



HURT & PROFFITT
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VA 42 AND GARBERS CHURCH ROAD

CONNECTIVITY STUDY



PREPARED FOR

Harrisonburg-Rockingham Metropolitan Planning Organization

06 July 2018

Revised 31 August 2018



EXECUTIVE SUMMARY

Hurt & Proffitt, Inc. was tasked by the Harrisonburg-Rockingham Metropolitan Planning Organization (HRMPO) to evaluate non-motorized transportation connections in the study area encompassing VA 42, Garbers Church Road, Grace Chapel Road and Erickson Avenue (reference Map on page 1). VA 42 is the primary route non-motorized travelers use to travel from the Towns of Bridgewater and Dayton to the City of Harrisonburg. Presently, a bike/buggy lane exists on both sides of VA 42 from Turner Ashby Drive in Bridgewater and terminates at Eberly Road in Dayton.

An extension of the bike/buggy lanes on VA 42 from Eberly Road in Dayton, to 0.1 miles east of Garbers Church Road will be constructed in 2019. The lanes terminate at a section of curb and gutter highway with minimal public right of way to widen the shoulder for a bike/buggy lane. The curb and gutter section 0.1 miles east of the intersection of VA 42 and Garbers Church Road, creates a gap in the regional non-motorized transportation network.

The primary goal of this study is to develop solutions for regional non-motorized connectivity. The Study Team also recognized Garbers Crossing Shopping Center as a frequent destination for the buggy-driving community. Accordingly, the study team evaluated two connections. The first is a connection from VA 42 to Garbers Church Road and Erickson Avenue. The second is a connection between Garbers Crossing Shopping Center and Grace Chapel Road.

The Study Team met with members of the Old Order Mennonite community to discuss the safety components of this study, and the preferred option included giving bike and buggy users a longer turn lane on VA 42 to gradually merge across traffic at the Garbers Church Road intersection. The Study Team also held a public information forum at Dayton Town hall to share the proposed solutions. Following this forum, the Grace Chapel Road connection was determined to be too specific to improving access to Garbers Crossing Shopping Center, and led the study team to focus on the Garbers Church Road connection. The forum also generated support for a possible private connection to Garbers Crossing Shopping Center from Garbers Church Road which is currently being pursued by private members of the community, and was not addressed in the findings of this report.

This Study provides a set of recommendations to safely connect the VA 42 bike/buggy lanes to existing and planned non-motorized facilities on Erickson Avenue in the City of Harrisonburg. The final recommendations include a 250' extension of the VA 42 left turn lane on to Garbers Church Road, connecting to paved bike/buggy lanes on both sides of Garbers Church Road. These improvements are anticipated to have a combined design, permitting, and construction cost of \$2.06 million. Additional right-of-way will be required from at least four property owners on the west side of Garbers Church Road. This study also recommends a pavement marking and highway signing option for all 8' wide bike/buggy lanes clearly delineate them from vehicular travel lanes. This new marking and signing design will require approval from the VDOT Statewide Traffic Engineer.



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INTRODUCTION

Hurt & Proffitt, Inc. was tasked by the Harrisonburg-Rockingham Metropolitan Planning Organization (HRMPO) to evaluate non-motorized transportation connections in the study area (see Map below), and safer access to Garbers Crossing Shopping Center in Rockingham County. The goals of the study were to evaluate options that fill a gap in the non-motorized network, and recommend a connection that best suits the needs of the community. The study took into account existing and proposed non-motorized infrastructure in the study area.

The Study Team includes staff from the HRMPO, Rockingham County, the Town of Dayton, and the Virginia Department of Transportation (VDOT), as well as representatives from the Rockingham County Bicycle Advisory Committee and Old Order Mennonite Community. The Study Team elected to evaluate at least two connections to address non-motorized network needs.

VA 42 and Garbers Church Road Connectivity Study Area Map



BACKGROUND

Rockingham County, Virginia has the largest Mennonite community in the State. This community relies heavily on non-motorized forms of transportation, especially bicycles and horse drawn buggies. Cyclists from Bridgewater and Dayton also utilize the VA 42 corridor to reach Harrisonburg.

The County is committed to the recommendations outlined in its Bicycle and Pedestrian Plan, which includes an 8 foot-wide, paved bicycle and buggy lane extension on both sides of VA 42 from Eberly Road (Route 732) on the north end of Dayton to 0.1 miles north of Garbers Church Road (Route 910) to be constructed in 2019. East of Garbers Church road, VA 42 has curb and gutter on both sides of the roadway and very limited public right of way, which prohibits the extension of the bicycle and buggy lane. This curb and gutter section leaves a 0.7-mile gap in the non-motorized transportation network. Within that gap, Garbers Crossing Shopping Center is a key destination.

In order to better understand existing usage of VA 42 by horse-drawn buggies, the Study Team met with members of the Old Order Mennonite community. The community utilizes both the signalized entrance to Garbers Crossing from VA 42, and the Garbers Church Road / Erickson Avenue connection to access the commercial area. Some members feel comfortable traveling in the vehicle lanes on the curb and gutter section of VA 42, but others prefer the longer route on Garbers Church road because it has less traffic. When returning home, travel from the signalized intersection on VA 42 is acceptable because buggies are not required to cross travel lanes to turn right.

Some of the operational considerations for buggies include:

- Lack of adequate gaps in traffic for buggies to cross both lanes on VA 42;
- Steep grades which can strain horses (uphill) and promote skidding (downhill);
- Traffic signals do not always actuate for buggies; and
- Horses do not like to be stationary near traffic

Approximate design parameters of a standard horse drawn buggy include:

- 15' long (20' with horse) with a 5'-6' wheel base;
- 6' wide;
- Optional side view mirrors;
- Height of driver's eye at approximately 6'; and
- Standard travel speed between 6mph and 8mph.



Tony Dejak/AP Photo

EXISTING NETWORK

John Wayland Highway (Route 42) is classified as a Principal Arterial. East of the primary study intersection, it is a 4-lane, median-divided section with curb and gutter, and has signalized intersections at Garbers Crossing and Erickson Avenue. The posted speed limit is 45 mph between Garbers Church Road and Garbers Crossing / 35 mph between Garbers Crossing and Erickson Avenue. West of the primary study intersection, it is a 4-lane, median-divided section with a raised grass median and earthen shoulders. The posted speed limit is 55 mph. The average daily traffic is 16,000 vehicles.



John Wayland Highway looking West towards Garbers Church Road

Erickson Avenue (Route 726) is classified as a Major Collector. It is a 2-lane, undivided section transitioning to a 4-lane, undivided section with bike lanes and curb and gutter near VA 42. There are signalized intersections at VA 42 and Garbers Church Road. The posted speed limit is 35 mph. The average daily traffic is 6,100 vehicles. Currently, a project to improve turn lanes at the Garbers Church Road intersection and add bike lanes with curb and gutter and 5' sidewalks to the portion of Erickson Avenue within the study area is being developed.

Garbers Church Road (Route 910) is classified as a Major Collector. It is a 2-lane, undivided section with a signalized intersection at Erickson Avenue and a posted speed limit of 35 mph. The average daily traffic is 3,100 vehicles.

