

Agenda

Rural Transportation Advisory Committee

Tuesday – May 21, 2024

1:00 PM

Location: Water Street Center



Item	Time	Description
1.	1:00-1:05	Matters from the Public: Limit of 3 minutes per speaker <i>Members of the Public are welcome to provide comments on any public-interest, transportation-related topic, including the items listed on this agenda</i>
2.	1:05-1:15	Approval of Draft Minutes* November 28, 2023, and January 16, 2024, March 19, 2024 meeting
3.	1:15-2:15	Smart Scale Applications Presentations from each locality on projects submitted for pre-application
4.	2:15-2:35	Round Table Discussion & Identification of Future Topics Committee members are invited to share updates and topics of interest with the group
5.	2:35-2:40	Additional Matters from the Public <i>Members of the Public are welcome to provide comments (limit of 3 minutes per speaker)</i>
6.	2:40	Adjourn

* Items requiring committee action.

Upcoming Meetings:

July 16, 2024

Guests and the public can join the meeting using Zoom:

Zoom Meeting link:

<https://us02web.zoom.us/j/89994649412?pwd=MGJMNiNjT25PS1A2WUlyQUdDamdOUT09>

Meeting ID: 899 9464 9412

Passcode: 292628

One tap mobile

+13126266799,,89994649412#,,, *292628# US (Chicago)

Dial by your location

312 626 6799 US (Chicago)

Rural Transportation Advisory Committee

DRAFT Minutes, November 28, 2023

The video of the meeting can be viewed at <https://www.youtube.com/watch?v=YMoG4aZornQ>

VOTING MEMBERS		STAFF	
Tom Egeland, Louisa County	x	Sandy Shackelford, TJPDC	x
Jim Frydl, Greene County	x	Lucinda Shannon, TJPDC	x
Douglas Miles, Fluvanna County		Gretchen Thomas, TJPDC	x
Dylan Bishop, Nelson County	x	Ruth Emerick, TJPDC	
Charles Proctor, VDOT, Culpeper	x	Curtis Scarpignato, TJPDC	x
David Cook, VDOT, Lynchburg	x		
Zadie Lacy, Jaunt			
Sara Pennington, Rideshare	x		
ALTERNATES		GUESTS/PUBLIC	
Rick Youngblood, VDOT		Alberic Karina-Plun, Albemarle County	x
JM Whalen, Fluvanna County		Ashley Dobson, Avid Core	x
David Benish, Albemarle County		Rashaun Bennet, Avid Core	x
Stephanie Golon, Greene County		Carson Eckhardt, Transportation Planner, VDOT	x
Cindy King, Louisa County		Chris Coon, Louisa County	x
Carrie Shepherd, VDOT		Danielle McCray, Kimley Horn	x
Michael Barnes, VDOT, Culpeper	x	Mark Herman, Kimley Horn	x
Jason Overstreet, Fluvanna County	x	Emily Hjulstron, Nelson County	x
		Josh Gillespie, Louisa County	x

* *attended online via Zoom.*

1. CALL TO ORDER:

The Rural Technical Advisory Committee Chair, Tom Egeland, presided and called the meeting to order at 1:00 pm. Meeting attendees introduced themselves.

2. MATTERS FROM THE PUBLIC (I):

- a. **Comments by the Public:** None
- b. **Comments provided via email, online, web site, etc.:** None

4. APPROVAL OF DRAFT MINUTES FROM SEPTEMBER 19, 2023 (MINUTE):

Motion/Action: Tom Egeland made a motion to approve the September 19 minutes with his changes. Jim Frydl seconded the motion and the motion passed unanimously.

5. COMPREHENSIVE SAFETY ACTION PLAN – COMMUNITY CHAMPIONS DISCUSSION (MINUTE):



City of Charlottesville

Albemarle County

Fluvanna County

Greene County

Louisa County

Nelson County

401 East Water Street ▪ Post Office Box 1505 ▪ Charlottesville, Virginia 22902-1505

Telephone (434) 979-7310 ▪ Fax (434) 979 1597 ▪ Virginia Relay Users: 711 (TDD) ▪ email: info@tjpd.org ▪ web: www.tjpd.org

He finished by talking about upcoming efforts with Kimley Horn's data analysis tasks. He gave the committee his contact information and two Senior Highway Safety Engineers' contact information if anyone had other feedback or questions.

