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Agenda
MPO CTAC
Wednesday, November 18th, 2020 @ 7:00 p.m.
Virtual Meeting via Zoom

https://us02web.zoom.us/j/81623462451?pwd=TnYzL2ZUTWRERjNwUDM2eEo1UDYzZz09
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Item	Time	Description
0	7:00-7:00	**Attendance**
1	7:00-7:03	**Matters from the Public: limit of 3 minutes per speaker** *Members of the Public are welcome to provide comment on any public-interest, transportation-related topic, including the items listed on this agenda – limit three minutes per speaker*
2	7:03-7:05	**Approval of July 15th draft meeting minutes (See September 2020 CTAC Minutes DRAFT)**
3	7:05-7:25	**Performance Measures and Targets – Lucinda Shannon (CAMPO)** • Ms. Shannon will describe the importance of federal performance standards and state and local performance targets to the transportation planning process. See slide titled **Performance Measures, Targets, and the MPO**.
4	7:30-7:50	**Smart Scale updates – Chuck Proctor (VDOT) and Chip Boyles (TJPDC/CAMPO)** • Update from Mr. Proctor on where VDOT is in the application review process and when decisions will be made – and when funding will be available for projects if they are fund • Smart Scale process update (Chip Boyles). For more information, see **Smart Scale Memo Procedures.** ○ CTAC members should be prepared to vote to recommend (or not recommend) that the MPO Policy board accepts the new process recommendation
5	7:50-8:10	**Rivanna River Bicycle and Pedestrian Crossing – Jessica Hersh-Ballering (TJPDC/CAMPO)** • Review of VDOT feasibility study results. See **feasibility study** for more information. • Review of comments/feedback from November 12th virtual public workshop
6	8:10-8:25	**MPO Bicycle and Pedestrian Count Update – Jessica Hersh-Ballering** • Update on the change of focus for data collection. See **count sheet.** • Results of fall count, if available • Next steps
7	8:25-8:30	**Additional Matters form the Public: Limit of 3 minutes per speaker** *Members of the Public are welcome to provide comment on any public-interest, transportation-related topic, including the items listed on this agenda – limit three minutes per speaker*

Upcoming Meetings:
MPO Tech Committee (3rd Tuesday): January 19th at 10am
MPO Policy Board (4th Wednesday): December 1st at 4pm
MPO CTAC (3rd Wednesday): January 20th at 7pm

Charlottesville-Albemarle Metropolitan Planning Organization
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Citizen Transportation Advisory Committee

Draft Meeting Minutes: July 15, 2020

Committee – Voting Members (Present)

Chair – Tristan Fessell (Albemarle County)
Vice Chair – Stuart Gardner (MPO)
Joseph French (City of Charlottesville)
Lucas Beane (City of Charlottesville)
Travis Pietila (MPO)
Tim Keller (Albemarle County – Planning Commission)
Donna Chen (MPO)
Ray Heron (City of Charlottesville)
Gary Heaton (City of Charlottesville – Planning Commission)
Lee Kondor (Albemarle County)

Voting Members (Absent)

Vacant (City of Charlottesville)
Vacant (Albemarle County)
Marty Meth (Albemarle County)

Staff (Present)

Chuck Proctor – VDOT
Chip Boyles – TJPDC/CAMPO
Jessica Hersh-Ballering – TJPDC/CAMPO
Lucinda Shannon – TJPDC/CAMPO
Sandy Shackelford – TJPDC/CAMPO
Alleyn Harned – Virginia Clean Cities

Call to Order

The virtual meeting (held on the Zoom platform) was called to order by Chair Tristan Fessell at 7:02pm.

Matters from the Public

There were no matters from the public.

Approval of July 15th Meeting Minutes

Tristan Fessell moved to approve the July15th meeting minutes. Travis Pietila seconded the motion. The committee voted unanimously in favor. The motion passed.

Electric Vehicles – Alleyn Harned (Exec Director of VA Clean Cities) and Lucinda Shannon (CAMPO)

Alleyn Harned, Executive Director of Virginia Clean Cities, joined the group to discuss changes to the Increased Highway Use Fee (HUF) for personal electric and fuel-efficient vehicles. In summary, there is an increase in the existing fee for electric vehicles of all sizes and a new fee for fuel-efficient vehicles. The HUF is intended to cover a portion of the reduced amount of gas tax these owners pay per vehicle mile traveled compared to less fuel-efficient vehicle owners.

Travis Pietila asked about an option for a fee reduction for EV and fuel-efficient vehicle owners who use their vehicles for a limited number of miles traveled per year. Alleyn commented that that option is not available yet. Stuart Gardner commented that it seemed bizarre to have a flat fee when people might travel very different distances. Donna Chen commented that her research identified that the administrative cost of a VMT program would outweigh the tax collected with the current number of EVs in use.

Stuart asked if this fee is up for review. Alleyn responded that this had come through the omnibus transportation package, but would be up for a review in a year.

Alleyn noted that an "efficiency fee" like this is uncommon in the US.

Lucinda Shannon presented on the TJPDC's electric vehicle charging station needs assessment study. She specifically asked CTAC if they would like to add any organizations to the stakeholder list. Dominion Energy was recommended, as was Blink and other charging networks.

Donna Chen asked how need for charging was being assessed. Lucinda listed the variables that were part of the study's projections. Donna offered to share her models and Stuart offered to share some contacts in the automotive industry. Tim Keller asked about gas station companies and their plans to include EV charging infrastructure. Chip Boyles commented on the need for planning requirements to catch up to the need for this technology (e.g. parking space requirements).

Alleyn Harned noted the Alternative Fuel Data Center can be a good resource for individuals interested in this topic. Alleyn also noted Virignia's "Right to Charge" law.

Lucinda noted that the timeline for rolling out the final results for this project was about six months from now.

MPO Documents – Sandy Shackelford (CAMPO) and Lucinda Shannon (CAMPO)

Sandy Shackelford reviewed the public comments on the MPO's public participation plan, which is the plan that states how the organization will meet the federal requirements for public input on planning decisions. Sandy reminded CTAC that this year's update was intended to be a minor update to make sure the MPO is in compliance and the organization's current practices were reflected in the updates.

Some of the public comments pointed toward larger or deeper changes that should be made, but were outside of the current scope/budget for revisions. Sandy divided the comments into simple

fixes, which will be addressed immediately, and more substantive changes that will be addressed in a more comprehensive update – to be included in the MPO's work plan in the near future.

Sandy answered questions from CTAC and reminded CTAC that they can make a recommendation to the MPO Policy Board in regards to the plan.

Jo French commented that the regulations in regard to the fact that the amount of public outreach seemed very short/limited compared to the long/large scope of the planning projects being discussed. He recommended a monthly meeting for the MPO to talk about all projects so the public was not surprised by a near complete project at a project-specific public input meeting.

Jo asked for the timeline for the more substantive changes. Sandy said the process might begin as early as February or March, but would conclude around June, especially if there would be a survey or public meeting for additional public feedback on the changes.

Jo French moved that CTAC recommend the Policy Board adopt the public participation plan with the simple changes and with the caveat that more substantive changes begin by June 2021. Travis Pietila seconded the motion. The committee voted unanimously in favor of the motion. The motion passed.

Lucinda Shannon described the updates to the MPO's Title VI Plan. She noted that like the public participation plan, more substantive changes are planned for the future. She asked the group if they had any questions or comments. Jo French asked what more robust changes might be included in a future update. Lucinda described a few innovative ideas she had seen in other organization's plans. Chip Boyles noted that one of the things the MPO has struggled with is diverse representation on committees like CTAC. Jo French recommended the use of financial compensation to individuals who want to be involved but need to use all of their time to earn money for life essentials. Travis Pietila noted that there are broader, less technical questions that should be asked in committees/at public meetings that might be more approachable for more members of the public.

Lee Kondor moved that CTAC recommend that the MPO Policy Board accept the changes to the Title VI Plan with the caveat that more substantive changes are made in the near future. Donna Chen seconded the motion. The committee voted unanimously in favor of the motion. The motion passed.

Lucinda Shannon explained that the Transportation Improvement Program (TIP) is the document that the localities use to track funding that has been appropriated for transportation projects in our region. Looking at the document, each block is a transportation project or group of transportation projects that has had funding allocated to it by the state. Often, money is moved around or costs are adjusted and those adjustments need to go through the policy board.

Chuck answered a few technical questions about the amendments. He clarified that no projects were *not* receiving funding because of the movement of funds described in the amendment.

Smart Scale updates – Chuck Proctor (VDOT), Lucinda Shannon, and Chip Boyles (TJPDC/CAMPO)

Chuck described the changes to the design of the Fontaine intersection Smart Scale submission. He described the history of the project and the need to come up with a lower cost design than had been previously submitted. The new design is a diverging diamond.

Stuart Gardner asked what was driving the large traffic volumes in this area requiring the improvements. Chuck Proctor talked about out-of-town traffic accessing the City of Charlottesville through this pinch point. Stuart also asked if increasing efficiency at this intersection would increase congestion in the Fry's Springs neighborhood. Chuck then clarified that the University of Virginia's research park was also a major driver of traffic volumes in this area and this design includes two right-turn lanes into the research park.

Tim Keller noted that there are long-term plans that have gone before the Albemarle County Planning Commission describing the University of Virginia's expectations for the Fontaine Research Project. Tim asked if implementing this design improvement would actually create more problems in the future to accommodate significantly increased use of the research park. Chuck noted that without additional funding from the University of Virginia, this design is more likely to be funded through Smart Scale. Stuart clarified that the main impetus of this improvement is to improve access to the research park, but it would also address some safety issues with traffic entering/exiting I-64; Chuck confirmed that statement.

Travis Pietila moved that CTAC recommend that the MPO Policy Board accept this amendment to the design of the Fontaine intersection Smart Scale application. Tristan Fessel seconded the motion. Lee Kondor, Jo French, Tim Keller, and Lucas Beane abstained from the vote. The motion did not pass, and another motion was not made.

