

RICHLAND COUNTY COUNCIL

SOUTH CAROLINA



TRANSPORTATION AD HOC COMMITTEE

May 31, 2018
1:30PM
Council Chambers

1. Call to Order
2. Approval of Minutes (Pages 1-16)
3. Adoption of the Agenda
4. Widening Memorandum (Pages 17-47)
5. County Letter to SCDOT Regarding the \$52.5 million for the I-20/Broad River Interchange
6. Greenway Memorandum (Pages 48-59)
 - Three Rivers Greenway
 - Lincoln Tunnel
 - Gills Creek Section A
 - Gills Creek Section B
 - Gills Creek Section C
 - Smith/Rocky Branch Sections A, B, C
 - Crane Creek Sections A, B, C
 - Columbia Mall Greenway
 - Polo/Windsor Lake Connector, Woodberry/ Old Leesburg Connector, and Dutchman Boulevard Connector
7. Bluff Road Phase 1 Final Change Order (Pages 60-66)
8. Gills Creek Greenway Section A Final Design Approval (Pages 67-87)
9. 2018 Build Grant Application for Shop Road Extension Phase 2 (Pages 88-99)
10. 2017 Annual Report
11. PDT Update
12. Adjournment

Committee Members

Calvin "Chip" Jackson, Chair
District Nine

Bill Malinowski
District One

Yvonne McBride
District Three

Paul Livingston
District Four

Norman Jackson
District Eleven



Richland County Council
Transportation Ad Hoc Committee
May 10, 2018 – 1:30 PM
Administration Conference Room
2020 Hampton Street, Columbia 29204

COMMITTEE MEMBERS PRESENT: Calvin “Chip” Jackson, Chair; Yvonne McBride, Paul Livingston, Bill Malinowski, and Norman Jackson

OTHER COUNCIL MEMBERS PRESENT: Jim Manning

OTHERS PRESENT: Michelle Onley, Tony Edwards, Nathaniel Miller, Melissa Watts, John Thompson, Michelle Rosenthal, Larry Smith

1. **Call to Order** – Mr. C. Jackson called the meeting to order at approximately 1:30 PM
2. **Approval of the Minutes**
 - a. March 29, 2018 – Ms. McBride moved, seconded by Mr. Livingston, to approve the minutes as submitted. The vote in favor was unanimous.
3. **Adoption of the Agenda** – Mr. C. Jackson stated a discussion of the reimbursement policy with the PDT was inadvertently left off the agenda and needs to be added.

Mr. N. Jackson moved, seconded by Mr. Livingston, to approve the agenda as amended. The vote in favor was unanimous.

4. **Greenway Projects** – Mr. Beaty stated the Greenway Memo is included in the agenda. If you recall, there were 15 Greenways in the referendum. Once the PDT was under contract, they prioritized the greenways 1 – 15. To date, one greenway, Lincoln Tunnel, has been completed. The second, Three Rivers Greenway Extension, is under construction. A third greenway, Gills Creek Section A, is in the design phase.

There have been a number of issues with how we get the rest of the greenways under design. The PDT’s memo is a proposal to get the other 13 greenways moving to some stage of design. There were 3 groups; 2 were Smith/Rock Branch and Crane Creek Sections A, B, and C. So instead of studying each individual section alone, they are proposing to group them for the preliminary studies to expedite time and save money in the study process.

Another part of the recommendation is smaller greenway, Columbia Mall, which crosses Decker Boulevard. There is a current Neighborhood Plan with the Decker/Woodfield Neighborhood Improvement. They propose to add that small plan to the Decker/Woodfield Neighborhood Improvement to expedite time and money.

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The other significant recommendation they are making is Gills Creek Section 2. It is a section that runs behind Kings Grant neighborhood. There has been a lot of discussion with Gills Creek Section A to get us to the point where we are today. Gills Creek B has had some opposition from the Kings Grant neighborhood. They have expressed in attendance at public meetings for Gills Creek Section A. They have written a letter, which is included in the agenda packet. Since there is strong support for extending Gills Creek A, and a lot of opposition from the community for Gills Creek B, it is the PDT's recommendation to move the monies from Gills Creek B to Gills Creek A.

To summarize, the PDT's recommendations are to try to expedite the remaining design and move Gills Creek B to Gills Creek A.

Ms. McBride inquired if there were any legal issues in changing the priority of the projects. In addition, she inquired if the 15 greenway projects were stated in the referendum.

Mr. Beaty stated the 15 greenways were listed, but in no order. Council chose the prioritization. This has been a Council decision up to this point.

Mr. Malinowski stated, for clarification, he does not believe that was Ms. McBride's question. Her question was were the 15 greenways listed on the referendum. That is a yes or no.

Ms. McBride stated now there are requests to change how they were prioritized. That part was done by Council, correct?

Mr. Livingston stated Council approved the criteria for prioritization that went to the PDT. Before it went to the PDT, it went to the Advisory Council. They looked at it and made recommendations. Then it went to Council for a vote.

Mr. N. Jackson inquired about the length of Gills Creek B.

Mr. Beaty stated he is not certain, but off the top of his head he believes it is 1 ½ to 2 miles.

Mr. N. Jackson the reason he is asking is because the costs of Gills Creek Section B is \$2,785,000 and then adding it Gills Creek Section A for an additional \$2,785,000. He inquired if Section B is the same length as Section A. He also inquired if when the interim plan was done was Kings Grant involved in the process or did we decided to put it in their community without asking.

Mr. Beaty stated he reviewed the original technical memos that were prepared by Parsons Brinkerhoff to assist in the referendum and a series of public meetings were held in the community, but not specifically with Kings Grant.

Mr. N. Jackson stated Kings Grant is saying they do not want it in their community now. We have to amend everything because of their refusal.

Mr. C. Jackson stated, for clarification, it will require 3 Readings and a public hearing.

Mr. N. Jackson stated one of their concerns is there is no lighting or security. He inquired if there is something we can do to make it safer.

Mr. Beaty stated the County and the City have entered into a maintenance agreement for Gills Creek A. It will be lighted and security will be provided by the City of Columbia. What we could do is extend Gills Creek

A and update the agreement with the City. The intent, in discussions with the City, is that all of the greenways within the City limits would be maintained, and security provided, by the City. Another piece of information about Gills Creek B, there is an existing greenway/bikeway that goes through Fort Jackson. Part of Gills Creek B was going to replace that existing greenway and place it just outside of Fort Jackson, which was done without a lot of communication with the Kings Grant neighborhood. Once it has been more known publicly, they have come out requesting Gills Creek B not be constructed.

Ms. McBride stated she was looking at the date of the chart about the priority ranking. She accepted that Council decided to prioritize, rather than in the referendum, but she is sure there were some guidelines used with the prioritization. And looking at Gills Creek B that is probably the most expensive one on the chart. Then looking at the first 6 priorities are in the City of Columbia. The remaining are within Richland County. She stated the PDT has grouped them to help reduce some of the costs.

Mr. Beaty stated on p. 20 of the agenda packet under "Maintenance" he has listed which ones are within the City and which ones are without the City. The first 3 are within the City and we have agreements. The next 5 are within the City and the remainder are outside the City. The County would be required to maintain those greenways. The recommendation is to combine Smith Rocky Branch A, B, and C and do the preliminary study together. Once we get the details worked out, we could implement them in order of priority. So that way we have one public meeting, but if one is lower in the priority let's go ahead and knock out the public meeting, expedite the process and save money. The recommendation is still that each greenway will be cost constrained, with the exception of Gills Creek B.

Mr. Malinowski stated, for clarification, the recommendation is for the greenways to remain cost-constrained. He inquired if we have enough funds in all of these referendum costs to cover what is listed in all of these projects, at this point and time.

Mr. Beaty stated very few of these can we build the entire termini for the referendum amount because costs have gone up. If we proceed with cost-constrained, we simply build shorter amount of the greenway. Now, Three Rivers Greenway Extension is going to come in under the \$7.9 million. Lincoln Tunnel came in right at the amount. The others we have not developed any final plans for us to say, with certainty, but with likelihood we will not be able to build the complete termini.

Mr. Malinowski stated it seems to him then that rather than one particular project benefit, to the exclusion of the others. If someone does not want their project and it is decided to eliminate it, then those funds should be shared equally to make them all stretch as far as they can.

Mr. N. Jackson inquired about what type of material is used to construct the greenways.

Mr. Beaty stated where it is not going to flood often they construct the greenways out of concrete, which is the cheapest. Where it does flood, the greenways are boardwalks that are made out of pressure treated lumber. The City of Columbia's greenway width requirements have changed since the referendum. For instance, since they are maintaining it, they are requiring that Gills Creek A be 14 ft. wide. Three Rivers Greenway, which is under construction, is 8 ft. wide. So, the City's requirements are urban greenways shall be 14 ft. wide, which has contributed to the costs.

Mr. N. Jackson stated then the City is altering the plan and driving up the costs.

Mr. Beaty stated the plan never specified the width. The referendum said from Point A to Point B, but the standard in Columbia, at that time, was 8 – 10 ft.

Mr. N. Jackson stated the money allotted, at that time, was X amount, right? So, they are increasing the costs. He has a concern with the County adding to the costs because the City decided to change the standards.

Mr. Livingston stated, based on what he heard Mr. Beaty say, if you stay within the amount of costs for each project how are you increasing costs? You might get a shorter greenway, but you are certainly not increasing the costs.

Mr. N. Jackson stated then you would not achieve the length you wanted, so anything extra would be an additional costs.

Mr. Livingston stated you are not going to achieve the length you want on any of them because of the costs.

Mr. N. Jackson stated this one specifically because they changed from 8 ft. to 14 ft. The length may be shorter because the costs were driven up because of the City's new design.

Mr. Beaty stated there are 5 more located in the City. The understanding has been the City will maintain those, but their understanding is we are going to design it to their standards. The total costs does not change. It's just if you build it twice as wide, you are going to build it twice as short.

Mr. Malinowski stated so the City has snookered the County from the referendum till now by saying let's make it bigger and better.

Mr. N. Jackson stated that is just one of his concerns. It was designed a specific way. Money was allocated a certain way. And then the City says it needs to be so much wider. It is going to drive up the costs or shortened the project.

Mr. C. Jackson stated Mr. Malinowski's point is a critical point. If almost \$3 million is one greenway and they do not want it, rather than rolling it over to another greenway how does benefit if we took that \$3 million and spread it out among the remaining greenways that are being installed.

Mr. Beaty stated we have not conducted the public meetings on the other groups.

Mr. C. Jackson stated so there could be another King's Grant out there somewhere waiting.

Mr. N. Jackson inquired if we are trying to tie these trails together.

Mr. Beaty responded they are where they can. We have already shortened A from its original termini in the referendum, per public input and Council action. By moving the money from B to A, you have the opportunity to create connectivity. If we had enough money to go all the way to Ft. Jackson to the Devine area and connect it to Timberlane, where of the flooding is taking place, we could combine funds with the flood recovery efforts and provide connectivity to there. Hopefully, we can extend it closer to Shop Rd. Where it will widen it and provide bike/pedestrian accommodations. You would provide better connectivity if you extended A.

Mr. Livingston stated his perception of the greenway, the City and the width. He stated let's keep in mind the referendum was passed. There are a lot of things that have changed since that particular time. Residents of the City of Columbia pay this penny also. They also have elected officials who represent them in the City of Columbia, so it does not bother him if the City of the Columbia if they want to widen it or whatever because they will be maintaining the greenway and they have a right to make decisions for the City of Columbia.

Mr. N. Jackson stated he is fine with shortening the length and/or extending the length, but he is concerned with adding money to the project because of the change of the design.

Ms. McBride stated, going back to her earlier point, the \$2.7 million that could fund 3 other projects that are located in Richland County. The top ones are located in the City of Columbia. She inquired as to how many of the 15 greenways the County will be able to fund.

Mr. Beaty stated the proposal is that we fund all of them within their referendum amount. The question would be how short or how far we can get for the money. The County will be able to do them all, with the exception of B, but at a different length.

Mr. Livingston stated, for clarification, the recommendations were to move the money from B to A and to initiate the design of the remaining projects at one time.

Mr. Beaty stated the design would only go through 30% and then it would come back to Council for guidance on continuing.

Mr. Malinowski stated he can support the one where the projects are all funded within the referendum amount.

Mr. Beaty stated his recommendation is that each one individually be funded within its individual referendum amount.

Mr. Malinowski stated, to take B out and move it to A, we are far exceeding the amount given. He believes if it is removed it needs to be held back until all of the projects are completed. The pot of money left over should be equally shared among the projects, so they can all achieve the greatest length.

Mr. N. Jackson stated there may have been some areas that got left off because there were no funds. We could look at those areas also to see where we could put some greenways.

Mr. C. Jackson stated Mr. Beaty noted they had not done all of the public community forums yet, there may be some other discussion in the upcoming ones that might impact us.

Mr. Beaty stated he is certain there will be.

Mr. C. Jackson stated, for clarification, the recommendation would be to approve the request for the design work and exclude the obligation of funding for B.

Mr. Livingston moved, seconded by Mr. Malinowski, to forward to Council with a recommendation to approve the request to design all of the projects at one time and exclude the obligation of funding for Gills Creek Greenway Section B. The vote in favor was unanimous.

5. **Greene Street Tract 61** – Mr. Beaty stated Greene Street Tract 61 is a tract that requires a small amount of right-of-way for Greene Street Phase II. There is no available deed for the property that the PDT, or the property owner, has been able to locate. In order to move forward with the project, they are recommending that it go to condemnation so that public notice can be issued. That way Richland County knows who they can cut the check to for this small amount of right-of-way.

Mr. Smith stated this matter was sent to his office a couple weeks ago. He requested, at that time, they

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provide him with a copy of the attorney's title opinion. Obviously, we need to know who is the record owner of the property and if there are other lien holders we would have to name them as a party, even if we were going to condemn. If we can get a copy of the title opinion, that may assist with moving forward.

Mr. C. Jackson inquired as to who would have the title opinion.

Mr. Smith stated we have a group of lawyers that assist Mr. Beaty and the Right-of-Way personnel to do the title work on any property that we are going to acquire. He assumes the attorney and/or firms working with the PDT would be responsible for getting that information.

Mr. Beaty stated they have been in contact with the property owner. He acquired the property about 40 years ago. He cannot physically find his deed. He is okay with a condemnation of the piece of property and being paid for it. They actually went back to the property owner after the last ad hoc committee meeting to double check on the deed. The property owner owns multiple properties. He has looked multiple times. He has been paying taxes for 40 years, but he does not have the physical deed.

Mr. Smith stated even if he does not, if he is the property owner it should be at the Register of Deeds. If you get a title opinion, it would show us the chain of title.

Mr. Beaty stated it is not at the Register of Deeds.

Mr. Smith stated we still need the title opinion to see exactly how and who he acquired it from.

Mr. Livingston inquired as to how you get a title opinion.

Mr. Smith stated the attorneys do it.

Mr. Beaty stated there is no title to give an opinion on. It is not at the Register of Deeds.

Mr. Smith stated he may not have his deed, but he had to have acquired the property from someone. So, there is a chain. You usually do a title search back 20 years and that will show us the chain to see whether or not he is the owner. We have to condemn the property based on who the titleholder is and if we cannot find a deed on record, and he does not have a deed, then that does complicate the matter because we do not know that he is the titleholder.