6. ROUND 6 SMART SCALE DISCUSSION (MINUTE):

He finished by talking about upcoming efforts with Kimley Horn's data analysis tasks. He gave the committee his contact information and two Senior Highway Safety Engineers' contact information if anyone had other feedback or questions.

7. ROUTE 151 CORRIDOR STUDY PRESENTATION (MINUTE):

He finished by talking about upcoming efforts with Kimley Horn's data analysis tasks. He gave the committee his contact information and two Senior Highway Safety Engineers' contact information if anyone had other feedback or questions.

8. ROUNDTABLE DISCUSSION & IDENTIFICATION OF FUTURE TOPICS (MINUTE)

Nelson County

Dylan Bishop

Louisa County

Tom Egeland

Fluvanna County

Jason Overstreet

City of Charlottesville

Ben Chambers

VDOT

Michael Barnes

Albemarle County

Alberic Karina-Plun

Jaunt

Zadie Lacy

TJPDC

Sandy Shackelford

VDOT

Chuck Proctor

9. Additional Matters from the Public ()

None.

Adjourn

Dylan Bishop

Rural Transportation Advisory Committee

NOTES, January 16, 2024

The video of the meeting can be viewed at <https://www.youtube.com/watch?v=-H3JKImhi2A>

VOTING MEMBERS		STAFF	
Tom Egeland, Louisa County	x	Sandy Shackelford, TJPDC	x
Jim Frydl, Greene County *	x	Lucinda Shannon, TJPDC	
Douglas Miles, Fluvanna County		Gretchen Thomas, TJPDC	x
Dylan Bishop, Nelson County *	x	Ruth Emerick, TJPDC	
Charles Proctor, VDOT, Culpeper	x	Curtis Scarpignato, TJPDC	x
David Cook, VDOT, Lynchburg		Christine Jacobs, TJPDC	x
Jason Aspie, Jaunt			
Sara Pennington, Rideshare	x		
ALTERNATES		GUESTS/PUBLIC	
Rick Youngblood, VDOT		Carson Eckhardt *	x
JM Whalen, Fluvanna County		Rick Youngblood, VDOT *	x
Alberic Karina-Plun, Albemarle County	x		
Stephanie Golon, Greene County			
Cindy King, Louisa County			
Carrie Shepherd, VDOT			
Jason Overstreet, Fluvanna County	x		

* *attended online via Zoom.*

1. **CALL TO ORDER:**

The Rural Technical Advisory Committee Chair, Tom Egeland, presided and called the meeting to order at 2:37pm. There was not a quorum present.

2. **MATTERS FROM THE PUBLIC (0:0:55):**

- a. **Comments by the Public:** None
- b. **Comments provided via email, online, web site, etc.:** None

4. **APPROVAL OF DRAFT MINUTES FROM NOVEMBER 28, 2023**

There was no quorum, so there was no approval of minutes.



5. VDOT PSI DATA (MINUTE 2:15):

Chuck Proctor gave a presentation on VDOT's updated Potential Safety Improvements (PSIs). He gave an update for Greene, Louisa, Nelson, and Albemarle counties only because they were the only localities present at the meeting.

6. SMART SCALE DISCUSSION (MINUTE 23:00):

Sandy Shackelford gave an update on the changes to Smart Scale including the final High Priority Project (HPP) Definition, modifications to the weighting factors, and some procedural modifications. Ms. Shackelford said pre-applications are open on March 1 and need to be completely submitted by April 1. Final applications are due on August 1.

Mr. Proctor said there is a technical guide on the Smart Scale website.

8. ROUNDTABLE DISCUSSION & IDENTIFICATION OF FUTURE TOPICS (MINUTE 34:00)

Louisa County

Tom Egeland said Louisa County's planning commission recommended the facilities plan that they will be sending to the BOS for review.

Albemarle County

Alberic Karina-Plun said they are working on the comp plan and a needs assessment. He also reported that the County staff are also working on their six-year plan.

Nelson County

Dylan Bishop said their public hearing for the comp plan is going to happen at the high school on January 31st, with a Board hearing scheduled for March. They just got their first utility scale application for solar after adopting the ordinance a few years ago.