Chip Boyles described the new draft processes for Smart Scale applications. The most recent round of Smart Scale applications brought a number of comments from the public stating that they did not feel that there was enough public engagement early enough in the application process. Chip also pointed to the thorough public engagement process for the Hydraulic/29 intersection application as an example of the kind of public engagement the PDC/MPO aspires to for complex projects. Chip also noted that there is, of course, a limit on resources (time, money, etc.) that can be spent on any funding application.

The draft processes Chip described are contained within the memo included in the meeting materials. This new process would only impact projects that City of Charlottesville and Albemarle County request the PDC/MPO to apply for on their behalf; it would not apply to projects the city or county are applying for on their own.

Travis Pietila commented that determining which projects are major versus minor should include "expected controversy" and other details, in addition to project size, cost, etc. Chip agreed that determining which projects are major versus minor would likely be the most difficult part of this new process.

Chip requested that CTAC members review the memo provided in the meeting materials, email or call any PDC/MPO staff with questions at any time ahead of the next CTAC meeting, and please be prepared to make a recommendation on the draft process.

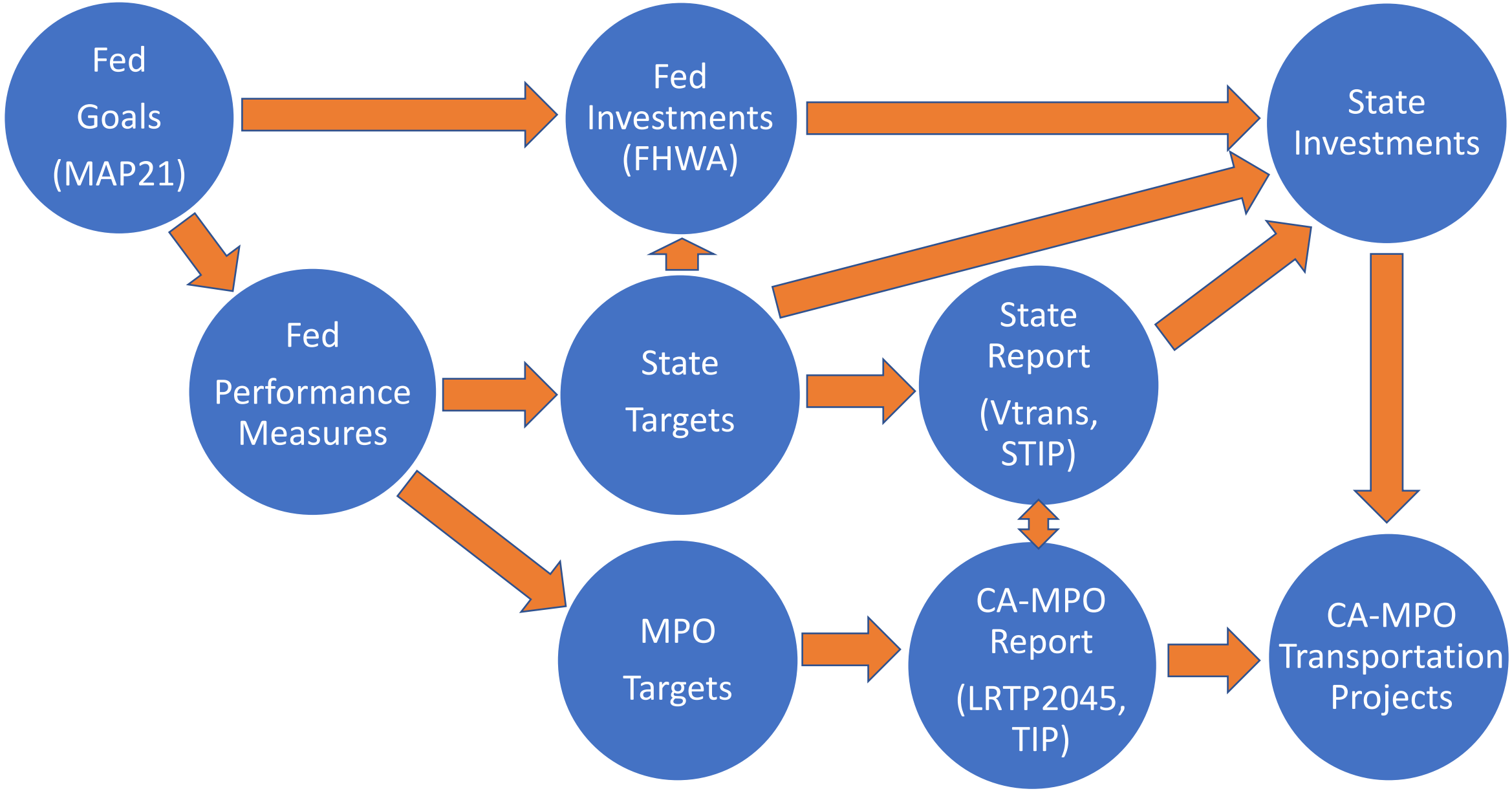
COVID-19 Impacts on Transportation (ONLY if sufficient time available) – Jessica Hersh-Ballering (CAMPO)

There was not enough time to include this agenda item. It will be moved to a future agenda.

Additional Matters from the Public:
There were no matters from the public.

The meeting was adjourned at 8:43 PM.

Performance Measures, Targets, and the MPO



Thomas Jefferson Planning District Commission

Regional Vision ▪ Collaborative Leadership ▪ Professional Service

MEMO

To: CA-MPO Policy Board
From: Chip Boyles, Executive Director
Date: July 22, 2020 REVISED September 8, 2020 REVISED December 1,2020
Re: 2022 Smart Scale MPO Project Selection Process

Purpose: To identify and fully vet with equitable and engaged community participation, transportation projects to be submitted for 2022 and future Smart Scale funding application consideration.

Background: SmartScale is the Virginia Department of Transportation's application process to fund transportation projects within the Commonwealth. Applications are accepted every two years and are qualified and ranked based upon benefit of the project and available funding. According to local, regional or state benefit of the project, projects may apply for either VDOT District Funds or the more competitive Statewide funds. Normally, local governments, Planning District Commissions and MPO's may apply for up to four projects per round. VDOT presents the ranked projects to the Commonwealth Transportation Board who then reviews and approves projects to be funded in the Six Year Improvement Plan of Virginia. The MPO has since the beginning of Smart Scale received recommendations for Smart Scale application in two methods:

1. The MPO Technical Committee recommends projects to be reviewed and recommended to the MPO Citizen's Advisory Committee for review and to the MPO Policy Board and local government for final consideration; and
2. Receive recommendations directly from the City of Charlottesville and Albemarle County for the MPO to apply on their behalf.

During the 2020 application process, one project, the Route 20 Bike/Ped Path, experienced the need for additional community engagement and design review beyond the review provided for past project applications. To meet application submission deadlines, a number of citizens and interested stakeholder groups had not been fully engaged in the preliminary conceptual designs and project options. The result was a conceptual project that was not adequately vetted by the public. Following the Smart Scale and MPO Policy Board protocol, the project did not receive approval to be submitted for funding consideration through Smart Scale. Because of the timing of this, the MPO will be asked to submit only three projects in 2020 for their four available submissions.

Issues: The MPO Policy Board needs to determine a way to identify priority projects much earlier to be considered for future Smart Scale submissions. To be included in this selection process, determining which possible projects require any additional community engagement or design or local match and which may require only minor community engagement. The MPO would not have resources available to fully engage four or more projects for each Smart Scale round.

Action Needed: MPO staff recommends that the following Smart Scale selection procedures be approved that will help to prioritize transportation projects for Smart Scale consideration and apply ONLY to

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projects to be submitted by the MPO; determine which priority projects require additional community engagement and/or design and/or local match; determine how to address direct project requests by the City of Charlottesville and Albemarle County. Local governments and the TJPDC will determine procedures for their own direct project application submissions to VDOT's SmartScale. MPO submitted project procedures should be in place by February, 2021.

Recommended procedures:

Once Smart Scale scoring is provided from the most recent submission round, usually in January following the most recent submissions, MPO staff will present current scores to the MPO Policy Board, CTAC and Technical Committee.

CTAC and the MPO Tech Committee will review to recommend projects to be considered by the MPO Policy Board for the next Smart Scale round.

Recommendations will be shared with the City of Charlottesville and Albemarle County. Charlottesville and Albemarle may support these recommendations and/or offer their own projects for consideration by the MPO Policy Board. Projects to be considered must be submitted to the MPO Policy Board by May of the same year.

CTAC and Tech Committee will review and consider the requested projects and will provide a list of up to five recommended projects to the MPO Policy Board.

In that recommendation, projects will be prioritized as major or minor projects. No more than two projects may be considered major. The MPO Policy Board may approve up to two projects as major.

Major projects will require an appointed advisory panel to advise on project development and community engagement to include specific online information (web site), similar but smaller than the Hydraulic and 29 Advisory Panel. It is likely outside consulting will be required to develop technical options. External design consulting may be provided by VDOT or through local government contract, as funding is available. Each advisory panel will be appointed by the MPO Policy Board and staffed by the TJPDC staff. Panel meetings should begin in October. This panel will meet regularly to review the objectives of the project and possible options, to include opportunities and threats of the transportation and land use changes of the potential project. Updates will be provided to the Technical Committee, CTAC and MPO Policy Board.

Minor projects will not require an advisory panel and will rely solely on VDOT, MPO Technical Committee and VDOT consultants for technical expertise. TJPDC staff will coordinate public engagement through grouped engagement meetings and CTAC meetings meeting SmartScale requirements.

The procedures of this policy may be waived at any time by the MPO Policy Board for Minor or Major Projects should local government projects or Major Project development dictate alternate project application submissions.

