrance to the WWRC facility will not adequately serve the long-term study area traffic demands.

Long-term Options

The long-term goal is to add a new entrance to the WWRC Complex. The study team identified 13 possible road alignments and narrowed the number of possible alignment options to three during the study process. The study team analyzed the three second entrance options to determine how each improved future corridor operating conditions, and to develop planning level cost estimates. Implementation of a long-term option requires the construction of a new roadway and associated improvements at the new connection on US 250. Long-term options are detailed in Section 4.2 and are shown on **Figure 10**.

Public Outreach

The study team held two public outreach meetings at Wilson Middle School to provide the community with the opportunity to learn about the study, review study materials, and provide input. Public meeting notices were posted in the Staunton News Leader and Waynesboro News Virginian, on the SAWMPO web site, and were provided to the schools in the WWRC Complex for distribution to parents and staff. Press releases for each event were provided to local media outlets. Flyers were distributed to businesses located within the study area. Copies of the public notices and flyers are in **Appendix A**. To view the study webpage please go to www.sawmpo.org.

The public meetings were held on:

- June 22, 2017
- January 31, 2018

1. Background

1.1 Purpose and Need

The SAWMPO conducted a Small Area Transportation Study to examine conditions and identify improvement solutions at the entrance to the WWRC Complex at the intersection of US 250 and Woodrow Wilson Avenue (VA 358)/LifeCore Drive (VA 636). Currently, vehicles experience congestion and delays at the entrance to the WWRC Complex during peak AM and PM hours, and the Campus lacks a secondary/emergency access road. The study area is a one-mile segment of the US 250 corridor between Idlewood Boulevard and Barren Ridge Road in the community of Fishersville, VA.

The purpose of this study is to:

- Inventory and summarize existing conditions.
- Collect and analyze traffic data for existing and forecasted operational conditions.
- Provide short-term improvement recommendations and long-term improvement options.
- Provide planning level cost estimates for improvement recommendations presented in this study.

The study was led by the SAWMPO in partnership with the Virginia Department of Transportation (VDOT), Augusta County, and the Timmons Group.

1.2 Corridor Operational and Safety Issues

Operational and safety issues in the study area include congestion and delays caused by the WWRC complex schools and institutions' concentrated demand on the single point of access at the US 250-Woodrow Wilson Avenue intersection during the AM and PM peak hours.

Traffic data analysis, field observations, and input from stakeholders, which include representatives from the WWRC, Augusta County, Augusta County Schools, and public meeting participants, identified the following operational and safety issues in the study area.

Extensive vehicle queues often occur at the entrance to the WWRC Complex in the US 250 westbound right-turn lane. Queues for vehicles turning right to enter the WWRC Complex were observed extending approximately 1,800-feet from the entrance during the AM peak hour.

1. Delays on Woodrow Wilson Avenue for southbound traffic exiting the WWRC Complex occur during AM and PM peak hours. Southbound through-traffic on Woodrow Wilson Avenue shares the lane with traffic turning right at the intersection. This shared through/right-turn lane contributes to the development of extensive queues during AM and PM peak hours. Additionally, left-turning traffic exiting the WWRC Complex was observed to queue past Wilson Elementary School (approximately 1,400-feet from the WWRC Complex entrance) and block the southbound through/right-turn lane at US 250.
2. There is no secondary or emergency access point to the Complex.

1.3 Study Assumptions

The following assumptions were made for this study:

1. Annual Growth Rate: The study team determined annual growth rates by reviewing historical traffic counts, the VDOT state planning system forecast and anticipated future development within the study area. The following growth rates were used for the traffic modeling analysis:

    - US 250: 1.0%
    - VA 358: 0.5%
    - VA 636: 2.0%

2. The horizon year for short-term improvements is 2022. The horizon year for a long-term option is 2040. Analysis for long-term options include having short-term improvements in place at time of implementation.

2.0 Study Area Characteristics

Roads in the study area include US 250, Woodrow Wilson Avenue (VA 358), LifeCore Drive (VA 636) and Barren Ridge Road.

US 250 is a five-lane undivided minor arterial highway. The speed limit is 45-mph through the study area. US 250 is identified for potential inclusion in the VDOT Arterial Preservation Network, pending CTB approval.

Woodrow Wilson Avenue (VA 358) is a two-lane, two-way road and provides the only entrance to the WWRC Complex. The posted speed is 40-mph at the entrance and decreases to 25-mph at Wilson Elementary School, approximately 1,200-feet north from the entrance.

LifeCore Drive (VA 636) is two-lane, two-way road on the south side of the intersection at the WWRC Complex entrance. LifeCore Drive is classified as a major collector road with a posted speed limit of 45-mph, and provides a link to I-64 to the south. The intersection of US 250 with Woodrow Wilson Avenue (VA 358) and Lifecore Drive (VA 636) is signal-controlled with dedicated left turn lanes and flashing yellow arrows for each direction on US 250. US 250 eastbound has two through and one free-flow right turn lane. US 250 westbound has two through lanes, in addition to the left turn lane. Woodrow Wilson Avenue has one through- and two left-turn lanes at the intersection, but no dedicated right turn lane. Lifecore Drive has two left-turn lanes, and a through/right turn lane at the intersection.

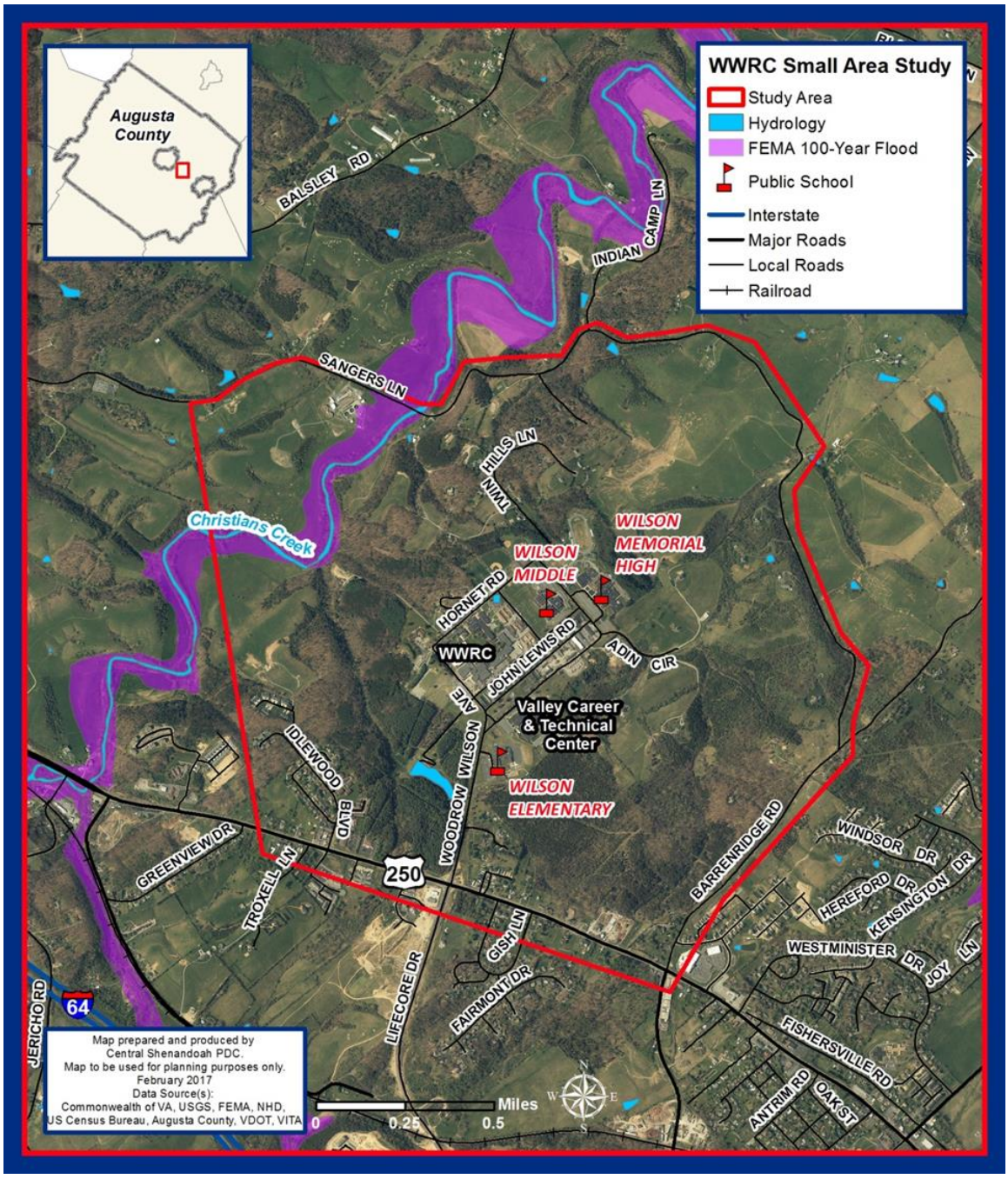
Barren Ridge Road is a two-lane, two-way road located approximately 3,455-feet (0.65-miles) to the east of the WWRC Complex entrance. Barren Ridge Road connects US 250 to surrounding agricultural and residential uses. The intersection of US 250 with Barren Ridge and Mule Academy Roads is signal-controlled with dedicated through- and left-turn lanes and shared through/right turn lanes in both directions on US 250. Barren Ridge Road has a single lane serving all movements at the intersection. Mule Academy provides a dedicated right-turn lane, and a through/left turn lane.

Development in the study area includes the WWRC Complex, several retail centers, office and medical buildings, single- and multi-family development, recreational facilities and agricultural uses. Facilities at the WWRC Complex include the Wilson Workforce and Rehabilitation Center, three public schools (Wilson Elementary, Wilson Middle, and Wilson High School), the Governor's School, the Valley Career Technical Center, the Augusta County Schools vehicle maintenance center, recreational facilities, and agricultural and residential uses. The entrance to the WWRC Complex is located at the intersection of US 250 and Woodrow Wilson Avenue (VA 358). US 250 also serves as an alternate/detour route for I-64. The study area is shown in **Figure 1**.

Study area non-motorized facilities include The Coleman Career Pathway, a 10-foot wide shared use recreational path that runs parallel along the western side of Woodrow Wilson Avenue/LifeCore Drive. This path crosses US 250 at a signalized crosswalk at the entrance to the WWRC Complex. The shared use path connects the WWRC complex and its recreational facilities to the LifeCore Drive Shared Use Path.

Transit service in the study area is available Monday – Saturday via BRITE Transit's 250 Connector Route. Bus stops are located at the corner of Idlewood Boulevard and US 250, and in the WWRC Complex at the WWRC main offices.

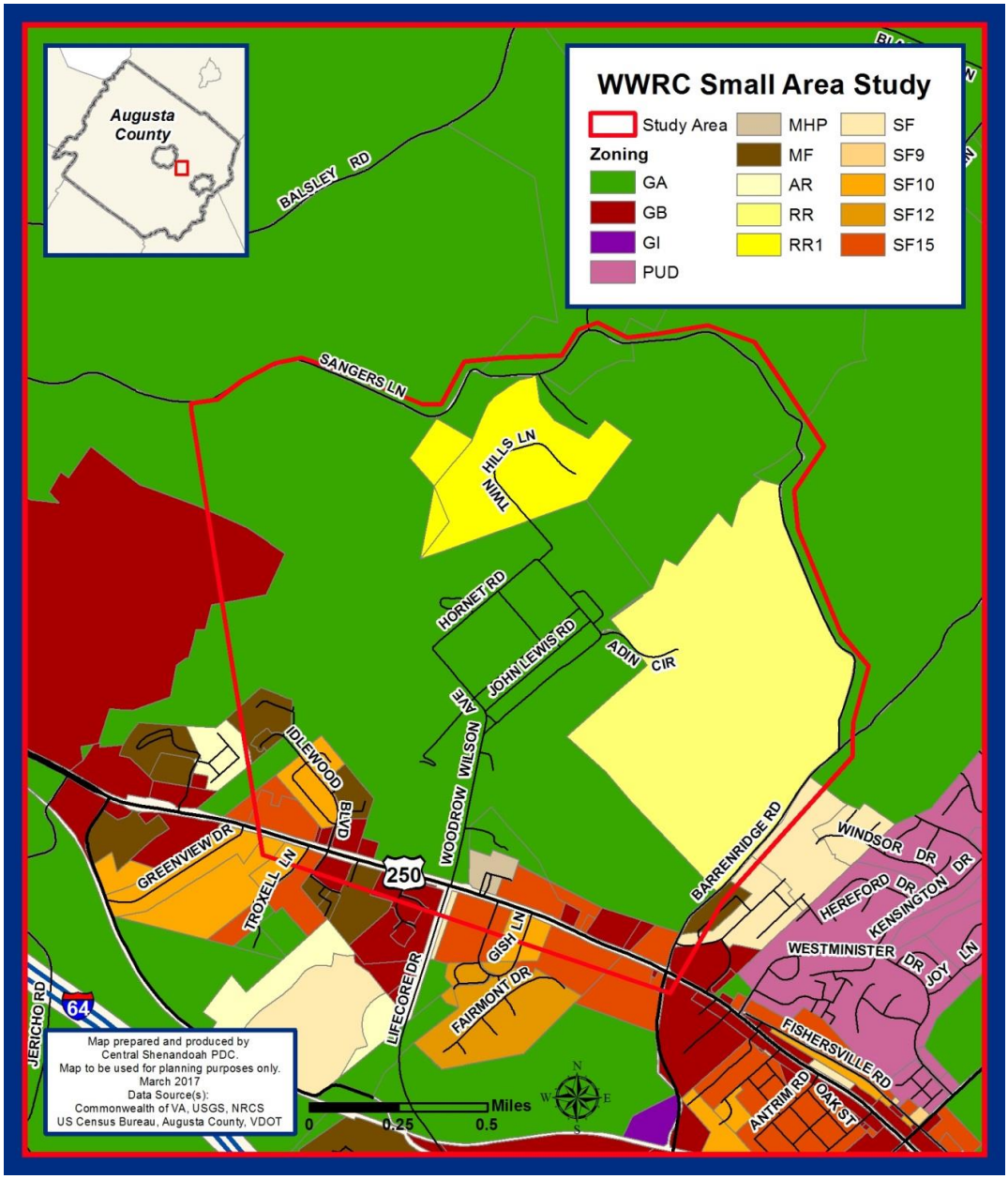
Figure 1: WWRC Study Area



2.1 Zoning

Zoning designations in the study area include General Agriculture (GA), General Business (GB), Multi-Family (MF), Single Family (SF), and Mobile Home Park (MHP). **Figure 2** illustrates zoning designations in the study area.

Figure 2: Zoning in Study Area



2.2 Environmental

This section does not constitute an environmental review or other such level of site assessment. It has not been determined whether a future a project will require an environmental assessment or a categorical exclusion to meet the requirements of the National Environmental Policy Act (NEPA).