VDOT

Chuck Proctor said they are working on the four pipeline studies as well as all of the Smart Scale applications. Rick Youngblood gave some stats on the recently closed online survey on the 151 Corridor project. He said that public information is extremely valuable.

TJPDC

Curtis Scarpignato said they are working on drafting letters to jurisdictions for participation in the Safe Streets and Roads 4 All. Grant. The letters will be sent out in the next few weeks.

9. Additional Matters from the Public

None.

Adjourn

Tom Egeland adjourned the meeting at 3:15 p.m.

Rural Transportation Advisory Committee

NOTES, March 19, 2024

The video of the meeting can be viewed at <https://www.youtube.com/watch?v=-H3JKImhi2A>

VOTING MEMBERS		STAFF	
Tom Egeland, Louisa County	x	Gretchen Thomas, TJPDC	x
Jim Frydl, Greene County *	x	Christine Jacobs, TJPDC	x
Douglas Miles, Fluvanna County		Ruth Emerick, TJPDC	x
Dylan Bishop, Nelson County			
Charles Proctor, VDOT, Culpeper	x		
David Cook, VDOT, Lynchburg *	x		
Jason Aspie, Jaunt			
Sara Pennington, Rideshare	x		
ALTERNATES		GUESTS/PUBLIC	
Rick Youngblood, VDOT *	x	Emily Hjulstrom, Nelson County *	x
JM Whalen, Fluvanna County		Clifton Tweedy, Deputy County Administrator, Campbell County	x
Alberic Karina-Plun, Albemarle County	x	Josh Gillespie *	x
Stephanie Golon, Greene County			
Cindy King, Louisa County *	x		
Carrie Shepherd, VDOT			
Jason Overstreet, Fluvanna County *	x		

* *attended online via Zoom.*

1. CALL TO ORDER:

The Rural Technical Advisory Committee Chair, Tom Egeland, presided and called the meeting to order at 1:05 p.m. There was not a quorum present.

2. MATTERS FROM THE PUBLIC:

- Comments by the Public:** None
- Comments provided via email, online, web site, etc.:** None

3. APPROVAL OF DRAFT MINUTES FROM NOVEMBER 28, 2023 AND NOTES FROM JANUARY 16, 2024

There was no quorum, so there was no approval of minutes.

There was a brief discussion of the Smart Scale projects for the rural jurisdictions, and the MPO.



4. REVENUE SHARING ():

Clifton Tweedy, Deputy County Administrator of Campbell County, reviewed a revenue sharing presentation discussing how they have made use of that tool. It was noted that the socio-economic class for the revenue sharing project that was completed was more upper-middle class and the participants could afford to pay the additional revenue per year to make it happen. He noted that there was additional money required for snow removal and road maintenance.

There were questions from both Alberic Karina-Plun and Tom Egeland. Mr. Tweedy noted that the subdivision code (subdivision section 21-41) is on the County website and is available to the public.

Mr. Tweedy said if he could assist anyone in this committee with a project in their jurisdiction, he would welcome a phone call.

5. FY25 RURAL WORK PLAN DRAFT (MINUTE):

Sara Pennington noted that the draft has been submitted to TJPDC's board, and they will be voting on it on April 4. She said she needs feedback on the draft so she can present any suggestions to the board at their next meeting. Ms. Jacobs said that if there is no other feedback, it will be going before the board as part of their consent agenda.

6. CAP STRATEGIC PLAN FEEDBACK (MINUTE):

Ms. Pennington said Rideshare is working with a local consultant to develop a strategic plan. The consultant has been collecting basic demographic information so far. Rideshare is currently looking to identify target markets and audiences.

She asked the group if they would be willing to help her identify who Rideshare is trying to serve, what the barriers may be, what they are looking for, etc. It was the consensus that they would be willing to meet with her to help identify those needs.

She also said they are sending out surveys to targeted markets and she will be sending an email to committee members with the link to the survey. She asked members to please send the link to those who could help get the survey out to a wider audience.

7. ROUNDTABLE DISCUSSION & IDENTIFICATION OF FUTURE TOPICS (MINUTE)

Louisa County

Tom Egeland said he will be speaking at a solar panel discussion next week in Charlottesville. Louisa County has adopted their facilities appendix for their comp plan.