SAMPLE SCHEDULE

January ’21	CTB receives VDOT scored projects
March ’21	Project Scores from VDOT presented to MPO Committees
May ’21	New projects must be submitted to CTAC and Tech Committee by local governments, transit agencies, or other interested groups for consideration as MPO Smart Scale applications. All submissions must meet minimum SmartScale requirements for consideration.
June ’21	Award of previous project funding by CTB
July ’21	New projects are recommended by CTAC and Tech Committee to MPO Policy Board.
Sept ’21	MPO Policy Board approves projects to be considered, differentiates between Major & Minor
Nov ‘21	MPO Policy Board appoints Advisory Panels. (May occur in September if needed)
Jan– June’22	Panels Meet (may begin in October if needed)
March ’22	Local government and TJPDC project applications due to MPO Policy Board for consideration of support resolutions
April ‘22	Letters of Intent due to VDOT
May ’22	MPO Policy Board considers resolutions for projects to submit for funding
	MPO Policy Board considers support of local government and TJPDC project applications
Aug ’22	Smart Scale Applications due

Concerns:

1. Will require the MPO and local governments to identify priority projects much earlier than previously
2. Limits the ability of the MPO to apply on behalf of the local government
3. Does not have resources for engineering and design consulting. The MPO only has resources for limited planning and facilitation.
4. Will require more than one cycle to meet local government Capital Improvement Plan deadlines for funding toward identified projects.
5. This process will become a major funded program for the MPO's VDOT provided annual funding and Unified Planning Work Program (UPWP)

Benefits:

1. Improved community engagement beyond what is required to submit Smart Scale applications
2. Early consideration of match funding to improve project scores
3. Identification of design/engineering funding to assist in application development
4. Major role of CTAC becomes consideration and recommendation of proposed SmartScale projects

To: Chuck Proctor
VDOT Culpepper District

Date: July 7, 2020

Project #: 34418.24

Memorandum

From: Chris Daily, P.E., VHB
Ricky Wiatt, P.L.A., VHB
Chuck Conran, E.I.T., VHB

Re: Rivanna River Pedestrian Path Concept

Various planning documents, including Albemarle County's Pantops Master Plan, Charlottesville's Bike/Ped Master Plan, and the Rivanna River Area Plan, have called for a pedestrian/bike crossing of the Rivanna River in the vicinity of Riverview Park (see **Figure 1)**. This planned crossing would connect the Pantops region of Albemarle County (east side of the Rivanna River) with both the Woolen Mills area of Albemarle County and the City of Charlottesville (both on west side of the Rivanna River). Today, the closest crossing is approximately 1.5 miles upriver at the US 250 Free Bridge. The Pantops area of Albemarle County is projected to grow in both residential and working population in the coming years, while a substantial economic development project is currently under construction at the Woolen Mills site. A Rivanna River crossing in this vicinity would join these economic growth areas, link existing Albemarle County employment centers (State Farm Operations Center and Sentara Martha Jefferson Hospital) to the City of Charlottesville, and connect recreational trail facilities (Rivanna Trail and Old Mills Trail) on both sides of the river. The Pantops Master Plan and the TJPDC Bike/Ped Plan also indicate future on-street bike facilities on Peter Jefferson Parkway and State Farm Boulevard.

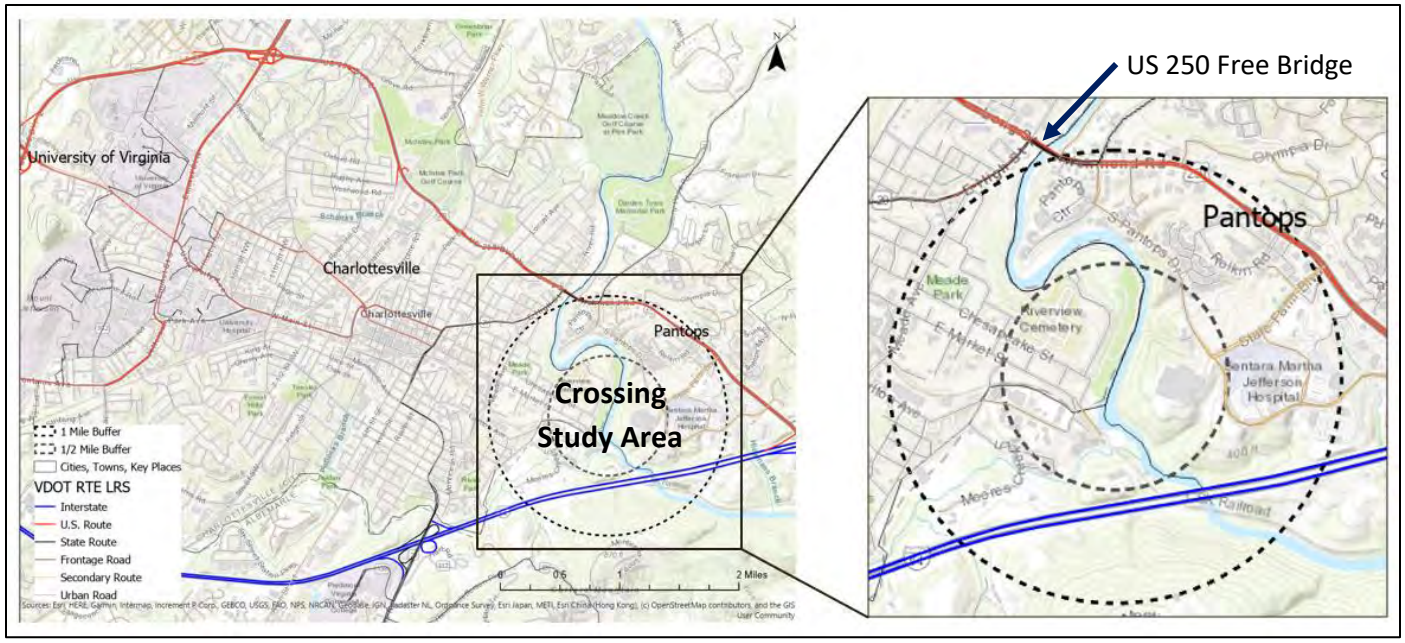


Figure 1: Rivanna River Crossing Vicinity Map

VDOT's Transportation Mobility and Planning Division (TMPD) tasked VHB with developing a conceptual plan and planning-level engineer's cost estimate for the Rivanna River path crossing that could be potentially used in the development of a grant application for funding. The planning documents identified the crossing being located somewhere within the half-mile stretch of river between the Riverview Park parking lot and the I-64 river crossing bridges. VHB reviewed the existing planning documents, completed a site visit with City, County, VDOT, and PDC staff, and evaluated existing conditions. The western takeoff point was determined to be flexible, while the eastern connection point for the shared use path was determined to be the intersection of Peter Jefferson Highway and State Farm Boulevard. VHB identified six potential crossing alignments from this preliminary review process and presented these to

Memorandum

the stakeholder group in February 2020. Feedback received at this meeting narrowed the potential alignments from six to two: a single-span alignment continuing straight across the river from Chesapeake Street and a dual-span alignment between East Market Street (near Woolen Mills development), the sediment island, and the east side of the river. Design criteria for both concepts are included in **Appendix A**.

Concept 1, shown in **Appendix B**, starts at the intersection of Chesapeake Street and Riverside Avenue on the west side of the river at Elevation 320 feet. Utilizing a 325-foot long truss bridge structure, the path maintains a consistent grade from this point to an elevation of 338 feet at the riverbank where it ties into the 240-foot cable-stayed single-span suspension bridge across the river. With a riverbed elevation of approximately 300 feet, this bridge span has a vertical clearance of nearly 40 feet over normal river height and fifteen feet over the 100-year floodplain at 324 feet. A bridge elevation of 338 feet, however, is necessary to tie into the slope on the east riverbank, specifically connecting to the existing Old Mills Trail. From here, the shared use path traverses a ~3,000-foot linear run along the slope (staying on the west side of the ravine and passing through transmission line easement), gaining 110 feet of elevation before tying into the intersection of Peter Jefferson Highway and State Farm Boulevard at an elevation of 450 feet. This 10-foot wide path alignment maintains a 5% max grade. The Rivanna River suspension bridge is a similar design to the Neuse River suspension bridges outside of Raleigh, North Carolina, except the proposed Rivanna bridge only has a single bridge tower on the west bank.

Concept 2, shown in **Appendix C**, starts from East Market Street beneath the Moore's Creek railroad bridge. Launching from an elevation of 320 feet, the first 296-foot arch bridge span rises 5 feet to reach 325 feet (25 feet above the normal water level and one foot above the 100-year flood zone). A pier would be constructed on the mid-river sediment island and a second 296-foot arch bridge span crosses to the east riverbank, landing at a 325-foot elevation near the existing Old Mills Trail. The 10-foot wide shared use path then climbs 125 feet to the Peter Jefferson Highway / State Farm Boulevard intersection over ~2,400 linear feet of path (staying on the west side of the ravine and passing through transmission line easement). This alignment mostly maintains a 5% max grade; however, it requires a 150-foot run of 6.5% grade. Additional consideration was given to connecting the path to the proposed five-foot wide trail on the east side of the ravine that is included in the Presidio Development Site Plan. This option was discarded as it would either require an additional 290-foot bridge span across the ravine at Elevation 373 feet or would require switchbacks to maintain a 5% max grade as the path climbs on the east side of the ravine from the riverbank to the site development trail (see **Appendix D**). This alternative concept would also require widening the five-foot development trail to a ten-foot shared use path.

VHB evaluated the environmental impacts and permitting requirements of the two concepts. Based on knowledge of permitting requirements and similar project experience, Concept 1 would require a permit from the Virginia Marine Resources Commission, while Concept 2 would require this permit plus a permit from the U.S. Army Corps of Engineers (due to proposed placement of bridge pier on the river island). Additionally, both bridge concepts would require hydraulic modeling to determine any impact to the 100-year floodplain elevation and boundary. Impacts to either would require a Special Use Permit from Albemarle County, a Floodplain Development Permit from the City of Charlottesville, and a Conditional Letter of Map Revision from FEMA. With a top of bridge deck elevation just above the 100-year floodplain, Concept 2 has a significantly higher risk of impacting the floodplain. **Appendix E** includes a full write-up on the permitting and floodplain impacts.