2.2.1 Soils

The study area is underlain by a variety of soil types with the Chilhowie-Edom Complex and Weikert-Berks Channery soil types being dominate in the study area. **Figure 3** maps the soil types and locations within the study area.

2.2.2 Geology

The study area is in the Ridge and Valley Ecoregion, and the 67a – Northern Limestone/Dolomite Valleys sub-ecoregion. The geologic subsurface in the study area is shale. Shale tends to heave when moisture increases, or during freeze-thaw conditions. Heaving loosens material and may impact soil stability causing them to lose compaction and density. **Figure 4** maps the geology of the study area.

2.3 Wetlands

There are several small wetland areas and water bodies in the study area. A jurisdictional determination will be required to quantify all streams and wetland areas in the study area.

2.4 Historic Resources

A Department of Historic Resources (DHR) project review was not requested at this preliminary study stage. A DHR project review may be required if a project is pursued in the study area. It is important to note that the WWRC, which includes early twentieth century structures, is in the study area.

Figure 5 identifies jurisdictional waters, wetlands, and historic resources in the study area.

2.5 Utilities

2.5.1 Water/Sewer Service

Study area water and sewer service is provided by the Augusta County Service Authority (ACSA) South River Water System. Water and sewer trunk lines run parallel to US 250 and provide service connections in the study area and are identified in **Figure 6**.

2.5.2 Electrical Service

Dominion Power owns and operates the Electric utilities. Power lines are mounted on standard timber stock poles. Power lines are located overhead and underground within the WWRC Complex.

Figure 3: Soils

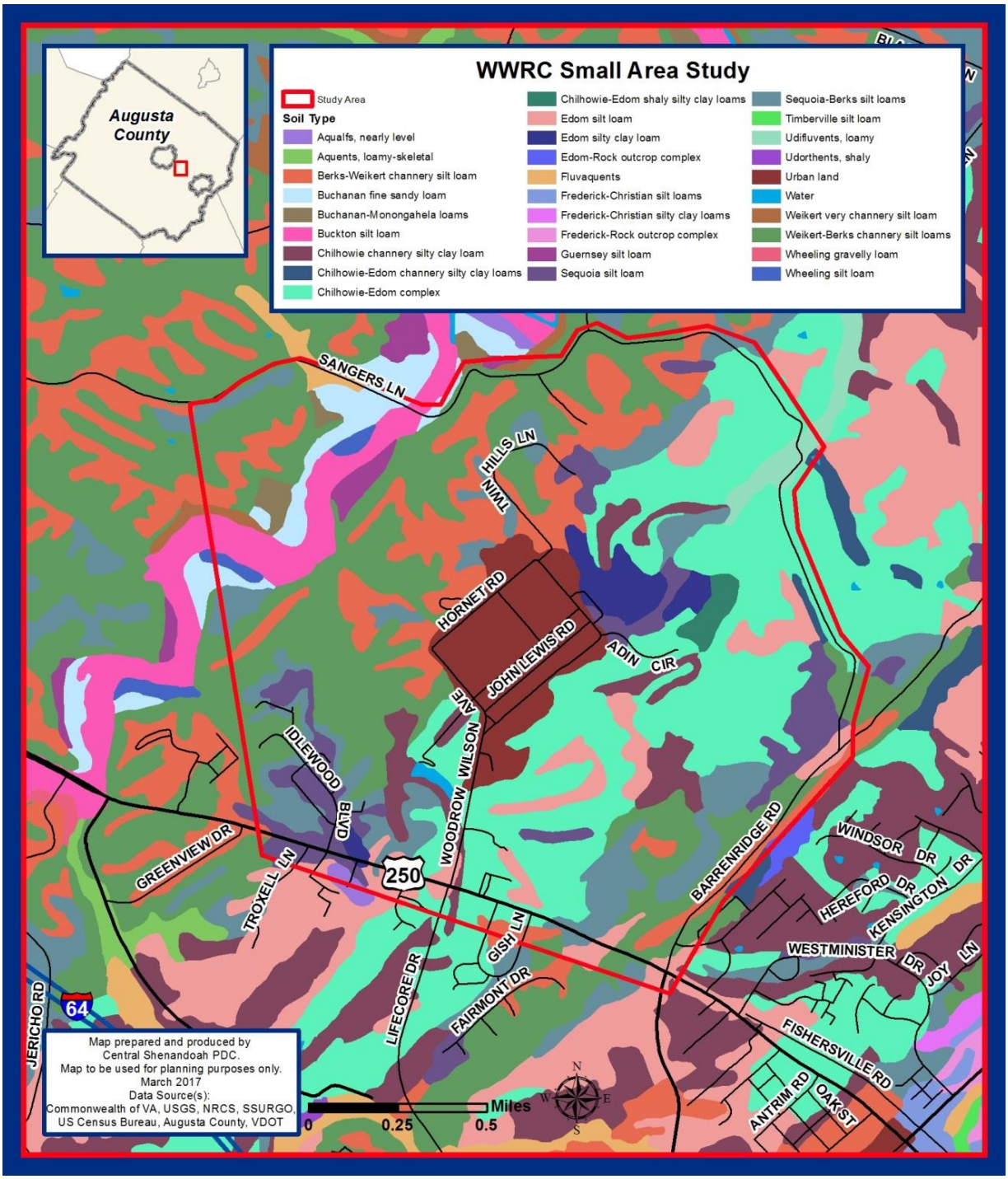


Figure 4: Geology

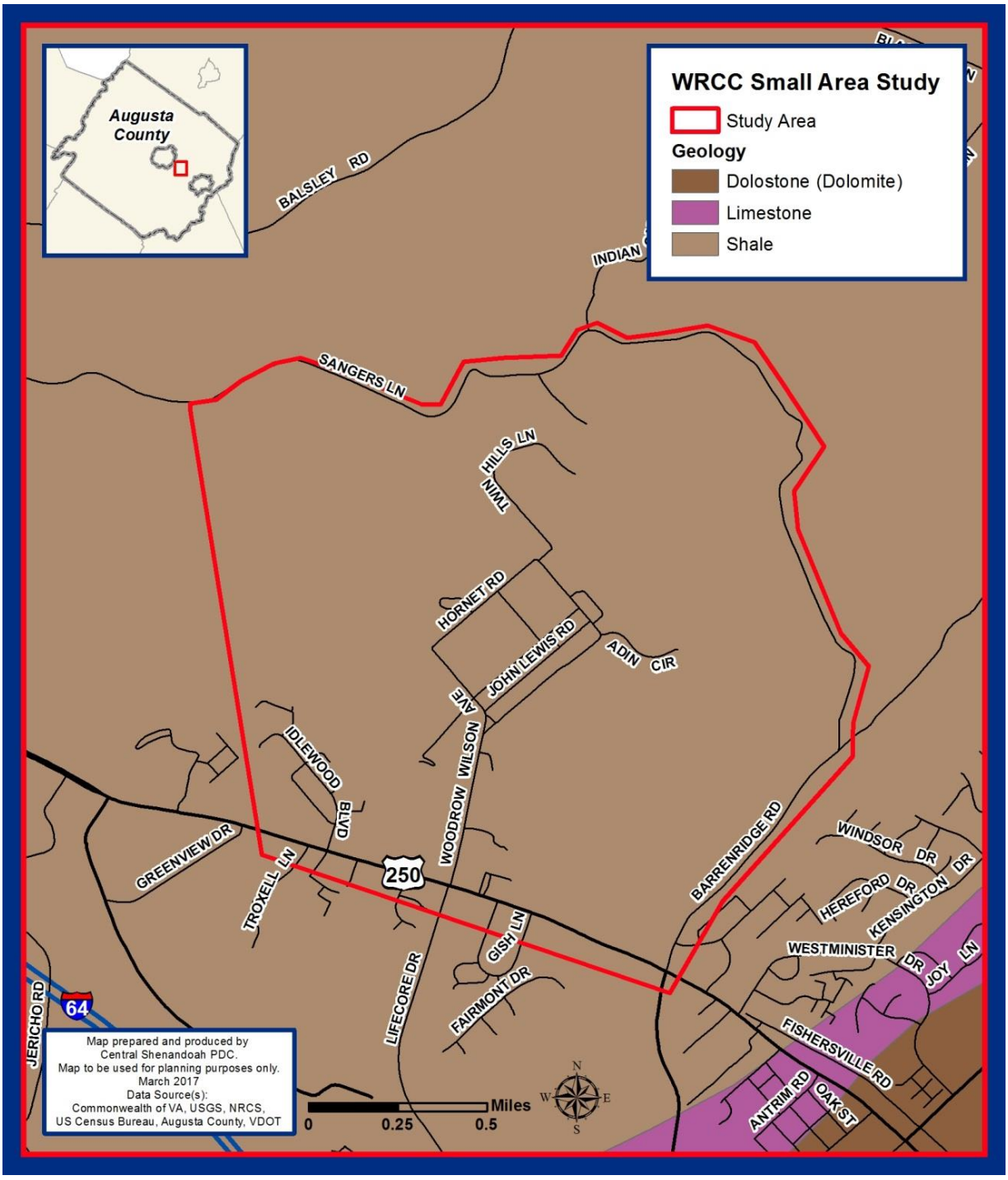


Figure 5: Historic Structures, Hydrology & Wetlands

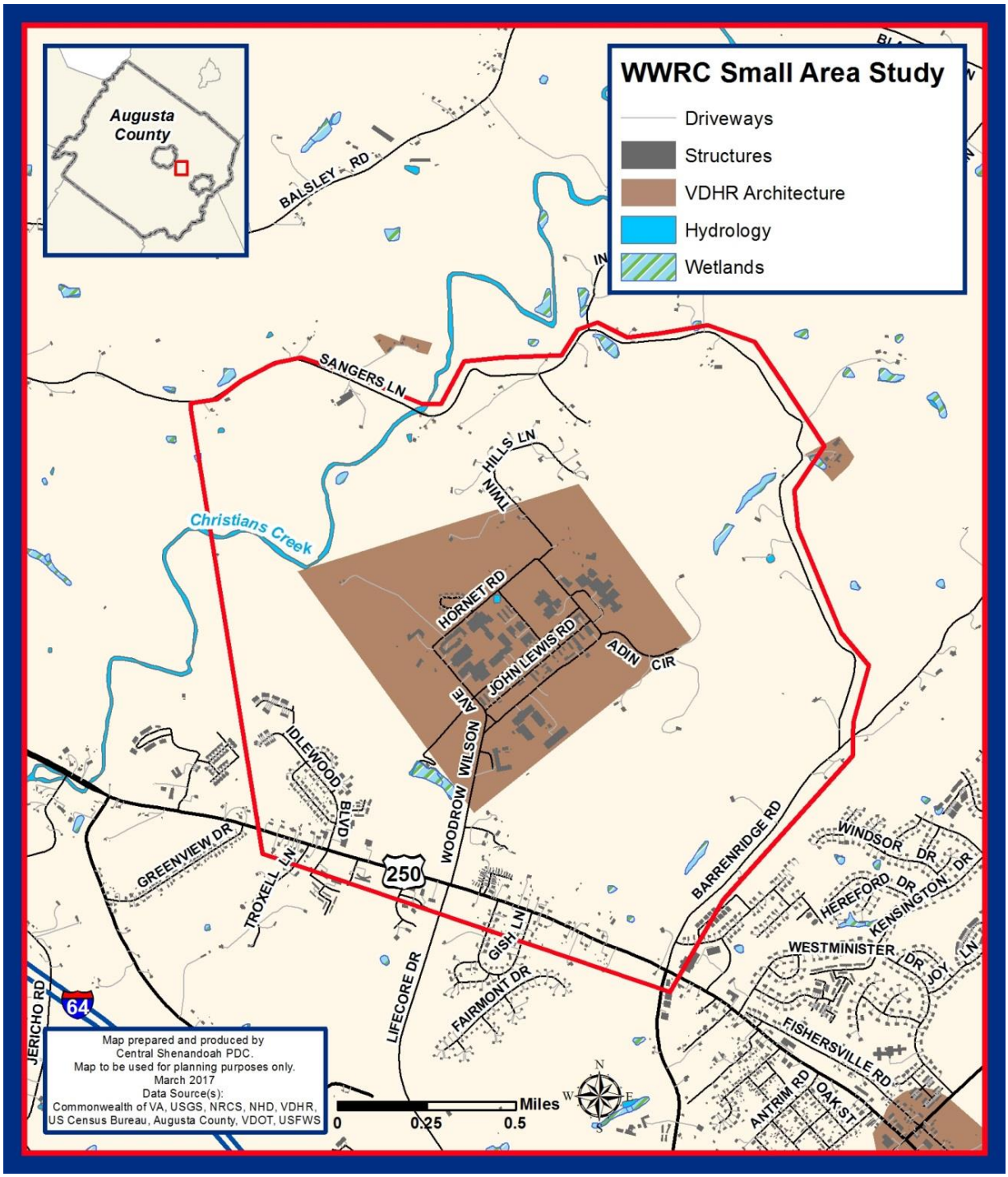
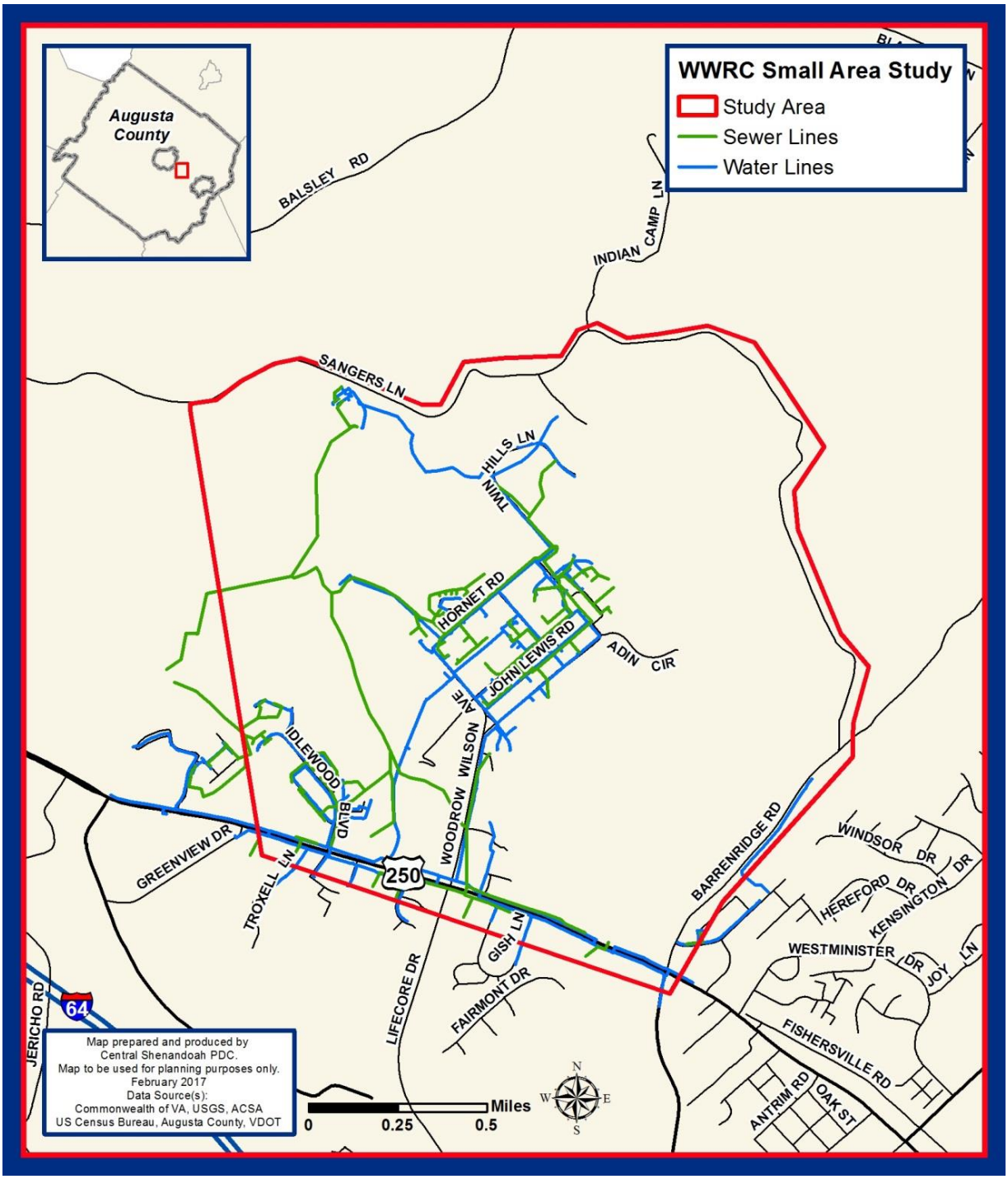


Figure 6: Water & Sewer Service



3. Operating Conditions

Transportation facilities examined for this study are US 250, and the US 250 intersections at Woodrow Wilson Avenue/LifeCore Drive, and Barren Ridge Road. Operating conditions examined include existing roadway characteristics, traffic counts, turning movements, and crashes.