Albemarle County

Alberic Karina-Plun said the County is working through the draft secondary six-year plan. The Board work session is on April 3 so they can give feedback. They continue to work on the comp plan. They are getting feedback on rural transportation on the comp plan – both bike/ped and transit included. He said there is a town hall in Yancey happening next month.

VDOT

Chuck Proctor said he is currently working on Smart Scale. He said there are STAR studies and Pipeline studies as well, but his focus has been mainly on Smart Scale.

Greene County

Jim Frydl said they are working on a review of the potential projects on unpaved roads. They are looking at some Smart Scale projects.

Nelson County

Emily Hjulstrom reported that Nelson has a comp plan public _____ is tomorrow evening. They are hoping to complete the comp plan next month. She said they are working on their Smart Scale applications as well.

Fluvanna County

Jason Overstreet said Fluvanna is working on their comp plan and looking at applications for next year's Smart Scale.

VDOT

David Cook said the state's trail plan is (listen) He said they had a broad outreach with the public and the official part of those results will come out in spring. There will be a complete state-wide inventory will be coming out later in the fall. The complete plan will be developed in late summer or early fall. (Listen for additional info.) They are also working on on-street markings. (transition plan??) They are looking at bike/ped accommodations for the future. If you have a study with count data, they can assist with that. They offer tech assistance for (listen) operational analysis for roadway reconfiguration. There is currently one in City of Charlottesville for a shared use path on 5th Street.

TJPD

Christine Jacobs said staff will be reaching out to the localities to confirm the applications being submitted for Smart Scale and then will ask the Board to create letters of support for those projects.

Alberic Karina-Plun said Virginia's HB74 is looking to use funds for unpaved rural roadways. He said the action deadline is midnight on April 8. He would like to see a presentation on how to improve roads without paving them so the County might include that in their six-year plan.

Sara Pennington said if anyone thinks of anything to discuss in future meetings, please contact her directly.

8. Additional Matters from the Public

None.

Adjourn

Tom Egeland adjourned the meeting at 2:02 p.m.

The next meeting is in person May 21, 2024 from 1:00 – 2:30 p.m. at the Water Street Center, 407 E Water Street, Charlottesville, VA.

CONCEPT DESIGN & ESTIMATE MEMORANDUM — CULPEPER DISTRICT L&D

Proposed RCUT on Route 29 in Ruckersville			
Greene, County			
APPLICATION INFORMATION		DRAWING OVERVIEW	
Funding	SMART SCALE FY2024		
Applicant	Greene County		
District ID	0029-0616		
Portal ID	9480		
Tier/Phases	Tier 1 PE/RW/CN		
Expected NEPA	PCE		
L&D P.O.C.	Trieu Nguyen		
Planning P.O.C.	Chuck Proctor		
Design By	District L&D	Updated: 9/30/2022	
Estimate By	District L&D		
REVIEW & APPROVAL			
District Project Development Engineer Signature:			

PROPOSED ESTIMATE				PROPOSED SCHEDULE	
Phase	Base	%	Total	Phase (Task)	Target Date
PE	\$1,730,000	10%	\$1,903,000	PE Start (12)	9/15/2025
RW/UT	\$3,080,000	56%	\$4,804,800	RW Start (52)	1/26/2028
CN (CEI)	\$5,140,000	20%	\$7,864,200	CN Start (80)	5/8/2029
CN (Cont)		33%		CN End (91)	7/27/2030
Total 2022 Estimate (Uninflated)			\$14,572,000		

SCOPE DESCRIPTION
• Mill existing northbound and southbound US-29 lanes and perform slope correction overlay (-2.0%). Construct U-Turn lanes by extending the northbound and southbound cross slope (-2.0%) • Reconstruct US-29 median from Starks Ln. to 1,000' south of the intersection of US-29 & US-33 to create an RCUT corridor within the project limits. • Lengthen left-turn lanes along US-29 median to meet deceleration. • Widen pavement at median, on both SB & NB US-29, to provide 4' paved shoulder. • Within the project limits, left turns are prohibited for all connections and entrances. • Reconstruct SB and NB US-29 entrances and connections at the restricted crossings to only allow for right-in/right-out.