Memorandum

VHB developed line-item engineer's cost opinion for the two concepts that utilize VDOT's 2020 cost development spreadsheet. The total construction + preliminary engineering + right of way estimate for Concept 1 is approximately $11,330,000, while the total estimate for Concept 2 is approximately $15,360,000, or about 35% more expensive than Concept 1. **Appendix F** shows the cost estimates by major line item. A twenty-foot wide right of way corridor is currently assumed through the State Farm and Presidio Development properties. Negotiation of an easement for the trail through these properties could substantially reduce right of way costs. In accordance with VDOT cost development policy, these preliminary cost estimates include substantial contingency factors, including 12% for preliminary engineering, 50% for right of way, and 40% for construction.

In addition to the environmental and cost considerations, there are several transportation planning considerations in comparing the two concept alignments. Concept 1 provides a direct connection to the Rivanna Trail, Riverview Park's parking lot, and Chesapeake Street, which can be used to access downtown Charlottesville. Concept 2, with its connection to East Market Street, provides direct access to the Woolen Mills economic development site; however, the connections to other destinations farther west are more challenging. East Market Street has a constrained 20-foot cross-section that would force pedestrians and bicyclists to share pavement space with vehicles. Additionally, there is no room for parking along East Market Street for recreational bridge users. The additional 600-feet of linear path on the east riverbank of Concept 1 is offset by the extra linear distance on East Market Street of Concept 2. On the east riverbank, Concept 2 has a steeper grade than Concept 1, and has potential impacts to the historical canal and lock system. Finally, from a constructability standpoint, Concept 1 is likely simpler due to the presence of a large staging area on the west riverbank and the absence of in-river construction. For all of the above stated reasons, VHB recommends Concept 1 be retained for future funding applications.

Appendix G includes perspective renderings of the two Rivanna River bridge concepts and the proposed trailhead located at the intersection of Peter Jefferson Highway and State Farm Boulevard. It also includes two potential typical sections for the path.

Appendix A – Design Criteria

RIVANNA RIVER PEDESTRIAN CROSSING PLANS
DESIGN CRITERIA
April 2020

VHB project # 34418.24

The following criteria have been compiled based on standard engineering practice and the successful application of regulatory standards and guidelines. The Virginia Department of Transportation (VDOT), the American with Disabilities Act (ADA) Design Guidelines; the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Planning Design, and Operation of Pedestrian Facilities, 2004 edition; the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, 2012 edition, (2012 AASHTO Bicycle Guidelines); American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets (AASHTO Road Design); and the Manual on Uniform Traffic Control Devices (MUTCD) were the primary references.

General

FACET	REFERENCE
Functional Classification Peter Jefferson Highway: Major Collector. ADT 9,100 vpd (2018)	VDOT ArcGIS Online Map VDOT Online Traffic Data
Traffic Control	FHWA, 2009 Manual of Uniform Traffic Control Devices (MUTCD)[1]
Drainage and Stormwater Management – BMP's sized to treat or by-pass 10 year, 24-hour storm Inlet Tops and Grates- Grates need to be replaced so that openings are perpendicular to bike travel ways and sidewalks.	VDOT Drainage Manual[2] AASHTO Bike Guide[3] ADA[4]

Shared Use Path

CRITERIA: SHARED USE PATH		REFERENCE
Design Speed (D) - Path	18 MPH (minimum)	VDOT Complete Streets Guidelines[5]
Radius Horizontal Curve	60 feet (minimum)	VDOT Complete Streets Guidelines
Superelevation/Cross Slope	2%	ADA
Stopping Sight Distance	115 feet	AASHTO Road Design[6]
Profile Grade	5% (or maximum of adjoining roadway)	ADA PROWAG[7]
Length Vertical Curve – for Bikes	Sag – 175 feet Crest – 50 feet	AASHTO Road Design
Typical Section	Pavement width 10 ft.	AASHTO Bike Guide

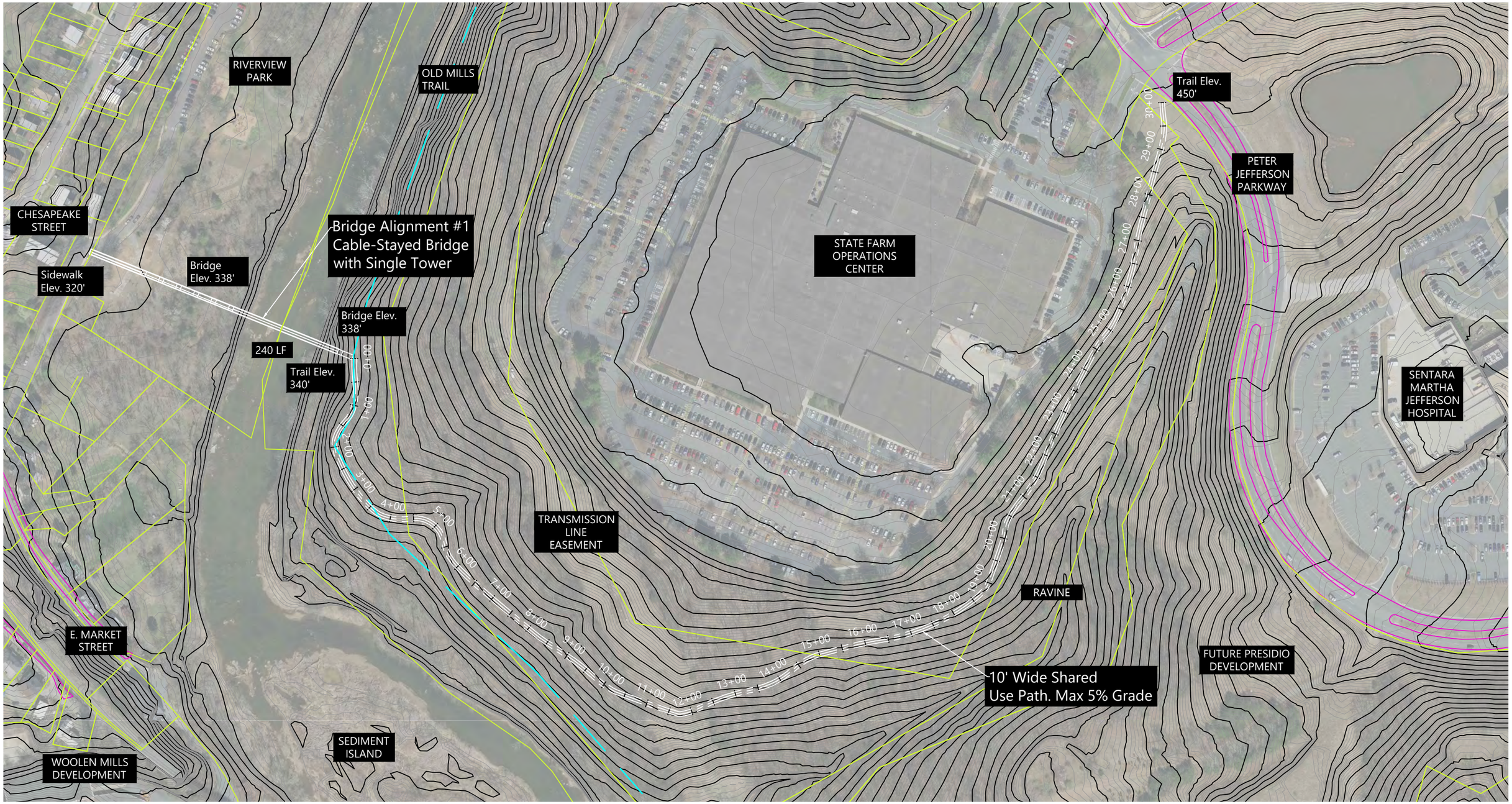
	Shoulder width 2 feet min, 3-5 feet ideal @1'V:6'H or flatter	
Clear Zone (for Path)	2 feet 5 feet (inc. shoulder)	AASHTO Bike Guide VDOT Complete Streets Guidelines
Vertical clearance	10 feet for bicyclists	AASHTO Bike Guide, p. 3-3
Lateral Clearance, Horizontal Curves	2 feet	AASHTO Bike Guide
Bridges	Width same as paved approach, plus 2 ft. clear area on each side	AASHTO Bike Guide
Physical Barrier / Railing	42" min	VDOT Complete Streets Guidelines

References:

[1] FHWA Manual of Uniform Traffic Control Devices (MUTCD), 2009, see http://mutcd.fhwa.dot.gov/kno_2009r1r2.htm
[2] VDOT, Drainage Manual, Rev. 2019
[3] AASHTO, Guide for the Development of Bicycle Facilities, 4th edition, 2012
[4] United States Access Board, Americans with Disabilities Act Accessibility Guidelines, 2010
[5] VDOT, Complete Streets: Bicycle & Pedestrian Facility Guidelines, Rev. 2020
6 AASHTO, A Policy of Geometric Design of Highways and Streets, 2011
7 United States Access Board, Proposed Public Right-of-Way Accessibility Guidelines (PROWAG), 2011, see http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines

Appendix B

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Concept Alignment - Bridge #1