EVALUATION OF ALTERNATIVES

Each alternative was evaluated by the H&P Design Team and the HRMPO Study Team, and reviewed to determine required design and permitting requirements. Conceptual drawings for recommended alternatives are included in **Appendix A**.

Left Turns on VA 42 (Sheet 1)

The Study Team discussed several options to facilitate safer left turns from VA 42. Left turns can be performed at Grace Chapel Road, Garbers Church Road, or the Garbers Crossing Shopping Center entrance. All three locations present similar safety challenges for bicycles and buggies, which must “take the lane” from the right shoulder to cross two lanes of traffic moving at much higher speeds. The Study Team focused on solutions at the Garbers Church Road intersection, reviewing the potential benefits of either a 250' extension of the existing left turn lane, or a graded bulb-out on the south side of VA 42 allowing buggies to sit perpendicular to traffic and cross to the highway.

A 250' extension of the existing left turn lane on VA 42 will allow buggies to gradually transition from the right shoulder to the left turn lane one lane at a time. While this leaves buggies in the left travel lane for a short distance, it makes finding gaps in traffic easier because they only have to merge one lane at a time instead of crossing multiple lanes at once. This maneuver was the preferred method for buggy drivers. Primary design components will be drainage away from the median / turn lane area. The remaining 4'-6' wide grass median would be replaced with a concrete median.

A bulb out would require approximately 50' of right-of-way for a distance of approximately 80' to 100' to accommodate the large turning radius on a buggy. Buggy drivers did not support this option because buggies are too long to sit perpendicular to traffic in the median waiting for a break in on-coming traffic to complete the movement. Due to the large footprint for this option, and the lack of support from buggy drivers, this alternative was not selected.

Additional signage could be provided on VA 42 to warn drivers of buggies. Roadway marking modifications could be made to allow buggies to merge left gradually across one lane of traffic at a time.

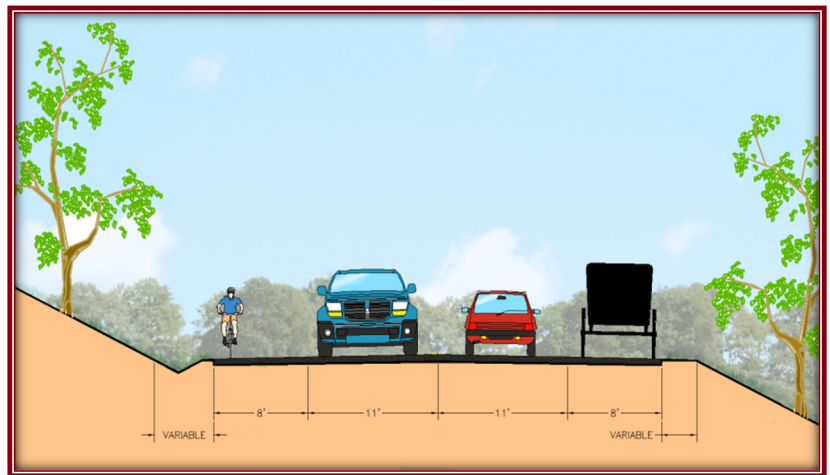


W11-14 Sign

Garbers Church Road / Erickson Avenue Connection (Sheets 2-4)

The Study team further developed the Rockingham County and HRMPO Bicycle and Pedestrian Plans' recommendation for a non-motorized facility on Garbers Church Road to connect the VA 42 bike/buggy lanes to the proposed Erickson Avenue bicycle and pedestrian facilities.

Continuing the 8' bike/buggy lane from VA 42 to Garbers Church Road can be accomplished on and adjacent to existing right-of-way. Because the existing right-of-way was shown on GIS to be very close to the eastern edge of Garbers Church Road, the Study Team anticipates widening Garbers Church Road to the west to minimize right-of-way acquisition.

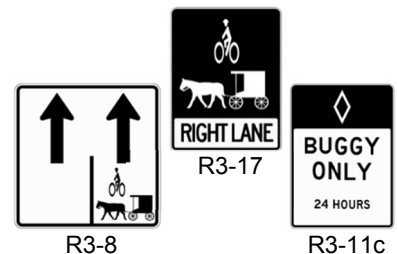


Proposed Garbers Church Road Cross Section

Widening the road to the west will affect drainage along the corridor because the existing section is in a cut section. Additional cut will be required to re-establish the ditch, and the utilities at the top of the slope will need to be relocated. The cost estimates for this improvement in Appendix B include the costs for utility relocation and right-of-way acquisition.

Pavement message markings or signage will need to be added to the corridor to clearly delineate the bike/buggy lanes. The message markings include the standard bike lane arrow and helmeted rider with a custom buggy graphic matching the national standard W11-14 sign. Alternative signing options could utilize modified R3-8, R3-11c, or R3-17 series signs to denote the buggy lane as shown to the right. These custom sign/pavement message options would require VDOT approval, but could then be utilized on VA 42 to create a consistent interpretation of the outside striped lanes.

Optional Modified Signs





Grace Chapel Road Connection (Appendix D)

A path connection to Garbers Crossing Shopping Center from Grace Chapel Road was evaluated as another potential option, but was not advanced as a preferred alternative. The proposed path would be constructed through a privately-owned, wooded floodplain, between the shopping center's stormwater pond and Grace Chapel Road which is a floodway for Sunset Heights Branch. Sunset Heights Branch is a studied stream so any connection through this area would also require FEMA coordination.

In order to connect Grace Chapel Road to the Garbers Crossing parking lot, it would require a 10 foot-wide concrete path installed at grade through the property currently owned by the shopping center (see **Appendix D**). The connection to the Garber's Crossing shopping center could be adjacent to the stormwater pond. The concrete path would be constructed to withstand flood and erosion conditions and was estimated to cost **\$465,000**.

Following the public input session, it was determined that this option would not be pursued, and the property owner was never contacted for input. The study team decided that the Grace Chapel Connection did not meet the goals of the study nor the community, especially when compared to the Garbers Church Road / Erickson Avenue Connection. At the public meeting, private citizens proposed an alternative connection from Garbers Church Road through private property into the northwest corner of the existing Walmart parking lot. This connection would be dedicated to non-motorized traffic only, and privately funded and maintained.

ESTIMATED CONSTRUCTION COSTS

The modified turn lane on VA 42 was estimated to cost **\$260,000**. The costs associated with environmental studies and reviews are minimal based on the size of the area of impact and its location in the middle of an existing roadway. Construction would include removal and relocation of the raised grass median, pavement patch on VA 42, and installation of a paved turn lane. Contract Administration and Construction Inspection (CA/CI) costs are estimated for a 4 month construction project.