- Construct pavement on the outside of NB US-29, north of Stark Ln. and north of Carpenters Mill Rd., to provide continuous right-turn lane within the project limits.

DESIGN ASSUMPTIONS

Scope Assumptions:

- **Identified Problems to Address:**
 - Improve safety within the project limits by reducing the prevailing crossover related and angle type crashes.
- Note: Proposed scope is currently anticipated as the best way to address existing problems at this location, subject to further traffic analysis, environmental review, and public feedback.
- **Site Visit** was performed on 05/27/2022 and attended by Trieu Nguyen
- **Traffic Analysis:** Traffic analysis was performed by RK&K on 07/24/2018.
- **Design Standard:** : Design shall be in accordance with GS-5 (Urban Principal Arterial System) Geometric Design Standards with shoulder, the VDOT *Road Design Manual*, Appendix A, Section 3 and the FHWA *Restricted Crossing U-Turn Informational Guide*.
- **Design Speed:** 50 MPH (45 MPH Posted)
- **Design Vehicle:** WB-67
- **Typical Section:**
 - Mill existing northbound and southbound US-29 lanes and perform slope correction overlay (-2.0%).
 - In locations of U-Turn lanes at median, extending the northbound and southbound cross slope (-2.0%)
 - Widen pavement at median to provide 4' paved shoulder.
- **Project Estimate:** (Non-Complex)
 - The PE Estimate was developed based on man-hour norms using the Culpeper P.E. Estimate Tool. Individual estimates were requested from Environmental and Survey.
 - The R/W and Utilities estimate was prepared by Regional R/W estimators based on their expertise and in accordance with the VDOT Right of Way Cost Estimate Guide, and entered into a PCES worksheet. Impacts were assumed based on the project's conceptual sketch and preliminary fee take and easement areas provided by the designer.
 - The Construction Estimate was developed as a hybrid preliminary bid-based estimate using the Culpeper Concept Estimate Workbook. Quantities were derived from the conceptual sketch and unit costs determined by bid tab histories or using District norms. Some items were determined by historical percentages and are documented in the Workbook. Non-bid costs, adjustments and assumptions are included in the Estimate Workbook.
 - Discipline-based Percentage Contingency estimates were used and selected with the guidance included in the Culpeper Concept Estimate Workbook
 - Inflation is not included in the current estimate. Inflation will be added by the Portal based on the proposed schedule.
 - See attached estimate workbook for additional estimate assumptions

Roadway Assumptions:

- The median crossings for the U-Turns are proposed at existing median crossings where the grade difference between the northbound and southbound lanes are minimal. However, the existing crossovers are being widened to the north and south where the grade difference is greater. It can be a challenge to meet median crossover slope.
- The existing crossover at Route 616 appears to be 7% or greater. It may be necessary to superelevate and/or build up asphalt on NB U.S. 29 to achieve reasonable grades. Estimate needs to account for additional cost to pavement and hydraulics.
- In location where turn lane is not proposed at the median, pavement is to be widened to provide a 4' paved shoulder.
- Generally, there will be no widening to the outside, except for two locations on NB U.S. 29 (depicted on the exhibit) and widening at curb returns to accommodate turning design vehicles.
- Substandard outside shoulder will not be improved at the south end of the project, in the southbound direction.
- Some substandard cross slopes (especially outside lane / turn lane) may not be improved to standard.
- Existing entrance spacings do not meet Access Management requirements. This is an existing condition. Access Management Waiver will be required.
- All entrances and connections to U.S. 29 within the project limits will be right-in/right-out.

Bicycle/Pedestrian Assumptions:

- Bicycle and pedestrian accommodations are not proposed as part of the project. An exception to the provision of accommodation will be required. The purpose and scope of the project do not facilitate the provision of accommodations. The project as proposed is an intersection safety improvement that is mostly limited to the existing roadway footprint. Separated facilities would require additional impacts to commercial properties, utilities, and reconstruction of drainage systems that are beyond the scope of the proposed project. On-roadway facilities are not included because safety would be compromised due to the volumes and speeds of traffic.