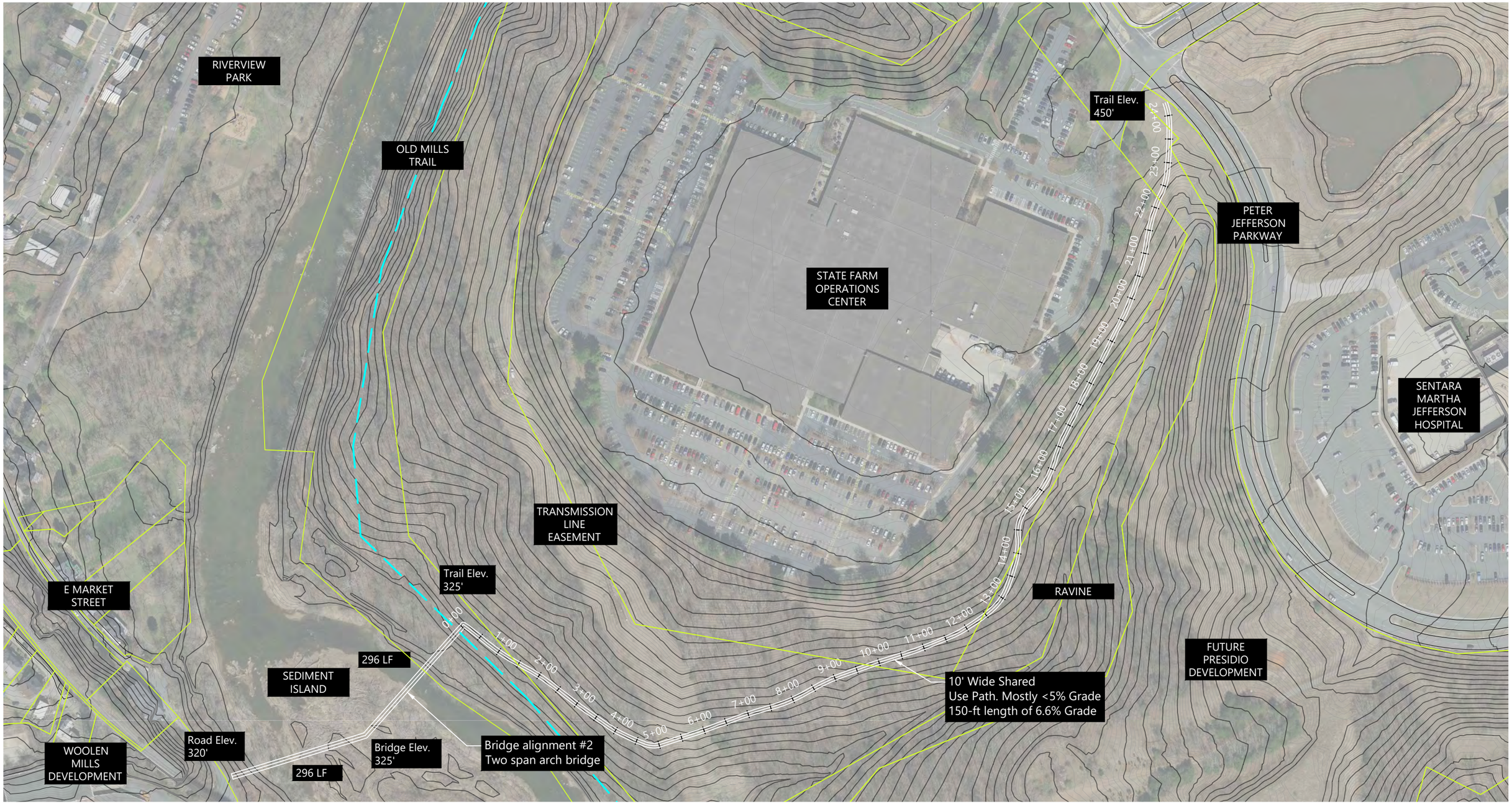
Rivanna River Path Crossing
Charlottesville, Virginia

Source:
Prepared for: **Memo Documentation**
Date: **June 2nd, 2020**

0 50 100 200 Feet

Appendix C

\\vhb\gbl\proj\Richmond\34418.24 VDOT TMPD Rivanna Path\cad\A-prjdwg\AlbemarleSurface_Bridge2_Alignment.dwg



Concept Alignment - Bridge #2

Rivanna River Path Crossing
Charlottesville, Virginia

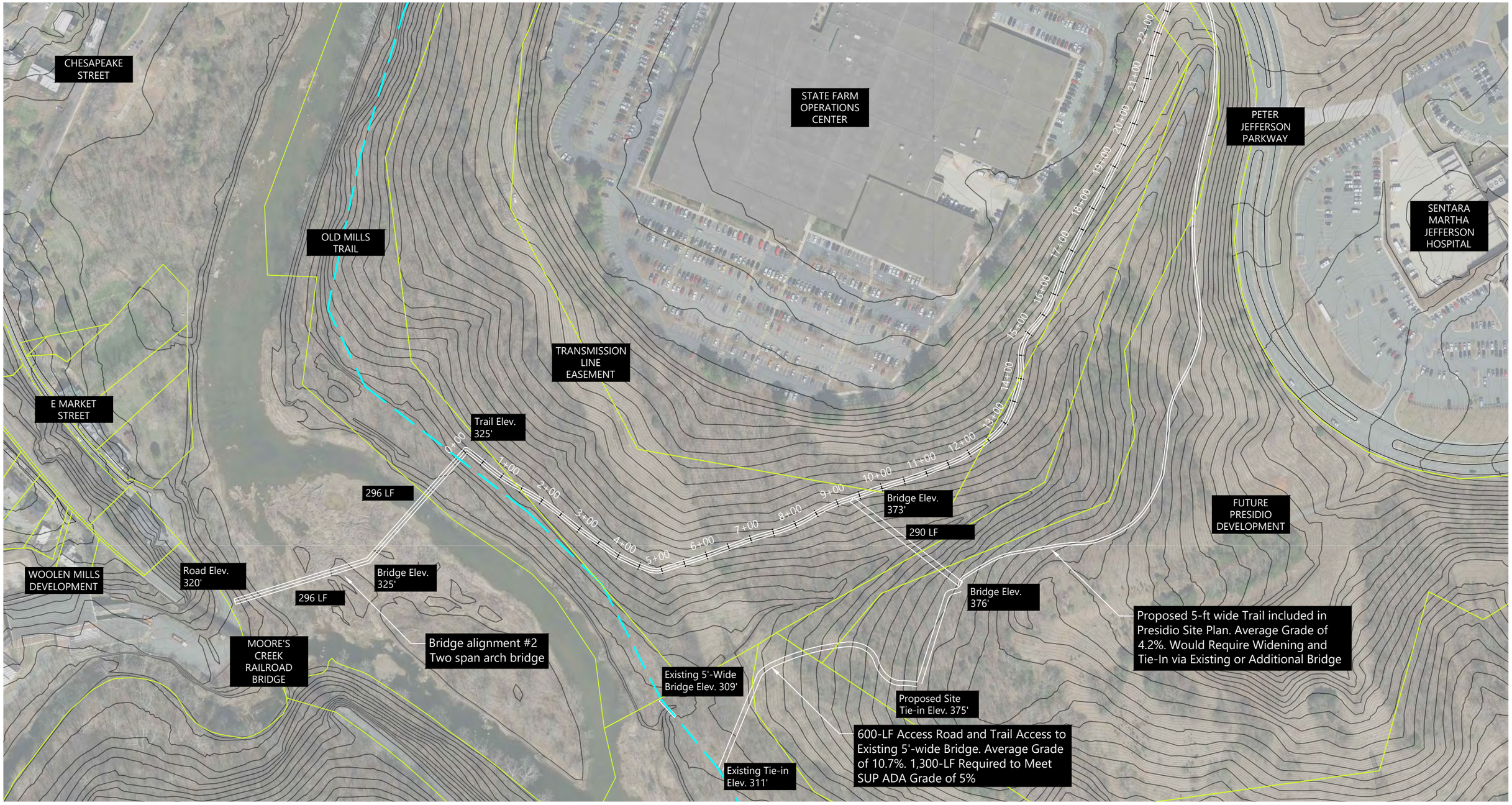
Source:
Prepared for: **Memo Documentation**
Date: **June 3rd, 2020**

0 50 100 200 Feet

vhb

Appendix D

\\vhb\gbl\proj\Richmond\34418.24 VDOT TMPD Rivanna Path\cad\A-prjdwg\AlbemarleSurface_NeighborhoodConnection.dwg



Concept Alignment - Potential Tie-In to Presidio Trail

Rivanna River Path Crossing
Charlottesville, Virginia

0 100 200 400 Feet

Source:
Prepared for: **Memo Documentation**
Date: **June 3rd, 2020**

Appendix E – Permitting Impacts

Rivanna River Trail

Summary of Environmental Permits Required

The proposed trail plan calls for a new suspended pedestrian bridge to cross the Rivanna River that would require environmental permits. This section outlines the expected environmental permitting of two alternative bridge concepts. Bridge Alignment #1 would cross the Rivanna River approximately 2,000 feet upstream from the confluence with Moores Creek. This crossing would include abutments on each side of the river channel to support a bridge deck situated at approximately 38 feet above the river elevation. The span between abutments is projected to be 240 feet long. Bridge Alignment #2 would cross the river approximately 300 feet upstream from the Moores Creek confluence. This bridge alignment has a longer span (592 feet) requiring a single support pier to be placed on an island of river sediment at approximately one half of the span distance. The elevation of the deck of Alignment #2 is projected to be set at 325 feet, which is approximately 25 feet above the normal water level of the river.

Wetland/Waters Regulatory Permits

Bridge Alignment #1 - The jurisdictional limits of the river would be determined by surveying the ordinary high water mark (OHWM) of the river bank presuming no adjacent vegetated wetlands are present. The OHWM is identifiable by physical features along the river bank as outlined in U.S. Army Corps of Engineers (USACE) guidance. The agencies having jurisdiction include the USACE, Virginia Department of Environmental Quality (VDEQ), and Virginia Marine Resources Commission (VMRC). Based on VHB's experience working in similar river settings, the channel is not likely to be deemed "navigable" by the U.S. Coast Guard, and no permit would be required from this agency. Likewise, VHB believes the USACE would not regulate this channel under the federal Section 10 of the Rivers and Harbors Act, but instead would regulate activities under Section 404 of the Clean Water Act.

USACE regulates the placement of fill material in jurisdictional 404 waters. Similarly, the VDEQ regulates the dredging, filling, and altering of state waters to include wetlands. VMRC regulates all activities place under, within, and over state bottomlands, defined in this case as any river channel having a drainage basin greater than 5 square miles (3,200 acres).

Bridge Alignment #1 would not require a permanent structure to be placed in the jurisdictional limits of the river. Nonetheless, a Joint Permit Application (JPA) would be required for submittal to the Virginia Marine Resources Commission (VMRC). This agency is the clearinghouse for the JPA, as they will transfer copies of the JPA to all local, state, and federal regulatory agencies for unilateral review as per each agency's regulations.