3.1 Roadway Characteristics

3.1.1 U.S. 250

The segment of US 250 in the study area is a minor arterial east-west roadway situated between the City of Waynesboro to the east and the City of Staunton and I-81 to the west. The posted speed limit in the study area is 45 miles-per-hour (mph). This section of US 250 serves both the local and regional transportation network and serves as an alternate/detour route for I-64. Topographical features in the study area include vertical curvatures that may present sight distance issues for drivers.

This segment could potentially be included in the State's Arterial Preservation Network (APN). Arterial Preservation Network routes are designated to accommodate long-distance mobility for people and goods throughout the Commonwealth. MES designated corridors are roadway segments inside urban areas (population of 50,000 or more) where opportunities exist to reduce congestion and improve traffic flow without major roadway widening. This designation influences corridor access management by requiring additional review and justification measures to install new driveway/entrance locations and traffic signals. The APN designation for the US 250 Corridor is pending adoption by the Commonwealth Transportation Board.

Multiple entrances and side roads are located throughout the US 250 corridor study area, with most of the commercial entrances located on the southern side of US 250 between the WWRC Complex entrance and Idlewood Boulevard. None of the entrances are signalized in this western segment of the corridor.

There are fewer entrances in the eastern segment of the corridor between the WWRC entrance and Barren Ridge Road. The intersection of US 250 at Barren Ridge Road is signalized.

3.1.2 Woodrow Wilson Avenue (VA 358)

Operational conditions examined for Woodrow Wilson Avenue were focused at the entrance to the WWRC Complex at the signalized intersection with US 250.

Based on input from the stakeholders and public meeting participants, there are three existing issues at the intersection of US 250 and Woodrow Wilson Avenue:

1. The westbound right turn lane from US Route 250 onto Woodrow Wilson Avenue experiences extensive queues in the AM peak hour. With buses, faculty, students, parents, and office workers all arriving in a very short, condensed timeframe, the queue extends up the hill towards Barren Ridge Road.
2. The southbound approach on Woodrow Wilson Avenue to US Route 250 experiences extensive queues during AM and PM peak hours. Traffic leaving the site queues to the elementary school and often blocks access to the southbound left-turn lanes at the WWRC exit.
3. There are no secondary or emergency access points to the Complex.

3.1.3 Barren Ridge Road Intersection with US 250

The US 250 intersection at Barren Ridge Road is approximately 3,455-feet (0.65-miles) to the east of the WWRC Complex entrance. The connection at US 250 is signalized, and the existing striping and pavement conditions are in poor condition. A new signal plan and equipment upgrades will be required should this location be selected for advancement as the long-term improvement option. Barren Ridge Road connects US 250 to surrounding agricultural and residential uses.

3.2 Historic Traffic Volumes

Historically, traffic on US 250 has experienced an annual growth average of 1.0%. However, traffic volumes decreased during the recession years between 2007 – 2012. Westbound traffic on US 250, from I-81 to Idlewood Boulevard recovered to 90% of pre-recession volumes by 2016, however eastbound traffic from Idlewood Boulevard to Tinkling Springs Road has remained consistent since 2013, operating 21% below 2006 volumes. The slow return to pre-recession eastbound traffic volumes can be attributed to the 2016 opening of VA 636 (LifeCore Drive). LifeCore Drive is a new roadway that provides a direct link from the WWRC Complex to I-64, eliminating the need for traffic exiting the WWRC Complex to turn left onto US 250 and travel east to Tinkling Springs Road to connect to I-64. **Table 2** provides the historic AADT for the US 250 corridor study area. US 250 historic AADT is shown in **Table 1**.

Table 1: Historic AADT US 250

Year	US 250: I-81 to Idlewood Boulevard	% Change	US 250: Idlewood Boulevard to Tinkling Springs Road	% Change
2006	20,000	*	19,000	*
2007	18,000	-10	15,000	-21
2008	18,000	0	14,000	-7
2009	17,000	-6	14,000	0
2010	16,000	-6	13,000	-7
2011	16,000	0	13,000	0
2012	16,000	0	13,000	0
2013	18,000	13	15,000	15
2014	17,000	-6	15,000	0
2015	18,000	6	15,000	0
2016	18,000	0	15,000	0

Source: VDOT

Historic AADT data for Woodrow Wilson Avenue is not available, as the roadway is not included in the VDOT traffic count program. Traffic counts for Hornet Road, an internal roadway in the WWRC complex, were taken in 2007 and 2013. ADT for Hornet Road in 2007 were 1,600 vehicles in 2007, and 2,500 vehicles in 2013, an increase of 56%. This increase can be attributed to the expansion of Wilson Middle and High Schools and the construction of Wilson Elementary School during the period between count years.

3.3 Current Traffic Volumes (2017)

VDOT conducted two-way 48-hour traffic counts at two locations on US 250 on February 22 and 23, 2017, during school operating hours, and 12-hour turning movement counts on February 23. Count station #1 was located between Idlewood Boulevard and Woodrow Wilson Avenue; count station #2 was located between Woodrow Wilson Boulevard and Barren Ridge Road. Turning movement counts were gathered at the intersections of US 250 with Barren Ridge Road, Woodrow Wilson Avenue, and Idlewood Boulevard.

Traffic counts show current volumes to be consistent with historic traffic volumes and growth patterns within the study area. AM peak hour use at the WWRC Complex entrance is between 7:15 and 8:15 AM; PM peak hour use occurs between 3:00 – 4:00 PM. The US 250 corridor weekday peak hour use is between 4:45 PM – 5:45 PM.

The peak hour operational time differs from peak hour turning movements due to an increase in vehicles entering and exiting the WWRC complex at times prescribed by school dismissal schedules versus normal corridor commuting times.

Current year US 250 study area ADT is summarized in **Table 2.** 2017 traffic counts at the WWRC entrance are summarized in **Table 3**. **Map 8** shows count locations.

Table 2: US 250 Current ADT (2017)

	2/22/2017	2/23/2017	Average Daily Traffic
Station 1	19,527	20,187	19,857
Station 2	15,487	16,428	15,958

Source: VDOT Staunton District Planning

Table 3: WWRC Complex Entrance Peak Hour Volumes

Year	Peak Hour Entering Volume	Peak Hour Exiting Volume	Total
2017	1,097	463	1,560

Source: VDOT

3.3.1 Existing Level of Service/Capacity

Capacity analyses were performed to assess traffic conditions for each analysis scenario. The analysis included delay, level of service, and 95th percentile queuing. The intersections were analyzed using SYNCHRO Version 9.1 based on HCM 2010 methodologies with the following assumptions:

- The peak hour factor (PHF) for the overall intersection was obtained from the turning movement counts; Analysis used specific movement PHFs to accurately represent the condensed time frame of arriving and departing volumes.
- Heavy vehicle percentages for each movement based on the collected traffic data with a minimum percentage of 2%;
- The existing signal timings (Synchro files) provided by VDOT; and
- All other software defaults remain unchanged.

The existing capacity analysis was performed based on the existing intersection geometrics and the existing peak hour counts described above.

Table 4 shows that the US Route 250/Woodrow Wilson Avenue/Lifecore Drive intersection operates at an overall Level of Service (LOS) E in the AM peak hour and D in the PM peak hour. Several of the individual turning movements operate at LOS E or F in both peak hours.

The westbound right turn operates at a LOS E with an average delay of 75.5 seconds/vehicle in the AM peak hour. The southbound though-right lane operates at a LOS F with an average delay of 95.2 seconds per vehicle in the AM peak hour and LOS E with an average delay of 58.2 seconds/vehicle in the PM peak hour.

Table 4: Existing Intersection Level of Service, Delay, and Queue Summary

Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM Peak Hour			PM Peak Hour		
			Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)
			2017 Existing (195s cycle length)					
1. US Route 250 (E-W) at Lifecore Drive (N) Woodrow Wilson Ave (S) Signalized	NB Left (2)	220	100.7	F	#121	61.8	E	201
	NB Thru-Right		103.9	F	449	54.2	E	118
	NB Approach		*103.0*	*F*	--	*58.9*	*E*	--
	SB Left (2)	220	99.9	F	157	56.3	E	215
	SB Thru-Right		95.2	F	396	58.2	E	356
	SB Right		--	--	--	--	--	--
	SB Approach		*97.5*	*F*	--	*57.1*	*E*	--
	EB Left	482	55.7	E	402	33.2	C	81
	EB Thru (2)		35.8	D	213	46.5	D	397
	EB Right	490	29.5	C	1	26.2	C	36
	EB Approach		*41.9*	*D*	--	*41.1*	*D*	--
	WB Left	350	44.0	D	77	35.5	D	58
	WB Thru (2)		56.6	E	294	47.6	D	361
	WB Right	250	75.5	E	550	18.8	B	0
	WB Approach		*66.7*	*E*	--	*41.3*	*D*	--
	Overall		**70.0**	**E**	**--**	**48.7**	**D**	**--**

3.4 Crash Summary

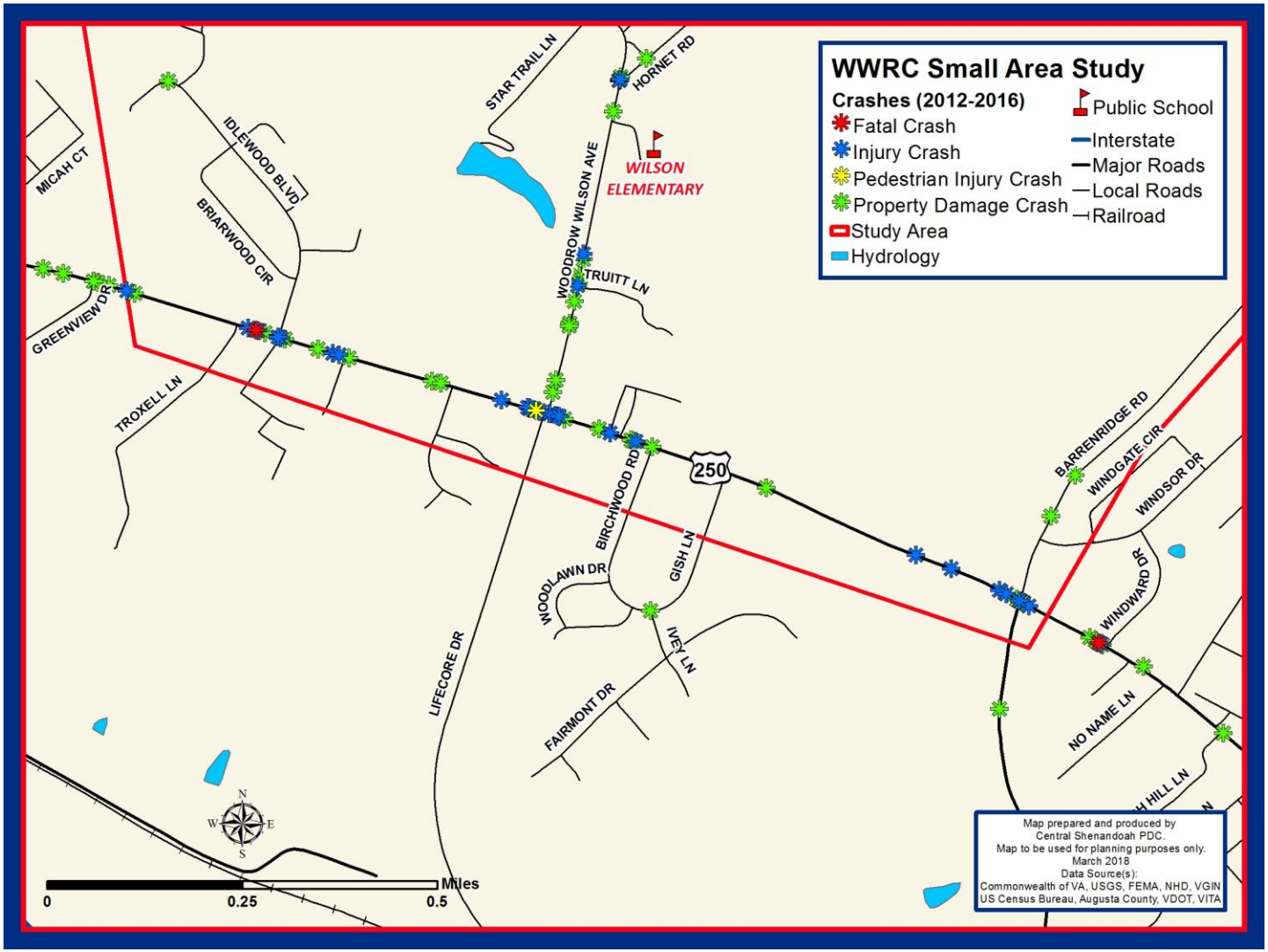
61 crashes were recorded in the study area for the 5-year period between January 1, 2012 and December 31, 2016. 46 recorded crashes occurred on US 250 between Barren Ridge Road and Idlewood Boulevard. 15 crashes occurred on Woodrow Wilson Avenue between the WWRC Complex entrance and Hornet Road.