Hydraulic Assumptions:

- Stormwater management facility locations proposed by Steve Ikenberry on 3/24/2022.
- The ponds require large area of potentially developable commercial land. Right-of-way cost for the stormwater management facilities is expected to be high.
- Large grade difference between northbound and southbound lanes can make it challenging, from both roadway and drainage standpoint, to convey water out of the median.

Maintenance of Traffic Assumptions:

- The majority of construction is expected to take place within the median. The work will require the closure of the inside through lane on southbound and northbound U.S. 29.

Traffic Control Devices Assumptions:

- The majority of signs for the new RCUT traffic pattern will be placed at the median.

Environmental Assumptions:

- After reviewing the project information we confirm that the environmental portion of the project costs can still be estimated at \$60,000 or less.

Materials/Geotechnical Assumptions:

- Recommend pavement design of 2" SM-12.5D; 2.0" IM-19.0A; 7.0" B M-25.0A; 8.0" 21-B. Preliminary pavement designs based on AASHTO 1993 guideline. In order to provide a final pavement design recommendation, we would need lab data and AASHTO MEPDG would be used for a final pavement recommendation.
- Note: SM-12D is given, but SM-9.5D is also acceptable but it could be that Pavement Management has a preference or which mix works best in that area of Route 29. Consider contacting Lyndon Sewell for input on that.
- This design was based on 29,000 ADT in year 2018, assumed 1.5% traffic growth rate and assumed 6,000 psi resilient modulus (CBR 4). 30-year design life, 1% tractor trailers and 3% single unit trucks.

Right of Way Assumptions:

- RW estimate based on preliminary sketch of 25 parcels; only two are non-commercial but valued as commercial per future comp plan.
- Per PM email, parcel 2 will have SWM pond shifted away from access to Rt 29 to avoid total acquisition due to being landlocked.
- Overall RW cost increase since SSRD4 is attributable to significant market increase in cost of improvements & damages due to parking loss.
- Estimate assumes that all TCE & UE will avoid any impacts to building/structures/large signs/access points whenever possible.
- Suggested contingency is 60%, same as suggested in SSRD4 since this is a concept sketch and the design will change in future.

Utilities Assumptions:

- Refer to sketch markups.

DESIGN DEVIATION SUMMARY

Design Element	Description/Location	Status	Approved
Outside shoulder	Southbound 29 in the southern 500' of the project	Exception	Pending
Entrance spacing	Existing entrances, see above description	A.M. Waiver	TBD

RISK LISTING (TIER 1 PROJECTS)

Roadway Risks:

- Large grade difference between the northbound and southbound lanes (greater than 5' at various sections throughout the project) would make it difficult to provide 4:1 median ditch slope. Florida gutter would be proposed at these locations. Worse case scenarios, 3:1 or 2:1 median ditch slope would be proposed with guardrail.
- There might be clear zone violations that cannot be addressed.
- Meeting median crossover slope at the proposed restricted median crossings.
- Project scope assumes approval of multiple design exceptions (see listing above)
- Changes to design standards and requirements.
- Scope creep.

Hydraulic Risks:

- Significant impact to commercial properties due to SWM facility locations.

Environmental Risks:

- Additional mitigation measures may be needed if there is a finding of adverse impact

Right of Way Risks:

- Project estimate cannot afford to compensate the County for land if they change their minds about donating Right of Way
- Potential for additional parcels impacted if ditch improvements are needed

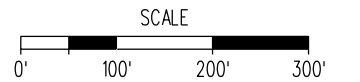
Utility Risks:

- Minimal risk due to mostly mill & overlay on the exterior lanes

Legend

- Full Depth Pavement
- Variable Depth Mill & Overlay
- Channelizing Island
- Proposed ROW
- Existing ROW (from GIS)
- Approx. Perm. Easement (for Drainage)
- Approx. Temp. Easement (grading limits T.B.D.)
- Approx. Utility Easement