Assuming the USACE deems the Rivanna River a Section 404 waterbody and not a Section 10 navigable waterbody, VHB believes that because Alignment #1 would not place fill, dredge, or alter the Rivanna River, no permit would be required from the USACE and VDEQ. However, a permit would be required from the VMRC since the bridge crosses state bottomlands associated with the river channel.

Bridge Alignment #2

This bridge location would have bridge abutments within uplands on each side of the river. However, the design incorporates the use of an island in the center of the Rivanna River channel for the placement of a bridge support pier. For purposes of this analysis, VHB presumes that the section of the island where the pier would be located is either a jurisdictional wetland or is situated below the OHWM. Under this scenario, Alignment #2 would likely qualify for a Nationwide Permit 42 (Recreational Facilities) or Nationwide Permit 18 (Minor Discharge) provided the impact is less than 0.1 acre. The VDEQ, however, has issued state-wide Section 401 Water Quality Certification approval for Nationwide Permits 42 and 18 with conditions, meaning that a separate VDEQ permit would not be issued provided the USACE verifies the use of a Nationwide Permit. A VMRC permit would be needed just as described for Alignment #1.

Below is a permitting summary table for both bridge alignments.

	Permit Required?	
Permitting Agency	**Alignment #1**	**Alignment #2**
U.S. Army Corps of Engineers	No	Yes
Virginia Department of Environmental Quality	No	No
Virginia Marine Resources Commission	Yes	Yes
U.S. Coast Guard	No	No

Flood Zone Impacts

FEMA LOMR Case No. 16-03-1207P, dated February 6, 2017, revised the effective Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM), both dated May 16, 2016 to reflect the removal of the dam, updated hydrologic and hydraulic analyses and updated topography. As a result, the 100-year floodplain elevation and floodway elevation were lowered at the project site (depicted in the attached figure).

In the vicinity of the southern suspension bridge with an assumed deck elevation of 325', the FEMA-mapped 100-year floodplain elevation is approximately 324.1'. At the northern single-span suspension bridge with an assumed deck elevation of 338', the FEMA-mapped 100-year floodplain elevation is approximately 324.2'.

Approvals:

Per the Albemarle County Code Floodplain Overlay District Section 30.3.11, the proposed bridges would require hydraulic modelling to determine the impact of the bridges on the 100-year floodplain elevation

and boundary and the mapped floodway. The bridges would classify as a by-right development if it can be demonstrated that they result in no change to the floodplain elevation or boundary, in addition to being reviewed and approved by the department of community development. Included in the approval process would be the submittal of a Floodplain Development Permit and Land Disturbance Permit to Albemarle County.

If the bridges do raise the floodplain elevation or increase the floodplain boundary, then in addition to the permits above, a Special Use Permit would be required from Albemarle County, and a Conditional Letter of Map Revision from FEMA. These would include notification of affected landowners, of which there are a few private landowners with property in the floodplain along the shoreline at and upstream of the project area.

City of Charlottesville would require a Floodplain Development Permit and the same approval process by FEMA if the bridges result in an increase to the floodplain elevation or boundary.

Considerations:

While the bridges are proposed at elevations above the 100-year floodplain and floodway, which is 0.3 feet higher than the aforementioned floodplain elevations, both bridges have the potential to impact the floodplain elevation, boundary and floodway, when considering their approach and any fill or structures within the floodplain or floodway. Specifically of concern is the southern bridge with an assumed deck elevation of 325', which it can be assumed will have a bottom of deck/support structure ("low chord") below the floodplain/floodway elevation and would likely impact its elevation and boundary. Thus, it is recommended that the hydraulic analysis be examined early in the design process to see what modification may be necessary and at what cost/benefit depending on their effect on the floodplain/floodway, approval process, and design and construction.

Appendix F

SYIP PROJECTS

DETAILED PROJECT COST ESTIMATE SUMMARY

(Version: 1/21/2020 - CTS Modified)

Portal ID:		Project UPC:	
Prepared By:	Chuck Conran	Milestone	Creation/Pre Scope
Reviewed By:	Chris Daily	Date:	6/3/2020
County/City/Town:	Albemarle County (02)	Tier Level	1

Preliminary Engineering

Project Estimate Component		Proposed Project Cost Estimate ($)		
Discipline	Source	Base ($)	Contingency (%)	Total
Roadway	Profess. Judgement	$ 267,866	12.00%	$300,010
Hydraulics	Profess. Judgement	$ 28,196	12.00%	$31,580
In-plan Utilities	Profess. Judgement	$ 70,491	12.00%	$78,950
Traffic				$0
Structures/Bridges	Profess. Judgement	$ 690,813	12.00%	$773,710
Materials/Geotech	Profess. Judgement	$ 70,491	12.00%	$78,950
Survey	Profess. Judgement	$ 140,982	12.00%	$157,900
Environmental	Profess. Judgement	$ 42,295	12.00%	$47,370
Right of Way	Profess. Judgement	$ 28,196	12.00%	$31,580
Other	Profess. Judgement	$ 70,491	12.00%	$78,950
	VDOT Oversight Costs	$ 126,884	12.00%	$142,110
	Total PE Phase Estimate	**$ 1,536,705**	**12.00%**	$1,721,110
PE Base Estimate Date (XX/XX/XXXX)				
PE Phase Dates (XX/XX/XXXX)	Start Date		End Date	

Right-of-Way & Utilities

Discipline	Source	Base ($)	Contingency (%)	Total
Right-of-Way	Tax Map	$1,088,331	50.00%	$1,632,497
Out-of-Plan Utilities (power, cable, gas, etc.)				$0
	VDOT Oversight Costs	$54,417	50.00%	$81,625
	Total RW Phase Estimate	$1,142,748	**50.00%**	$1,714,121
RW Base Estimate Date (XX/XX/XXXX)				
RW Phase Dates (XX/XX/XXXX)	Start Date		End Date	

Construction

Discipline	Source	Base ($)	Contingency (%)	Total
Mobilization	AASHTO PreCon	$396,000	40.00%	$554,400
MOT	Profess. Judgement	$57,500	40.00%	$80,500
Roadway	Bid Tabs	$901,232	40.00%	$1,261,725
Hydraulics	Bid Tabs	$86,250	40.00%	$120,750
In-plan Utilities	Bid Tabs	$261,625	40.00%	$366,275
Traffic				$0
Structures/Bridges	Bid Tabs	$2,231,000	40.00%	$3,123,400
Materials/Geotech	Bid Tabs	$241,500	40.00%	$338,100
Soundwalls				$0
Other	Bid Tabs	$335,225	40.00%	$469,315
	Total Bid Items	**$4,510,332**	**40.00%**	**$6,314,465**
Incidental-Claims & Work Orders (Percentage of Bid Items)	5% to 10% max	225,517	40.00%	315,723
Railroad Flagging/Coordination				0
State Forces				0
State Police				0
Contract Requirements (Incentive/Disincentive)	5%			0
Construction Engineering (Inspection)	Environmental Inspection ($)			0
	VDOT or Locality ($)	902,066	40.00%	1,262,893
	VDOT Oversight ($)			0
	Total CEI			1,262,893
	Total CN Phase Estimate	**$5,637,915**	**40.00%**	**$7,893,081**
CN Base Estimate Date (XX/XX/XXXX)				
CN Phase Start Date (XX/XX/XXXX)				
CN Phase End Date (XX/XX/XXXX)				
Total Project Cost Estimate				**$11,328,312**

Appendix F - Cost Estimate

Project # 34418.24
Date: June 3, 2020

Rivanna River Shared Use Path Bridge Study
Alignment #1
VDOT Contract ID#46267
Opinion of Probable Construction Costs
Non-Inflated Costs are in FY2020 Dollars

Description	Unit	Quantity	Unit Cost	Extension
Mobilization				**$ 396,000.00**
Mobilization	LS	1	$ 396,000.00	$ 396,000.00
MOT				**$ 57,500.00**
Maintenance of Traffic	LS	1	$ 50,000.00	$ 50,000.00
			Subtotal	$ 50,000.00
			+15% Unaccounted for Items	$ 7,500.00
Roadway				**$ 901,232.00**
Erosion Control	LS	1	$ 125,000.00	$ 125,000.00
Clearing and Grubbing	AC	1.5	$ 50,000.00	$ 75,000.00
Earthwork	LS	1	$ 450,000.00	$ 450,000.00
Aggregate Base Material TY. I No. 21B	TON	975	$ 75.00	$ 73,125.00
ASPHALT CONCRETE; SM-9.5A	TON	367	$ 165.00	$ 60,555.00
			Subtotal	$ 783,680.00
			+15% Unaccounted for Items	$ 117,552.00
Hydraulics				**$ 86,250.00**
Stormwater Management	LS	1	$ 75,000.00	$ 75,000.00
			Subtotal	$ 75,000.00
			+15% Unaccounted for Items	$ 11,250.00
In-plan Utilities				**$ 261,625.00**
Light Pole, Fixture and Foundation	EA	35	$ 6,500.00	$ 227,500.00
			Subtotal	$ 227,500.00
			+15% Unaccounted for Items	$ 34,125.00
Structures/Bridges				**$ 2,231,000.00**
Cable-stayed Bridge	LF	240	$ 6,000.00	$ 1,440,000.00
Structural Abutment	EA	2	$ 75,000.00	$ 150,000.00
Truss Land Bridge	LF	200	$ 1,500.00	$ 300,000.00
Truss Bridge Piers	EA	2	$ 25,000.00	$ 50,000.00
			Subtotal	$ 1,940,000.00
			+15% Unaccounted for Items	$ 291,000.00
Materials/Geotech				**$ 241,500.00**
Retaining Walls (2' - 4' HT.)	LF	1500	$ 140.00	$ 210,000.00
			Subtotal	$ 210,000.00
			+15% Unaccounted for Items	$ 31,500.00
Other				**$ 335,225.00**
Construction Surveying	LS	1	$ 40,000.00	$ 40,000.00
Field Office	MO	18	$ 3,000.00	$ 54,000.00
Landscaping	LS	1	$ 50,000.00	$ 50,000.00
Regulatory Signage	LS	1	$ 7,500.00	$ 7,500.00
Seating Areas along trail	EA	3	$ 20,000.00	$ 60,000.00
Trailhead Structure	EA	2	$ 25,000.00	$ 50,000.00
Trailhead Signage, Seating, and Bike Racks	LS	1	$ 30,000.00	$ 30,000.00
			Subtotal	$ 291,500.00
			+15% Unaccounted for Items	$ 43,725.00