Mr. Malinowski stated he sees a conflict in the terminology on p. 33 of the agenda, "The County Assessor's Office currently shows ownership of this property as follows: Columbia Outdoor Adv Inc...." then it states "When we cannot determine ownership..."

Mr. Beaty stated the Tax Assessor shows this person as the owner and paying taxes, but there is no physical deed.

Mr. Malinowski inquired if we have went through the complete process to allow the County to take the property.

Mr. Beaty stated they have researched all of the available data. They have gone to the courthouse. The Tax Assessor says, "Yeah, this gentleman has been paying taxes for 40 years." And this gentleman says, "I just cannot find my title." Neither can our attorneys.

Mr. Smith inquired if there was anything in the agenda documentation from the attorneys about this piece

of property before this gentleman purportedly became the owner.

Mr. Beaty stated the Tax Assessor shows that the property was acquired in 1976 and who he bought it from.

Ms. Heizer inquired if there was a deed prior to 1976 that shows the prior owner.

Mr. Beaty stated there is not and that is the problem.

Mr. Livingston moved, seconded by Mr. Malinowski, to forward to Council with a recommendation for approval contingent upon the outcome of the conversation between the attorneys. The vote in favor was unanimous.

6. **Shared Use Plan** – Dr. Thompson stated legal has reviewed the documents for the Southeast Richland Neighborhood Project, the Clemson Road Project and the Polo Road Project. The information has been submitted to the SCDOT for review.

Mr. Smith stated this came before Council a couple weeks ago because there was concern about whether or not we wanted to do this. He believes Council voted to go forward with it, which prompted us to finish the review of the contract.

Mr. N. Jackson inquired as to what the projected date of construction is.

Mr. Beaty stated the Clemson Road Widening Project is scheduled to be advertised for construction in July, which means construction would begin in September. The Polo Road Project would go to construction late this calendar year. The Southeast Richland Neighborhood they are trying to get the FEMA permit for the project and final approval from the SCDOT. That project should go to construction late this calendar year. The temporary pipes have been placed under Rabbit Run and the project will place permanent pipes under Rabbit Run.

7. **Atlas Road Widening – AT&T Utility Design Authorization** – Dr. Thompson stated this item is for AT&T to begin their design work for relocation of their utilities on Atlas Road. They will not begin until we make a written commitment to them. There is no information included in the agenda packet on this item. If the committee agrees, the Transportation Department will provide a draft of what will be submitted to them.

Mr. Beaty stated the costs will be \$125,000.

Mr. C. Jackson inquired if we have done anything like this with AT&T on any other project.

Mr. Beaty stated they have not. As more and more construction is going on across the State, the utilities are getting busier doing their design and relocating their utilities. And as projects begin, stop, and get delayed, AT&T wants to make sure they are going to get paid for the work they do.

Mr. C. Jackson inquired if this is a firm number or will it change.

Mr. Beaty stated they give us a not to exceed. They have estimated \$125,000 and they will bill us up to that point.

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Mr. N. Jackson moved, seconded by Mr. Livingston, to forward this to Council with a recommendation for approval. The vote in favor was unanimous.

8. **Additional Design Authorizations**

Mr. Beaty stated there are a group of projects across the entire referendum where no design has been started, to date. The proposal is to allow the PDT and the OET to initiate the designs to get the project started. All of them would only go through 30% design. At which point, they would come back and request to continue the design.

- a. **Shop Road Extension Phase 2** – Shop Road Phase 1 is under construction. Phase 2 would extend a new location over to a new tie in at Trotter and Garners Ferry. Recommend going forward with 30% design.
- b. **Spears Creek Church Road** – Recommend going forward with the 30% design.
- c. **Lower Richland Widening** – Recommend going forward with the 30% design.
- d. **Polo Road Widening** – Recommend going forward with the 30% design.
- e. **Blythewood Widening Phase (associated projects)** – Recommend going forward with the 30% design.
- f. **Trenholm Acres/Newcastle NIP** – Recommend going forward with the 30% design.
- g. **Broad River Corridor NIP** – Recommend going forward with the 30% design.
- h. **Gills Creek Greenway Section C** – This project was covered in the previous greenways motion.
- i. **Smith/Rocky Branch Greenway A, B and C** – This project was covered in the previous greenways motion.
- j. **Crane Creek Sections Greenway A, B and C** – This project was covered in the previous greenways motion.
- k. **Columbia Mall Greenway** – This project was covered in the previous greenways motion.
- l. **Polo/Windsor Lake Connector, Woodberry/Old Leesburg Connector, and Dutchman Blvd. Connector Greenways**

Mr. Livingston inquired if the 30% design will give us a good idea of the estimated costs.

Mr. Beaty responded affirmatively. He stated that is part of why they build a 30%. We can do a cost estimate today, but as we do more design the estimates get more accurate. They have estimates for all of the projects, but they have not done any surveying, mapping, or detailed studies.

Mr. Jackson inquired as to what is included in the 30% design.

Mr. Beaty stated they would be do traffic studies, using an airplane they would fly the project corridor to prepare electronic mapping, use controlled surveys for the flying, do alternate studies, estimate costs and impacts to come up with a 30% plans.

Mr. N. Jackson stated the company that did Shop Road Extension Phase 1 was involved in some preliminary plans for Phase 2 some years back when he was with the SCDOT.

Ms. McBride inquired once we receive the 30% design what happens after that.

Mr. Beaty stated after they get 30% design plans they would have a public meeting. They would go to the public and present the concept plan and get their buy-in. They would come to the County with an Executive Summary, which would include what the public said and the recommended design. Council would agree or direct that it should look this particular way. Once, they get Council's buy-in then they could assign the

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continued design to the design firm. Then they go from 30% to 70% design, which the design finishes all the drainage, so they know the new right-of-way that needs to be purchased. They will then approach the public to let them know how much property the County is going to need to acquire. The project buys the right-of-way while the design goes to final design. That is a 3-4 year process from 0 to final design.

Ms. McBride stated at the end of the design we will get an estimate of the costs.

Mr. Beaty stated Council will get an estimate at 0%, 30%, 70% and 100%.

Ms. McBride stated, once that is determined, we may discover that we can only do 5 of the 12. So, we may lose money by doing all the design upfront.

Mr. Beaty stated the proposal is for the greenway projects and Shop Road Extension Phase 2 to be designed and built within their referendum amount. The widenings are a little bit different; therefore, they are another agenda item.

Ms. McBride stated so we are assuming we would have the funding.

Mr. N. Jackson inquired if Shop Road Extension Phase 2 was in the STIP.

Mr. Beaty stated he believes it is.

Mr. N. Jackson inquired if we would be reimbursed from SCDOT for the portion that was approved in the STIP.

Mr. Beaty stated he does not know for certain, but he would not count on the SCDOT giving Richland County any money.

Mr. N. Jackson stated his understanding of the agreement was that we use Penny Tax funds to build the project and any money SCDOT received for that project would be reimbursed.

Mr. Beaty stated they will check on the reimbursement for Shop Road Phase 2.

Mr. N. Jackson stated regarding the Lower Richland Widening. There were public meetings on widening from Rabbit Run to Air Base Road. He knows the funds were there from Garners Ferry Road to Rabbit Run. The design was shown to the community. That was included in the SERN to extend to build that road.

Mr. Edwards stated if we got the money from the Department of Transportation that would refocus the project to have to be designed to Federal standards, which may also affect the costs because it requires different permitting.

Mr. N. Jackson stated any State road or anything that involved SCDOT was to be built to their standards. When they send the request through the STIP, it is based on SCDOT design. Our agreement had to meet their design.

Mr. Beaty stated Shop Road was included in the referendum for \$71.9 million. We are proposing that both sections be constructed within that referendum amount. Shop Road Phase 1 is costing about \$30 million, so that leaves \$40 million. That would be our budget to design to. Except for the 4 widenings, the greenway, the neighborhoods and Shop Road Phase 2 would all be designed to the original referendum amount.

Mr. Livingston moved, seconded by Ms. McBride, to forward to Council with a recommendation to allow the

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PDT to initiate 30% design on the following projects: Shop Road Extension Phase 2, Spears Creek Church Road, Lower Richland Widening, Polo Road Widening, Blythewood Widening, Trenholm Acres/Newcastle NIP, Gills Creek Greenway Section C, Smith/Rocky Branch Greenway A, B and C, Crane Creek Sections A, B and C, Columbia Mall Greenway, Polo/Windsor Lake Connector, Woodberry/Old Leesburg Connector, and Dutchman Blvd. Connector Greenways. The vote in favor was unanimous.

9. **Proposed Road Diet Projects**

- a. **Hampton Street**
- b. **Calhoun Street**

Mr. Beaty stated, as you know, traveling Hampton Street is a 4-lane, undivided road, which means you have 2 lanes in each direction and there is no turn lane. All of the lanes are 9 ft. wide and have parking on both sides.

Mr. C. Jackson inquired as to what portion Mr. Beaty is referring.

Mr. Beaty stated Hampton Street is Main to Harden. The concept is, if you are driving most vehicles, you cannot drive next to someone in the same direction because you are worried that your mirrors are going to hit each other or your mirror on the outside will hit a parked car. You cannot have 4 cars pass at the exact same moment. Then whenever one car wants to turn left they block the lane, which means either the cars behind them have to stop or go around them to continue. A common approach across the country, but has not been done in Columbia yet, is to do a road diet. Hampton Street is already operating like a 3-lane road, which is one lane in each direction and a middle turn lane. The proposal would be to get rid of parking on one side (north), widen the 3 lanes and add a bike lane on each side. The plus side is you provide bicycle accommodations and improve safety for vehicles, but the negative is you lose parking on one side. They have partnered with the City. City staff is in agreement with this approach. The City is going to have this exact same conversation with their Council. Assuming both Councils were good with the concept, the City would lead a public meeting to educate the business owners and do public outreach. The PDT would assist them, but the City would lead the public involvement. Depending on the public reaction on losing over ½ of the parking places, both Council would need to agree for the project to move forward. The cost would be approximately \$100,000 per road. The existing markings would be painted over. There would be no resurfacing or new asphalt. The drainage grates would not have be raised. The City would remove the meters and if needed, move the signals to line up with the new lanes. It would be a true partnership between the City and County to provide bicycle accommodations and improve safety for vehicles, at the expense of on street parking on one side.

Mr. N. Jackson inquired about what the level of service is now and how will affect the level of service.

Mr. Beaty stated widening the lanes to 11 feet and providing a left turn lane, they feel, and previous studies have shown, that the level of service will actually improve along the roadway.

Mr. N. Jackson stated there are 2 lanes in both directions, except one is turning, you can always switch to another lane. It has the capacity to hold more vehicles.

Mr. Beaty stated they have not done the detailed study to know the level of service today versus the level of service in the future. It is probably operating at a very low level of service.

Mr. N. Jackson stated that is the process they use as a Transportation Planner. They do the level of service first before they consider it.

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Mr. Malinowski inquired if Mr. Beaty is mixing and matching.

Mr. Beaty stated they are proposing losing one lane of the 4 travel lanes. What you would end up with physically, you would take away parking on the north side and have a bicycle lane. You would have one lane going to Columbia, continuous middle left turn lane, and one lane coming back with parking.

Mr. Malinowski inquired as to why Richland County has to give an approval if this is part of the City's Penny Tax projects.

Mr. Beaty stated it is part of the City's bike plan and this project is on the Penny referendum as a bicycle route. So, they have studied and there are different ways to accommodate bicycles. You can have a shared for cars and....

Mr. Malinowski stated he was wondering because it is within the City and he thought they would have the say on it.

Mr. Beaty stated they are proposing they do have a say. In the next few weeks, they will be meeting with City Council to have this exact same conversation. If both bodies are in agreement then we will go to the public.

Mr. Malinowski stated he has to agree with Mr. N. Jackson. If you have not done studies yet to know your level of service, it seems you could be going from an A to a C.

Mr. Beaty stated this falls into the Engineering judgment, the experience, and the National studies. The level of service is going to do nothing but improve. We could go and spend the money to do a detailed traffic study, but we are confident, and the City staff is confident in the answer you are going to get.

Mr. N. Jackson stated currently there is not a problem. The objective is to eliminate some lanes to accommodate bike lanes.

Mr. Beaty stated that is one of the objectives. The other objective is to reduce accidents (i.e. knocking mirror off on a parked car).

Mr. N. Jackson stated he is just concerned about spending extra money to accommodate the bike lanes. He is told there are certain places until some many accidents happen they will not take care of anything. He had a discussion recently in regards to the SERN on Garners Ferry Road and they said until so much happens they won't spend the money to do it.

Mr. Beaty stated it is a philosophy of making a city more bike friendly. It is an approach. It is a choice from the leaders and members of the community. You may be giving up revenue from on street parking. You could, potentially, decrease vehicular capacity, but you are increasing bicycle capacity. In addition, the referendum had 87 bike lanes identified. There are 6 that are candidates for this road diet. We are proposing to go to the public with 2 before we even approach the other 4.

Mr. C. Jackson stated he was watching "Nightly News" the other night and their story from Seattle. This very exact design was showcased.

Ms. McBride stated we are planning the new Judicial Center on Hampton Street. She wondered about the impact with that facility. She knows South Carolina is leading the nation with pedestrian fatalities, so whatever we can do to make it safer. She was just wondering if Hampton Street would be the most

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appropriate place given all of the traffic involved if the Judicial Center is located on Hampton Street.

Mr. Beaty stated his opinion is that it would be still be a good candidate. Again, we are not adding any pavement, so we are staying within the width of the existing Hampton Street.

Mr. C. Jackson stated he was parked a building down below the AT&T Building on Hampton and lost my side mirror while he was inside.

Mr. Beaty stated what they are asking the committee to do, and what City staff is asking City Council, is if they can move forward with this approach and conduct a public meeting. Then after the public meeting, they will give you the results of the public meeting and ask if we can take the next step.

Mr. Livingston moved, seconded by Mr. Malinowski, to forward to Council with a recommendation to move forward with this approach and conduct a public meeting. The vote in favor was unanimous.

10. **Widening Memorandum** – Mr. Beaty stated the total referendum amount, excluding the COMET, is approximately \$767 million. The PDT updates the estimate quarterly and right now the estimate is approximately \$140 – 143 million. The current estimates are over the \$767 million. The PDT’s recommendation is to construct all of the projects, with the exception of the widenings, within their referendum amounts. The 15 intersections were lumped in as a group. The widenings are the high dollar projects. If we are approximately \$140 million over the referendum amount, how do we make up that difference?

The recommendation has four legs to the stool, if you will. As the SCDOT constructs “Malfunction Junction (Carolina Crossroads)”, which is fully funded by the legislature, they are going to have to construct the I-20/Broad River Road interchange. That project is in the referendum at \$52.5 million. That could be recognized as a savings to Richland County.

Bluff Road Phase I has been partially constructed. Bluff Road Phase II would go from National Guard Armory, on the other side of Williams-Brice, to about South Beltline. Bluff Road Phase II currently has 4 lanes of traffic. And at the lights, it has left turn lanes. To improve that, and add the continuous 2 way left turn lanes and shared use path, would cost \$40 million. You would not be adding any traffic capacity and would only safety more by spending the \$40 million.