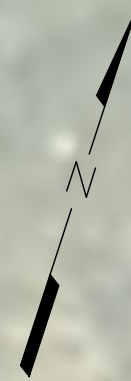
The extension of the bike/buggy lanes onto Garbers Church Road to Erickson Boulevard was estimated to cost **\$1,800,000**. The costs associated with environmental studies and reviews include standard environmental coordination for federally funded projects. Stormwater mitigation assumes that the owner will purchase offset credits for required stormwater treatment because this is a linear project. The estimate also assumes that right-of-way will be required on the western side of Garbers Church Road and approximately 12 utility poles relocated. CA/CI costs are estimated for a 12 month construction project.

Unit prices for items are based on recently bid projects and VDOT bid tabs. Design and permitting fees are only estimates. Detailed cost estimates are included in **Appendix B**.

Appendix A – Proposed Improvements



NOTE: INSTALL W11-14 SIGN ON WB RTE 42



EX. RIGHT OF WAY AS SHOWN IN COUNTY GIS

INSTALL STANDARD VDOT RAISED CONCRETE MEDIUM

JOHN WAYLAND HWY. (RTE. 42)

REMOVE EX. CURB
INSTALL 13' WIDE ASPHALT TURNING LANE

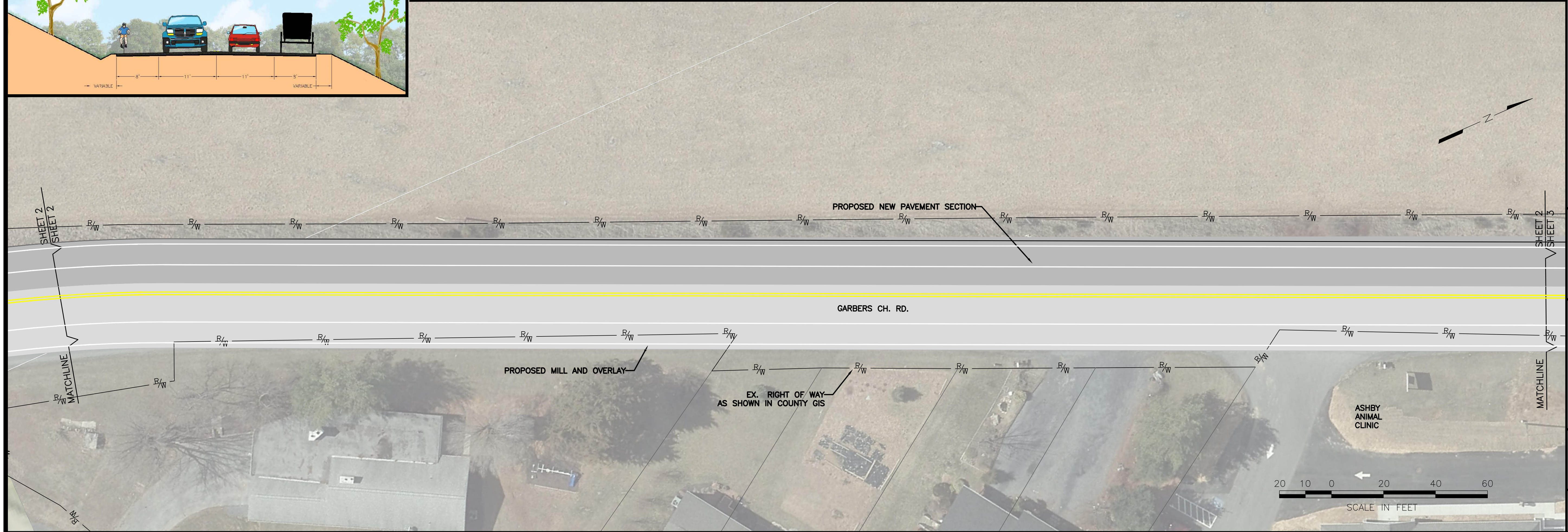
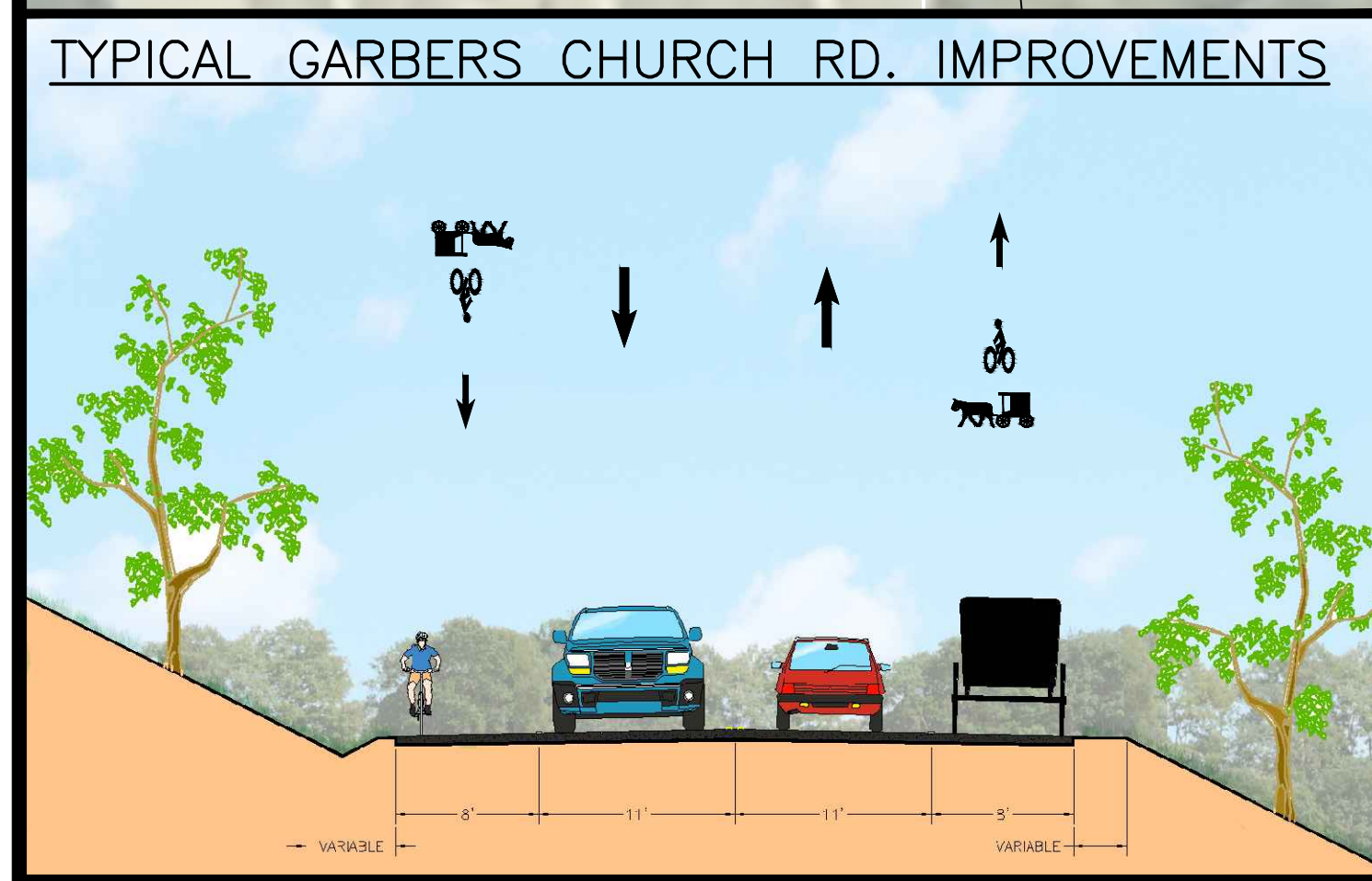
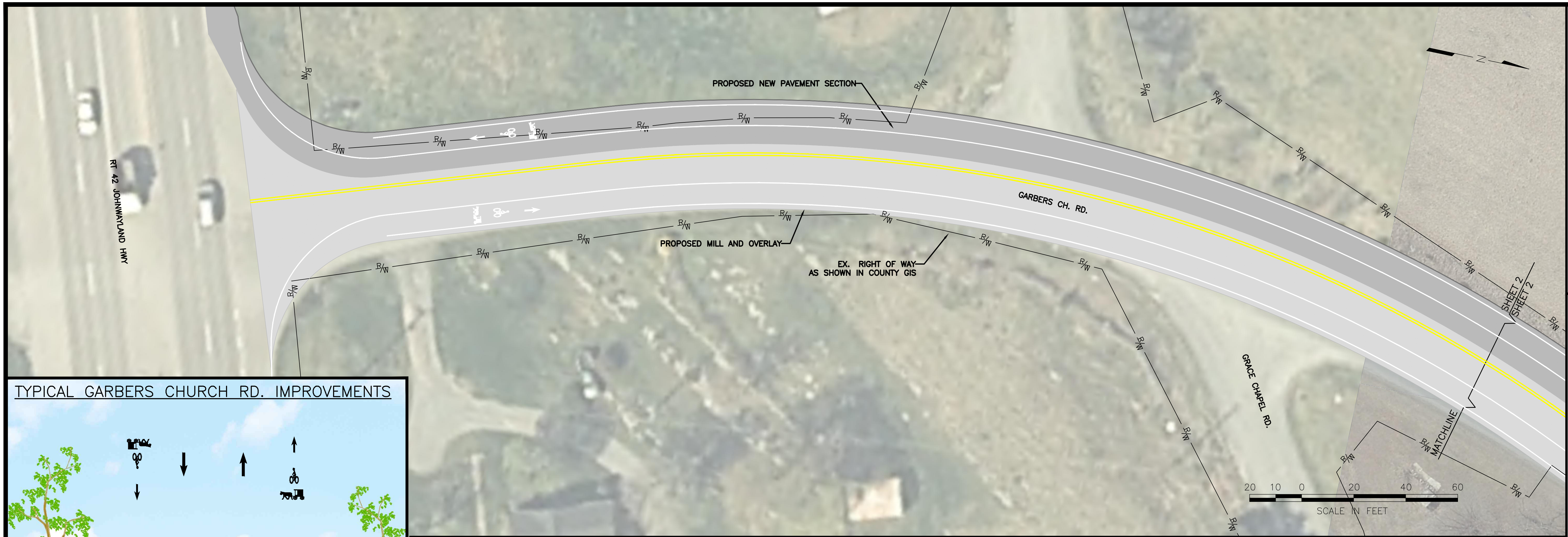