Location: Greene County



Sheet 1/1



CONCEPT DESIGN & ESTIMATE MEMORANDUM — CULPEPER DISTRICT L&D

Routes 33 and 743, Advance Mills Rd & Greenecroft Blvd, RCUT			
Midway, Greene County			
APPLICATION INFORMATION		DRAWING OVERVIEW	
Funding	SMART SCALE FY2024		
Applicant	Greene County		
District ID	0033-0743		
Portal ID	9484		
Tier/Phases	Tier 1 PE/RW/CN		
Expected NEPA	PCE		
L&D P.O.C.	Justin Cooner		
Planning P.O.C.	Chuck Proctor		
Design By	Michael Baker		
Estimate By	District L&D / Volkert		
REVIEW & APPROVAL		Updated: 9/9/2022	
District Project Development Engineer Signature:			

PROPOSED ESTIMATE				PROPOSED SCHEDULE	
Phase	Base	%	Total	Phase (Task)	Target Date
PE	\$1,240,000	10%	\$1,364,000	PE Start (12)	9/15/2025
RW/UT	\$550,000	40%	\$770,000	RW Start (52)	1/26/2028
CN (CEI)	\$3,770,000	20%	\$5,805,800	CN Start (80)	11/14/2028
CN (Cont)		34%		CN End (91)	11/16/2029
Total 2022 Estimate (Uninflated)			\$7,939,800		

SCOPE DESCRIPTION
- Convert existing intersections on US-33 at Routes 743/1105 and 1050/1106 to remove direct left turn access into and out of the minor roads. - U-turn areas will be provided east and west on US 33 to relocate displaced left-turns and through movements. - Improve sight distance left from Route 1105 (Locust Lane).

ASSUMPTIONS AND RISKS

Scope Assumptions:

- **Identified Problems to Address:**
 - Project is focused on enhancing the safety of the segment. 9 angle crashes occurred between 2016 and 2021 at the Route 33 and Route 743 intersection. 8 angle crashes occurred between 2016 and 2021 at the Route 33 and Route 1050 intersection.
 - RCUT's have the benefit of reducing the number of conflict points and reducing crashes by up to 20%.
 - The sight-distance will also be improved at the intersection of Route 33 and Locust Lane by removing the vegetation in the northwest corner based on the crash history at this location.
- Note: Proposed scope is currently anticipated as the best way to address existing problems at this location, subject to further traffic analysis, environmental review, and public feedback.
- **Site Visit** was performed on 9/13/2022 and attended by Justin Cooner. No changes in field conditions were noted.
- **Traffic Analysis:** Traffic analysis was performed by VDOT on 3/31/2022. It found that the segment experienced a high amount of angle crashes at two intersections and that relocating the left-turns and through movements to U-turn areas east and west would reduce the number of crashes.
- **Design Standard:** Roadway design shall be in accordance with GS-1 standards in the Road Design Manual.
- **Design Speed:**
 - The posted speed on US 33 is 55 mph, and 60 mph was used as the design speed.
- **Design Vehicle:** WB-67 vehicle accommodated in roadway. WB-67 was used to design RCUT turns.
- **Typical Section:**
 - Left-turn lanes to be 12' with 4' paved inside shoulders.
 - US-33 to conform to Rural Principal Arterial (GS-1) design standards with 12' lanes
- **Project Estimate:** (Non-Complex)
 - This project is considered Non-Complex
 - Quantities estimated from preliminary sketch prepared by Michael Baker dated 08/29/2022
 - Inflation is not included in the current estimate. Inflation will be added by the Portal based on the proposed schedule.

Roadway Risks & Assumptions:

- Proposed modifications to existing roadways will not make existing conditions worse. Construction will be limited on the outside of the roadway and existing outside shoulders and slopes will be retained. Waivers and exceptions will be sought as necessary to match these existing conditions in accordance with the principles of performance based practical design.
- The substandard horizontal alignment on westbound US 33 is not being corrected, which may require a design exception.
- It is assumed that vehicles using the proposed RCUTs will have sufficient sight distance to make proper judgement when making turns and that existing utilities will not be impacted.

- Western loon is location is about 10-15 feet below the existing south berm. Construction limits expected to be between 40-55 feet from proposed edge of pavement. Design may want to consider steeper slopes (2:1) beyond ditch, paved ditch, or retaining structures may be used to minimize impacts. However, loon may not be needed based on existing pavement widths.
- WP-2 is assumed parallel to the length of left-turn lanes and loon areas.
- All construction is expected to be within exiting right-of-way at eastern loon.
- The permanent easement in the proposed SWM area was expanded 10 feet to accommodate potential impacts to underground telephone utility.
- To achieve appropriate sight triangles at Locust Lane, clearing and maintaining trees/shrubs will be required on property 005 and coordination/acquisition from owner.