Pineview Road, coincidentally, the cost estimate is right at \$40 million. However, when Shop Road Phase II is constructed to Garners Ferry that will act as essentially a bypass. So, people coming from the Sumter area would get off on Shop Road Extension to come into Columbia. They will quit traveling down Garners Ferry to turn left onto Pineview and then turn right on Shop. That traffic model has been prepared by the Central Midlands Council of Government.

If we were to recognize the savings of the I-20 Broad River Road interchange, indefinitely defer Bluff Road Phase II and Pineview. We are approaching that \$140 million mark. We will recognize a little bit of savings on Spears Creek Road. Spears Creek Road really goes from Percival over to Two Notch. If we began the Spears Creek Road project on the other side of I-20 instead of Percival, and did not replace the interstate bridge, we are right at \$140 million. If we recognize those savings, all of the other widenings could be constructed to their referendum amount. So, Lower Richland Boulevard, Polo Road and Spears Creek Church Road, etc. get built. The thought is that SCDOT is going to take care of I-20/Broad River Road interchange. You will actually lose traffic on Pineview. In 20 years there will be less cars on Pineview than there are today. Why spend \$40 million when traffic is decreasing?

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Dr. Thompson requested Mr. Beaty to quantify the amount of traffic today and in the future.

Mr. Beaty stated traffic today is approximately 16,400. When Shop Road Phase II is built it will decrease to about 16,000.

Mr. Beaty stated the PDT's memo include other options. Another option is to cost constrain each project. There is not enough money on a number of these projects to do a meaningful project. You could not build ½ of a project. It would not have logical termini. There is not enough money in the referendum for Atlas and Pineview to stay within the budget and build anything. If you took that approach on Atlas or Pineview, and started at Garners Ferry, they could not even get over to Shop.

Mr. Livingston stated we would have roads to nowhere.

Mr. Beaty said you could do spot improvements, but you would be getting little return on your investment. He reminded Mr. Malinowski that Broad River Road has had its termini shortened.

Mr. N. Jackson inquired about what was recommended for Pineview Road.

Mr. Beaty stated it was recommended to be 5 lanes from Garners Ferry to Shop Road, and then, 3 lanes from Shop Road to Bluff Road. During the first public meeting, the public wanted it further reduced, so the plan was to only improve Pineview Road from Bluff Road up until Metal Park Drive as a 2 lane, and then, go to 3 lanes from Metal Park Drive up to Shop Road.

Mr. N. Jackson stated, for clarification, from Garners Ferry Road to Shop Road would be 3 lanes.

Mr. Beaty stated it was proposed to be 5 lanes, but in this scenario they would build nothing on Pineview.

Mr. N. Jackson stated there are a lot of factories on Pineview Road and the tractor trailers are turning.

Mr. Beaty stated there is a lot of existing 3 lanes in that part.

Mr. N. Jackson stated the other part he talked about was Wildcat Road, which Ft. Jackson had approved. The entire length had to have a secure fence. At the time, it was \$3 million for the fence and bridges. He would like for the PDT to look into this.

Mr. Beaty stated they are going to look at the STIP for the Shop Road Extension monies and they will inquire with the SCDOT about the potential to bring the Wildcat Road project back to life.

Mr. N. Jackson stated that he and Ike McLeese met with Garrison Commander at Ft. Jackson and they agreed to do it. We just did not have the funding to do it. He feels it would be a tremendous help for the area and provide a connection to the National Cemetery.

Mr. Malinowski inquired if Mr. Beaty is saying because of the other projects there is no longer a need to do any widening on Pineview Road and Bluff Road because traffic will be reduced greatly and what is there will accommodate the traffic.

Mr. Beaty stated, in so many words, the answer is yes. Today, Bluff Road has 4 lanes, so you would not be greatly benefitting traffic capacity or safety by improving Bluff Road. And, the same thing with Pineview Road. Pineview Road traffic is going to be decreasing. Obviously, this will be a Council action to re-prioritize these 2 projects.

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Mr. Malinowski inquired if the PDT was going to do any public meetings on the deferral of Pineview Road and Bluff Road. He stated he does not know how many people voted for the referendum because they saw these projects in there and now we are going to say, "Hey, forget it."

Mr. Beaty stated he had not planned to, or thought of that, to be honest. He would offer that this falls under Council's purview of re-prioritize. Council prioritized to begin with. Council can re-prioritize. Again, he does not think we will have the money to get there, but we might. There are opportunities for Federal grants. They are working on a Build Grant now. All of the estimates include a 10% contingency in construction, so \$20 million of the \$140 million is a contingency. There is a chance that a portion of them can be built.

Mr. Livingston stated, for clarification, the scenario that was recommended was scenario #3.

Mr. Beaty responded in the affirmative.

Mr. Livingston moved, seconded by Mr. C. Jackson, to forward to Council with a recommendation to approve scenario #3 to defer the Bluff Road Widening Phase 2 and Pineview Road Widening and to reduce the project termini on Spears Creek Church Road Widening. The vote was in favor.

11. **Release the \$250 Million Bond Proceeds from Escrow** – Ms. Heizer stated the County was approaching a deadline to issue the debt pursuant to the authorization in the referendum and the Supreme Court decision was pending. We were particularly concerned about the mandamus issue and whether SCDOR could potentially hold the distribution of the penny. One thing that was good in the Supreme Court opinion is that they upheld the mandamus, which clearly indicates the SCDOR cannot withhold the penny from distribution. The County is now free to move the money from escrow. She stated she would be glad to do a resolution and recite why the funds were held in escrow and the reason has been eliminated.

Moving the funds from escrow means it is available to be spent, but none of the money is spent until Council authorizes it pursuant to a budget and appropriation. The County Treasurer will continue to hold funds, but he will be notified that the hold on them has been terminated.

Mr. Livingston moved, seconded by Mr. N. Jackson, to forward to Council to authorize the release of the \$250 bond proceeds from escrow. The vote in favor was unanimous.

12. **PDT Reimbursement Policy** – Mr. Smith stated the County and the PDT have been in discussions regarding a portion of the PDT contract that relates to reimbursable items. Both sides have exchanged correspondence, as it relates to that, and Council has been privy to the correspondence. The attorney for the PDT, Keith Babcock, and Mr. Smith have been in discussions about a way to move this issue forward. They have agreed a way to move this forward is by way of mediation. Mr. Babcock has presented the County Legal Department with names of mediators. The Legal Department is in the process of reviewing that and getting back to him. What he anticipates will occur at this point, is we are going to make a decision about the mediator. Then we will determine when we will schedule a date, time and place to conduct the mediation.

Mr. Livingston inquired about how long it will take to get to the mediation.

Mr. Smith responded he does not know how long it will be. They have not had a discussion about the timeline.

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Ms. McBride inquired about how mediators are selected.

Mr. Smith stated, traditionally, both sides will give some names of mediators. In this case, Mr. Babcock has sent him several names. We may send him some names. Then they will mutually agree on a person.

Mr. N. Jackson inquired as to what this mediation is specifically about.

Mr. Smith stated what items under the contract are subject to be reimbursed, pursuant to the contract. This was something we went through with the PDT and Council.

Mr. N. Jackson stated his understanding is the firms did the work and were supposed to be reimbursed, but there is a problem with the billing or invoice. In the past, how was it handled that is different now? Why are we going through this process?

Mr. Smith stated it was not handled pursuant to our understanding of what the contract calls for.

Mr. N. Jackson stated he has had people calling him about not being paid since July. Some have not been paid since September.

Mr. Smith stated this item has to do with a specific part of the contract that deals with reimbursable items, not necessarily work that has been done where a vendor has not been paid. This is a specific part of the contract related to what items/things under the contract are subject to be reimbursed.

Mr. N. Jackson stated maybe he needs to ask another question about the vendors that have not been paid. In November, he asked about reimbursement for some vendors who have not been paid since July and September. We were told it was taken care of. Now 5 months later, they still have not been paid. He wants to know what is going on with the others.

Mr. C. Jackson stated the issue on the table deals specifically with the contract where there are funds being requested the County feels are not pursuant to the rules and requirements of the contract. Mr. Smith, along with the lawyers for the PDT, have agreed to have a mediator to sit down with the two of you and determine some middle ground.

Mr. Smith stated to help us facilitate so we can come to a mutual agreement about how we are going to resolve the issue.

Mr. C. Jackson stated, in the meantime, both the PDT, SLBE, whomever have requested reimbursements from the County, which have not been paid because there is a discrepancy in the contract.

Mr. Smith responded those are two separate issues. The narrow part that he is dealing with has to do with a specific section of the contract that deals with what things are reimbursable pursuant to the contract. He is not talking about work that has been performed where contractors have not been paid.

Mr. C. Jackson stated, his understanding is, the PDT has requested funds under that portion of the contract. Those funds have not been released because of the disagreement about whether they are entitled to that.

Mr. Smith stated there are a series of letters, which have been sent to us, where they continue to say to the County their position is still the same regarding this particular issue. The County has said their position is still the same, as it relates to those items that we believe are not reimbursable.

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Mr. C. Jackson stated mediation is different from arbitration, in that the person is not going to issue any ruling that says we have to pay or we do not have to pay.

Mr. Smith stated the mediation will not be binding, but hopefully it will give both sides an opportunity to see whether or not we can find a path forward to get it resolved.

Dr. Thompson stated we are talking about is between \$400,000 and \$500,000.

Mr. C. Jackson stated, to the point Mr. N. Jackson made, he is sure Mr. Livingston, Mr. Manning, Ms. McBride and himself have gotten calls. Mr. N. Jackson is right, he raised that issue at a meeting and was told that nothing was being held up, but he still gets phone calls saying that is not the case that there are some vendors who have submitted invoices and have not been paid for those invoices.

Dr. Thompson stated he is not aware of any vendors who have not been paid. If you have specific vendors, he will be happy to reach out to them.

Ms. Watts stated all of the OSBO invoices are up-to-date.

Mr. Livingston stated he wants to make sure that all these decisions we are making, in terms of our ordinance, as it relates to the penny, because he does not want to come back and say none of these things makes a difference because it is not consistent with our ordinance. He needs to make sure it is clear, in terms of how these things fit into our ordinance, or what we need to do to change the ordinance to make sure what we have done is consistent with the ordinance.

Ms. Heizer stated one of the things Council will hear on Tuesday, at the work session, is the concern that when you make decisions, that change the list from 2012, it should be done by an ordinance. One of the concerns Mr. Smith and she have had is making a change through the committee process. In terms of some of those changes, they need to be made to the ordinance. If in the discussions on Tuesday, the consensus on Council is that one of the ways to deal with the projected shortfall is to move projects down to the bottom of the list, so you wait to see if there is other money or if they do not ever get done then Council can make that decision. Ultimately, the ordinance you will give 3rd Reading to will incorporate any of those new decisions.

Dr. Thompson stated, on Tuesday, it includes those projects the termini has been changed, as well as, the dollar amounts.

Ms. Heizer stated the last time the "amending ordinance" came up it was deferred until next Tuesday. The working group (lawyers, Transportation Department, Administration) discussed that Council will make some decisions Tuesday at the workshop. There may be some decisions that takes you longer than Tuesday to make, so it may not be realistic to give 3rd Reading to the ordinance on Tuesday.

13. **ADJOURN** – The meeting adjourned at approximately 3:00 PM

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Memo

To: Dr. John M. Thompson, Ph.D., MBA, CPM

From: David Beaty, P.E.

CC: Tony Edwards, P.E.

Date: March 6, 2018

Re: Richland County Transportation Program Widening Categorical Recommendations to Align Program with Current Available Funding

It is the intent of this memorandum to provide recommendations for the Widening category of the Richland County Transportation Program to best align the Program with the projected available funding while maximizing the completion of all other categories.

Background:

The Richland County Transportation Program has a total funding of \$1.07 billion funded through the Transportation Sales Tax approved by voters in November of 2012. Per the referendum, \$300,991,000 is dedicated to Transit with the remaining \$769,009,000 dedicated to the categories of Administration, Bike/Ped/Greenway, and Roadway. As the Transit funding is directly assigned to The COMET bus system, this memorandum will be discussing the remainder of the categories (Program).

Based on projected revenue and current cost estimates, there is an anticipated shortfall of approximately \$140 million for the entire Program, almost entirely attributable to the Widening category of projects (see Attachment 1 Financial Status Summary by Category dated 12-31-17). The 9 other major Program categories (Intersections, Special, Neighborhood Improvements, Bikeways, Sidewalks, Greenways, Pedestrian Intersections, Dirt Road Paving, and Resurfacing) have been developed such that each category is constrained to the Referendum amount. For example, the Intersections category consists of 15 individual intersections totaling \$42.3 million. Within that category, some intersections are projected to exceed their original referendum amount while others are anticipated to be constructed below their original referendum amount, but the total cost is expected to be below the total \$42.3 million. To date, the Widening category has not been developed to be constrained to the Referendum amount.



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Widening Shortfall:

Four of the 14 Widening are at or under the Referendum amount: (1) Hardscrabble Road widening and (2) Leesburg Road widening are being managed and developed by SCDOT resulting in Richland County's role being one of providing a set amount of funding only; (3) North Main Street widening has received outside funding from the City of Columbia and federal grants such that when combined with the Intersection funds identified for North Main Street/Monticello Road (within the limits of the North Main Street widening), the total project cost to Richland County is approximately equal to the referendum funding; (4) Clemson Road widening has been developed such that it is scheduled to be advertised for construction in Q2 2018 and is estimated to be below the Referendum amount. This results in 10 individual projects within the Widening category that are responsible for the \$140 million funding shortfall. (Note that all cost estimates include a 10% construction contingency which may or may not be utilized and accounts for approximately \$20 million of the projected shortfall).

Each of the 14 Widening has been reviewed in detail focusing on the original Council-approved prioritization criteria with additional emphasis placed on traffic and safety. The results were used to develop multiple scenarios that would return the Widening category back to a cost constrained value that meets available funding. Attachment 2 provides the detailed analysis and recommendation for each Widening project.

Modification Scenarios:

SCDOT is currently developing the Carolina Crossroads Project (Malfunction Junction) which consists of significant improvements to multiple interchanges along I-20, I-26, and I-126. This project is fully funded and includes the reconstruction of the I-20/Broad River Road Interchange. For more information, please refer to www.scdotcarolinacrossroads.com. The I-20/Broad River Road Interchange was included in the 2012 Referendum in the amount of \$52.5 million. All 3 of the following scenarios assume the availability of the \$52.5 million to the Widening category.

- Scenario 1 – Construct All Widening in Order of Current Prioritization
This approach would construct the first 10 Widening to their full Referendum termini (except Broad River Road which has previously been changed by Council) leaving Spears Creek Church Road, Lower Richland Boulevard, Polo Road, and Blythewood Improvements Phase 2 indefinitely deferred.
- Scenario 2 – Construct All Widening Within Original Referendum Amounts
This approach would greatly reduce, if not eliminate, significant improvements to traffic and safety for a number of projects due to insufficient funds. These projects include



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Atlas Road, Bluff Road Phase 2, Blythewood Road Phase 1, Pineview Road, Polo Road, Shop Road, and Spears Creek Church Road. While some improvements could be made within Referendum amounts, actual cost to benefit ratios would likely be considered undesirable and some improvements would likely not be allowed by SCDOT due to logical termini concerns.