HURT & PROFFITT
 1861 PRATT DRIVE, SUITE 1100
 BLACKSBURG, VIRGINIA 24060
 800.763.5596 TOLL FREE
 540.552.5592 MAIN
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**VA 42 / GARBER'S CHURCH ROAD
 BICYCLE / HORSE & BUGGY
 TRAFFIC STUDY**
 STAUNTON, VIRGINIA

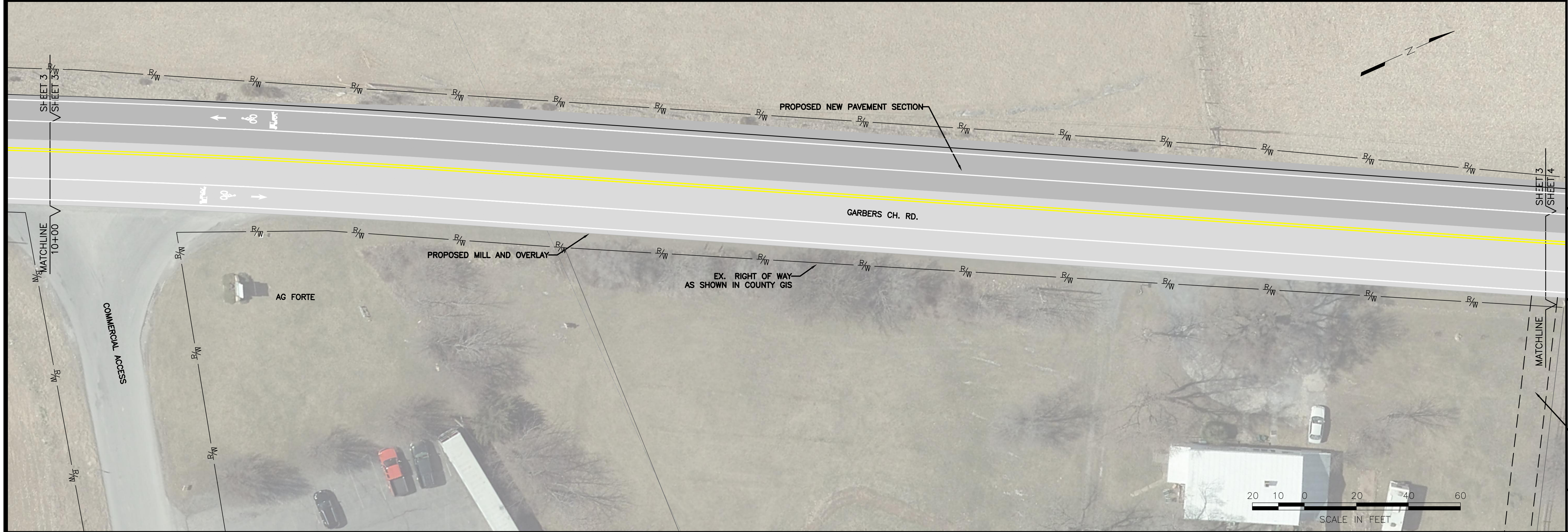
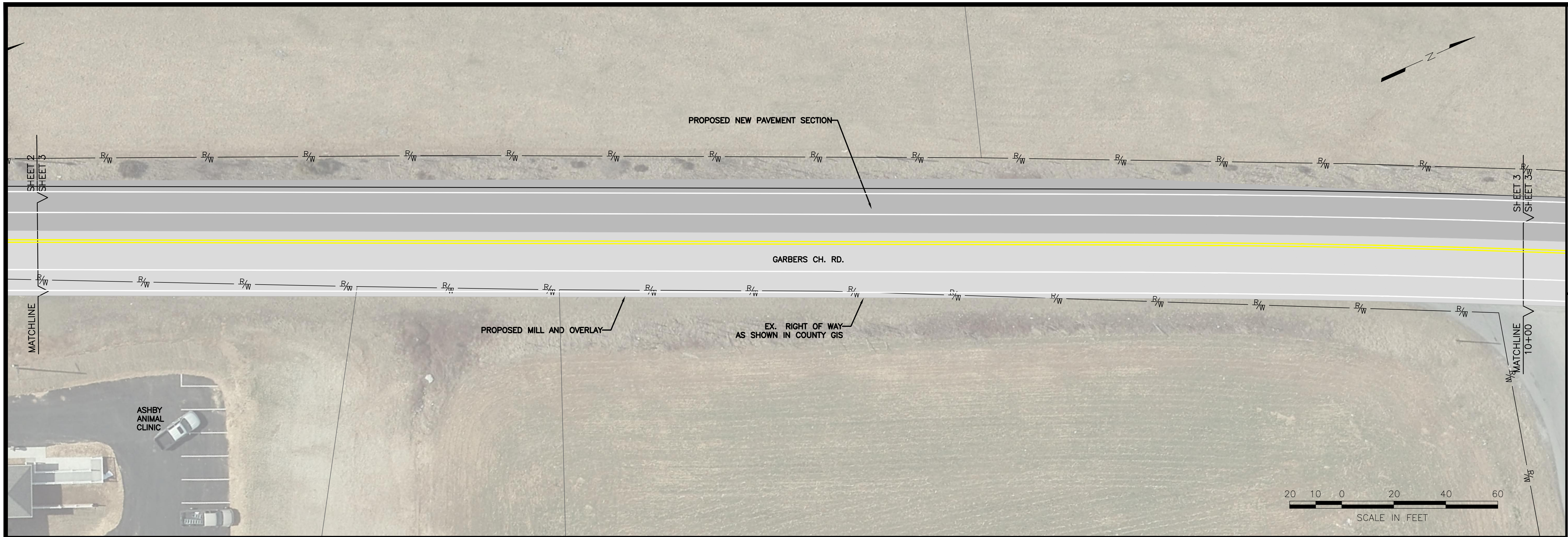
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DRAWN BY:	AWM
CHECKED BY:	JMJ