CN Total		**$ 7,893,081.00**
Subtotal		$ 4,510,332.00
Work Orders	5%	$ 225,516.60
CEI	20%	$ 902,066.40
Sub-Total		$ 5,637,915.00
CN Contingency	40%	$ 2,255,166.00

SYIP PROJECTS

DETAILED PROJECT COST ESTIMATE SUMMARY

(Version: 1/21/2020 - CTS Modified)

Portal ID:		Project UPC:	
Prepared By:	Chuck Conran	Milestone	Creation/Pre Scope
Reviewed By:	Chris Daily	Date:	6/3/2020
County/City/Town:	Albemarle County (02)	Tier Level	1

Preliminary Engineering

Project Estimate Component		Proposed Project Cost Estimate ($)		
Discipline	Source	Base ($)	Contingency (%)	Total
Roadway	Profess. Judgement	$ 302,813	12.00%	$339,150
Hydraulics	Profess. Judgement	$ 31,875	12.00%	$35,700
In-plan Utilities	Profess. Judgement	$ 79,688	12.00%	$89,250
Traffic				$0
Structures/Bridges	Profess. Judgement	$ 780,938	12.00%	$874,650
Materials/Geotech	Profess. Judgement	$ 79,688	12.00%	$89,250
Survey	Profess. Judgement	$ 159,375	12.00%	$178,500
Environmental	Profess. Judgement	$ 47,813	12.00%	$53,550
Right of Way	Profess. Judgement	$ 31,875	12.00%	$35,700
Other	Profess. Judgement	$ 79,688	12.00%	$89,250
VDOT Oversight Costs		$ 143,438	12.00%	$160,650
Total PE Phase Estimate		**$ 1,737,188**	**12.00%**	$1,945,650
PE Base Estimate Date (XX/XX/XXXX)				
PE Phase Dates (XX/XX/XXXX)	Start Date		End Date	

Right-of-Way & Utilities

Discipline	Source	Base ($)	Contingency (%)	Total
Right-of-Way	Tax Map	$963,606	50.00%	$1,445,409
Out-of-Plan Utilities (power, cable, gas, etc.)				$0
VDOT Oversight Costs		$48,180	50.00%	$72,270
Total RW Phase Estimate		$1,011,786	**50.00%**	$1,517,679
RW Base Estimate Date (XX/XX/XXXX)				
RW Phase Dates (XX/XX/XXXX)	Start Date		End Date	

Construction

Discipline	Source	Base ($)	Contingency (%)	Total
Mobilization	AASHTO PreCon	$595,000	40.00%	$833,000
MOT	Profess. Judgement	$57,500	40.00%	$80,500
Roadway	Bid Tabs	$870,372	40.00%	$1,218,520
Hydraulics	Bid Tabs	$86,250	40.00%	$120,750
In-plan Utilities	Bid Tabs	$261,625	40.00%	$366,275
Traffic				$0
Structures/Bridges	Bid Tabs	$4,398,750	40.00%	$6,158,250
Materials/Geotech	Bid Tabs	$193,200	40.00%	$270,480
Soundwalls				$0
Other	Bid Tabs	$335,225	40.00%	$469,315
Total Bid Items		**$6,797,922**	**40.00%**	**$9,517,090**
Incidental-Claims & Work Orders (Percentage of Bid Items)	5% to 10% max	339,896	40.00%	475,855
Railroad Flagging/Coordination				0
State Forces				0
State Police				0
Contract Requirements (Incentive/Disincentive)	5%			0
Construction Engineering (Inspection)	Environmental Inspection ($)			0
	VDOT or Locality ($)	1,359,584	40.00%	1,903,418
	VDOT Oversight ($)			0
	Total CEI			1,903,418
Total CN Phase Estimate		**$8,497,402**	**40.00%**	**$11,896,363**
CN Base Estimate Date (XX/XX/XXXX)				
CN Phase Start Date (XX/XX/XXXX)				
CN Phase End Date (XX/XX/XXXX)				
Total Project Cost Estimate				**$15,359,693**

Project # 34418.24
Date: June 3, 2020

Rivanna River Shared Use Path Bridge Study
Alignment #2
VDOT Contract ID#46267
Opinion of Probable Construction Costs
Non-Inflated Costs are in FY2020 Dollars

Description	Unit	Quantity	Unit Cost	Extension
Mobilization				**$ 595,000.00**
Mobilization	LS	1	$ 595,000.00	$ 595,000.00
MOT				**$ 57,500.00**
Maintenance of Traffic	LS	1	$ 50,000.00	$ 50,000.00
			Subtotal	$ 50,000.00
			+15% Unaccounted for Items	$ 7,500.00
Roadway				**$ 870,371.75**
Erosion Control	LS	1	$ 125,000.00	$ 125,000.00
Clearing and Grubbing	AC	1.5	$ 50,000.00	$ 75,000.00
Earthwork	LS	1	$ 450,000.00	$ 450,000.00
Aggregate Base Material TY. I No. 21B	TON	780	$ 75.00	$ 58,500.00
ASPHALT CONCRETE; SM-9.5A	TON	293	$ 165.00	$ 48,345.00
			Subtotal	$ 756,845.00
			+15% Unaccounted for Items	$ 113,526.75
Hydraulics				**$ 86,250.00**
Stormwater Management	LS	1	$ 75,000.00	$ 75,000.00
			Subtotal	$ 75,000.00
			+15% Unaccounted for Items	$ 11,250.00
In-plan Utilities				**$ 261,625.00**
Light Pole, Fixture and Foundation	EA	35	$ 6,500.00	$ 227,500.00
			Subtotal	$ 227,500.00
			+15% Unaccounted for Items	$ 34,125.00
Structures/Bridges				**$ 4,398,750.00**
Arched Truss Bridge	LF	600	$ 6,000.00	$ 3,600,000.00
Structural Abutment	EA	2	$ 75,000.00	$ 150,000.00
Truss Bridge Piers	EA	1	$ 75,000.00	$ 75,000.00
			Subtotal	$ 3,825,000.00
			+15% Unaccounted for Items	$ 573,750.00
Materials/Geotech				**$ 193,200.00**
Retaining Walls (2' - 4' HT.)	LF	1200	$ 140.00	$ 168,000.00
			Subtotal	$ 168,000.00
			+15% Unaccounted for Items	$ 25,200.00
Other				**$ 335,225.00**
Construction Surveying	LS	1	$ 40,000.00	$ 40,000.00
Field Office	MO	18	$ 3,000.00	$ 54,000.00
Landscaping	LS	1	$ 50,000.00	$ 50,000.00
Regulatory Signage	LS	1	$ 7,500.00	$ 7,500.00
Seating Areas along trail	EA	3	$ 20,000.00	$ 60,000.00
Trailhead Structure	EA	2	$ 25,000.00	$ 50,000.00
Trailhead Signage, Seating, and Bike Racks	LS	1	$ 30,000.00	$ 30,000.00
			Subtotal	$ 291,500.00
			+15% Unaccounted for Items	$ 43,725.00

CN Total		**$ 11,896,363.06**
Subtotal		$ 6,797,921.75
Work Orders	5%	$ 339,896.09
CEI	20%	$ 1,359,584.35
Sub-Total		$ 8,497,402.19
CN Contingency	40%	$ 3,398,960.88

Appendix G – Bridge and Trail Renderings

Alignment Concept 1 – Bridge Rendering



Ref: Rivanna River Pedestrian Path Concept
May 26, 2020

Alignment Concept 1 – Bridge Perspective Rendering



Alignment Concept 1 – Bridge Perspective Rendering



Ref: Rivanna River Pedestrian Path Concept
May 26, 2020

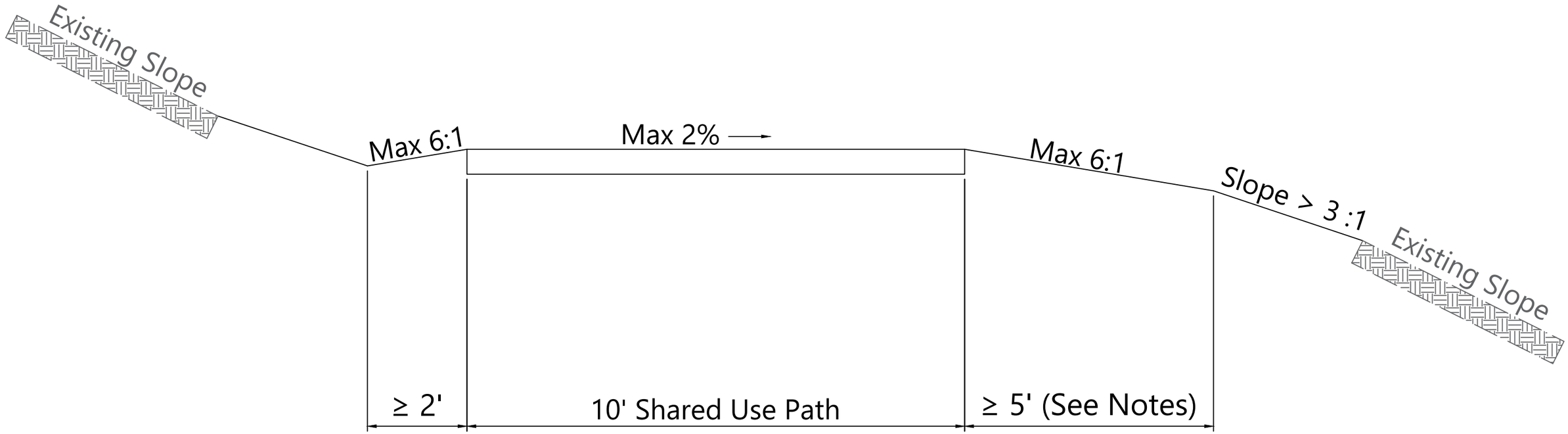
Alignment Concept 2 – Bridge Rendering



Ref: Rivanna River Pedestrian Path Concept
May 26, 2020

North Trailhead (Both Concepts) – Intersection of Peter Jefferson Highway and State Farm Boulevard