The intersection of US 250 at Barren Ridge Road reported the highest concentration of crashes for the 5-year period with 19. The highest reported number of crashes, 21, occurred between 3:00 PM - 6:00 PM. Fifty-three (87%) recorded crashes occurred during months schools were in session.

Rear end crashes accounted for 53% of all crashes in the study area, with 23 rear-end collisions occurring on US 250, and 11 occurring on Woodrow Wilson Avenue. Angle crashes were the second most reported crash type in the study area, with a total of 22 crashes recorded for the 5-year period.

32 crashes reported property damage only, 28 crashes involved an injury, and 1 fatality was recorded. **Figure 7** illustrates the location and severity of crashes in the study area between 2012 and 2016.

Figure 7: Study Area Crashes (2012 - 2016)



4. Improvement Options and Analysis

Short- and long-term options were analyzed to identify improvements that best enhance corridor operations. Short-term options focus on improving operating conditions at the WWRC Complex entrance at the US 250/Woodrow Wilson intersection. Long-term options focus on identifying possible locations for a second entrance to the WWRC Complex.

4.1 Short-Term Improvement Options

Goals for the short-term improvement options for the US 250/Woodrow Wilson Avenue/Lifecore Drive intersection were:

- Alleviate congestion at the intersection;
- Minimize delay and queues during the AM and school PM peak hours; and
- Maintain existing multi-use path/pedestrian amenities.
    - Currently there is a multi-use path along the western side of Woodrow Wilson Avenue and a crosswalk across Jefferson Highway. Maintaining these facilities was a priority in developing the short-term options.

The following short-term-options were developed and evaluated:

1. Channelized free-flow westbound right turn lane and associated northbound receiving lane;
2. Separate southbound right turn lane; and
3. Signal timing adjustments.

Short-term improvements are shown on **Figure 8** (wide view) and **Figure 9** (close view). Short-term improvements do not include an analysis of internal traffic operations at the WWRC. Additional analysis will be required to support a project application should recommendations be advanced for funding consideration.

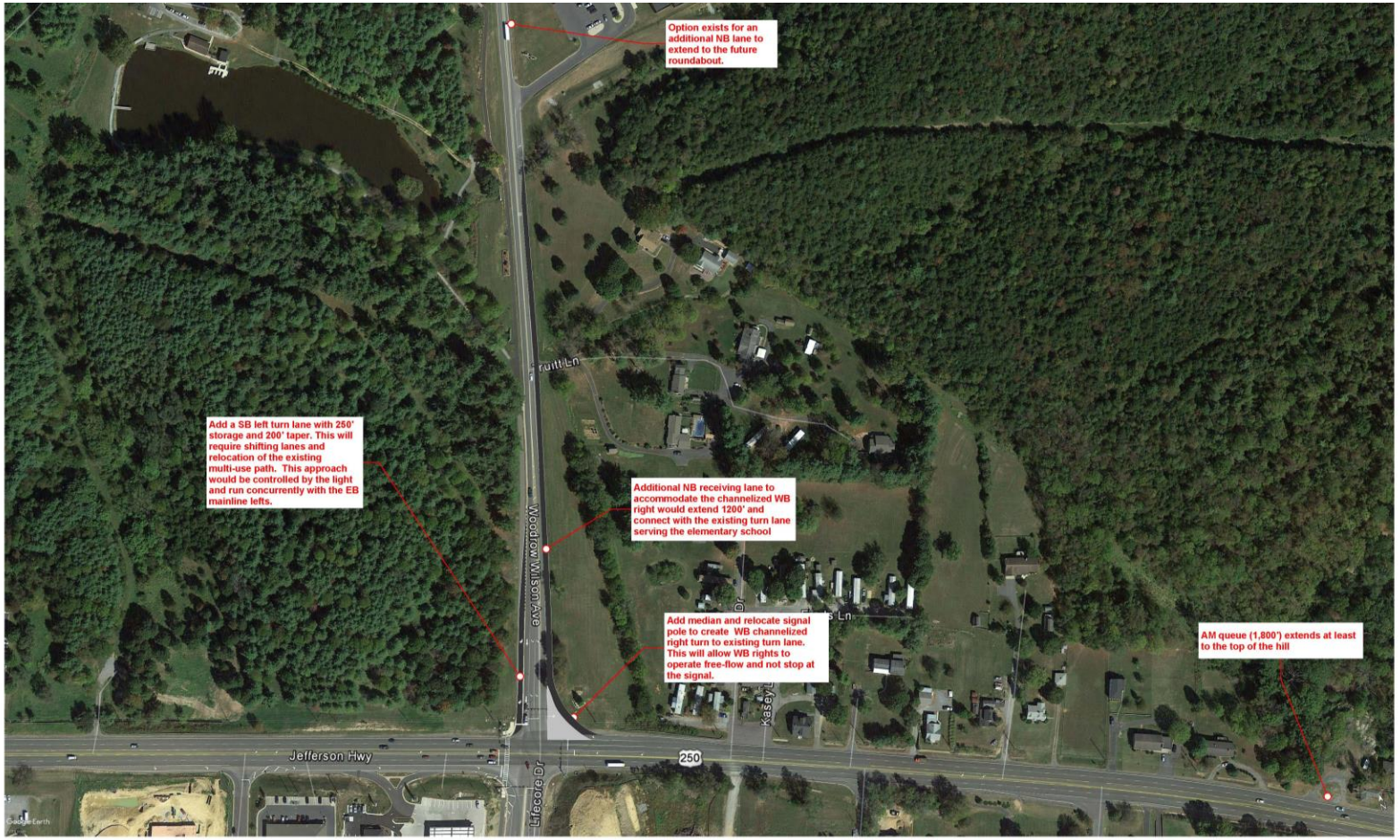
The recommended channelized westbound right turn lane and northbound receiving lane allow traffic entering the Complex to operate as a free-flow movement. This improvement includes a concrete triangular median on US 250 to separate the right turn from main-line traffic and an additional northbound lane on Woodrow Wilson Avenue to receive the right turning traffic.

The north-bound receiving lane extends approximately 1,200-feet from the WWRC Complex entrance and terminates at Wilson Elementary. An option to extend the receiving lane an additional 800-feet past Wilson Elementary to the future roundabout location at Hornet Road is provided in **Appendix B-2**. Further analysis of internal traffic movements at the WWRC Complex will be required to determine the benefits of extending the north-bound receiving lane to the future roundabout location and if extending the receiving lane impacts the future roundabout design.

Improvements for southbound traffic on Woodrow Wilson Avenue exiting the WWRC Complex include a separate southbound right-turn lane with 250-feet of storage and 200 feet of taper is recommended at the WWRC Complex exit. The remaining southbound lanes exiting the WWRC Complex consist of one through traffic lane, and dual left-turn lanes. This improvement will require shifting the existing lanes west and relocating the existing multi-use path.

Short-term improvements also require modifications to the existing traffic signal timings at the WWRC Complex entrance intersection.

Figure 8: Short-term Improvements (Wide View)



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Proposed Short Term Improvements - January 2018

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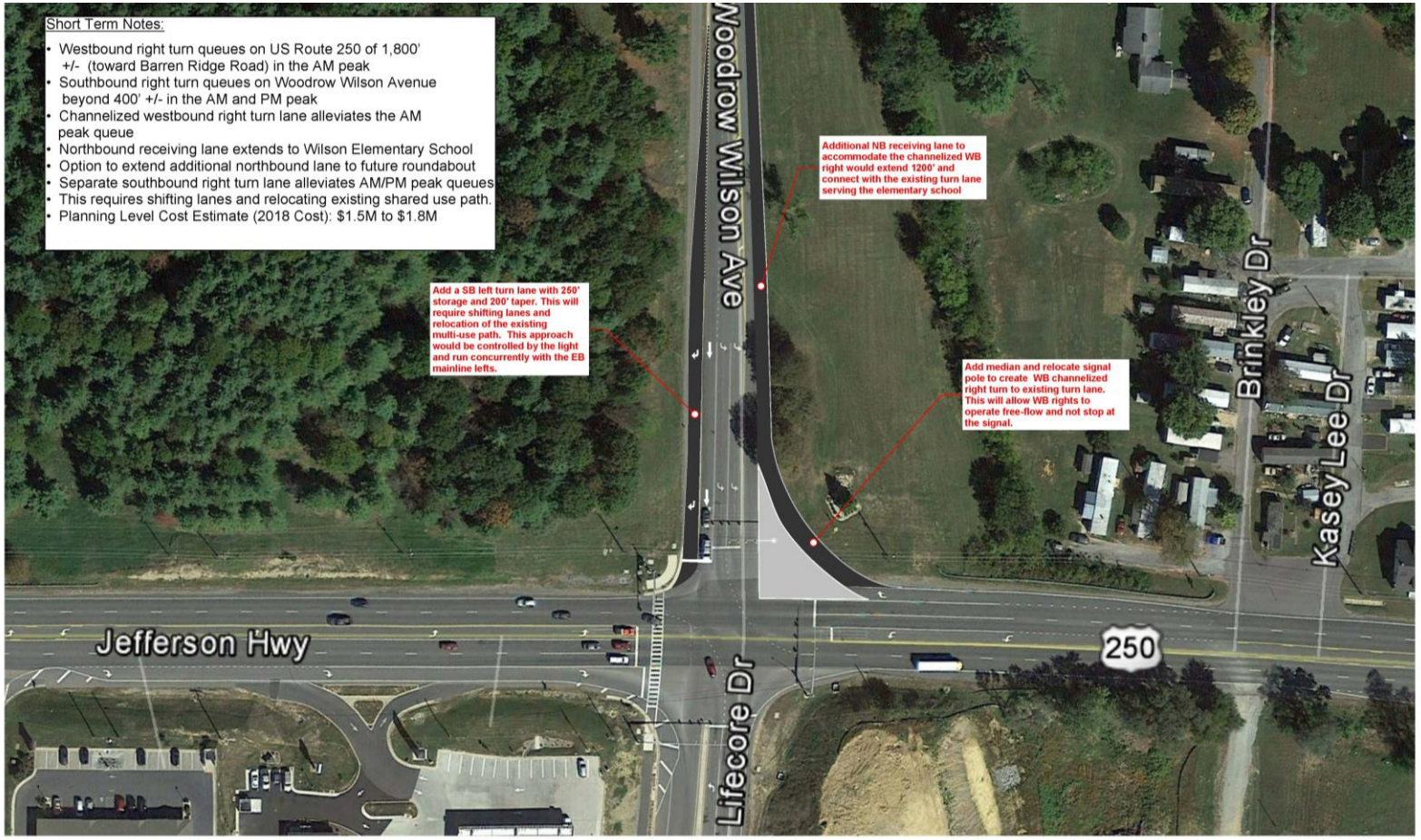
US 250/WWRC Small Area Study

Figure 9: Short-term Improvements (Close-up View)



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4.1.1 Short-Term Improvements Capacity Analysis

The impacts of the short-term improvements were analyzed under both existing conditions (2017) and future conditions (2022).

The results of the existing conditions (2017) analysis are summarized in **Table 5,** and the analysis worksheets are contained in **Appendix B**.

Table 5 shows with the short-term improvements and 2017 traffic volumes the overall LOS of the intersection will improve in both the AM and PM peak hours. The free-flow westbound right turn lane eliminates the delay and queue for that movement and allows for signal timing adjustments to improve the operations of other movements. The southbound right queue is reduced to 177 feet and will be contained within the storage area of the new turn lane. The southbound right delay is reduced by 30 seconds/vehicle.

The 2022 traffic volumes were developed using the following annual linear growth rates (applied to the existing 2017 volumes):

- US Route 250: 1.0%;
- Woodrow Wilson Avenue: 0.5%; and
- Lifecore Drive 2.0%

The capacity of the intersection under 2022 traffic conditions was analyzed for both no-build (no short-term improvements) and build conditions (with the short-term improvements). The results of the analysis are summarized in **Table 6.**

Table 6 shows that without the short-term improvements, the operations and queueing of the intersection will deteriorate in 2022.

With the short-term improvements, the overall intersection LOS will improve in both the AM and PM peak hours. The free-flow westbound right turn lane, again, eliminates the delay and queue for that movement and allows for signal timing adjustments to improve the operations of other movements. The southbound right queue is reduced to 160 feet and will be contained within the storage area of the new turn lane. The southbound right delay is reduced by over 40 seconds/vehicle.

Table 5: Existing Intersection Operational Conditions with Short-Term Improvements

Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)
			Existing Lane Use						With Free-flow WBR Turn Lane and Exclusive SBR					
1. US Route 250 (E-W) at	NB Left (2)	220	100.5	F	#121	63.9	E	201	83.6	F	119	56.1	E	185
Lifecore Drive (N)	NB Thru-Right		103.2	F	449	56.8	E	118	87.4	F	442	56.6	E	114
Woodrow Wilson Ave (S)	*NB Approach*		*102.4*	*F*	--	*61.2*	*E*	--	*86.3*	*F*	--	*56.3*	*E*	--
	SB Left (2)	220	100.3	F	153	57.3	E	214	84.0	F	151	51.1	D	200
Signalized	SB Thru-Right		97.6	F	395	61.8	E	356	-	-	-	-	-	-
	SB Thru		-	-	-	-	-	-	50.1	D	165	41.2	D	161
	SB Right	250	-	-	-	-	-	-	22.2	C	90	33.5	C	177
	SB Approach		*98.9*	*F*	--	*59.2*	*E*	--	*57.2*	*E*	--	*45.1*	*D*	--
	EB Left	482	53.8	D	398	31.8	C	81	56.7	E	440	29.5	C	77
	EB Thru (2)		35.3	D	211	45.8	D	398	37.9	D	220	43.2	D	375
	EB Right	490	29.0	C	1	26.2	C	36	29.8	C	1	23.8	C	33
	EB Approach		*40.9*	*D*	--	*40.5*	*D*	--	*43.1*	*D*	--	*37.9*	*D*	--
	WB Left	350	43.4	D	76	34.8	D	58	53.5	D	80	32.5	C	55
	WB Thru (2)		55.8	E	292	47.5	D	361	71.3	E	339	45.0	D	345
	WB Right	250	75.0	E	549	18.8	B	0	Free-Flow[(2)]			Free-Flow[(2)]		
	WB Approach		*66.1*	*E*	--	*41.2*	*D*	--	*29.9*	*C*	--	*35.6*	*D*	--
	Overall		**69.6**	**E**	**--**	**49.5**	**D**	**--**	**46.9**	**D**	**--**	**42.2**	**D**	**--**

Table 6: Future Intersection Operational Conditions Summary with Short-Term Improvements

Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)	Delay [1] (sec/veh)	LOS [1]	HCM 2000 95th Percentile Queue Length (ft)
			2022 No Build (existing 195s cycle length)						With Free-flow WBR Turn Lane and SBR Turn Lane (optimized 150s cycle length)					
1. US Route 250 (E-W) at	NB Left (2)	220	107.3	F	#137	65.2	E	224	70.5	E	100	56.8	E	181
Lifecore Drive (N)	NB Thru-Right		108.6	F	#472	56.3	E	121	94.9	F	#404	57.0	E	104
Woodrow Wilson Ave (S)	*NB Approach*		*108.2*	*F*	--	*61.9*	*E*	--	*87.8*	*F*	--	*56.9*	*E*	--
	SB Left (2)	220	108.8	F	162	58.8	E	233	85.4	F	127	52.5	D	188
Signalized	SB Thru-Right		104.5	F	414	60.8	E	373	45.6	D	145	41.2	D	153
	SB Right		--	--	--	--	--	--	21.3	C	70	34.8	C	160
	SB Approach		*106.6*	*F*	--	*59.6*	*E*	--	*57.1*	*E*	--	*46.2*	*D*	--
	EB Left	482	61.3	E	412	34.7	C	91	66.6	E	392	30.2	C	71
	EB Thru (2)		36.0	D	222	48.1	D	442	35.5	D	197	41.9	D	355
	EB Right	490	29.7	C	0	26.7	C	36	27.3	C	6	23.0	C	33
	EB Approach		*44.1*	*D*	--	*42.4*	*D*	--	*45.2*	*D*	--	*36.9*	*D*	--
	WB Left	350	45.9	D	80	36.7	D	67	26.1	C	69	29.7	C	53
	WB Thru (2)		59.2	E	311	48.7	D	392	66.9	E	283	41.5	D	313
	WB Right	250	94.2	F	604	18.7	B	0	1.1	A	0	0.1	A	0
	WB Approach		*78.2*	*E*	--	*42.2*	*D*	--	*27.0*	*C*	--	*33.0*	*C*	--
	Overall		**77.0**	**E**	**--**	**50.5**	**D**	**--**	**46.9**	**D**	**--**	**41.7**	**D**	**--**

4.2 Long-Term Improvement Options

While the short-term analysis and recommendations focus on improving operational and safety conditions at the entrance to the WWRC Complex, a single entrance to the WWRC Complex will not adequately serve the long-term traffic demands in the study area or address concerns raised by stakeholders regarding the need for a second entrance to the WWRC Complex. Long-term improvement options focus on identifying a second entrance location to the WWRC Complex.

To address long-term improvement options, the study team developed the following goals for a second entrance location:

1. Alleviate congestion at the existing entrance;
2. Provide secondary and emergency access to the Complex; and
3. Provide access to adjacent/undeveloped parcels.

To accomplish the long-term goals, the construction of a new road that connects to the surrounding roadway network is required. Based on traffic projections and nature of the proposed road, a typical section was developed with the following construction specifications:

- Two 13' vehicular travel lanes (one lane in each direction);
- 10' multi-use path on one side; and
- Option for either curb and gutter or ditch section.

Three potential entrance locations were identified to determine planning level cost estimates. Since the options include new or modified connections to US 250, the analysis includes each option's respective connection point, the US 250/Woodrow Wilson Avenue/Lifecore Drive intersection, and the US 250/Barren Ridge Road/Mule Academy Road intersection. For purposes of analysis, traffic signals were assumed at the connection points on US 250 for Options A and B. Long-term options are conceptual and represent planning level efforts; engineering, design, and environmental studies have not been performed. Additionally, analysis of internal WWRC traffic will be required should a long-term option be advanced in the future. Long-term entrance options are detailed below and are shown on **Figure 10**.

Option A

Option A is located west of Woodrow Wilson Avenue connecting US 250 near the Virginia Employment Commission building with the western portion of the Complex. The option is approximately 3,700 feet in length and would connect with the Complex via Hornet Road near the Rehabilitation Center. This option provides direct access to the Complex and relief for the eastbound left movement in the AM peak hour and the southbound right in both the AM and PM peak hours. Most of the right-of way for the alignment as shown is across State-owned property.

Option A alone does not provide relief for the heavy westbound traffic in the AM peak hour, but the congestion related to this westbound traffic is generally resolved with the short-term improvements at US 250 and Woodrow Wilson Avenue/Lifecore Drive.

Right and left turn lanes on US 250 would likely be required with Option A; however, a more detailed analysis of intersection control will be needed if this option were pursued for funding.

Option B

Option B is located east of Woodrow Wilson Avenue, connecting to US 250 near the crest of the hill, and connects into the Complex behind the Technical Center near the current bus parking area. The option is approximately 3,900 feet in length and provides access to the Middle/High School portion of the Complex. This option provides direct access to the Complex and provides relief for the westbound traffic in the AM peak hour and the southbound left traffic in both the AM and PM peak hours. Implementing this option will provide access to adjacent/undeveloped parcels but requires obtaining right-of-way from individual private owners.

Right and left turn lanes on US 250 would likely be required with Option B; however, a more detailed analysis of intersection control will be needed if this option is pursued for funding.

Option C

Option C connects to Barren Ridge Road and the existing traffic signal at the US 250/Barren Ridge Road/Mule Academy Road intersection and connects into the Complex behind the Technical Center near the current bus parking area. The option is approximately 5,000 feet in length and provides access to the Middle/High School portion of the Complex.

Barren Ridge Road requires realignment to become the minor street where southbound traffic yields to through traffic on the proposed road. The portion of Barren Ridge Road between Option C and US 250 requires widening from one (1) to two (2) lanes to accommodate a southbound left turn lane. In addition, westbound right and eastbound left turn lanes would be added/extended on US 250. The existing traffic signal would be modified to accommodate the improvements.

Option C provides direct access to the Complex, and relief for the westbound traffic in the AM peak hour and the southbound left traffic in both the AM and PM peak hours. The option provides access to adjacent/undeveloped parcels but requires obtaining right-of-way from individual private owners.

4.2.1 Long-Term Improvements Capacity Analysis

The long-term improvement options capacity analysis used 2040 forecasted traffic volumes. To develop the 2040 traffic volumes, the following annual linear growth rates were applied to existing traffic volumes:

1. US 250: 1.0%;
2. Woodrow Wilson Avenue: 0.5%;
3. Lifecore Drive 2.0%.

Analysis of future operating conditions show Options A – C provide relief for the existing WWRC Complex entrance. **Table 4** summarizes the future traffic volume analysis. Analysis worksheets are contained in **Appendix C**.

The following summarizes the traffic diversion assumptions for each option:

Option A

- Expect up to 60% of the existing EB left turns to divert to Option A. This amounts to 183 lefts in the AM peak hour. The diversions would most likely come from traffic heading towards the middle/high school area of the campus.
- Expect up to 70% of the existing SB right turns to divert to Option A. This amounts to 147 rights in the school PM peak hour.

Option B

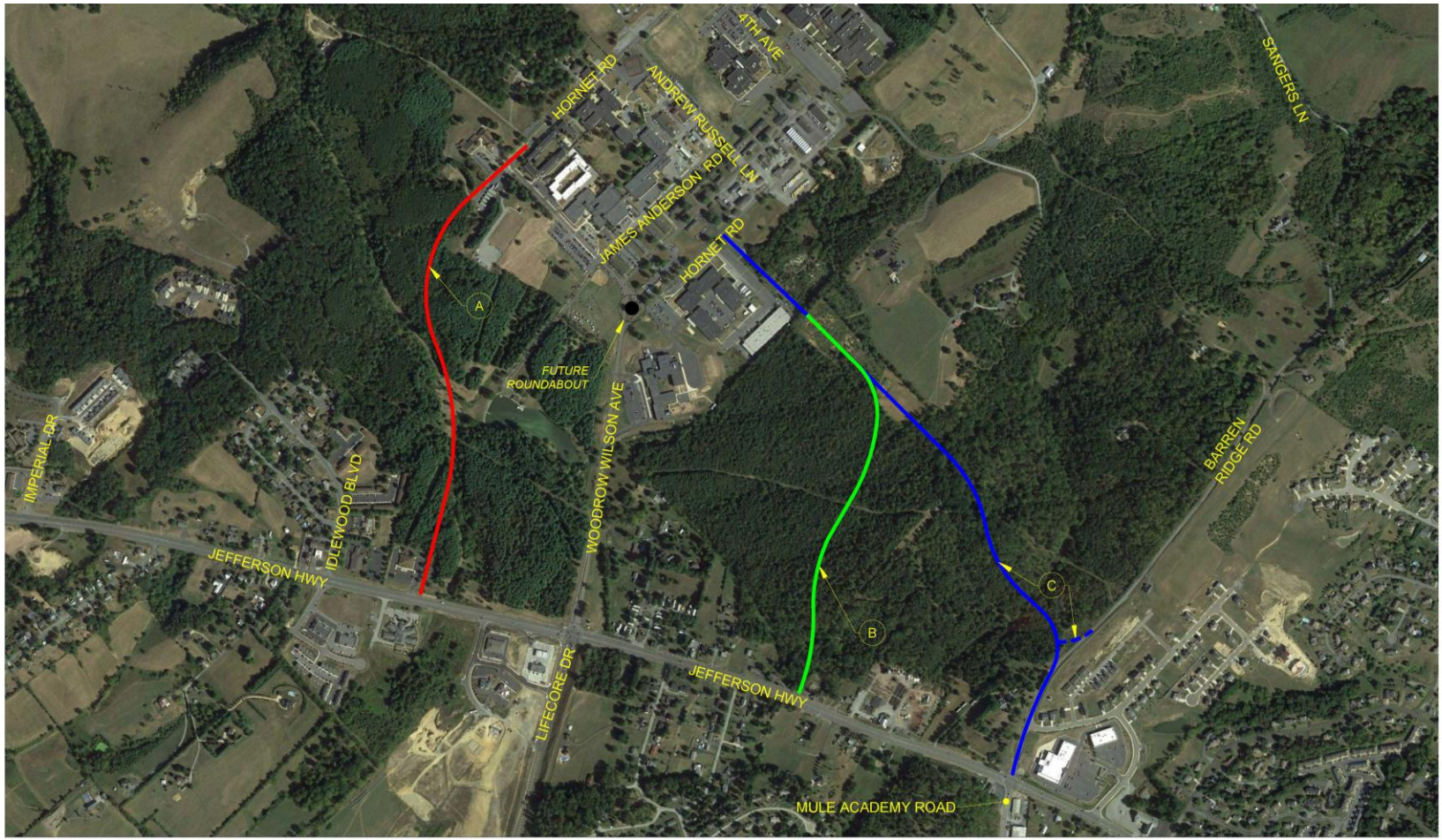
- Expect up to 60% of the existing WB right turns and 20% of the existing NB thru traffic to divert to Option B. This amounts to 346 rights in the AM peak hour. The diversions would most likely come from traffic heading towards the middle/high school area of the campus.
- Expect up to 50% of the existing SB left turns to divert to Option B. This amounts to 159 lefts in the school PM peak hour.

Option C

- Up to 60% of the existing WB right turns and 20% of the existing NB through traffic to divert to Option C. This amounts to 346 rights in the AM peak hour. The diversions would most likely come from traffic heading towards the middle/high school area of the campus.
- Expect up to 50% of the existing SB left turns to divert to Option C. This amounts to 159 lefts in the school PM peak hour.

US 250/WWRC Small Area Study

Figure 10: Long-term Secondary Access Options



WOODROW WILSON SMALL AREA STUDY

Alternative Routes - January 2018

0 300 600 Feet

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Table 7: Future Intersection Operating Conditions Summary with Long Term Improvement

Intersection and Type of Control	Movement and Approach	Turn Lane Storage (ft)	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			Delay [1] (sec/veh)	LOS [1]	SimTraffic Max Queue Length[3] (ft)	Delay [1] (sec/veh)	LOS [1]	SimTraffic Max Queue Length[3] (ft)	Delay [1] (sec/veh)	LOS [1]	SimTraffic Max Queue Length[3] (ft)	Delay [1] (sec/veh)	LOS [1]	SimTraffic Max Queue Length[3] (ft)	Delay [1] (sec/veh)	LOS [1]	SimTraffic Max Queue Length[3] (ft)	Delay [1] (sec/veh)	LOS [1]	SimTraffic Max Queue Length[3] (ft)
			Option A						Option B						Option C					
1. US Route 250 (E-W) at	SB Left	200	53.1	D	51	52.9	D	27	Not Included in This Option						Not Included in This Option					
Option A (S)	SB Right		52.8	D	134	53.6	D	95												
	SB Approach		*52.9*	*D*	--	*53.6*	*D*	--												
Signalized	EB Left	200	6.2	A	198	3.9	A	64												
	EB Thru (2)		3.6	A	150	3.4	A	112												
	EB Approach		*4.2*	*A*	--	*3.5*	*A*	--												
	WB Thru (2)		2.1	A	66	1.3	A	122												
	WB Right	200	0.0	A	10	0.0	A	25												
	WB Approach		*2.1*	*A*	--	*1.2*	*A*	--												
	Overall		**8.2**	**A**	**--**	**6.7**	**A**	**--**												
2. US Route 250 (E-W) at	NB Left (2)	220	55.5	E	151	77.6	E	287	86.4	F	207	92.3	F	289	86.4	F	182	92.3	F	280
Lifecore Drive (N)	NB Thru-Right		64.8	E	325	56.2	E	200	95.3	F	385	49.2	D	176	95.3	F	373	49.2	D	193
Woodrow Wilson Ave (S)	*NB Approach*		*61.7*	*E*	--	*70.2*	*E*	--	*92.0*	*F*	--	*78.2*	*E*	--	*92.0*	*F*	--	*78.2*	*E*	--
	SB Left (2)	220	60.1	E	213	56.7	E	219	93.2	F	207	54.1	D	175	93.2	F	192	54.1	D	193
Signalized	SB Thru		32.9	C	313	38.2	D	505	64.2	E	250	44.9	D	198	64.2	E	269	44.9	D	201
	SB Right	250	22.1	C	144	30.2	C	159	27.8	C	164	34.7	C	177	28.3	C	232	38.4	D	168
	SB Approach		*48.3*	*D*	--	*50.5*	*D*	--	*57.5*	*E*	--	*45.2*	*D*	--	*57.7*	*E*	--	*46.6*	*D*	--
	EB Left	482	48.5	D	237	36.1	D	70	64.8	E	480	34.3	C	160	54.1	D	477	24.2	C	115
	EB Thru (2)		42.1	D	192	51.8	D	308	31.4	C	582	37.1	D	313	30.2	C	599	37.1	D	321
	EB Right	490	19.9	B	161	25.4	C	90	24.2	C	158	19.7	B	108	23.4	C	127	19.7	B	90
	EB Approach		*33.8*	*C*	--	*44.7*	*D*	--	*40.8*	*D*	--	*32.8*	*C*	--	*36.4*	*D*	--	*31.9*	*C*	--
	WB Left	350	14.5	B	112	21.6	c	108	30.8	C	133	11.9	B	106	11.5	B	249	17.6	B	107
	WB Thru (2)		33.1	C	246	17.6	B	273	51.7	D	358	15.4	B	253	51.8	D	408	16.5	B	278
	WB Right	250	Free-Flow[(2)]			Free-Flow[(2)]			Free-Flow[(2)]			Free-Flow[(2)]			Free-Flow[(2)]			Free-Flow[(2)]		
	WB Approach		*14.2*	*B*	--	*15.0*	*B*	--	*32.8*	*C*	--	*13.8*	*B*	--	*30.6*	*C*	--	*15.3*	*B*	--
	Overall		**33.1**	**C**	**--**	**42.7**	**D**	**--**	**48.4**	**D**	**--**	**38.7**	**D**	**--**	**46.1**	**D**	**--**	**39.1**	**D**	**--**