SHEET NO.
1



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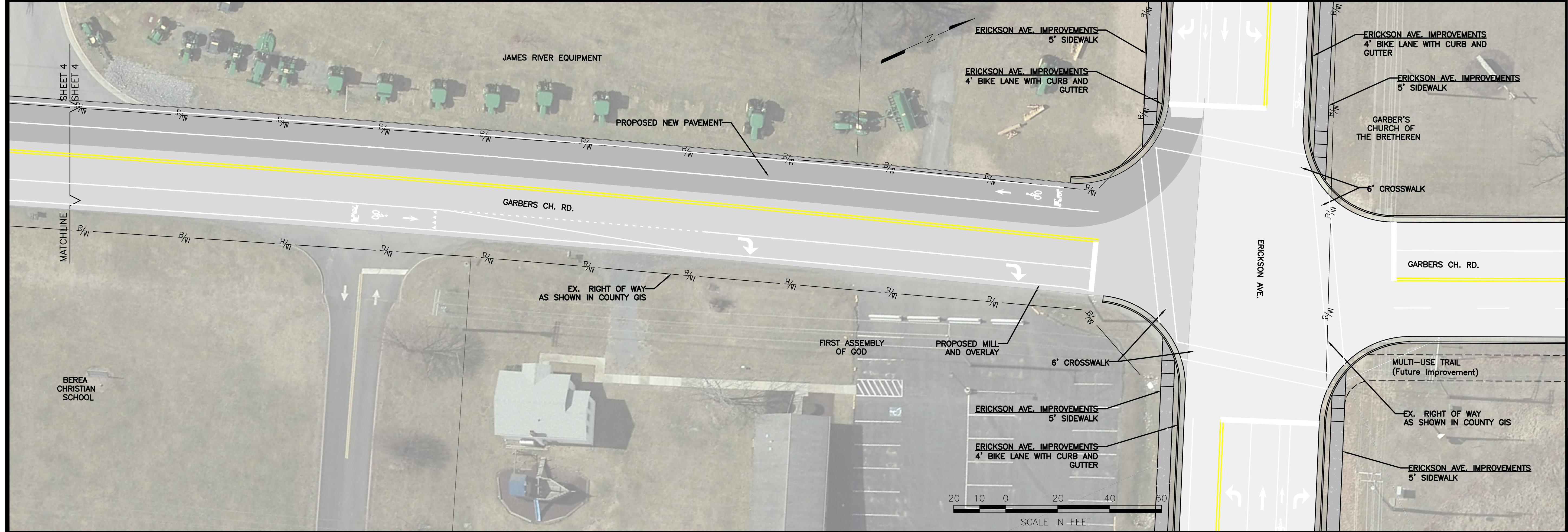
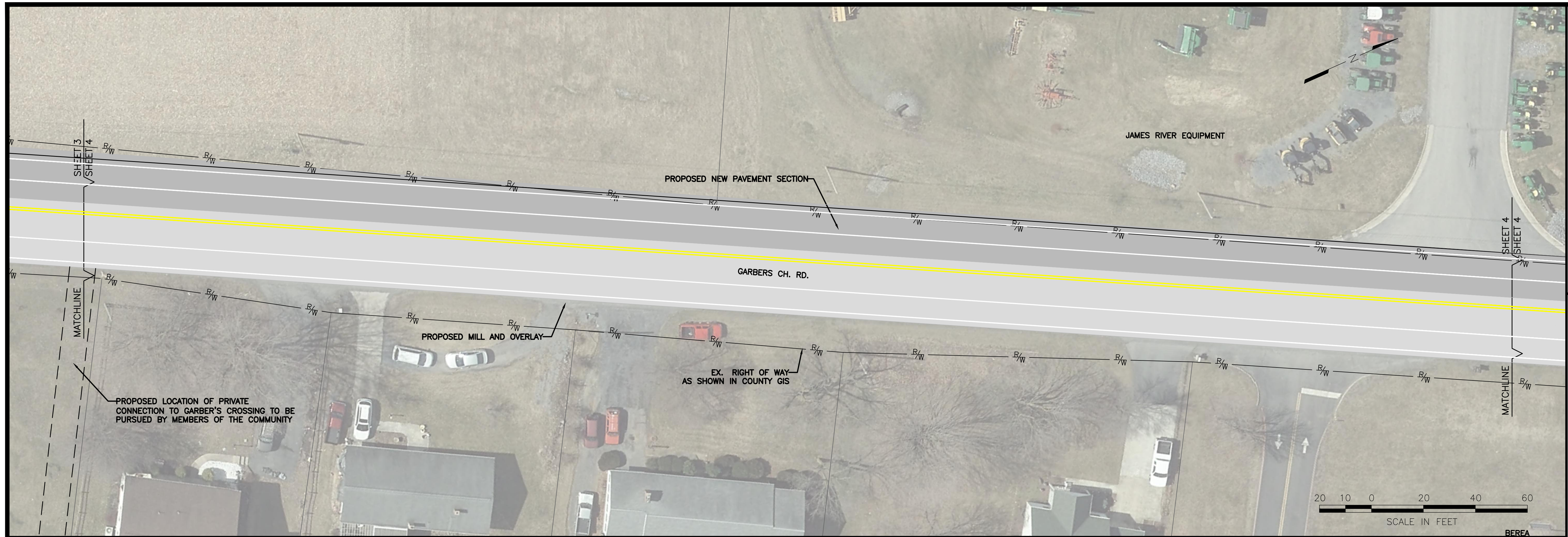
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VA 42 / GARBER'S CHURCH ROAD
BICYCLE / HORSE & BUGGY
TRAFFIC STUDY
 STAUNTON, VIRGINIA