- Scenario 3 – Defer Construction of Select Projects and/or Elements of Projects
Reviewing projects with consideration of traffic, safety, logical termini and potential for individual improvements compared to overall costs of the projects results in two projects standing out for deferral and one project for reduced project termini:

1. Bluff Road Widening Phase 2: In order to receive \$1.8 million in outside funding from the County Transportation Commission and SCDOT, Bluff Road Widening was separated into 2 sections. Bluff Road Phase 1 was recently constructed as part of the Program at a cost of \$7.5 million from Rosewood Dr. to George Rogers Blvd. The section from George Rogers Blvd. to National Guard Road has previously been improved and funded by others. Bluff Road Phase 2 extends from National Guard Road to South Beltline Blvd. The Referendum amount for all of Bluff Road is \$16.7 million (\$9.2 million remaining after Phase 1) and the current estimate to construct Bluff Road Phase 2 is \$40 million.

Bluff Road Phase 2 is currently a 4 lane roadway with existing left-turn lanes at signalized intersections. Items contributing to the estimated \$40 million project cost include construction of isolated locations of flush-median turn lanes, the inclusion of Shared Use Paths, the construction of large stormwater pipes due to adjacent existing developed areas, and the replacement of a culvert near South Beltline Blvd. Minimal improvements to traffic or safety would be achieved by this project.

2. Pineview Road Widening: This project was defined in the referendum as being widened to 3 lanes from Bluff Road to Shop Road and then widened to 5 lanes from Shop Road to Garners Ferry Road. The referendum amount is \$18.2 million and the current estimate is \$40 million.

The Columbia Area Transportation Study (COATS) regional traffic model shows that by 2041 daily traffic volumes along Pineview Road from Garners Ferry Road to Shop Road would actually decrease from 16,700 to 16,000 due to the construction of Shop Road Extension Phase 2. Although traffic volumes would increase in the section of Pineview Road from Shop Road to Bluff Road from 3,400 to 4,700 by 2041, the existing 2-lane section could adequately



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accommodate that traffic volume. Minimal improvements to traffic or safety would be achieved by this project.

3. Spears Creek Church Road Widening: The referendum amount for Spears Creek Church Road from Two Notch Road to Percival Road is \$26.6 million and the current estimate is \$49.5 million. This estimate includes replacing the Spears Creek Road Bridge over I-20 and making associated improvements along I-20. If this project were to begin on the north side of the I-20 bridge extending to Two Notch Road and eliminate the I-20 bridge replacement, including a total of 1,850 feet of Spears Creek Church Road to Percival Road, a savings of approximately \$13.5 million could result.

Recommendations:

In an effort to align with available funding, the following recommendations are made:

- Reprogram the \$52.5 million from the I-20/Broad River Interchange to the Widenings category.
- Defer Bluff Road Widening Phase 2 until all other Widenings are constructed or until additional funds are identified (\$40 million).
- Defer Pineview Road Widening until all other Widenings are constructed or until additional funds are identified (\$40 million).
- Reduce the termini of Spears Creek Church Road to construct from north of I-20 to Two Notch Road resulting in saving \$13.5 million.

Additionally, it is recommended that the remaining Widening projects be fully constructed in accordance with the Referendum termini. The combination of the above identified amounts totaling \$146 million is greater than the projected Program shortfall of \$140 million and allows the Program to be completed within the constraints of the available funding.

Attachment 1: Richland Transportation Penny Program Financial Status Summary by Category
Attachment 2: Widenings Category Summary & Recommendations

Widenings Category Summary & Recommendations

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PROJECT: 271 ATLAS RD WIDENING

Scope	The proposed scope recommends a 3-lane (2 travel lanes with a center turn lane) widened roadway from Bluff Road to Shop Road and then a 5-lane (4 travel lanes with a center turn lane) roadway from Shop Road to Garners Ferry Road. These improvements will accommodate bicyclists through the use of 4-foot on-street bike lanes and provide for pedestrians through the use of 5-foot sidewalks constructed behind the curb.
SCDOT PIN	P029310
Project Length	2.80 miles
District	10, 11
Project Manager	Raven Gambrell
Design	Cox & Dinkins, Inc.



TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2015)	Design (2040)
Atlas Road (Urban Minor Arterial)		
Bluff to Shop	5,500	8,200
Shop to Garners Ferry	10,500	13,500

ACCIDENT DATA – Jan 2012-Feb 2015 (3.2 years)

Project / Segment	Crashes	Notes
Atlas Road	100	44% rear-end crashes, 34% intersection-related, 22% other (1 fatality)

PROJECT COSTS

Referendum Total (2012)	Current Estimate (2017 Q4 Estimate)
\$17.6 million	\$41.7 million
Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals	

The proposed Atlas Road improvements include multiple project and design-specific details that affect the overall cost estimate increase for this project. These items include the following (which were not included in the original cost-per-mile method for attaining the referendum values);

- (2) Railroad Crossings – Norfolk/Southern and CSX;
- (1) New, triple box culvert under Atlas Road;
- (1) Extension of existing box culvert under Atlas Road;
- Extensive improvements at the Atlas Road / Garners Ferry Road intersection to include the addition of dual, left turns and dedicated right turning lanes;
- Relocations of AT&T utility equipment.

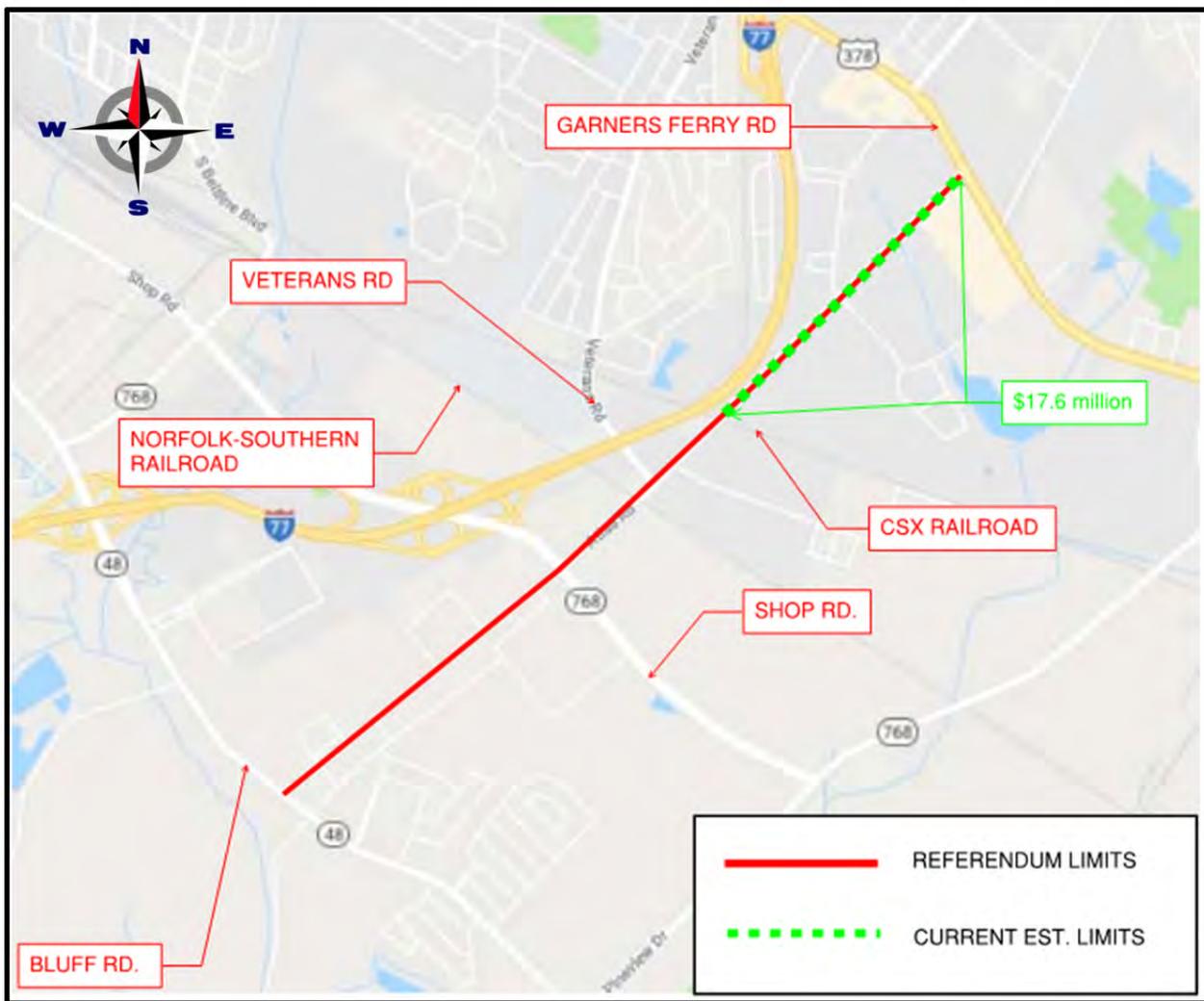
Construct within Original Referendum Amount (Scenario 2):

Assuming the referendum value (2012) is to be maintained for this project; the scale and scope of improvements would need to be reduced. Utilizing current construction costs, detailed cost estimates and knowledge of project-specific issues, the proposed improvements would likely be reduced to approximately 1.2 miles.

The potential limits of improvements, per the reduced scope, would assume a 5-lane widening from just east of the CSX Railroad crossing to Garners Ferry Rd, to include the necessary geometric improvements at the intersection – see map below for project limits based on referendum value (2012) and potential scope reduction per current estimate (2017).

The area of improvements reflective of the reduced scope is indicative of the highest traffic volumes and incidence of accidents.

Roadway widening projects typically terminate at crossing routes that are traffic generators (ie: Shop Rd); therefore, coordination with SCDOT would be required to justify the limited improvements and to verify that the reduced termini would not cause any undue traffic issues. It is likely that SCDOT would not be supportive of this alternative due to limited benefits.

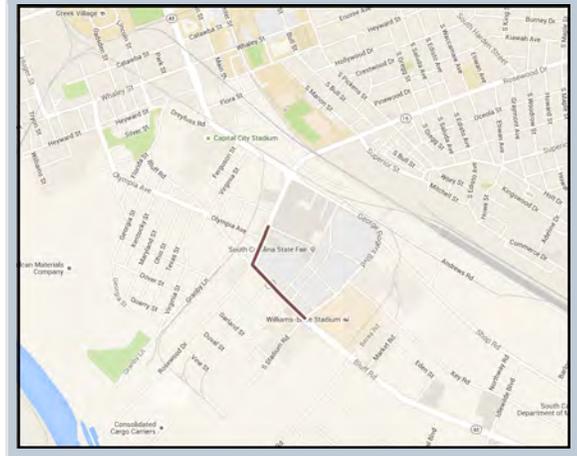


Atlas Road Widening Project Map

Recommendation: Construct entire project as defined in referendum (Bluff Road to Garners Ferry Road). Design and Right-of-Way Acquisitions are nearly complete and construction can begin in late 2018.

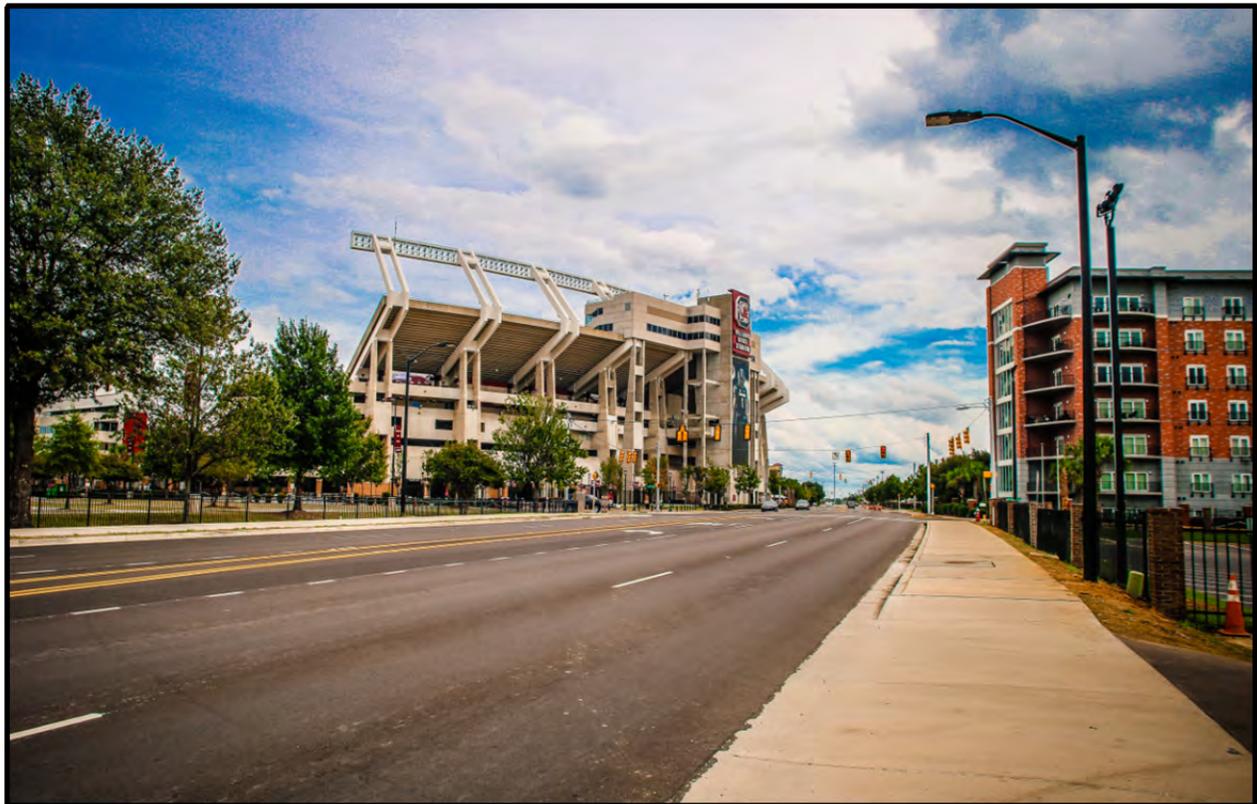
PROJECT: 425 BLUFF RD WIDENING PH. 1

Scope	The scope recommended a 5-lane (4 travel lanes with center turn lane) widened roadway with bicycle and pedestrian accommodations from Rosewood Drive to George Rogers Blvd. Additionally, a sidewalk was added along Rosewood Drive from the SC State Fair entrance to Bluff Road. Budget includes \$1M in Federal GuideShare funds and \$800K in CTC funds.
SCDOT PIN	0041846
Project Length	0.50 miles
District	10
Project Manager	Raven Gambrell
Design	Parrish & Partners, LLC
Construction	Cherokee, Inc.



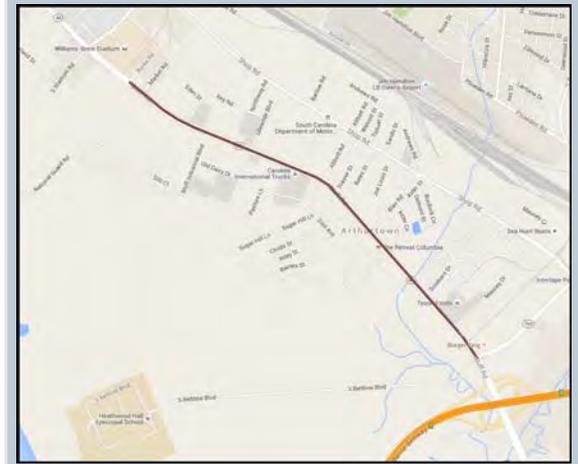
The referendum funding for this project (along with Bluff Road Widening Phase 2, see next page) included a total of \$16.7 million. The total cost for this project was approximately \$9.3 million; however, \$1 million was contributed via Federal GuideShare funds and \$800 thousand via SCDOT CTC funding. Therefore, the total cost for this project from referendum funding was approximately \$7.5 million, with a remainder of \$9.2 million for the Bluff Road Widening Phase 2 project.