3. US Route 250 (E-W) at	SB Left		Not Included in This Option						41.8	D	255	51.9	D	360	Not Included in This Option							
Option B (S)	SB Right	200							27.1	C	88	31.5	C	41								
	SB Approach								*41.0*	*D*	--	*51.3*	*D*	--								
Signalized	EB Left	200							4.8	A	37	3.1	A	54								
	EB Thru (2)								4.3	A	159	9.4	A	220								
	EB Approach								*4.3*	*A*	--	*9.3*	*A*	--								
	WB Thru (2)								4.2	A	153	8.2	A	118								
	WB Right	200							3.9	A	161	1.1	A	43								
	WB Approach								*4.1*	*A*	--	*7.3*	*A*	--								
	Overall								**8.6**	**A**	**--**	**15.5**	**B**	**--**								
4. US Route 250 (E-W) at	NB Thru-Left		79.1	E	106	61.6	E	182	49.5	D	87	59.0	E	176	63.0	E	175	61.4	E	198		
Mule Academy Road (N)	NB Right	220	53.2	D	62	48.3	D	120	38.9	D	54	48.5	D	107	35.4	D	91	47.6	D	139		
Barren Ridge Road (S)	*NB Approach*		*71.3*	*E*	--	*55.2*	*E*	--	*46.3*	*D*	--	*53.7*	*D*	--	*58.8*	*E*	--	*55.0*	*E*	--		
	SB Left	200	Added with Option C						Added with Option C						37.3	D	170	58.6	E	237		
Signalized	SB L-T-R		67.1	E	300	62.1	E	199	71.0	E	267	62.6	E	190	66.6	E	293	58.4	E	247		
	SB Approach		*67.1*	*E*	--	*62.1*	*E*	--	*71.0*	*E*	--	*62.6*	*E*	--	*56.6*	*E*	--	*58.5*	*E*	--		
	EB Left	100	16.2	B	92	19.0	B	99	18.7	B	99	8.5	A	99	26.8	C	96	13.1	B	100		
	EB Thru (2)		12.4	B	211	20.8	C	363	14.2	B	188	16.2	B	257	33.0	C	203	22.3	C	312		
	EB Right	300	7.3	A	53	17.8	C	172	18.3	B	52	17.8	B	71	23.8	C	69	23.0	C	145		
	EB Approach		*12.0*	*B*	--	*20.5*	*C*	--	*15.0*	*B*	--	*15.7*	*B*	--	*31.1*	*C*	--	*21.5*	*C*	--		
	WB Left	220	16.7	B	206	20.3	C	149	16.7	B	168	20.0	B	134	29.4	C	131	24.2	C	177		
	WB Thru (2)		30.3	C	422	35.6	D	285	36.3	D	459	24.2	C	241	35.8	D	257	32.3	C	279		
	WB Right	200	Added with Option C						Added with Option C						15.6	B	159	12.7	B	31		
	WB Approach		*29.2*	*C*	--	*34.2*	*C*	--	*34.8*	*C*	--	*23.9*	*C*	--	*28.3*	*C*	--	*29.4*	*C*	--		
	Overall		**28.9**	**C**	**--**	**30.8**	**C**	**--**	**32.1**	**C**	**--**	**24.7**	**C**	**--**	**36.1**	**D**	**--**	**33.9**	**C**	**--**		

5. Cost Estimates

5.1 Short Term Cost Estimates

Planning level cost estimates developed for the short-term improvements range between $1.5 to $1.8 million (2018 dollars). Estimates include engineering, construction, right-of-way, utilities, traffic signal work, relocation of the pedestrian path, and contingency fees. Detailed estimates are included in **Appendix B**. Short-term improvements are shown on **Figure 7** (close view) and **Figure 8** (wide view).

The short-term cost estimate increases to $2.1 to $2.5 million (2018 dollars) if the northbound receiving lane on Woodrow Wilson Avenue is extended to the future roundabout at Hornet Road.

5.2 Long Term Improvement Options Cost Estimates

Planning level cost estimates developed for the long-term improvements identified in **Section 4.2** include engineering, construction, right-of-way, utilities, traffic signal work, and contingency fees. Given the extended timeline for construction, the estimates are inflated to 2026 dollars. Planning level cost estimates are summarized below **Figure 10** illustrates long-term secondary/emergency access options A – C. Detailed cost estimates for each can be found in **Appendix C**.

- Option A: $13.3 to $16.1 million in 2026 dollars;
- Option B: $13.3 to $16.6 million in 2026 dollars; and
- Option C: $19.6 to $23.7 million in 2026 dollars.

Detailed cost estimates are included in **Appendix C.**

6. References

USDA-NRCSa. 2015. Official Soil Series Descriptions (OSD) with series extent mapping capabilities. Available at: http://soils.usda.gov/technical/classification/osd/index.html.

Woods, A.J., J.M. Omernik, and D.D. Brown. 1999. Level III and IV Ecoregions of Delaware, Maryland, Pennsylvania, Virginia, and West Virginia. USEPA: Corvallis, Oregon. Available at: ftp://ftp.epa.gov/wed/ecoregions/reg3/reg3_eco_desc.doc.

Appendix A:

Public Participation/Outreach

WWRC/US 250 Transportation Study
Public Meeting

Wednesday January 31, 2018
4:00 PM to 6:00 PM
Wilson Middle School Cafeteria
232 Hornet Road, Fishersville, VA

The Staunton-Augusta-Waynesboro MPO is conducting a transportation study of US 250 in the vicinity of the Wilson Workforce and Rehabilitation Center in an effort to improve access and safety. Study recommendations will be used to guide future transportation improvements in the area. Come out and give us your input!

Let's work together to keep the area safe, vibrant, and moving!

Staunton Augusta Waynesboro Metropolitan Planning Organization

VDOT Virginia Department of Transportation

REDEANT IN AURUM SECULA PRISCUM AUGUSTA

Wilson Workforce and Rehabilitation Center

TIMMONS GROUP

For additional information please contact Scott Philips at 885-5174 or by email at scott@cspdc.org

The News Leader

Classified Ad Receipt
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Customer: CENTRAL SHEN PLANNING

Address: 112 MACTANLY PL
STAUNTON VA 24401
USA

Ad No.: 0002170799
Pymt Method Invoice
Net Amt: $179.08

Run Times: 1

No. of Affidavits: 1

Run Dates: 05/30/17

1/2 710.2
1/2 750.2

Text of Ad:

SAWMPO NOTICE OF PUBLIC MEETING

The Staunton-Augusta-Waynesboro Metropolitan Planning Organization (SAWMPO), is conducting a Small Area Study to evaluate operational and safety issues on US 250 (Jefferson Highway) and access to the WWRC. The SAWMPO will hold a public information meeting on June 22, 2017, from 5:00 pm to 7:00 pm, at the Wilson Middle School Cafeteria, 232 Hornet Road, Fishersville, VA. Members of the public are invited to attend to learn about the study and to provide input.

The SAWMPO ensures nondiscrimination and equal employment in all programs and activities in accordance with Title VI and Title VII of the Civil Rights Act of 1964. If you have questions or concerns regarding your civil rights in regards to this program, or if special assistance for persons with disabilities or limited English proficiency is required, please contact the SAWMPO at 540-885-5174. Sign language or non-English language interpreters will be provided if needed and requested 7 days in advance of any meeting by contacting the SAWMPO.

'0002170799-01'

ORANGE COUNTY REVIEW The Madison Eagle The Daily Progress GREENE COUNTY RECORD THE NEWS VIRGINIAN

Central Virginia Newspapers Review Order Confirmation for Ad #0000542957-01

Ad Content Proof Actual Size

SAWMPO NOTICE OF PUBLIC MEETING

The Staunton-Augusta-Waynesboro Metropolitan Planning Organization (SAWMPO), is conducting a Small Area Study to evaluate operational and safety issues on US 250 (Jefferson Highway) and access to the WWRC. The SAWMPO will hold a public information meeting on June 22, 2017, from 5:00 p.m. to 7:00 p.m., at the Wilson Middle School Cafeteria, 232 Hornet Road, Fishersville, VA. Members of the public are invited to attend to learn about the study and to provide input.

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Have something to say about traffic around Wilson schools?

Megan Williams , mwilliams@newsleader.com Published 1:31 p.m. ET June 14, 2017 | Updated 3:01 p.m. ET June 14, 2017

(Photo: Katie Currid/The News Leader, Katie Currid/The News Leader)

FISHERSVILLE — If you've ever been in Fishersville near the Woodrow Wilson complex, which has all three Wilson schools as well as the Woodrow Wilson Workforce and Rehabilitation Center, during school drop-off or pickup, you understand the frustration that goes along with traveling in that area.

It's a problem that has plagued the area for years. There is only one entrance and exit to the complex and hundreds of parents flood in and out twice a day to drop their children off and then to pick them up. Every school day around 3 p.m. a line of cars waits to exit the complex, and in the mornings a line forms to get into the complex, clogging traffic along U.S. 250/Jefferson Highway.

More in the news: New administrators named for Kate Collins Middle School (/story/news/2017/06/13/new-administrators-named-kate-collins-middle-school/391905001/)

Often parents have to choose whether to arrive an hour early to pick up students or to wait an hour in line once school lets out, not to mention those rehab center employees who need to get in and out of the complex.

An effective solution to the Woodrow Wilson complex traffic issue has eluded officials, but a panel next week will hopefully provide some answers.

The Staunton-Augusta-Waynesboro Metropolitan Planning Organization will be hosting a public open house and information meeting for the Wilson Workforce and Rehabilitation Center Transportation Study on Thursday. The forum will take place at Wilson Middle School from 5 p.m. to 7 p.m.

The study will examine alternative and secondary access locations to the Woodrow Wilson complex, access management along U.S. 250, and operational and safety issues along the corridor with the intent of developing short- and long-term improvement recommendations, according to a press release.

Study recommendations will be used to guide future transportation improvements in the area. The public is invited to attend the open house and provide input.

For more information about the forum, contact Bonnie Riedesel, 540-885-5174, bonnie@cspdc.org or Scott Philips, 540-885-5174, scott@cspdc.org.

More in the news: Wilson senior finds passion in helping others (/story/entertainment/2017/05/23/wilson-senior-finds-passion-helping-others/338757001/)

WWRC/US 250 Transportation Study
Public Meeting

Wednesday January 31, 2018
4:00 PM to 6:00 PM
Wilson Middle School Cafeteria
232 Hornet Road, Fishersville, VA

The Staunton-Augusta-Waynesboro MPO is conducting a transportation study of US 250 in the vicinity of the Wilson Workforce and Rehabilitation Center in an effort to improve access and safety. Study recommendations will be used to guide future transportation improvements in the area. Come out and give us your input!

Let's work together to keep the area safe, vibrant, and moving!

Staunton Augusta Waynesboro Metropolitan Planning Organization

VDOT Virginia Department of Transportation

REDEANT IN AURUM SECULA PRISCUM AUGUSTA

Wilson Workforce and Rehabilitation Center

TIMMONS GROUP

For additional information please contact Scott Philips at 885-5174 or by email at scott@cspdc.org

The News Leader

Classified Ad Receipt
(For Info Only - NOT A BILL)

Customer: CENTRAL SHEN PLANNING

Address: 112 MACTANLY PL
STAUNTON VA 24401
USA

Ad No.: 0002644697
Pymt Method Invoice
Net Amt: $196.84

Run Times: 1

No. of Affidavits: 1

Run Dates: 01/07/18

Text of Ad:

SAWMPO NOTICE of PUBLIC MEETING

The Staunton-Augusta-Waynesboro Metropolitan Planning Organization (SAWMPO) will hold a second and final public meeting on the transportation study of the US250 corridor near the WWRC entrance and roads within the WWRC complex. The meeting will be held on January 31, 2018, from 4-6 p.m., at the Wilson Middle School Cafeteria, 232 Hornet Road, Fishersville, VA. Members of the public are encouraged to attend to learn about the study. Information about the study is available at www.sawmpo.org/wwrc-small-area-transportation-study.

The SAWMPO ensures nondiscrimination and equal employment in all programs and activities in accordance with Title VI and Title VII of the Civil Rights Act of 1964. If you have questions or concerns about your civil rights regarding this project, or if special assistance for persons with disabilities or limited English proficiency is needed, please contact the SAWMPO at 540-885-5174. Sign language or non-English language interpreters will be provided if needed and requested no later than seven business days prior to the meeting by calling the SAWMPO.

0002644697-01

ORANGE COUNTY REVIEW The Madison Eagle The Daily Progress GREENE COUNTY RECORD THE NEWS VIRGINIAN

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Ad Content Proof Actual Size

SAWMPO NOTICE of PUBLIC MEETING

The Staunton-Augusta-Waynesboro Metropolitan Planning Organization (SAWMPO) will hold a second and final public meeting on the transportation study of the US250 corridor near the WWRC entrance and roads within the WWRC complex. The meeting will be held on January 31, 2018, from 4-6 p.m., at the Wilson Middle School Cafeteria, 232 Hornet Road, Fishersville, VA. Members of the public are encouraged to attend to learn about the study. Information about the study is available at www.sawmpo.org/wwrc-small-area-transportation-study.

The SAWMPO ensures nondiscrimination and equal employment in all programs and activities in accordance with Title VI and Title VII of the Civil Rights Act of 1964. If you have questions or concerns about your civil rights regarding this project, or if special assistance for persons with disabilities or limited English proficiency is needed, please contact the SAWMPO at 540-885-5174. Sign language or non-English language interpreters will be provided if needed and requested no later than seven business days prior to the meeting by calling the SAWMPO.