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**VA 42 / GARBER'S CHURCH ROAD
 BICYCLE / HORSE & BUGGY
 TRAFFIC STUDY**
 STAUNTON, VIRGINIA

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Appendix B – Cost Estimates

ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS
 JOHN WAYLAND HIGHWAY (ROUTE 42) NON-MOTORIZED LEFT TURNS
 Rockingham County, VA

Date: 28 August 2018
 JN: 20180363

PRELIMINARY ENGINEERING PHASE				
	Surveying		\$	3,000.00
	Environmental Document		\$	2,500.00
	Engineering / Design		\$	10,000.00
	VDOT Review Fees		\$	3,000.00
ESTIMATED PE PHASE COSTS				\$ 18,500.00
RIGHT OF WAY PHASE				
	Right of Way		\$	-
	Utility Relocation		\$	-
ESTIMATED RW PHASE COSTS				\$ -
CONSTRUCTION PHASE				
ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
MOBILIZATION	1	LS	\$ 15,448.00	\$ 15,448.00
CONSTRUCTION SURVEY	1	LS	\$ 3,000.00	\$ 3,000.00
CLEARING & GRUBBING	1	LS	\$ 1,000.00	\$ 1,000.00
EARTHWORK	1	LS	\$ 10,000.00	\$ 10,000.00
AGGR. MATL. NO. 21B	178	TON	\$ 30.00	\$ 5,340.00
ASPHALT CONC. TY. SM-9.5A	58	TON	\$ 125.00	\$ 7,250.00
ASPHALT CONC. BASE COURSE TY. BM-25.0A	116	TON	\$ 110.00	\$ 12,760.00
MEDIAN STRIP MS-1A	419	SY	\$ 175.00	\$ 73,325.00
TEMPORARY TRAFFIC CONTROL	1	LS	\$ 25,000.00	\$ 25,000.00
DEMOLITION	1	LS	\$ 12,000.00	\$ 12,000.00
TEMP. SILT FENCE	400	LF	\$ 4.00	\$ 1,600.00
SIGN PANEL	7	SF	\$ 75.00	\$ 525.00
SIGN POST WOOD 4" X 4"	1	EA	\$ 100.00	\$ 100.00
TY.B CL.II PAVE. LINE MARK.4"	515	LF	\$ 5.00	\$ 2,575.00
SUB-TOTAL CONSTRUCTION COSTS				\$ 169,923.00
CONSTRUCTION IMPLEMENTATION				
	Construction Contract Administration and Bidding		\$	16,000.00
	Daily Inspection		\$	30,000.00
	Materials Testing		\$	3,000.00
	Contingency (10%)		\$	21,892.30
	VDOT Construction Oversight Charges		\$	2,500.00
ESTIMATED CONSTRUCTION PHASE COSTS				\$ 243,315.30
TOTAL ESTIMATED PROJECT COSTS (PE, RW, & CN)				
TOTAL ESTIMATED PROJECT COSTS				\$ 261,815.30

ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS
 GARBERS CHURCH ROAD CONNECTION
 Rockingham County, VA

Date: 01 October 2018
 JN: 20180363

PRELIMINARY ENGINEERING PHASE				
Surveying	\$	40,000.00		
Environmental Document	\$	25,000.00		
Stormwater Mitigation	\$	15,000.00		
Engineering / Design	\$	120,000.00		
VDOT Review Fees	\$	5,000.00		
ESTIMATED PE PHASE COSTS		\$	205,000.00	
RIGHT OF WAY PHASE				
Right of Way	\$	80,000.00		
Utility Relocation (~12 Poles)	\$	60,000.00		
ESTIMATED RW PHASE COSTS		\$	140,000.00	
CONSTRUCTION PHASE				
ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
MOBILIZATION	1	LS	\$ 81,595.83	\$ 81,595.83
CONSTRUCTION SURVEY	1	LS	\$ 30,000.00	\$ 30,000.00
CLEARING & GRUBBING	1	LS	\$ 6,000.00	\$ 6,000.00
EARTHWORK	1	LS	\$ 80,000.00	\$ 80,000.00
DRAINAGE	1	LS	\$ 120,000.00	\$ 120,000.00
AGGR. MATL. NO. 21B	3272	TON	\$ 30.00	\$ 98,160.00
FLEXIBLE PAVE. PLANING 0"-2"	9065	SY	\$ 10.00	\$ 90,650.00
ASPHALT CONC. TY. SM-9.5A	1725	TON	\$ 125.00	\$ 215,625.00
ASPHALT CONC. BASE COURSE TY. BM-25.0A	1455	TON	\$ 110.00	\$ 160,050.00
TEMPORARY TRAFFIC CONTROL	1	LS	\$ 50,000.00	\$ 50,000.00
PERMANENT SEEDING	1	LS	\$ 15,000.00	\$ 15,000.00
CHECK DAM, ROCK TY. I	60	EA	\$ 750.00	\$ 45,000.00
INLET PROTECTION	6	EA	\$ 500.00	\$ 3,000.00
EROSION CONTROL MAT EC-2	1111	SY	\$ 6.50	\$ 7,221.50
TEMP. SILT FENCE	3250	LF	\$ 4.00	\$ 13,000.00
TY.B CL.II PAVE. LINE MARK.4"	19562	LF	\$ 5.00	\$ 97,810.00
TY.B CL.II PAVE.LINE MARK.24"	20	LF	\$ 20.00	\$ 400.00
PVMT SYMB MARG (ARROW)	2	EA	\$ 800.00	\$ 1,600.00
PVMT SYMB MARG (BICYCLIST THRU ARROW)	6	EA	\$ 1,000.00	\$ 6,000.00
PVMT SYMB MARG (BUGGY)	6	EA	\$ 2,000.00	\$ 12,000.00
SUB-TOTAL CONSTRUCTION COSTS			\$	1,133,112.33
CONSTRUCTION IMPLEMENTATION				
Construction Contract Administration and Bidding	\$	50,000.00		
Daily Inspection	\$	105,000.00		
Materials Testing	\$	30,000.00		
Contingency (10%)	\$	131,811.23		
VDOT Construction Oversight Charges	\$	5,000.00		
ESTIMATED CONSTRUCTION PHASE COSTS		\$	1,454,923.56	
TOTAL ESTIMATED PROJECT COSTS (PE, RW, & CN)				
TOTAL ESTIMATED PROJECT COSTS		\$	1,799,923.56	