Project Complete



PROJECT: 272 BLUFF RD WIDENING PH. 2

Scope	The proposed scope recommends a 5-lane (4 travel lanes with center turn lane) widened roadway with shared-use paths for bicyclists and pedestrians from National Guard Rd/Berea Rd to South Beltline Boulevard. The proposed 5-lane widened section will transition to the existing 4-lane divided roadway at South Beltline. The bicycle and pedestrian accommodations would terminate at South Beltline Boulevard.
SCDOT PIN	P028861
Project Length	2.00 miles
District	10
Project Manager	Raven Gambrell
Design	Parrish and Partners, LLC



TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2015)	Design (2040)
Bluff Road - Phase 2	22,600	29,800

ACCIDENT DATA – Jan 2011-Oct 2014 (3.8 years)

Project / Segment	Crashes	Notes
Bluff Road - Phase 2	281	53% rear-end crashes, 43% intersection-related, 4% other (1 fatality)

PROJECT COSTS

Referendum Total (2012)	Current Estimate (2017 Q4 Estimate)
\$16.7 million ¹ (\$9.2 million) ²	\$40.3 million

¹ Includes Phase 1 and Phase 2 project limits, ² Remaining value from Phase 1 construction

Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals

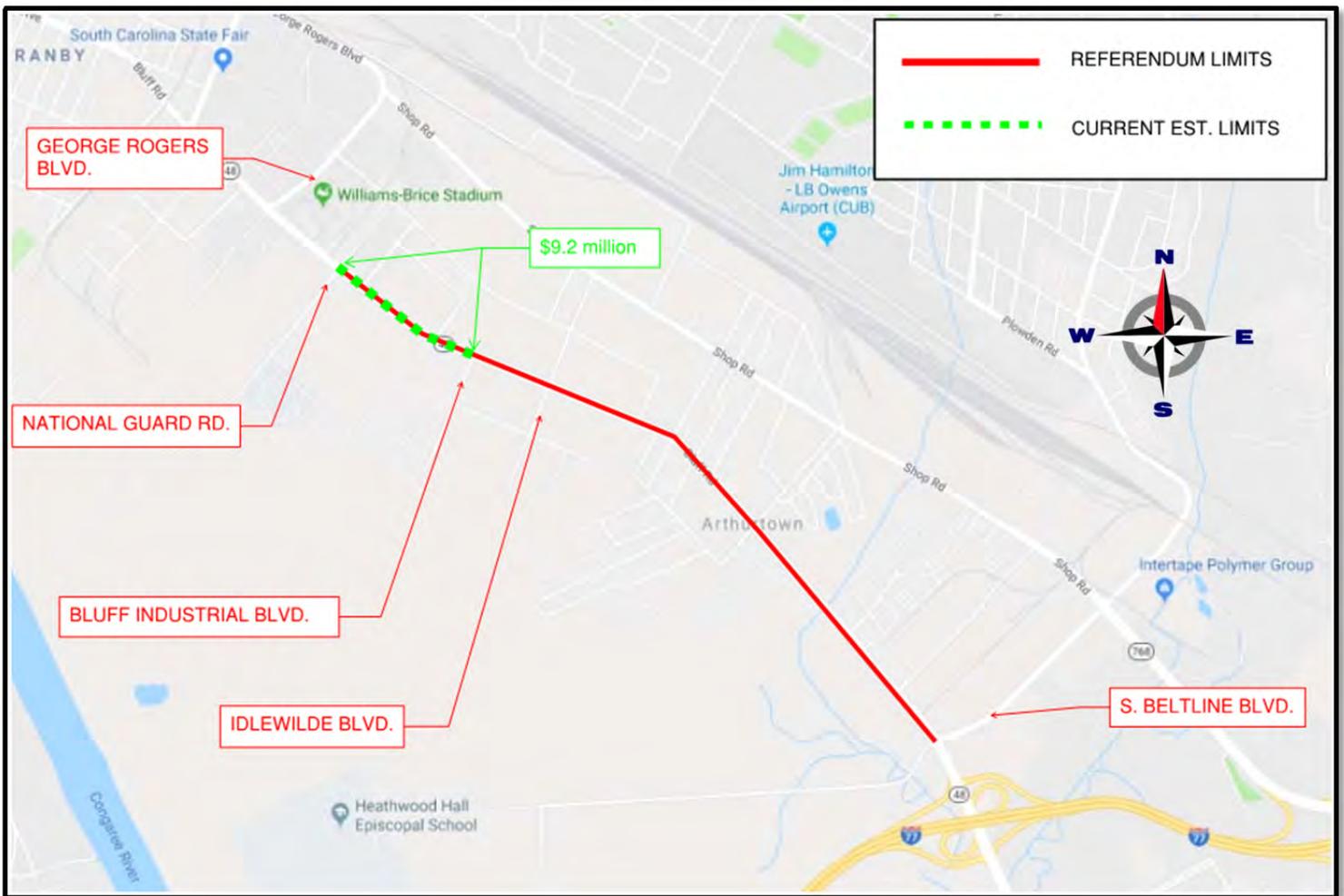
The proposed Bluff Road – Phase 2 improvements include multiple project and design-specific details that affect the overall cost estimate increase for this project. These items include the following (which were not included in the original cost-per-mile method for attaining the referendum values);

- Approximately 750 feet of grade change (approximately 5 – 7 feet vertically) along Bluff Rd crossing Gills Creek Tributary (full-depth reconstruction of pavement);
- (1) New, dual 8’x10’ box culvert at Gills Creek Tributary (replaces existing box culvert);
- Approximate 350 feet (straight-line) relocation of Gills Creek Tributary (jurisdictional stream) requiring extensive permitting efforts and stream mitigation costs;
- Extensive drainage outfall design and construction (includes purchase of new right of way for outfall), south of Simmons St;
- Due to industrial character of the majority of project corridor, utility costs would be greater than typical.

Construct within Original Referendum Amount (Scenario 2):

Assuming the referendum value (2012) is to be maintained for this project; the scale and scope of improvements would need to be reduced. Utilizing current construction costs, detailed cost estimates and knowledge of project-specific issues, the proposed improvements would likely be reduced to approximately 0.5 miles.

The recommended limits of improvements, per the reduced scope, would assume a 5-lane widening beginning at National Guard Road / Berea Road and ending at Bluff Industrial Boulevard – see map below for project limits based on referendum value (2012) and potential scope reduction per current estimate (2017). The proposed improvements would extend the existing roadway typical section, west of National Guard Road, to tie into the existing 4-lane typical section at Bluff Industrial Boulevard. Approximately 18% of accidents within the Bluff Road Widening corridor occurred at the Bluff Industrial Boulevard intersection; therefore, terminating improvements at this location is logical. The majority of the accidents at this location include rear-end and angle-type accidents, typical of intersection-related crashes. The proposed addition of a center median and improving sight distance issues would potentially assist with reducing crashes at this intersection. Coordination with SCDOT would also be required to justify the limited improvements and to verify that the reduced termini would not cause any undue traffic issues.

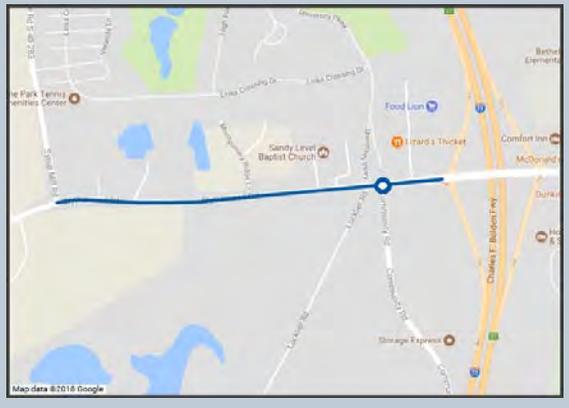


Bluff Road Widening – Phase 2 Project Map

Recommendation: As the existing corridor is a 4-lane roadway with left turn lanes at major intersections, this project would not improve traffic capacity or provide significant safety improvements. The improvements proposed by this project would consist of providing shared-use paths for bicycle and pedestrian access and improving the potential for overtopping at the Gills Creek Tributary crossing. Defer this project until other widenings are complete or additional funds are identified.

PROJECT: 273 BLYTHEWOOD RD WIDENING (SYRUP MILL ROAD TO I-77)

Scope	The proposed scope recommends a 5-lane (4 travel lanes with a center turn lane) improvement from I-77 west to Syrup Mill Road. Provisions for bicycle and pedestrian accommodation are proposed through the construction of offset, shared-use paths. This project also includes the Phase 2 roundabout at the intersection of Community Rd and Cobblestone.
SCDOT PIN	P030152
Project Length	0.80 miles
District	02
Project Manager	Ben Lewis
Design	Parrish & Partners, LLC



TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2016)	Design (2041)
Blythewood Road (Syrup Mill to I-77)	11,000	15,200

ACCIDENT DATA – Jan 2013 – Dec 2015 (3.0 years)

Project / Segment	Crashes	Notes
Blythewood Road (Syrup Mill to I-77)	19	42% rear-end crashes, 37% intersection-related, 21% other (zero fatalities)

PROJECT COSTS

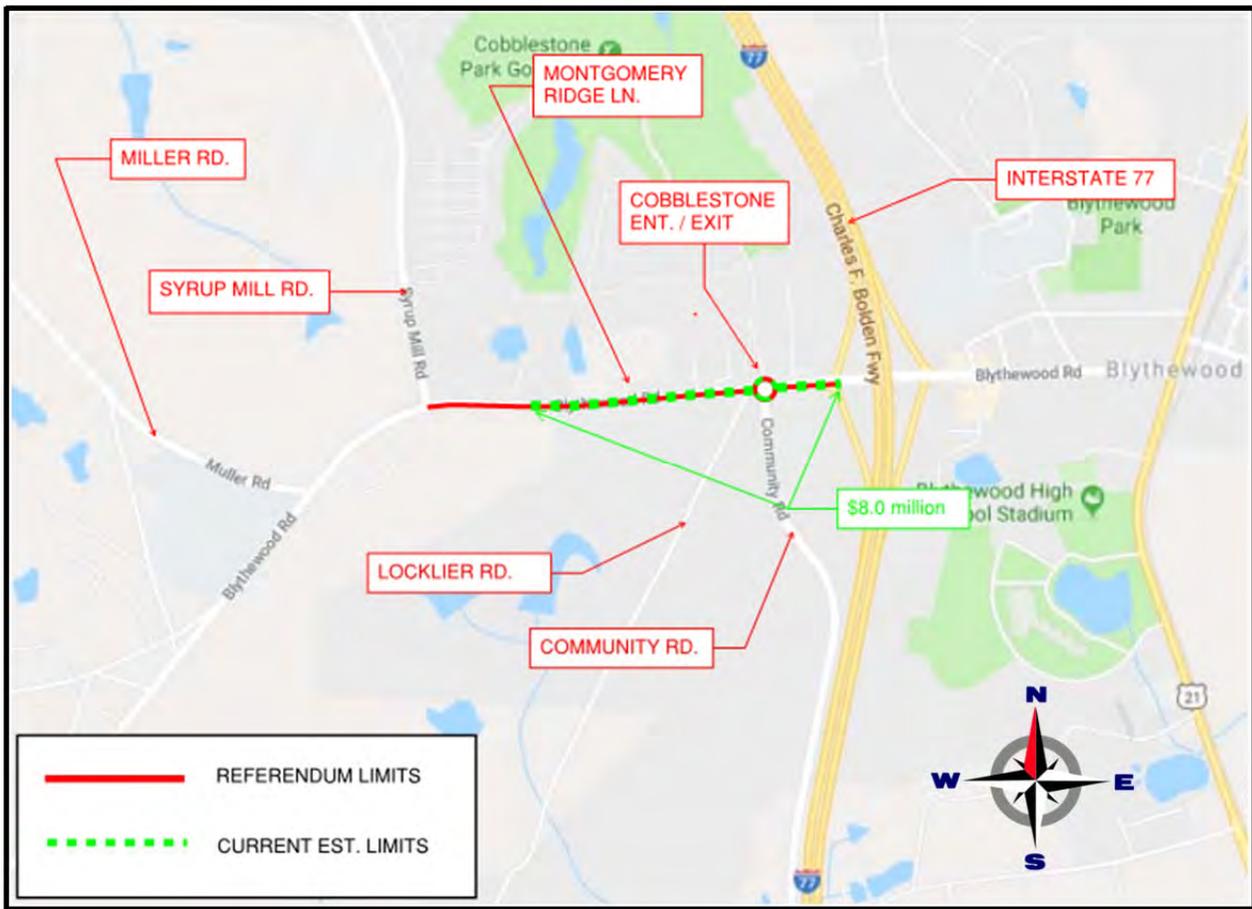
Referendum Total (2012)	Current Estimate (2017 Q4 Estimate)
\$8.0 million	\$10.4 million
Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals	

The proposed Blythewood Road improvements (I-77 to Syrup Mill Rd) are typical of a standard roadway widening project; therefore, significant increases in construction costs can be attributed as the reason for the difference between the 2012 referendum and current cost estimate (2017) values. The project does include one design specific detail which affects the overall cost estimate increase for this project. The project includes a double-lane roundabout at the intersection of Cobblestone and Community Road. The proposed roundabout is actually specified as part of the future Blythewood Road Phase 2 improvements; however, included as part of the current widening. Approximately 80% of the accidents within the project corridor occur between I-77 southbound ramps and the intersection of Cobblestone and Community Road. The proposed roundabout to be constructed at this intersection is a documented intersection alternative to promote safety and speed reductions.

Construct within Original Referendum Amount (Scenario 2):

Assuming the referendum value (2012) is to be maintained for this project; the scale and scope of improvements would also be reduced. Utilizing current construction costs, detailed cost estimates and knowledge of project-specific issues, the proposed improvements would likely be reduced to approximately 0.6 miles.

The recommended limits of improvements, per the reduced scope, would assume a 5-lane widening beginning at the I-77 southbound exit / entrance ramps and extending westward along Blythewood Road to a point between Montgomery Ridge Lane and Syrup Mill Road, approximately 0.20 miles short of the referendum limits, while also retaining the proposed double-lane roundabout at the intersection of Cobblestone and Community Road – see map below for project limits based on referendum value (2012) and potential scope reduction per current estimate (2017). The proposed, reduced scope limits would require extensive and additional coordination with SCDOT as the project would not terminate at a logical termini (Syrup Mill Road). Per the previous traffic study conducted for this project, a 5-lane widening is necessary between I-77 and Syrup Mill Road to convey existing and future traffic volumes.