Rivanna River Shared Use Path Typical Section

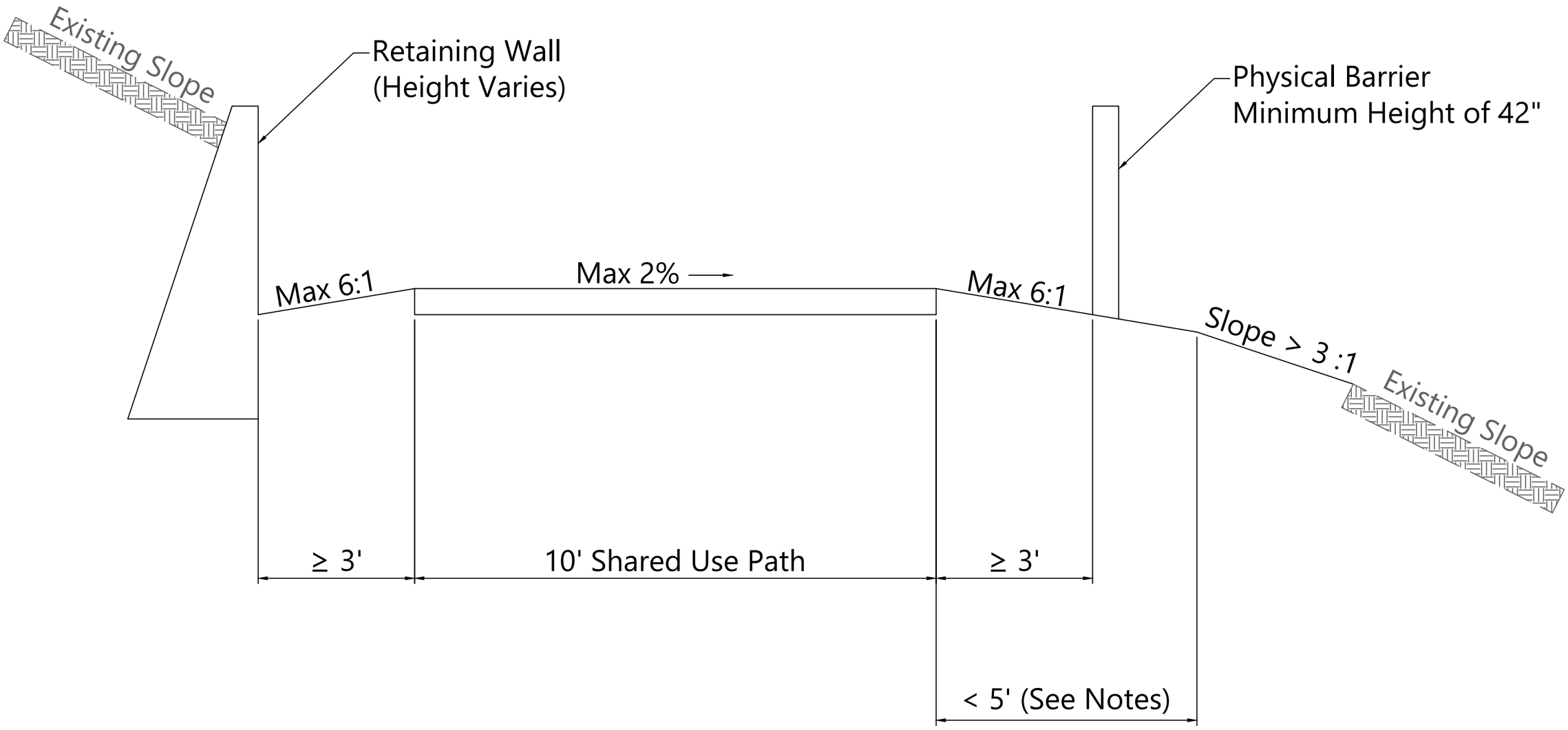
May 2020

VDOT Virginia Department of Transportation

NOTES

- Minimum 5' separation required from edge of Shared Use Path to downward slopes steeper than 3:1.
- Typical section is for illustrative purposes only. Survey has not been performed. Existing slopes are unknown.

0 1 2 4 Feet



Rivanna River Shared Use Path
Typical Section

May 2020

VDOT
Virginia Department of Transportation

NOTES

Physical Barrier (e.g. fence or handrail) required if less than 5' separation from:

- Slopes 2:1 or steeper, with a drop of 4 feet or greater
- Slopes 3:1 or steeper, with a drop of 6 feet or greater
- Slopes 3:1 or steeper, adjacent to parallel water hazard (greater than 2 feet deep) or other obvious hazard
- Retaining wall or structure with a drop-off of 1 foot or more

NOTES (cont'd)

- Typical section is for illustrative purposes only. Survey has not been performed. Existing slopes are unknown.

0 1 2 4 Feet

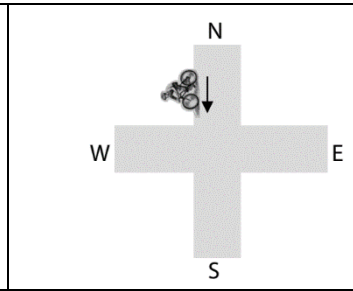
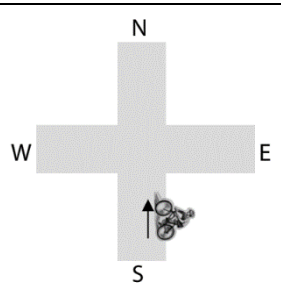
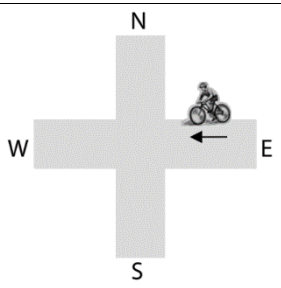
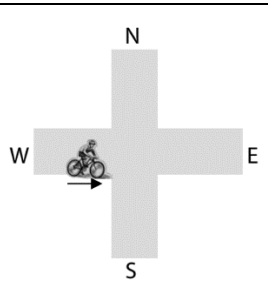
Bicycle and Pedestrian Count Sheet (2020-2021)

Date: _____ Location: _____ ☐ Weekday ☐ Weekend

Time (fill in hour)		Enters from:	Count Bicyclists	Count Pedestrians	Tally if female*	Tally if <16 years of age*	Tally if non-white*	Tally if physical limitation*	Tally if wearing a helmet	Tally if wrong-way riding
	:00 - :14	N								
		S								
		E								
		W								
	:15 - :29	N								
		S								
		E								
		W								
	:30 - :44	N								
		S								
		E								
		W								
	:45 - :59	N								
		S								
		E								
		W								

Notes (Construction, crashes, inclement weather, etc.):	Motorized scooter/bike (tally above as bicycle AND here):

References and Reminders

				
	This individual is entering the intersection from the north and would be tallied as "Enters from N" regardless of whether they turn at the intersection.	This individual is entering the intersection from the south and would be tallied as "Enters from S" regardless of whether they turn at the intersection.	This individual is entering the intersection from the east and would be tallied as "Enters from E" regardless of whether they turn at the intersection.	This individual is entering the intersection from the west and would be tallied as "Enters from W" regardless of whether they turn at the intersection.
Monticello Ave/6th Street SE	On 6th Street (travelling against one-way traffic)	Coming from 6th Street (where it is two-way)	Coming from Monticello Ave (side with houses)	Coming from Monticello Ave (side with community garden)
John Warner Parkway and Rio Road	On John Warner Parkway with CATEC on bicyclist's/ped's right	On John Warner Parkway with CATEC on bicyclist's/ped's left	On Rio Road heading towards CATEC	Leaving CATEC
Emmet Street and Ivy Road	On Emmet heading towards the main part of campus	On Emmet leaving the main part of campus	On University Ave	On Ivy Road
9th Street and Market St	On 9th heading towards Belmont Bridge	On 9th heading away from Belmont Bridge	On Market heading towards downtown	On Market heading away from downtown
Rio Rd and Pen Park Rd	On Rio heading towards C-ville Catholic School	On Rio heading away from C-ville Catholic School	On Pen Park Rd	On Waldorf School Rd
5th St and Old Lynchburg	On 5th St before it becomes Old Lynchburg	On Old Lynchburg before it becomes 5th St	On older section of Old Lynchburg (parallel to Wahoo Way)	Exiting Albemarle Count complex

- Weekday morning counts are done from 7am-9am; Weekday afternoon counts are from 4pm-6pm; Weekend counts are 8am-11am
- Please remember to bring 1) one count sheet for each hour of counting, 2) a pen/pencil, 3) time-keeping device, 4) a face-covering to use if not able to physically distance, and 5) water, chair, sun protection and any other materials to ensure comfort during the count
- Please arrive 10 minutes before your scheduled shift to ensure you are ready to start counting on time
- Count people, not bikes! If two people are on a bike (tandem, parent and child in child seat or trailer, etc.), make two tally marks.
- For the purposes of this count, skateboarders, rollerbladers, wheelchair users, and kids in strollers are all considered pedestrians. Motorized bikes are scooters are considered bicycles.
- Demographic information (noted with a * on the count sheet) is based on the best guess of the counter and we acknowledge that the demographic counts cannot be completely accurate. Nonetheless, the bicycle and pedestrian count committee believes these estimates are valuable for planning purposes.
- Within one week of completing your count, please email a scan or photo of your count form to Jessica at jballering@tjpdc.org.