ENGINEER'S ESTIMATE OF PROBABLE PROJECT COSTS
 GRACE CHAPEL CONNECTION
 Rockingham County, VA

Date: 28 August 2018
 JN: 20180363

PRELIMINARY ENGINEERING PHASE				
	Surveying		\$	9,000.00
	Environmental Document		\$	20,000.00
	Stormwater Mitigation		\$	15,000.00
	Engineering / Design		\$	35,000.00
	VDOT Review Fees		\$	5,000.00
ESTIMATED PE PHASE COSTS				\$ 84,000.00
RIGHT OF WAY PHASE				
	Right of Way		\$	8,000.00
	Utility Relocation		\$	-
ESTIMATED RW PHASE COSTS				\$ 8,000.00
CONSTRUCTION PHASE				
ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
MOBILIZATION	1	LS	\$ 21,880.55	\$ 21,880.55
CONSTRUCTION SURVEY	1	LS	\$ 5,000.00	\$ 5,000.00
CLEARING & GRUBBING	1	LS	\$ 4,000.00	\$ 4,000.00
EARTHWORK	1	LS	\$ 90,000.00	\$ 90,000.00
24" PIPE	220	LF	\$ 150.00	\$ 33,000.00
24" END SECTION ES-1 OR 2	8	EA	\$ 1,750.00	\$ 14,000.00
AGGR. MATL. NO. 21B	8	TON	\$ 30.00	\$ 240.00
ASPHALT CONC. TY. SM-9.5A	3	TON	\$ 125.00	\$ 375.00
ASPHALT CONC. BASE COURSE TY. BM-25.0A	5	TON	\$ 110.00	\$ 550.00
STD. COMB. CURB & GUTTER CG-6	22	LF	\$ 32.00	\$ 704.00
CLASS A3 CONCRETE	140	CY	\$ 450.00	\$ 63,000.00
TEMPORARY TRAFFIC CONTROL	1	LS	\$ 5,000.00	\$ 5,000.00
DEMOLITION	1	LS	\$ 2,500.00	\$ 2,500.00
PERMANENT SEEDING	1	LS	\$ 1,000.00	\$ 1,000.00
TEMP. SILT FENCE (REINFORCED)	400	LF	\$ 12.00	\$ 4,800.00
SIGN PANEL	8	SF	\$ 75.00	\$ 600.00
SIGN POST WOOD 4" X 4"	2	EA	\$ 50.00	\$ 100.00
TY.B CL.II PAVE. LINE MARK.4"	41	LF	\$ 5.00	\$ 205.00
SUB-TOTAL CONSTRUCTION COSTS				\$ 246,954.55
CONSTRUCTION IMPLEMENTATION				
	Construction Contract Administration and Bidding		\$	24,000.00
	Daily Inspection		\$	48,000.00
	Materials Testing		\$	15,000.00
	Contingency (10%)		\$	33,395.46
	VDOT Construction Oversight Charges		\$	5,000.00
ESTIMATED CONSTRUCTION PHASE COSTS				\$ 372,350.01
TOTAL ESTIMATED PROJECT COSTS (PE, RW, & CN)				
TOTAL ESTIMATED PROJECT COSTS				\$ 464,350.01

Appendix C – Virginia State Regulations

As part of this study, the design team evaluated existing state laws regarding non-motorized transportation and contacted VDOT for additional information. The following laws are reference for additional use.

46.2-800.1. Riding animals on highways after sunset “No person riding upon any animal on a highway between sunset and sunrise shall ride the animal on the roadway unless the rider: ...Carries a light visible in clear weather for a distance of 500 feet...”

46.2-804. Special regulations applicable on highways laned for traffic states that slower moving vehicles should travel as close to the right edge of the highway except when overtaking or passing another vehicle or in preparation for a left turn.

46.2-820. Right-of-way at uncontrolled intersections “...when two vehicles approach or enter an uncontrolled intersection at approximately the same time, the driver of the vehicle on the left shall yield the right-of-way to the vehicle on the right.”

46.2-824. Right-of-way at uncontrolled “T” intersections “ When vehicles arrive at approximately the same time at an uncontrolled “T” intersection, the driver of the vehicle on the highway that intersects but does not cross the other highway shall yield the right-of-way to any vehicle traveling on the other highway.”

46.2-833 Traffic lights; penalty “Steady red indicates that moving traffic shall stop and remain stopped as long as the red signal is shown, except in the direction indicated by a steady green arrow.

Green indicates the traffic shall move in the direction of the signal and remain in motion as long as the green signal is given, except that such traffic shall yield to other vehicles and pedestrians lawfully within the intersection.

Steady amber (Yellow) indicates that a change is about to be made in the direction of the moving of traffic. When the amber signal is shown, traffic which has not already entered the intersection, including the crosswalks, shall stop if it is not reasonably safe to continue, but traffic which has already entered the intersection shall continue to move until the intersection has been cleared...

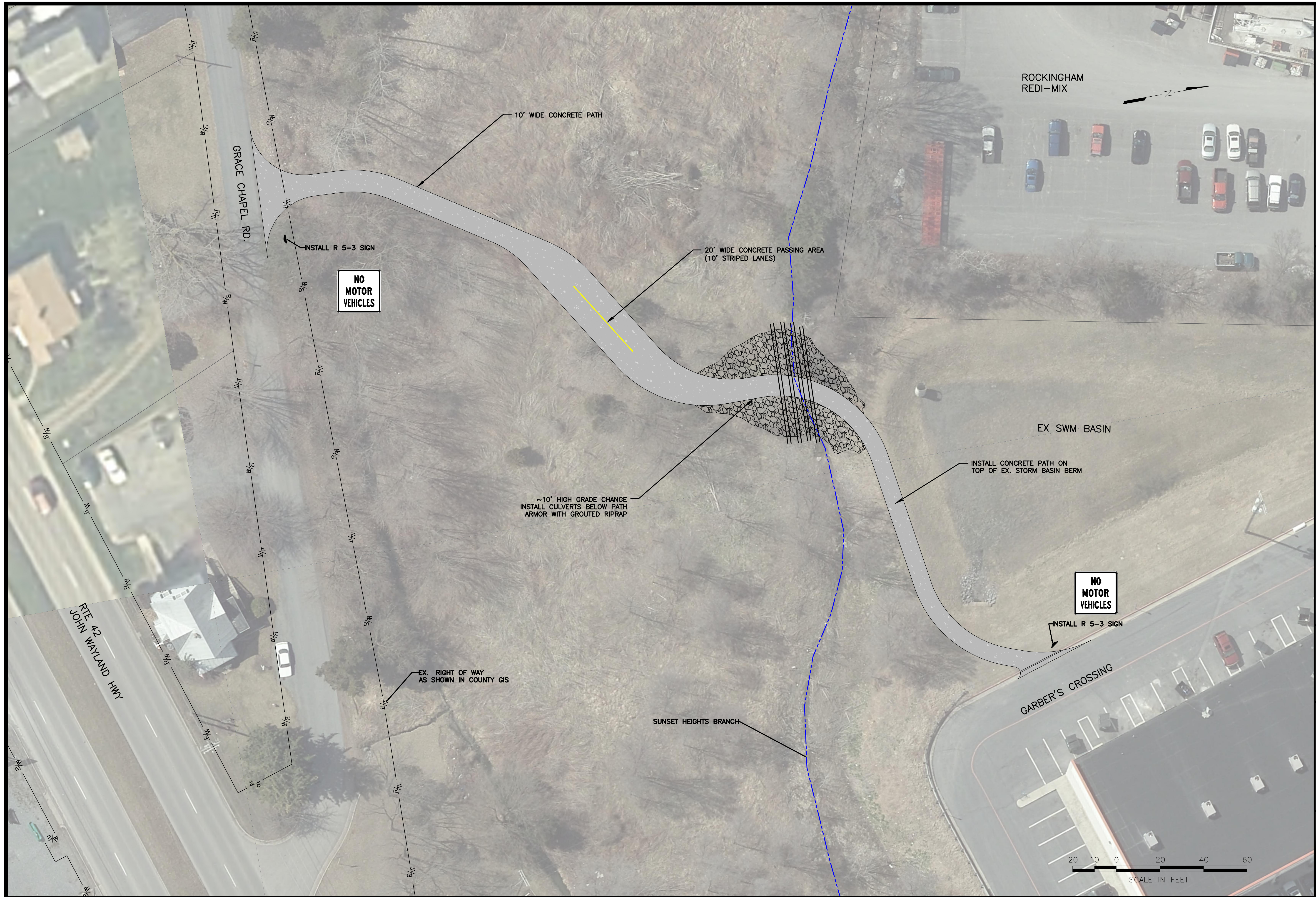
...B. Notwithstanding any other provision of the law, if a driver of a motorcycle or moped or a bicycle rider approaches an intersection that is controlled by a traffic light, the driver or rider may proceed through the intersection on a steady read light only if the driver or rider (i) comes to a full and complete stop at the intersection for two complete cycles of the traffic light or for two minutes, whichever is shorter, (ii) exercises due care as provided by law, (iii) otherwise treats the traffic control device as a stop sign, (iv) determines that it is safe to proceed, and (v) yields the right-of-way to the driver of any vehicle approaching on such other highway from either direction...”