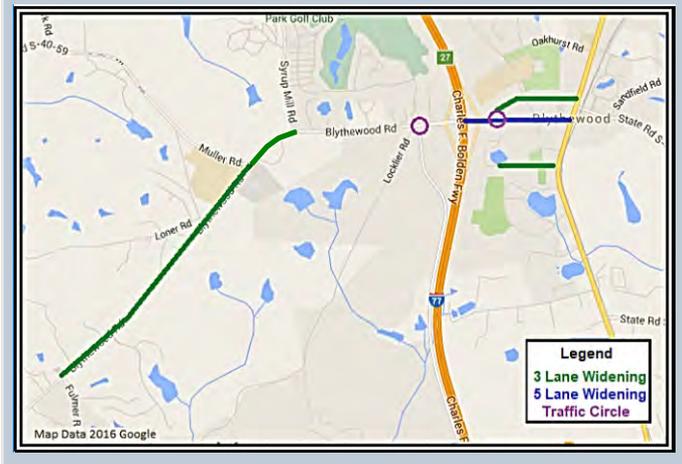


Blythewood Road Widening Project Map

Recommendation: Construct entire project as defined in referendum (I-77 to Syrup Mill Road). Design is complete through 70% construction plans and rights-of-way acquisitions are planned to begin in the 3rd quarter of 2018.

PROJECT: 274 BLYTHEWOOD ROAD WIDENING AND IMPROVEMENTS

Scope	The proposed scope recommends the widening of Blythewood Rd from Fulmer to Syrup Mill Rd, McNulty Street improvements, the proposed Creech Connector, I-77 to Main St and a traffic circle at Blythewood Rd/Creech Rd (traffic circle at Blythewood Rd/Cobblestones to be completed with Phase 1).
Project Length	
District	02



TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing	Design
Blythewood Road Alternative Projects	N/A	N/A

ACCIDENT DATA

Project / Segment	Crashes	Notes
Blythewood Road Alternative Projects	N/A	N/A

PROJECT COSTS

Referendum Total (2012)

\$21.0 million

Current Estimate (2017 Q4 Estimate)

\$26.2 million

Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals

The Blythewood Road Widening & Improvements project includes (5) independent projects, of which, one has been incorporated into the Blythewood Road Widening project between I-77 and Syrup Mill Road (RPP Project No. 273, above). The improvements within the Town of Blythewood and surrounding areas, as part of this project, includes two widening corridors, a street-scaping project within town limits, a roadway extension on new location within town limits and a roundabout. No preliminary design or detailed evaluation has been conducted on these projects to-date. Upon initiation of design services, each project area will be evaluated in regards to traffic conditions (existing and future), accident data and proposed improvements and potential impacts.

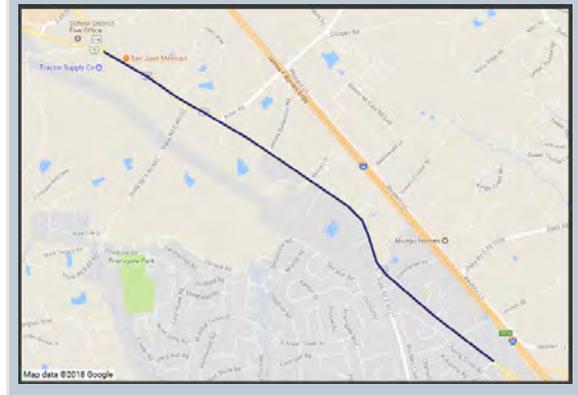
Construct within Original Referendum Amount (Scenario 2):

Assuming the referendum value (2012) is to be maintained for this project; the scale and scope of improvements would need to be evaluated and reduced. For this project, the individual improvement areas would likely need prioritized in conjunction with the Town of Blythewood and in coordination with SCDOT. It is likely that one or more of the included projects would need to be removed in order to maintain the referendum constraints.

Recommendation: Initiate design studies for the four (4) remaining projects immediately. Upon development of more detailed cost estimates specific to each project and upon coordination with County, SCDOT and the Town of Blythewood, adjust the scope and scale of the projects accordingly.

PROJECT: 275 BROAD RIVER RD WIDENING

Scope	The proposed scope recommends a 5-lane section (4 travel lanes and a center turn lane) between Royal Tower Drive and Dutch Fork Road. Bicycle and pedestrian accommodations shall include on-street bike lanes and sidewalks.
SCDOT PIN	P029344
Project Length	2.50 miles
District	01
Project Manager	Ben Lewis
Design	CECS, Inc.



The original referendum scope for this project included improvements along Broad River Road from Royal Tower Road to I-26 (at the Peak Exit). Upon holding a public meeting and evaluating the total cost for these project limits; County Council approved the revised (current) termini in March 2017 to terminate the improvements at Dutch Fork Road.

TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2016)	Design (2043)
Broad River Road	22,300	34,200

ACCIDENT DATA – Jan 2013 – Dec 2015 (3.0 years) (Royal Tower to Dutch Fork)

Project / Segment	Crashes	Notes
Broad River Road	161	71% rear-end crashes, 21% intersection-related, 8% other (zero fatalities)

PROJECT COSTS

Referendum Total (2012)

\$29.0 million

Current Estimate (2017 Q4 Estimate)

\$39.7 million (Royal Tower to Dutch Fork)

Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals

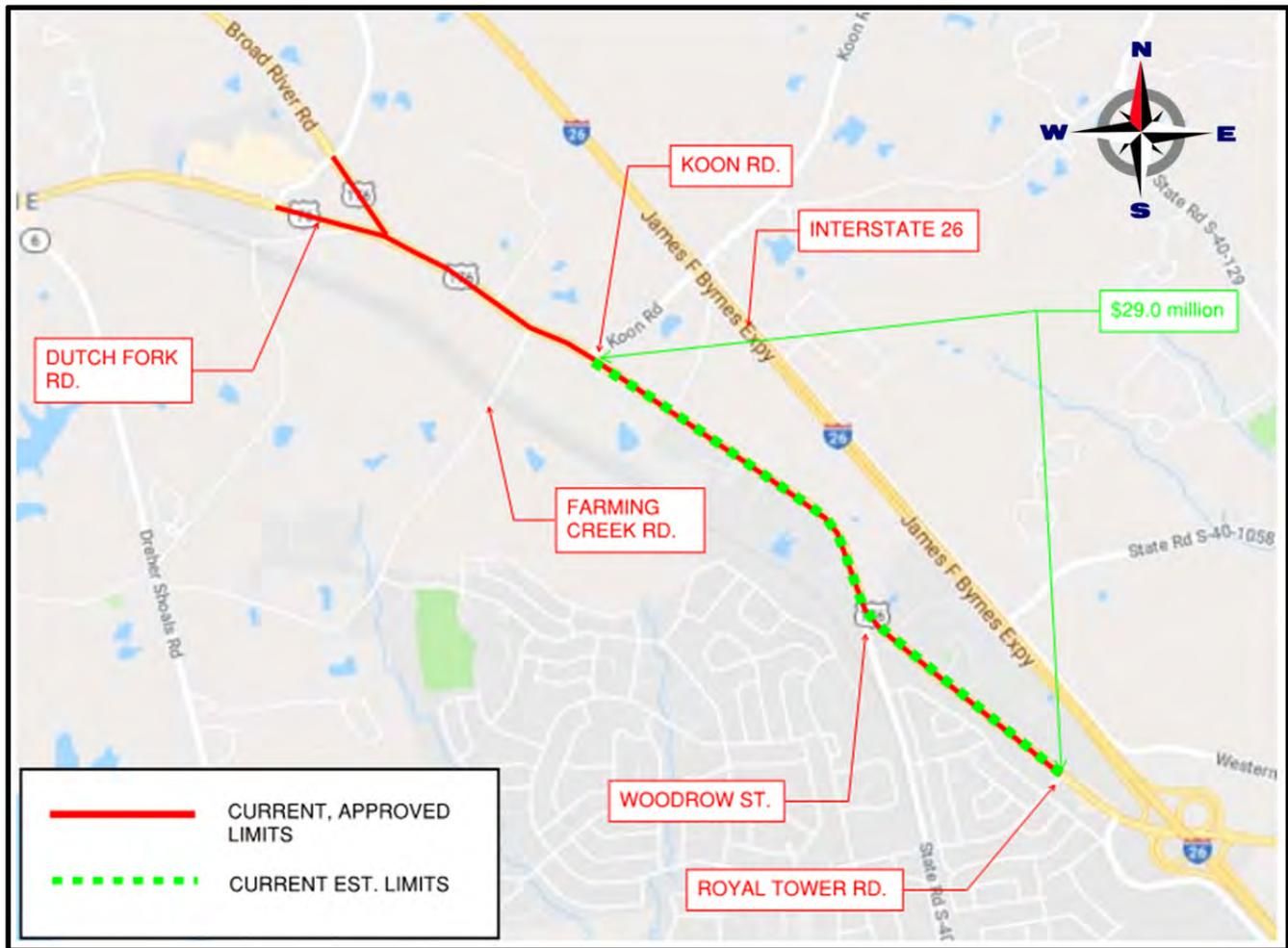
The proposed Broad River Road improvements include multiple project and design-specific details that affect the overall cost estimate increase for this project, including the program-wide significant increases in construction costs. These items include the following (which were not included in the original cost-per-mile method for attaining the referendum values);

- (1) 10'x10' box culvert extension (assumed at this time, further hydraulics study could reflect need for replacement or widening)
- Intersection realignment of Woodrow Street and Broad River Road;
- Alignment shifts / modifications along Broad River Road to correct sub-standard horizontal geometry;
- Improvements at the intersection of Broad River Road and Dutch Fork Road to include lane geometry and intersection alignment modifications;
- Potential City of Columbia 24 inch water line relocation;
- Potential retaining walls to reduce / eliminate impacts to adjacent properties.

Construct within Original Referendum Amount (Scenario 2):

Assuming the referendum value (2012) is to be maintained for this project; the scale and scope of improvements would need to be reduced. Utilizing current construction costs, detailed cost estimates and knowledge of project-specific issues, the proposed improvements would likely be reduced to approximately 1.8 miles.

The recommended limits of improvements, per the reduced scope, would assume a 5-lane widening, beginning at Royal Tower Road (tying to existing 5-lane roadway section) and extending west to terminate at Koon Road - see map below for project limits based on referendum value (2012) and potential scope reduction per current estimate (2017). Koon Road is a potential logical terminus as it is a collector roadway that distributes traffic onto / from Broad River Road. However, coordination with SCDOT would be required in order to evaluate and verify the reduced project limits would not cause any undue traffic issues.

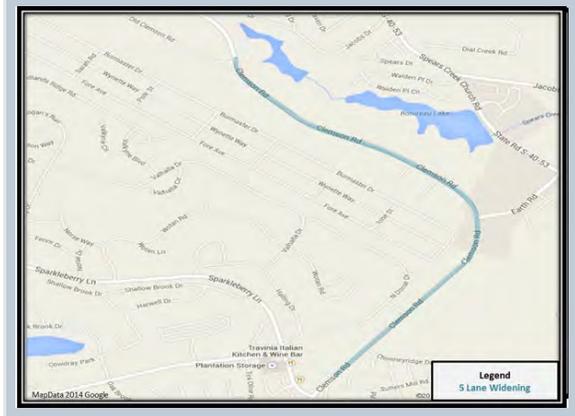


Broad River Road Widening Project Map

Recommendation: Due to high volumes of existing and future traffic, construct the project from Royal Tower Road to Dutch Fork Road per the Council-approved action in March 2017.

PROJECT: 276 CLEMSON RD WIDENING

Scope	The proposed scope recommends a 5-lane section (4 travel lanes and a center turn lane) from Old Clemson Rd. to Sparkleberry Crossing with shared-use paths for bicyclists and pedestrians between Old Clemson Road and Chimneyridge Drive.
SCDOT PIN	P028858
Project Length	1.90 miles
District	09, 10
Project Manager	Raven Gambrell
Design	Holt Consulting Company, LLC



TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2015)	Design (2040)
Clemson Road	23,900	34,700

ACCIDENT DATA – Jan 2011 – Oct 2014 (3.8 years)

Project / Segment	Crashes	Notes
Clemson Road	146	57% rear-end crashes, 34% intersection-related, 9% other (one fatalities)

PROJECT COSTS

Referendum Total (2012)

\$23.4 million

Current Estimate (2017 Q4 Estimate)

\$19.6 million

Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals

The project also includes outside funding through a TAP Grant (\$180 thousand) and Federal Safety Funds (\$800 thousand); therefore, the total cost for this project from referendum funding is approximately \$18.6 million.

Construct within Original Referendum Amount (Scenario 2): None

Recommendation: Roadway design services and rights-of-way acquisitions have been completed. City of Columbia waterline relocation design is underway and is the last remaining item to complete the project development. Construct entire project as defined in referendum.

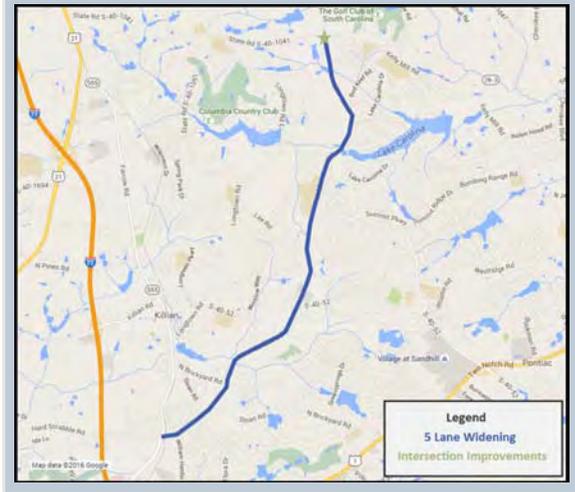
PROJECT: 277 HARDCRABBLE RD WIDENING

Scope The proposed scope includes widening Hard Scrabble Road to four travel lanes and adding a center merge/turn lane. The project will extend from Farrow Road to Kelly Mill Road. Sidewalks, bicycle lanes, and intersection improvements are included. The Richland Penny Program is funding \$29.86M for this project. SCDOT / COATS is funding \$8.4M for right-of-way and \$28.86M for construction as identified in the SCDOT STIP. This project is being managed by the South Carolina Department of Transportation (SCDOT).

Project Length 7.20 miles

District 02, 07, 08, 09

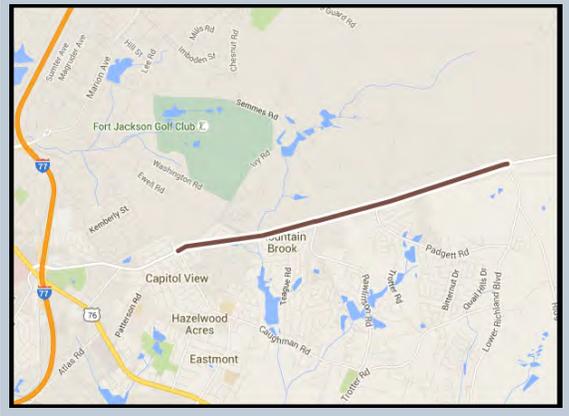
Project Manager SCDOT



Project under Construction, administered by SCDOT.

PROJECT: 278 LEESBURG ROAD WIDENING

Scope	The proposed scope includes widening Leesburg Road to four travel lanes and adding a center merge/turn lane from approximately Fairmont Road to Lower Richland Boulevard. Sidewalks, shared-use lanes and intersection improvements are included. The Richland Penny Program is funding a total of \$4.0 million toward the construction of this project, estimated at \$31 million as identified in the SCDOT STIP. This project is being developed and managed by the South Carolina Department of Transportation.
Project Length	3.72 miles
District	10, 11



Rights-of-way acquisitions are underway with construction scheduled to begin in 2019. Project administered by SCDOT.