Bicycle/Pedestrian Risks & Assumptions:

- Bicycle and pedestrian accommodations are not proposed as part of the project. An exception to the provision of accommodation will be required. The purpose and scope of the project do not facilitate the provision of accommodations. The project as proposed is an intersection safety improvement that is mostly limited to the existing roadway footprint. Separated facilities would require additional impacts to commercial properties, utilities, and reconstruction of drainage systems that are beyond the scope of the proposed project. On-roadway facilities are not included because safety would be compromised due to the volumes and speeds of traffic.

Hydraulic Risks & Assumptions:

- Shoulder drainage is relocated at U-turn aprons but is otherwise unmodified.
- Existing median grass channel is adequate for water quality treatment.
- Install 18" drainage pipe under U-turn cross-over (median side) for eastbound traffic.
- The estimated nutrient reduction requirement is approx. 0.65 lb. P. A median grass channel is anticipated to meet if not exceed this requirement. Alternatively, water quality credits may be purchased from the Rappahannock and/or Ivy Creek NPS Banks.
- A 7000 SF WQ BMP has been added in median near eastern crossover.

Maintenance of Traffic Risks & Assumptions:

- Construction will require temporary pavement and significant flagging due to shoulder and median closures.
- Tree removal will be needed at the intersection of Locust Lane and Spotswood Trail to improve sight distance for traffic pulling out of Locust Lane.

Traffic Control Devices Risks & Assumptions:

- Additional signage will be needed for One Way right turns and proposed RCUTs.
- Remove vegetation on Parcel 005 to improve sight distance for right-turn vehicles onto Route 33 westbound.
- Western crossover entrance facing gas station shall be signed "Do Not Enter."

Materials/Geotechnical Risks & Assumptions:

- Pavement design for Route 33/743 Midway Intx. Imp. Greene and Route 33, new pavement mainline is assumed to be:
 - 1.5" SM-9.5D, 2.0" IM-19.0A, 6.0" BM-25.0A and 8.0" 21-B

Right of Way Risks & Assumptions:

- Estimate based on an unapproved sketch with 5 parcels being impacted. No total takes
- Did not consider loss profits or damages due to changes in access to parcels with no acquisition.
- Utilities - May be able to avoid cost and easement dependent upon final design. If easement is required, it would be 10' in front of parcel 009 and 010.

DESIGN DEVIATION SUMMARY

Design Element	Description/Location	Status	Approved
Outside shoulder	Westbound US-33	Design exception	Pending
Horizontal curves	Westbound US-33	Design exception	Pending
Outside ditch width/slopes	Westbound US-33	Design waiver	Pending

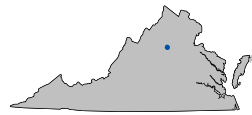


Virginia Department
of Transportation

US 33 - Route 743 & Route 1050

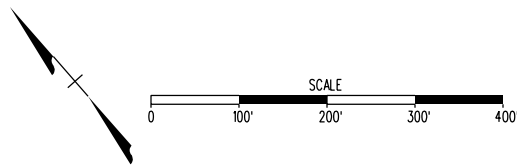
Intersection Improvements

Project Location



RUCKERSVILLE, VA

North Arrow & Scale



Legend

- PARCEL LINES
- VDOT STD. CG-3
- EXISTING EDGE OF PAVEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED PERMANENT EASEMENT
- PROPOSED TEMPORARY EASEMENT
- PROPOSED FULL DEPTH PAVEMENT TO REPLACE SOIL AND ORGANICS
- PROPOSED MILL AND OVERLAY
- PROPOSED PAVEMENT MARKINGS
- PROPOSED TOPSOIL AND SEEDING TO REPLACE EXISTING ASPHALT
- PROPOSED CONCRETE MEDIAN

Date

7/26/2022

Michael Baker
INTERNATIONAL

These plans are unfinished and unapproved and are not to be used for any type of construction or the acquisition of right of way. Additional easements for utility relocations may be required beyond the proposed right-of-way shown on these plans.

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