46.2-839. Passing bicycle, electric personal assistive mobility device, electric power assisted bicycle, moped, animal or animal-drawn vehicle states that vehicles overtaking named vehicles/pedestrians shall do so at a safe speed and give at least 3 feet of the overtaken vehicle/pedestrian.

46.2-860. Failing to give proper signals “A person shall be guilty of reckless driving who fails to give adequate and timely signals of intention to turn, partly turn, slow down, or stop as required by Article 6...”

46.2-906. Carrying articles or passengers on bicycles, electric personal assistive mobility devices, electric power-assisted bicycles, and mopeds. “...No bicycle or moped shall be used to carry more persons at one time than the number of persons for which it was designed or is equipped, except that an adult bicycle rider may carry a child less than six years old if such child is securely attached to the bicycle in a seat or trailer designed for carrying children.”

Appendix D – Grace Chapel Connection



**VA 42 / GARBER'S CHURCH ROAD
 BICYCLE / HORSE & BUGGY
 TRAFFIC STUDY**
 STAUNTON, VIRGINIA

PROJECT NO.	20180363
LAT.	38°25'50"
LONG.	-78°54'33"
DATE:	JULY 5, 2018
DRAWN BY:	AWM
CHECKED BY:	JMJ



JUL 06, 2018 - 2:15 PM C:\Users\mjohnson\Desktop\10 - delete\caddbackup\AcP\blisr_BB400\20180363_Sheets.dwg

Appendix E – Public Comments



July 19, 2018
 VA 42 and Garbers
 Church Road
 Intersection Study

Comments/Questions/Concerns:

the proposal coming off Garbers church road, to the back of Walmart would benefit both directions of buggy traffic.

Contact Information (Optional):



July 19, 2018
 VA 42 and Garbers
 Church Road
 Intersection Study

Comments/Questions/Concerns:

- I like the extended left turn
- I like the idea of a climbing lane for bikes/buggies
- Signage is crucial so cars don't think this is another lane.
- I like how you've reached out to cycling + Memorable Communities

Contact Information (Optional):

Sandra Parks
 sparks62@mac.com.



July 19, 2018
 VA 42 and Garbers
 Church Road
 Intersection Study

Comments/Questions/Concerns:

The proposed Embank into the Back of Walmart from Graber Ch. Rd. Looks Good + same! Much Safer for Bikes + Buggies!

Contact Information (Optional):



July 19, 2018
 VA 42 and Garbers
 Church Road
 Intersection Study

Comments/Questions/Concerns:

THANKS FOR CONSIDERING ALL OPTIONS ~~OF~~ FOR
 BUGGIES AND CYCLISTS

Contact Information (Optional):

yosi.gillette@gmail.com



July 19, 2018
 VA 42 and Garbers
 Church Road
 Intersection Study

Comments/Questions/Concerns:

I favor a bike buggy lane on both
 sides of Garbers Church Road from 42 to
 Erickson. Also I'm pleased with the suggestion
 of Access to Walmart, ^{either} from Grace Chapel Rd.
 or along the edge of James' Rhodes' property, if
 feasible

Contact Information (Optional):

John Dan Burkholder
 438-1890



July 19, 2018
 VA 42 and Garbers
 Church Road
 Intersection Study

Glad to see this project advancing.

Comments/Questions/Concerns:

- Speed on 42 South of the Garbers Church
 intersection needs to be stepped down
 earlier to accommodate safe movement into the
 left turn lane for slower vehicles.
- Consider greenway/Stormwater BMP combo
~~at~~ (Luray)^{es.}

Contact Information (Optional):

Kim Sandum



July 19, 2018
 VA 42 and Garbers
 Church Road
 Intersection Study

Comments/Questions/Concerns:

1st Back entrance
 - Favor ~~Garbers~~ Chapel Road Connection
 2nd
ERickson Ave Entrance

Contact Information (Optional):

John Shank
570-867-0007



July 19, 2018
 VA 42 and Garbers
 Church Road
 Intersection Study

Comments/Questions/Concerns:

Would like a clear standard
marking on all buggy/bicycle
lanes, including those on 42.
I do like the Garbers Church
uphill-only buggy/bicycle lane. Thank you
for the careful consideration of this!

Contact Information (Optional):



July 19, 2018
 VA 42 and Garbers
 Church Road
 Intersection Study

Comments/Questions/Concerns:

THANK YOU FOR YOUR EFFORTS ON THIS PROJECT AS
A MEMBER OF THE BICYCLING COMMUNITY, THESE
IMPROVEMENTS ARE VERY IMPORTANT AND HELPFUL
I LIVE IN THE HILLDALE NEIGHBORHOOD, AND
THESE UPDATES, ALONG WITH THE GARBERS CHURCH
SHARED USE PATH PROJECT WILL GREATLY IMPROVE
MY ACCESS TO THE AREAS SOUTH OF HARRISONBURG.

Contact Information (Optional):

JACOB RIZOV