PROJECT: 279 LOWER RICHLAND BLVD WIDENING (RABBIT RUN RD TO GARNERS FERRY RD)

Scope	The proposed scope recommends a 5-lane section (4 travel lanes and a center turn lane) between Rabbit Run and Garners Ferry Road.
Project Length	0.55 miles
District	11



TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2016)	Design (2043)
Lower Richland Boulevard	2,100 ¹	4,000 ²

¹Per SCDOT 2016 ADT data, ²Assumed 3.0% growth rate

ACCIDENT DATA - Jan 2011-Apr 2014 (3.25 years)

Project / Segment	Crashes	Notes
Lower Richland Boulevard	20	40% rear-end crashes, 40% intersection-related, 20% other (zero fatalities)

PROJECT COSTS

Referendum Total (2012)

\$6.1 million

Current Estimate (2017 Q4 Estimate)

\$7.0 million

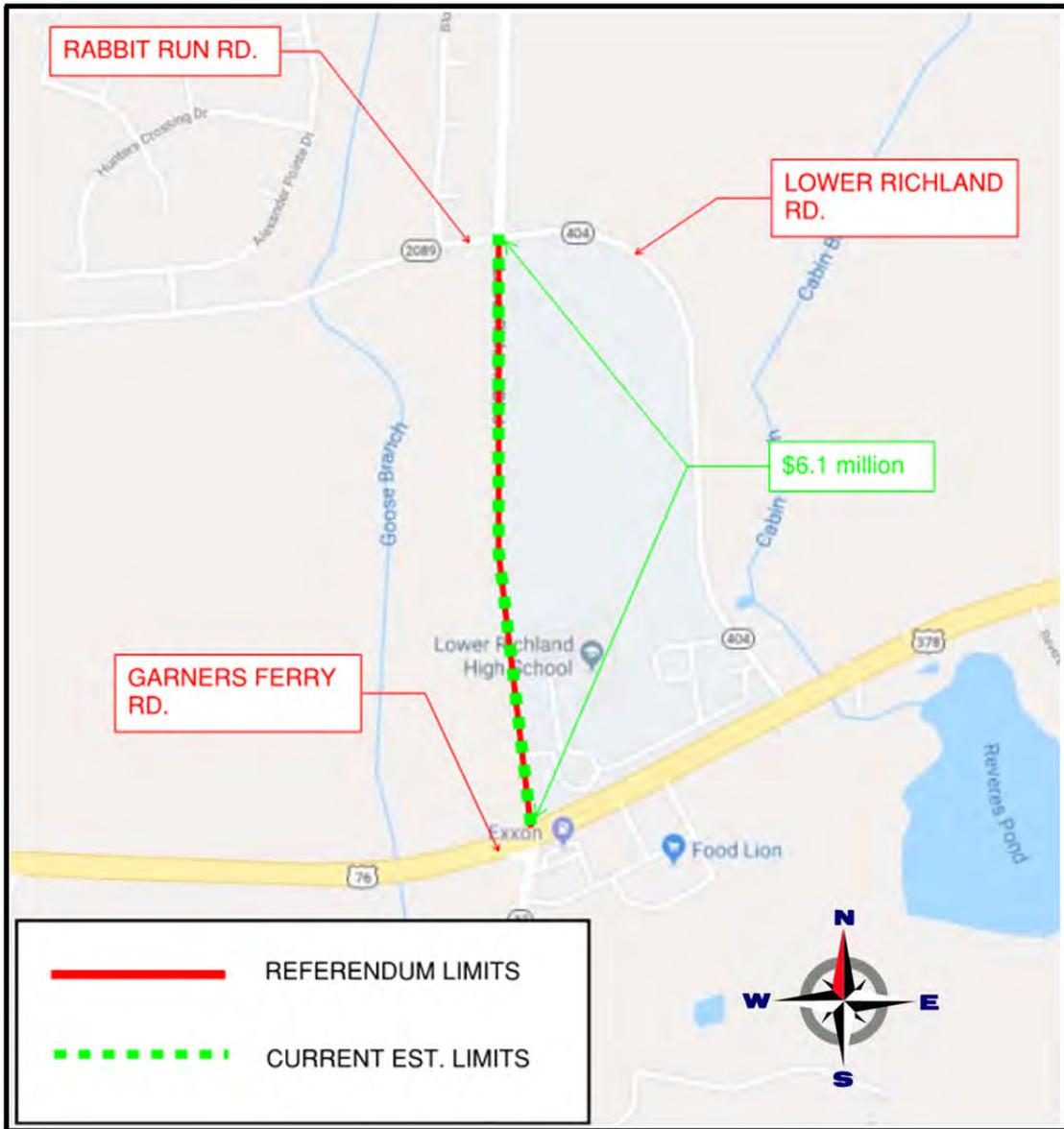
Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals

Preliminary design has not begun on the Lower Richland Boulevard project; however, review of the proposed project scope and physical observation of existing conditions, the proposed Lower Richland Boulevard improvements are typical of a standard roadway widening project; therefore, the program-wide increases in construction costs can be attributed as the reason for the difference between the 2012 referendum and current cost estimate (2017) values. No design-specific details have been identified to-date that would reflect significant increases in project cost.

The 5-lane typical section would address the rear-end and intersection-related crashes that are evident within this corridor. The addition of the center median would allow storage for left-turning vehicles while maintaining traffic flow for through movements.

Construct within Original Referendum Amount (Scenario 2):

Due to the fact the current estimate is preliminary, with no design having been started and is relatively close to the referendum amount, it is likely that the final cost will be even closer to the referendum amount.

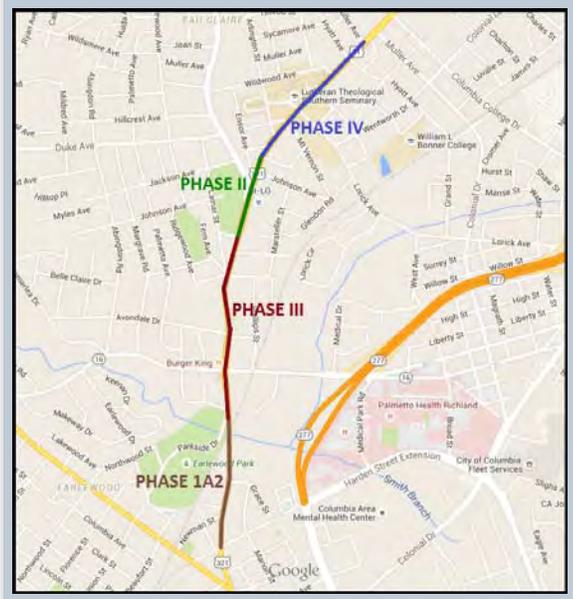


Lower Richland Boulevard Widening Project Map

Recommendation: Construct entire project as defined in referendum (Rabbit Run Road to Garners Ferry Road). Initiate design studies immediately.

PROJECT: 280 NORTH MAIN STREET (PHASES IA2 & III; II & IV) WIDENING

Scope The proposed scope recommends improving the existing deteriorating roadway surface by repaving, improving roadway aesthetics by using imprinted and textured pavement stamping for designated crosswalks and landscape improvements where appropriate, improving night safety with street lighting, and improving pedestrian routes and crosswalks. Other proposed improvements include relocating overhead utilities to underground. In addition to the \$30M in funding from the Richland Transportation Penny program, this project is also being funded with a \$16.65M Tiger Grant, a \$1.3M Federal Earmark and \$5.4M from the City of Columbia for water and sewer work.



Project Length	1.70 miles
District	04
Project Manager	Kevin Sheppard
Design	(Managed by City of Columbia)
Construction	LJ Construction Inc

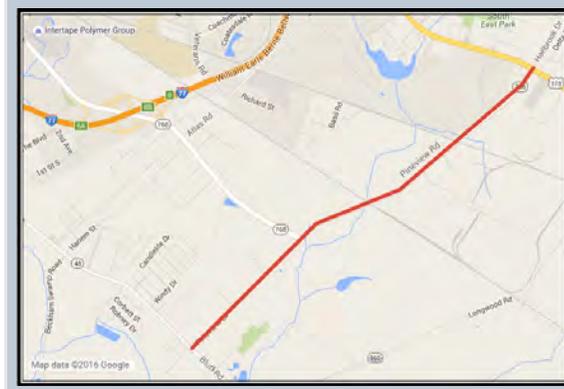
Construct within Original Referendum Amount (Scenario 2): None

Project under Construction.



PROJECT: 281 PINEVIEW RD WIDENING

Scope The proposed scope recommends to retain the existing 2-lane roadway from Bluff Road to Metal Park Drive while providing for bicycle and pedestrian accommodations through the use of an offset shared-use path along one side of the road. Widening of Pineview Road to provide a turn lane at Bluff Road will also be provided. A 3-lane roadway (1 travel lane in each direction with a center turn lane) is to be provided from Metal Park Drive to Shop Road. A 5-lane (4 travel lanes with a center turn lane) roadway is proposed from Shop Road to Garners Ferry Road. These improvements will accommodate bicyclists through the use of 4 foot on-street bike lanes while providing for pedestrians through the use of 5 foot sidewalks constructed behind the curb.



SCDOT PIN	P029306
Project Length	2.90 miles
District	10, 11
Project Manager	Ben Lewis
Design	CECS

The original referendum scope for this project included widening of Pineview Road to a 3-lane section between Bluff Road and Shop Road, and a 5-lane section between Shop Road and Garners Ferry Road. Upon holding a public meeting and receiving public comments against the 3-lane section; County Council approved the revised (current) scope in May 2016 to revised the typical section between Bluff Road and Shop Road to construct intersection improvements at Bluff Road and a shared use path, only, to Shop Road. Between Metal Park Road and Shop Road a 3-lane section is still proposed due to the industrial nature of adjacent development and majority of accidents within this area.

TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2015)	Design (2041)
Pineview Road		
Bluff to Shop	3,400	4,700
Shop to Garners Ferry	16,700	16,000 ¹
Shop to Garners Ferry	16,700	24,000 ²

¹ Assumes construction of Shop Rd Ext. Phase 2, ² Assumes no development of Shop Ext Phase 2

ACCIDENT DATA – Jan 2011 – Nov 2013 (2.9 years)

Project / Segment	Crashes	Notes
Pineview Road	61	49% rear-end crashes, 21% intersection-related, 30% other (1 fatality)

PROJECT COSTS

Referendum Total (2012)	Current Estimate (2017 Q4 Estimate)
\$18.2 million	\$40.0 million
Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals	

The proposed Pineview Road improvements include multiple project and design-specific details that affect the overall cost estimate increase for this project. These items include the following (which were not included in the original cost-per-mile method for attaining the referendum values);

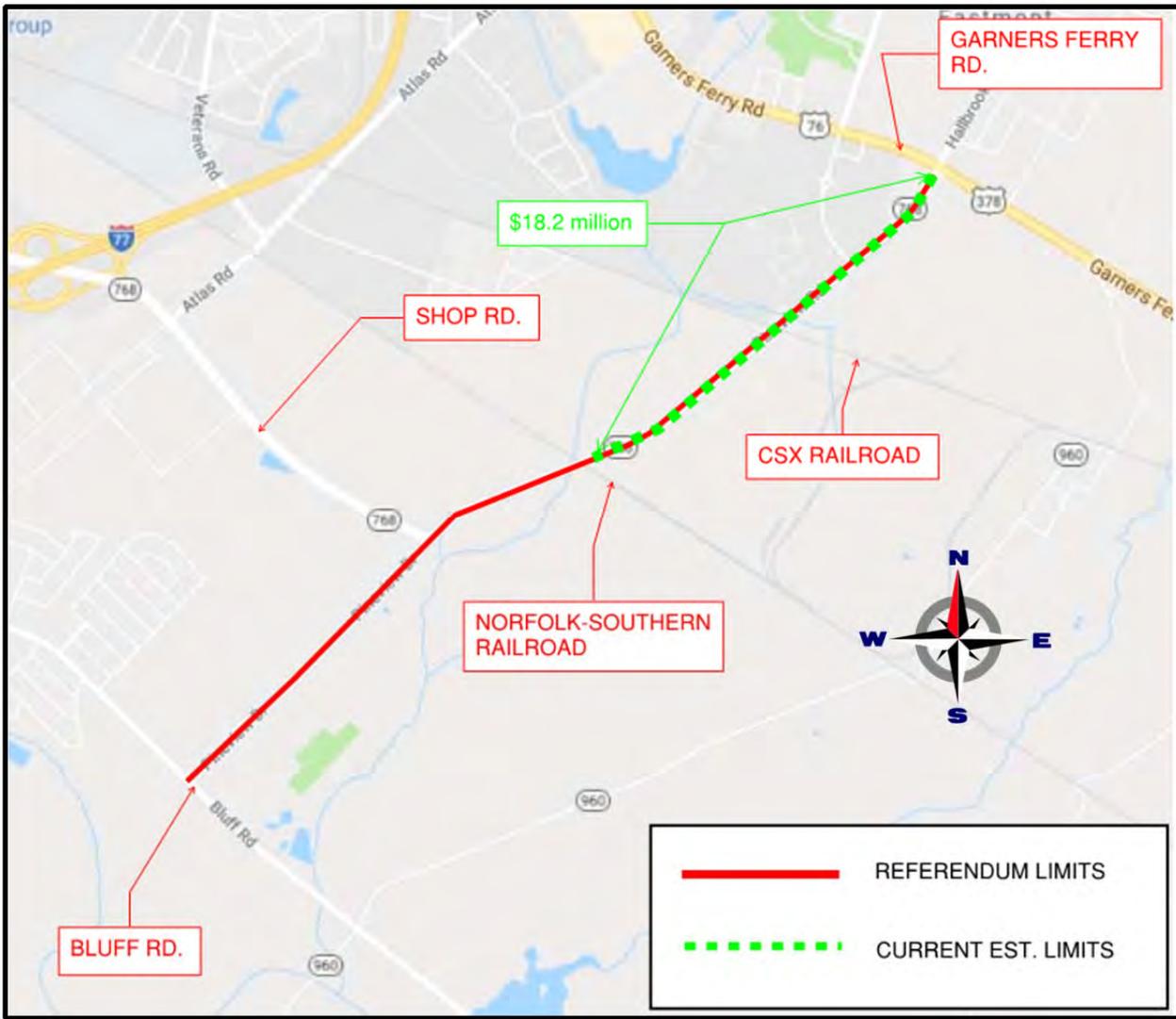
- (2) Railroad Crossings – Norfolk/Southern and CSX;
- (1) New, flat slab 2-lane bridge crossing Reeder Point Branch;
- Overlay, rehabilitation of existing flat slab, 2-lane bridge;
- (1) Extension of existing triple box culvert & widening to provide new 8'x6' section;
- (1) Extension of existing 9'x7' double box culvert;
- (1) Extension of existing 10'x10' box culvert'
- Extensive improvements at the Pineview Road / Garners Ferry Road intersection to include the addition of dual, left turns and dedicated right turning lanes.

Construct within Original Referendum Amount (Scenario 2):

Assuming the referendum value (2012) is to be maintained for this project; the scale and scope of improvements would need to be reduced. Utilizing current construction costs, detailed cost estimates and knowledge of project-specific issues, the proposed improvements would likely be reduced to approximately 1.3 miles.