APPENDIX B:

Short-Term Improvements Detailed Cost Estimates

PROJECT BUDGET: SHORT TERM IMPROVEMENTS
PROPOSED PUBLIC ROAD CONSTRUCTION
WESTBOUND FREE-FLOW RIGHT TURN LANE FROM US ROUTE 250
TO WOODROW WILSON AVENUE
OPTION 1: END RECEIVING LANE AT EXISTING SCHOOL TURN LANE
1/26/2018
WESTBOUND RIGHT TURN LANE ON US ROUTE 250

		LOW		HIGH
400' of Turn Lane Improvements (Pavement) at $425/LF	$	170,000	$	170,000
Traffic Signal Pole Relocation	$	100,000	$	100,000
Construction Total A:	$	270,000	$	270,000
Right of Way and Utilities (35% to 65% Per VDOT formulas)	$	94,500	$	175,500
25% Contingency and PE Fee	$	67,500	$	67,500
Sub-Total A:	**$**	**432,000**	**$**	**513,000**
ADDITIONAL RECEIVING LANE ON WOODROW WILSON TO SCHOOL ENTRANCE				
1,200' of Additional Lane (Pavement) at $400/LF	$	480,000	$	480,000
Construction Total B:	$	480,000	$	480,000
Right of Way and Utilities (35% to 65% Per VDOT formulas)	$	168,000	$	312,000
25% Contingency and PE Fee	$	120,000	$	120,000
Sub-Total B:	**$**	**768,000**	**$**	**912,000**
SOUTHBOUND RIGHT TURN LANE ON WOODROW WILSON AVE				
450' of Turn Lane Improvements (Pavement) at $425/LF	$	191,250	$	191,250
Pedestrian Pole Relocation	$	15,000	$	15,000
500' of Multi-Use Path Relocation at $45/LF	$	22,500	$	22,500
Construction Total C:	$	228,750	$	228,750
Right of Way and Utilities (35% to 65% Per VDOT formulas)	$	80,063	$	148,688
25% Contingency and PE Fee	$	57,188	$	57,188
Sub-Total C:	**$**	**366,001**	**$**	**434,626**
Total Bid Items A + B + C Rounded (2018 Dollars):	**$**	**1,566,000**	**$**	**1,859,600**
Total Bid Items A + B + C Rounded (2026 Dollars):	**$**	**1,983,800**	**$**	**2,355,700**

* The total construction dollars above only includes items listed under the associated detailed breakdown.

* Low vs High cost estimates reflect variance in ROW and Utilities only.

PROJECT BUDGET: SHORT TERM IMPROVEMENTS
PROPOSED PUBLIC ROAD CONSTRUCTION
WESTBOUND FREE-FLOW RIGHT TURN LANE FROM US ROUTE 250
TO WOODROW WILSON AVENUE
OPTION 2: END RECEIVING LANE AT ROUNDABOUT
1/26/2018

		LOW		HIGH
WESTBOUND RIGHT TURN LANE ON US ROUTE 250				
400' of Turn Lane Improvements (Pavement) at $425/LF	$	170,000	$	170,000
Traffic Signal Pole Relocation	$	100,000	$	100,000
Construction Total A:	$	270,000	$	270,000
Right of Way and Utilities (35% to 65% Per VDOT formulas)	$	94,500	$	175,500
25% Contingency and PE Fee	$	67,500	$	67,500
Sub-Total A:	**$**	**432,000**	**$**	**513,000**
ADDITIONAL RECEIVING LANE ON WOODROW WILSON TO ROUNDABOUT				
2,000' of Additional Lane (Pavement) at $400/LF	$	800,000	$	800,000
Construction Total B:	$	800,000	$	800,000
Right of Way and Utilities (35% to 65% Per VDOT formulas)	$	280,000	$	520,000
25% Contingency and PE Fee	$	200,000	$	200,000
Sub-Total B:	**$**	**1,280,000**	**$**	**1,520,000**
SOUTHBOUND RIGHT TURN LANE ON WOODROW WILSON AVE				
450' of Turn Lane Improvements (Pavement) at $425/LF	$	191,250	$	191,250
Pedestrian Pole Relocation	$	15,000	$	15,000
500' of Multi-Use Path Relocation at $45/LF	$	22,500	$	22,500
Construction Total C:	$	228,750	$	228,750
Right of Way and Utilities (35% to 65% Per VDOT formulas)	$	80,063	$	148,688
25% Contingency and PE Fee	$	57,188	$	57,188
Sub-Total C:	**$**	**366,001**	**$**	**434,626**
Total Bid Items A + B + C Rounded (2018 Dollars):	**$**	**2,078,000**	**$**	**2,467,600**
Total Bid Items A + B + C Rounded (2026 Dollars):	**$**	**2,632,300**	**$**	**3,125,900**

* The total construction dollars above only includes items listed under the associated detailed breakdown.
* Low vs High cost estimates reflect variance in ROW and Utilities only.

APPENDIX C:

Long-Term Improvements Options A – C Sections, Detailed Cost Estimates

PROJECT BUDGET: OPTION A
PROPOSED PUBLIC ROAD CONSTRUCTION
ROUTE 250 (JEFFERSON HWY) TO SITE (APPROX. 3,700 LF)
1/26/2018

CONSTRUCTION COSTS

		LOW		HIGH	
Pavement Demolition and Resurfacing, Saw Cut, and Earthwork	$	2,792,690	$	2,792,690	
Storm Sewer and Hydraulics	$	1,305,600	$	1,305,600	
Pavement and Stone	$	874,000	$	874,000	
Curb, Pavement Markings, Misc.	$	247,100	$	247,100	
Retaining Wall	$	112,500	$	112,500	
Maintenance of Traffic	$	30,000	$	30,000	
Erosion and Sediment Control / Seeding	$	120,000	$	120,000	
Traffic Signal	$	350,000	$	350,000	
Sub-Total A:	**$**	**5,831,890**	**$**	**5,831,890**	

OTHER CONSTRUCTION BID COSTS

Mobilization for Sub-Total A (Calculated per VDOT formulas)	$	321,595	$	321,595	
Materials Testing	$	116,638	$	116,638	
Construction Staking / Surveying (2%)	$	116,638	$	116,638	
Right of Way and Utilities (35% to 65% Per VDOT formulas)	$	2,041,162	$	3,790,729	
Sub-Total B:	**$**	**2,596,032**	**$**	**4,345,599**	
Total Bid Items (A + B):	**$**	**8,427,922**	**$**	**10,177,489**	
Contingency for Construction and PE (25% of Total Bid Items)	$	2,106,980	$	2,544,372	
Sub-Total C (Total Bid Items + Contingency):	**$**	**10,534,902** CN	**$**	**12,721,861** CN	

TOTAL PROJECT BUDGET (C) (ROUNDED) in 2018 dollars:	**$**	**10,534,900**	**$**	**12,721,900**
TOTAL PROJECT BUDGET (C) (ROUNDED) in 2026 dollars:	**$**	**13,345,300**	**$**	**16,115,700**

*Inflation 3% compounded annually for 8 years (3%) to get from 2018 to 2026

* The total construction dollars above only includes items listed under the associated detailed breakdown.

PROJECT BUDGET - DETAILED BREAKDOWN FOR OPTION A
PROPOSED PUBLIC ROAD CONSTRUCTION
ROUTE 250 (JEFFERSON HWY) TO SITE (APPROX. 3,700 LF)

ENGINEER'S OPINION OF PROBABLE COSTS

Item Code	Spec. No.	Description	Quantity	Unit	Unit Price	Total
Pavement Demolition and Resurfacing, Saw Cut, and Earthwork						
00110	301	Clearing and Grubbing and Site Preparation	8	AC	$ 10,000.00	$ 80,000.00
10628	515	Flexible Pavement Planing (0" - 3" and variable)	670	SY	$ 7.00	$ 4,690.00
24430	508	Demolition of Pavement (Flexible)	600	SY	$ 10.00	$ 6,000.00
24420	508	Demolition of Pavement (Rigid)		SY	$ 25.00	$ -
N/A	508	Building Demolition		LS	$ 100,000.00	$ -
51910	315	Saw Cut Existing Pavement		LF	$ 5.00	$ -
	303	NS Undercut Excavation	3000	CY	$ 13.00	$ 39,000.00
	303	NS Undercut Excavation Backfill	3000	CY	$ 20.00	$ 60,000.00
	303	Rock Excavation	3000	CY	$ 100.00	$ 300,000.00
	303	Excess Excavation	19000	CY	$ 15.00	$ 285,000.00
00120	303	Regular Excavation	26000	CY	$ 13.00	$ 338,000.00
00140	303	Borrow Excavation	84000	CY	$ 20.00	$ 1,680,000.00
		Sub-Total for Pavement Demolition and Resurfacing, Saw Cut, and Earthwork:				**$ 2,792,690.00**
Storm Sewer and Hydraulics						
01186	302	18" Reinforced Concrete Pipe	950	LF	$ 100.00	$ 95,000.00
01246	302	24" Reinforced Concrete Pipe	1800	LF	$ 115.00	$ 207,000.00
01306	302	30" Reinforced Concrete Pipe	950	LF	$ 125.00	$ 118,750.00
06815	302	Drop Inlet DI-3A	4	EA	$ 4,000.00	$ 16,000.00
06818	302	Drop Inlet DI-3B, L = 6'	15	EA	$ 4,750.00	$ 71,250.00
06819	302	Drop Inlet DI-3B, L = 8'	15	EA	$ 5,000.00	$ 75,000.00
06835	302	Drop Inlet DI-3C, L = 6'	1	EA	$ 5,000.00	$ 5,000.00
06836	302	Drop Inlet DI-3C, L = 8'	1	EA	$ 5,200.00	$ 5,200.00
N/A	N/A	Major Structure (Triple Box Culvert)	1	LS	$ 350,000.00	$ 350,000.00
N/A	N/A	SWM Basins	1	LS	$ 300,000.00	$ 300,000.00
00588	501	Underdrain UD-4	7800	LF	$ 8.00	$ 62,400.00
00596	302	Endwall EW-12		EA	$ 475.00	$ -
		Sub-Total for Storm Sewer and Hydraulics:				**$ 1,305,600.00**
Pavement and Stone						
10607	211,315	**Asphalt Concrete Type SM-12.5A**	**1790**	**TON**	**$ 125.00**	**$ 223,750.00**
		New Pavement	*1260*	*TON*		
		New Shared Use Path	*470*	*TON*		
		Overlay	*60*	*TON*		
10611	211,315	**Asphalt Concrete Type IM-19.0D**	**1260**	**TON**	**$ 115.00**	**$ 144,900.00**
10643	211,315	**Asphalt Concrete Type BM-25.0A**	**2510**	**TON**	**$ 105.00**	**$ 263,550.00**
10128	208,309	**Aggregate Base Material Type 1, No. 21B**	**8060**	**TON**	**$ 30.00**	**$ 241,800.00**
		New Pavement	*5850*	*TON*		
		New Shared Use Path	*1610*	*TON*		
		Underdrain	*600*	*TON*		
		Sub-Total for Pavement and Stone:				**$ 874,000.00**
Curb, Pavement Markings, Misc.						
12600	502	Std. Combination Curb and Gutter CG-6	7600	LF	$ 25.00	$ 190,000.00
		Permanent Signage	1	LS	$ 5,000.00	$ 5,000.00
54032	246	Type B Class I Pavement Line Marking 4"	7600	LF	$ 2.00	$ 15,200.00
54034	246	Type B Class I Pavement Line Marking 6"		LF	$ 3.00	$ -
54036	246	Type B Class I Pavement Line Marking 8"		LF	$ 4.00	$ -
54042	246	Type B Class I Pavement Line Marking 24"	100	LF	$ 15.00	$ 1,500.00
N/A	N/A	NS Yield Markings (Shark Teeth)		LF	$ 15.00	$ -
54300	246	Pavement Message Marking Elongated Arrow Single	4	EA	$ 300.00	$ 1,200.00
54310	246	Pavement Message Marking Elongated Arrow Double	4	EA	$ 400.00	$ 1,600.00
13323	221,505	Guardrail GR-MGS1	500	LF	$ 30.00	$ 15,000.00
N/A	N/A	Guardrail Terminal GR-MGS2	4	EA	$ 3,500.00	$ 14,000.00
N/A	N/A	NS Guardrail Terminal Site Preparation Minor	4	EA	$ 750.00	$ 3,000.00
13345	221,505	Aggregate Base Material Ty. I or II No. 21A or 21B	20	TON	$ 30.00	$ 600.00
		Sub-Total for Curb, Pavement Markings, Misc.:				**$ 247,100.00**
Retaining Wall						
13530		RW-3 Retaining Wall & Excavation	225	CY	$ 500.00	$ 112,500.00
		Sub-Total for Retaining Wall:				**$ 112,500.00**
Maintenance of Traffic						
N/A	N/A	MOT Lump Sum	1	LS	$ 30,000.00	$ 30,000.00
		Sub-Total for Maintenance of Traffic:				**$ 30,000.00**
Erosion and Sediment Control / Seeding						
N/A	N/A	E&S Lump Sum	1	LS	$ 120,000.00	$ 120,000.00
		Sub-Total for Erosion and Sediment Control / Seeding:				**$ 120,000.00**
Traffic Signal						
N/A	N/A	Traffic Signal Lump Sum	1	LS	$ 350,000.00	$ 350,000.00
		Sub-Total for Traffic Signal:				**$ 350,000.00**

PROJECT BUDGET: OPTION B
PROPOSED PUBLIC ROAD CONSTRUCTION
ROUTE 250 (JEFFERSON HWY) TO SITE (APPROX. 3,900 LF)
1/26/2018

CONSTRUCTION COSTS

		LOW		HIGH	
Pavement Demolition and Resurfacing, Saw Cut, and Earthwork	$	2,880,940	$	2,880,940	
Storm Sewer and Hydraulics	$	1,348,275	$	1,348,275	
Pavement and Stone	$	896,100	$	896,100	
Curb, Pavement Markings, Misc.	$	252,500	$	252,500	
Retaining Wall	$	112,500	$	112,500	
Maintenance of Traffic	$	30,000	$	30,000	
Erosion and Sediment Control / Seeding	$	150,000	$	150,000	
Traffic Signal	$	350,000	$	350,000	
Sub-Total A:	**$**	**6,020,315**	**$**	**6,020,315**	

OTHER CONSTRUCTION BID COSTS

Mobilization for Sub-Total A (Calculated per VDOT formulas)	$	331,016	$	331,016	
Materials Testing	$	120,406	$	120,406	
Construction Staking / Surveying (2%)	$	120,406	$	120,406	
Right of Way and Utilities (35% to 65% Per VDOT formulas)	$	2,107,110	$	3,913,205	
Sub-Total B:	**$**	**2,678,939**	**$**	**4,485,033**	
Total Bid Items (A + B):	**$**	**8,699,254**	**$**	**10,505,348**	
Contingency for Construction and PE (25% of Total Bid Items)	$	2,174,813	$	2,626,337	
Sub-Total C (Total Bid Items + Contingency):	**$**	**10,874,067** CN	**$**	**13,131,685** CN	

TOTAL PROJECT BUDGET (C) (ROUNDED) in 2018 dollars:	**$**	**10,874,100**	**$**	**13,131,700**
TOTAL PROJECT BUDGET (C) (ROUNDED) in 2026 dollars:	**$**	**13,775,000**	**$**	**16,634,800**

*Inflation 3% compounded annually for 8 years (3%) to get from 2018 to 2026

* The total construction dollars above only includes items listed under the associated detailed breakdown.

PROJECT BUDGET - DETAILED BREAKDOWN FOR OPTION B
PROPOSED PUBLIC ROAD CONSTRUCTION
ROUTE 250 (JEFFERSON HWY) TO SITE (APPROX. 3,900 LF)

ENGINEER'S OPINION OF PROBABLE COSTS

Item Code	Spec. No.	Description	Quantity	Unit	Unit Price	Total
Pavement Demolition and Resurfacing, Saw Cut, and Earthwork						
00110	301	Clearing and Grubbing and Site Preparation	8	AC	$ 10,000.00	$ 80,000.00
10628	515	Flexible Pavement Planing (0" - 3" and variable)	670	SY	$ 7.00	$ 4,690.00
24430	508	Demolition of Pavement (Flexible)	25	SY	$ 10.00	$ 250.00
24420	508	Demolition of Pavement (Rigid)		SY	$ 25.00	$ -
N/A	508	Building Demolition		LS	$ 100,000.00	$ -
51910	315	Saw Cut Existing Pavement		LF	$ 5.00	$ -
	303	NS Undercut Excavation	3000	CY	$ 13.00	$ 39,000.00
	303	NS Undercut Excavation Backfill	3000	CY	$ 20.00	$ 60,000.00
	303	Rock Excavation	3000	CY	$ 100.00	$ 300,000.00
	303	Excess Excavation	19000	CY	$ 15.00	$ 285,000.00
00120	303	Regular Excavation	24000	CY	$ 13.00	$ 312,000.00
00140	303	Borrow Excavation	90000	CY	$ 20.00	$ 1,800,000.00
		Sub-Total for Pavement Demolition and Resurfacing, Saw Cut, and Earthwork:				**$ 2,880,940.00**
Storm Sewer and Hydraulics						
01186	302	18" Reinforced Concrete Pipe	975	LF	$ 100.00	$ 97,500.00
01246	302	24" Reinforced Concrete Pipe	1850	LF	$ 115.00	$ 212,750.00
01306	302	30" Reinforced Concrete Pipe	975	LF	$ 125.00	$ 121,875.00
06815	302	Drop Inlet DI-3A	4	EA	$ 4,000.00	$ 16,000.00
06818	302	Drop Inlet DI-3B, L = 6'	17	EA	$ 4,750.00	$ 80,750.00
06819	302	Drop Inlet DI-3B, L = 8'	17	EA	$ 5,000.00	$ 85,000.00
06835	302	Drop Inlet DI-3C, L = 6'	2	EA	$ 5,000.00	$ 10,000.00
06836	302	Drop Inlet DI-3C, L = 8'	2	EA	$ 5,200.00	$ 10,400.00
N/A	N/A	Major Structure (Triple Box Culvert)	1	LS	$ 350,000.00	$ 350,000.00
N/A	N/A	SWM Basins	1	LS	$ 300,000.00	$ 300,000.00
00588	501	Underdrain UD-4	8000	LF	$ 8.00	$ 64,000.00
00596	302	Endwall EW-12		EA	$ 475.00	$ -
		Sub-Total for Storm Sewer and Hydraulics:				**$ 1,348,275.00**
Pavement and Stone						
10607	211,315	**Asphalt Concrete Type SM-12.5A**	**1830**	**TON**	**$ 125.00**	**$ 228,750.00**
		New Pavement	*1290*			
		New Shared Use Path	*480*			
		Overlay	*60*			
10611	211,315	**Asphalt Concrete Type IM-19.0D**	**1290**	**TON**	**$ 115.00**	**$ 148,350.00**
10643	211,315	**Asphalt Concrete Type BM-25.0A**	**2580**	**TON**	**$ 105.00**	**$ 270,900.00**
10128	208,309	**Aggregate Base Material Type 1, No. 21B**	**8270**	**TON**	**$ 30.00**	**$ 248,100.00**
		New Pavement	*6000*	*TON*		
		New Shared Use Path	*1650*	*TON*		
		Underdrain	*620*	*TON*		
		Sub-Total for Pavement and Stone:				**$ 896,100.00**
Curb, Sidewalk, Pavement Markings, Misc.						
12600	502	Std. Combination Curb and Gutter CG-6	7800	LF	$ 25.00	$ 195,000.00
		Permanent Signage	1	LS	$ 5,000.00	$ 5,000.00
54032	246	Type B Class I Pavement Line Marking 4"	7800	LF	$ 2.00	$ 15,600.00
54034	246	Type B Class I Pavement Line Marking 6"		LF	$ 3.00	$ -
54036	246	Type B Class I Pavement Line Marking 8"		LF	$ 4.00	$ -
54042	246	Type B Class I Pavement Line Marking 24"	100	LF	$ 15.00	$ 1,500.00
N/A	N/A	NS Yield Markings (Shark Teeth)		LF	$ 15.00	$ -
54300	246	Pavement Message Marking Elongated Arrow Single	4	EA	$ 300.00	$ 1,200.00
54310	246	Pavement Message Marking Elongated Arrow Double	4	EA	$ 400.00	$ 1,600.00
13323	221,505	Guardrail GR-MGS1	500	LF	$ 30.00	$ 15,000.00
N/A	N/A	Guardrail Terminal GR-MGS2	4	EA	$ 3,500.00	$ 14,000.00
N/A	N/A	NS Guardrail Terminal Site Preparation Minor	4	EA	$ 750.00	$ 3,000.00
13345	221,505	Aggregate Base Material Ty. I or II No. 21A or 21B	20	TON	$ 30.00	$ 600.00
		Sub-Total for Curb, Sidewalk, Pavement Markings, Misc.:				**$ 252,500.00**
Retaining Wall						
13530		RW-3 Retaining Wall & Excavation	225	CY	$ 500.00	$ 112,500.00
					Sub-Total for Retaining Wall:	**$ 112,500.00**
Maintenance of Traffic						
N/A	N/A	MOT Lump Sum	1	LS	$ 30,000.00	$ 30,000.00
					Sub-Total for Maintenance of Traffic:	**$ 30,000.00**
Erosion and Sediment Control / Seeding						
N/A	N/A	E&S Lump Sum	1	LS	$ 150,000.00	$ 150,000.00
					Sub-Total for Erosion and Sediment Control / Seeding:	**$ 150,000.00**
Traffic Signal						
N/A	N/A	Traffic Signal Lump Sum	1	LS	$ 350,000.00	$ 350,000.00
					Sub-Total for Traffic Signal:	**$ 350,000.00**

PROJECT BUDGET: OPTION C
PROPOSED PUBLIC ROAD CONSTRUCTION
ROUTE 250 (JEFFERSON HWY) TO SITE (APPROX. 5,000 LF)
1/26/2018

CONSTRUCTION COSTS

		LOW		HIGH	
Pavement Demolition and Resurfacing, Saw Cut, and Earthwork	$	5,216,440	$	5,216,440	
Storm Sewer and Hydraulics	$	1,543,675	$	1,543,675	
Pavement and Stone	$	1,131,900	$	1,131,900	
Curb, Pavement Markings, Misc.	$	328,100	$	328,100	
Retaining Wall	$	50,000	$	50,000	
Maintenance of Traffic	$	75,000	$	75,000	
Erosion and Sediment Control / Seeding	$	200,000	$	200,000	
Traffic Signal	$	50,000	$	50,000	
Sub-Total A:	**$**	**8,595,115**	**$**	**8,595,115**	

OTHER CONSTRUCTION BID COSTS

Mobilization for Sub-Total A (Calculated per VDOT formulas)	$	459,756	$	459,756	
Materials Testing	$	171,902	$	171,902	
Construction Staking / Surveying (2%)	$	171,902	$	171,902	
Right of Way and Utilities (35% to 65% Per VDOT formulas)	$	3,008,290	$	5,586,825	
Sub-Total B:	**$**	**3,811,851**	**$**	**6,390,385**	
Total Bid Items (A + B):	**$**	**12,406,966**	**$**	**14,985,500**	
Contingency for Construction and PE (25% of Total Bid Items)	$	3,101,741	$	3,746,375	
Sub-Total C (Total Bid Items + Contingency):	**$**	**15,508,707**	CN **$**	**18,731,875**	CN

TOTAL PROJECT BUDGET (C) (ROUNDED) in 2018 dollars:	**$**	**15,508,700**	**$**	**18,731,900**
TOTAL PROJECT BUDGET (C) (ROUNDED) in 2026 dollars:	**$**	**19,646,000**	**$**	**23,729,000**

*Inflation 3% compounded annually for 8 years (3%) to get from 2018 to 2026

* The total construction dollars above only includes items listed under the associated detailed breakdown.

PROJECT BUDGET - DETAILED BREAKDOWN FOR OPTION C
PROPOSED PUBLIC ROAD CONSTRUCTION
ROUTE 250 (JEFFERSON HWY) TO SITE (APPROX. 5,000 LF)

ENGINEER'S OPINION OF PROBABLE COSTS

Item Code	Spec. No.	Description	Quantity	Unit	Unit Price	Total
Pavement Demolition and Resurfacing, Saw Cut, and Earthwork						
00110	301	Clearing and Grubbing and Site Preparation	11	AC	$ 10,000.00	$ 110,000.00
10628	515	Flexible Pavement Planing (0" - 3" and variable)	670	SY	$ 7.00	$ 4,690.00
24430	508	Demolition of Pavement (Flexible)	2675	SY	$ 10.00	$ 26,750.00
24420	508	Demolition of Pavement (Rigid)		SY	$ 25.00	$ -
N/A	508	Building Demolition		LS	$ 100,000.00	$ -
51910	315	Saw Cut Existing Pavement		LF	$ 5.00	$ -
	303	NS Undercut Excavation	7500	CY	$ 13.00	$ 97,500.00
	303	NS Undercut Excavation Backfill	7500	CY	$ 20.00	$ 150,000.00
	303	Rock Excavation	7500	CY	$ 100.00	$ 750,000.00
	303	Excess Excavation	32000	CY	$ 15.00	$ 480,000.00
00120	303	Regular Excavation	67500	CY	$ 13.00	$ 877,500.00
00140	303	Borrow Excavation	136000	CY	$ 20.00	$ 2,720,000.00
		Sub-Total for Pavement Demolition and Resurfacing, Saw Cut, and Earthwork:				**$ 5,216,440.00**
Storm Sewer and Hydraulics						
01186	302	18" Reinforced Concrete Pipe	1325	LF	$ 100.00	$ 132,500.00
01246	302	24" Reinforced Concrete Pipe	2500	LF	$ 115.00	$ 287,500.00
01306	302	30" Reinforced Concrete Pipe	1325	LF	$ 125.00	$ 165,625.00
06815	302	Drop Inlet DI-3A	4	EA	$ 4,000.00	$ 16,000.00
06818	302	Drop Inlet DI-3B, L = 6'	19	EA	$ 4,750.00	$ 90,250.00
06819	302	Drop Inlet DI-3B, L = 8'	19	EA	$ 5,000.00	$ 95,000.00
06835	302	Drop Inlet DI-3C, L = 6'	2	EA	$ 5,000.00	$ 10,000.00
06836	302	Drop Inlet DI-3C, L = 8'	2	EA	$ 5,200.00	$ 10,400.00
N/A	N/A	Major Structure (Triple Box Culvert)	1	LS	$ 350,000.00	$ 350,000.00
N/A	N/A	SWM Basins	1	LS	$ 300,000.00	$ 300,000.00
00588	501	Underdrain UD-4	10800	LF	$ 8.00	$ 86,400.00
00596	302	Endwall EW-12		EA	$ 475.00	$ -
		Sub-Total for Storm Sewer and Hydraulics:				**$ 1,543,675.00**
Pavement and Stone						
10607	211,315	**Asphalt Concrete Type SM-12.5A**	**1810**	**TON**	**$ 125.00**	**$ 226,250.00**
		New Pavement	*1750*			
		New Shared Use Path	*650*			
		Overlay	*60*			
10611	211,315	**Asphalt Concrete Type IM-19.0D**	**1750**	**TON**	**$ 115.00**	**$ 201,250.00**
10643	211,315	**Asphalt Concrete Type BM-25.0A**	**3500**	**TON**	**$ 105.00**	**$ 367,500.00**
10128	208,309	**Aggregate Base Material Type 1, No. 21B**	**11230**	**TON**	**$ 30.00**	**$ 336,900.00**
		New Pavement	*8150*	*TON*		
		New Shared Use Path	*2250*	*TON*		
		Underdrain	*830*	*TON*		
		Sub-Total for Pavement and Stone:				**$ 1,131,900.00**
Curb, Sidewalk, Pavement Markings, Misc.						
12600	502	Std. Combination Curb and Gutter CG-6	10600	LF	$ 25.00	$ 265,000.00
		Permanent Signage	1	LS	$ 5,000.00	$ 5,000.00
54032	246	Type B Class I Pavement Line Marking 4"	10600	LF	$ 2.00	$ 21,200.00
54034	246	Type B Class I Pavement Line Marking 6"		LF	$ 3.00	$ -
54036	246	Type B Class I Pavement Line Marking 8"		LF	$ 4.00	$ -
54042	246	Type B Class I Pavement Line Marking 24"	100	LF	$ 15.00	$ 1,500.00
N/A	N/A	NS Yield Markings (Shark Teeth)		LF	$ 15.00	$ -
54300	246	Pavement Message Marking Elongated Arrow Single	4	EA	$ 300.00	$ 1,200.00
54310	246	Pavement Message Marking Elongated Arrow Double	4	EA	$ 400.00	$ 1,600.00
13323	221,505	Guardrail GR-MGS1	500	LF	$ 30.00	$ 15,000.00
N/A	N/A	Guardrail Terminal GR-MGS2	4	EA	$ 3,500.00	$ 14,000.00
N/A	N/A	NS Guardrail Terminal Site Preparation Minor	4	EA	$ 750.00	$ 3,000.00
13345	221,505	Aggregate Base Material Ty. I or II No. 21A or 21B	20	TON	$ 30.00	$ 600.00
		Sub-Total for Curb, Sidewalk, Pavement Markings, Misc.:				**$ 328,100.00**
Landscaping						
N/A	N/A	Landscaping Lump Sum	1	LS	$ 50,000.00	$ 50,000.00
		Sub-Total for Landscaping:				**$ 50,000.00**
Maintenance of Traffic						
N/A	N/A	MOT Lump Sum	1	LS	$ 75,000.00	$ 75,000.00
		Sub-Total for Maintenance of Traffic:				**$ 75,000.00**
Erosion and Sediment Control / Seeding						
N/A	N/A	E&S Lump Sum	1	LS	$ 200,000.00	$ 200,000.00
		Sub-Total for Erosion and Sediment Control / Seeding:				**$ 200,000.00**
Traffic Signal						
N/A	N/A	Traffic Signal Lump Sum	1	LS	$ 50,000.00	$ 50,000.00
		Sub-Total for Traffic Signal:				**$ 50,000.00**