The recommended limits of improvements, per the reduced scope, would assume a 5-lane widening from just east of the Norfolk-Southern Railroad crossing to Garners Ferry Rd, to include the necessary geometric improvements at the intersection – see map below for project limits based on referendum value (2012) and potential scope reduction per current estimate (2017). The area of improvements reflective of the reduced scope is indicative of the highest traffic volumes and incidence of accidents. Roadway widening projects typically terminate at crossing routes that are traffic generators (ie: Shop Rd); therefore, coordination with SCDOT would be required to justify the limited improvements and to verify that the reduced termini would not cause any undue traffic issues. It is likely SCDOT would not be supportive of this alternative due to limited benefits.

It should also be noted that the current design for Pineview Road assumes that Shop Road Extension – Phase 2 will be developed and constructed in the period between the Pineview Road opening year and design year. The project traffic analysis reflects a reduction in average daily traffic (ADT) between Shop Road and Garners Ferry Road upon the completion of Shop Road Extension – Phase 2. This reduction reflects traffic volumes less than current values (based on 2015 traffic counts); therefore, should Shop Road Extension – Phase 2 be developed and constructed, corridor improvements along Pineview Road may not be necessary.

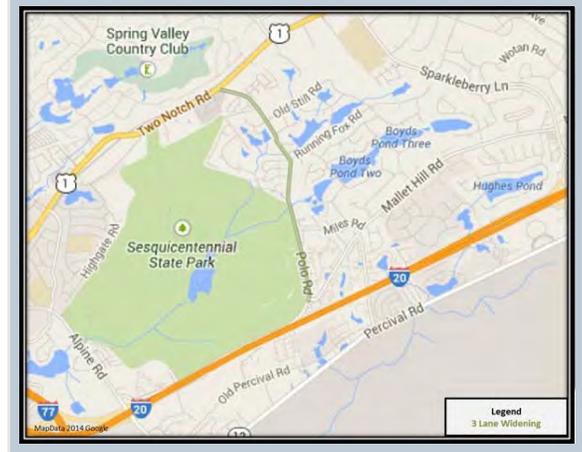


Pineview Road Widening Project Map

Recommendation: Due to the fact that traffic volumes are projected to actually decrease with the construction of Shop Road Extension Phase 2, defer this project until other widenings are complete or additional funding is identified.

PROJECT: 282 POLO RD WIDENING

Scope	The proposed scope recommends a 3-lane (2 lanes with center turn lane) widened roadway from Two Notch Road to Mallet Hill Road. These improvements will accommodate bicyclists through the use of 4 foot on-street bike lanes and provide for pedestrians through the use of 5 foot sidewalks constructed behind the curb.
Project Length	1.90 miles
District	08, 09, 10



TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2016)	Design (2044)
Polo Road	8,300 ¹	12,600 ²

¹Per SCDOT 2016 ADT data, ²Assumed 2.0% growth rate

ACCIDENT DATA – Jan 2011 – Nov 2013 (2.9 years)

Project / Segment	Crashes	Notes
Polo Road	17	35% rear-end crashes, 29% intersection-related, 36% other (zero fatalities)

PROJECT COSTS

Referendum Total (2012)	Current Estimate (2017 Q4 Estimate)
\$12.8 million	\$16.0 million

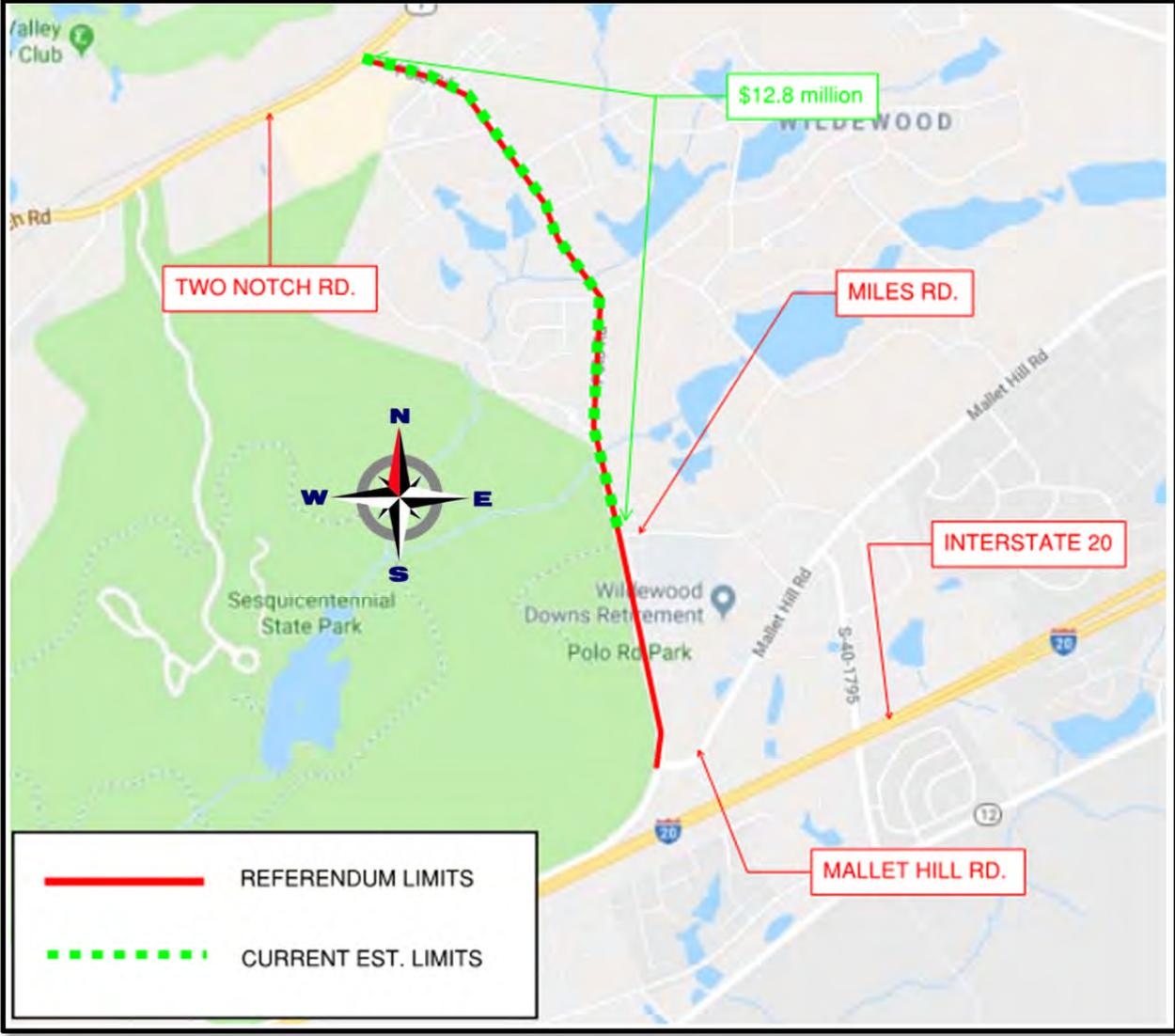
Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals

Preliminary design has not begun on the Polo Road project; however, review of the proposed project scope and physical observation of existing conditions, the proposed improvements are typical of a standard roadway widening project; therefore, the program-wide increases in construction costs can be attributed as the reason for the difference between the 2012 referendum and current cost estimate (2017) values. No major design-specific details have been identified to-date that would reflect significant increases in project cost. The project would include intersection improvements at certain side roads and termini, specific to lane storage and dedicated turning lanes. The corridor includes a large concentration of residential development, some of which could be affected by the proposed improvements.

Construct within Original Referendum Amount (Scenario 2):

Assuming the referendum value (2012) is to be maintained for this project; the scale and scope of improvements would need to be reduced. Utilizing current construction costs, detailed cost estimates and knowledge of project-specific issues, the proposed improvements would likely be reduced to approximately 1.5 miles, less than a half-mile short of the proposed referendum limits.

The recommended limits of improvements, per the reduced scope, would assume a 3-lane widening beginning at the intersection with Two Notch Road and extending south along Polo Road, terminating at the intersection with Miles Road (these limits could also be affected by the final determination of hydraulic requirements at the existing stream crossings). Two Notch Road is a major arterial; therefore, a practical location for the project termini – see map below for project limits based on referendum value (2012) and potential scope reduction per current estimate (2017). The reduced limits would require coordination with SCDOT to study the associated traffic impacts to the remaining portion of Polo Road.



Polo Road Widening Project Map

Recommendation: Construct entire project as defined in referendum from Two Notch Road to Mallet Hill Road. Initiate design studies immediately.

PROJECT: 283 SHOP RD WIDENING

Scope	The proposed scope recommends a 5-lane (4 travel lanes with a center turn lane) widened roadway with offset, shared use paths along both sides of the road (for bicycle and pedestrian accommodations) on Shop Road from George Rogers Boulevard to South Beltline Boulevard. The project will include an intersection realignment and reconstruction at George Rogers Blvd.
SCDOT PIN	P028862
Project Length	2.50 miles
District	10
Project Manager	Ben Lewis
Design	Mead & Hunt



TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2015)	Design (2042)
Shop Road	15,000	19,500

ACCIDENT DATA – Jan 2011 – Oct 2014 (3.8 years)

Project / Segment	Crashes	Notes
Shop Road	82	46% rear-end crashes, 25% intersection-related, 29% other (2 fatalities)

PROJECT COSTS

Referendum Total (2012)	Current Estimate (2017 Q4 Estimate)
\$33.1 million	\$60.2 million
Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals	

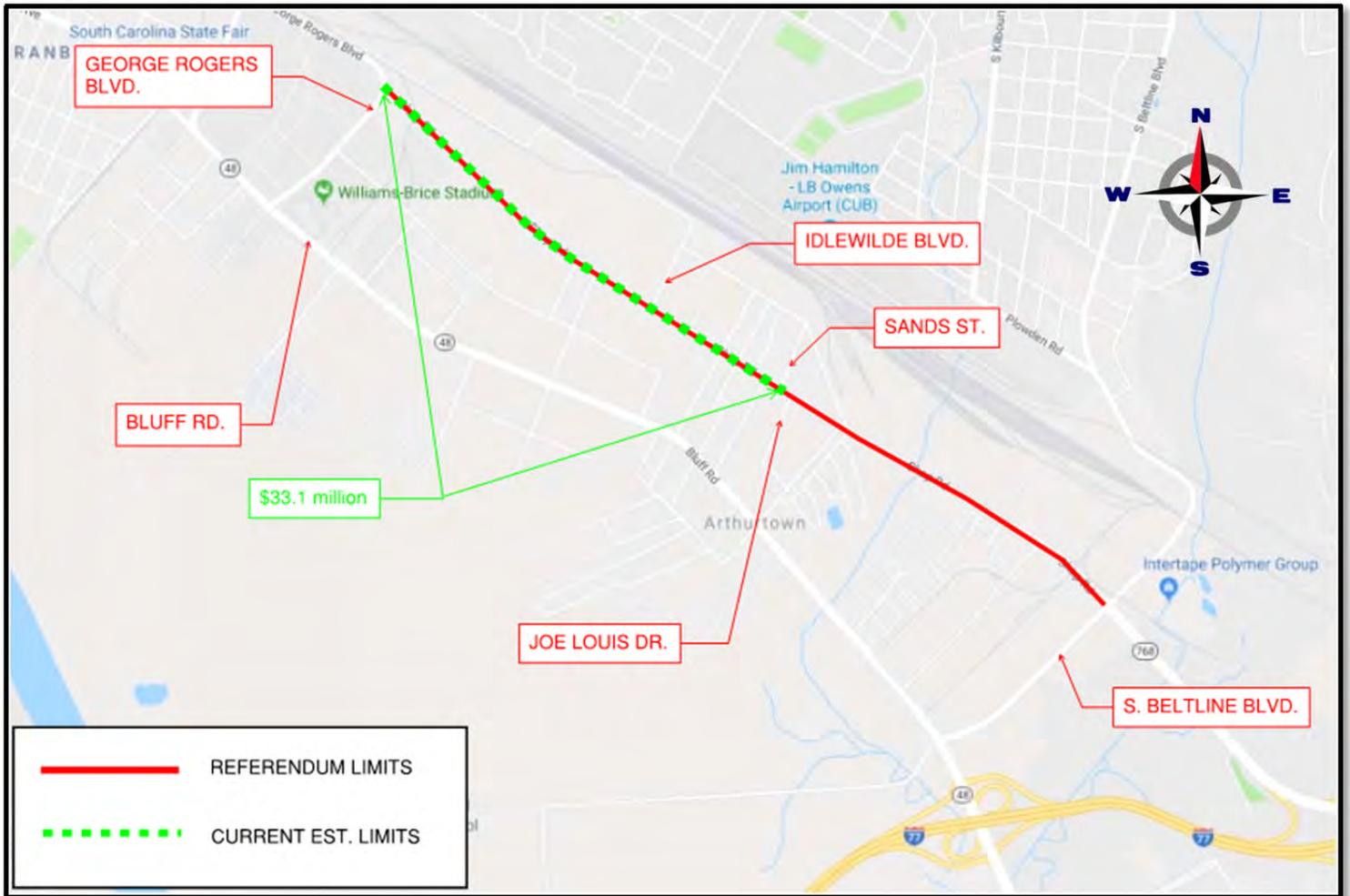
The proposed Shop Road improvements include multiple project and design-specific details that affect the overall cost estimate increase for this project. These items include the following (which were not included in the original cost-per-mile method for attaining the referendum values);

- Intersection realignment / reconfiguration of Shop Road / George Rogers Boulevard / S. Assembly Street
- (2) Railroad Crossings – Norfolk / Southern crossings
- Potential (3) commercial and (3) residential relocations
- Potential relocation of (2) waterlines from under existing pavement, including a City of Columbia water pump station
- Potential relocation of major data and communication hubs that service fairgrounds, SCETV building and Williams-Brice stadium
- Reconstruction of approx. 2,300 feet of drainage outfall (closed system) and acquisition of new right-of-way for outfall (under-sized existing system)

Construct within Original Referendum Amount (Scenario 2):

Assuming the referendum value (2012) is to be maintained for this project; the scale and scope of improvements would need to be reduced. Utilizing current construction costs, detailed cost estimates and knowledge of project-specific issues, the proposed improvements would likely be reduced to approximately 1.4 miles.

The recommended limits of improvements per the reduced scope would assume a 5-lane widening beginning at George Rogers Boulevard (including the realignment / reconfiguration of the intersection) and terminating at Sands Street, just east of the Little Camden neighborhood – see map below for project limits based on referendum value (2012) and potential scope reduction per current estimate (2017). The reduced limits would eliminate one railroad crossing, potential wetland impacts crossing the existing culvert and associated right of way impacts to the developed properties east of the proposed termini. Extensive and additional coordination with SCDOT would be required in order to evaluate and justify the proposed termini and any associated traffic impacts relative to the design change.



Shop Road Widening Project Map

Recommendation: Construct entire project as defined in referendum from George Rogers Boulevard to S. Beltline Boulevard.

PROJECT: 284 SPEARS CREEK CHURCH RD WIDENING

Scope	The proposed scope recommends a 5-lane (4 travel lanes and a center turn lane) section to accommodate the traffic between Two Notch Road and Percival Road.
Project Length	2.54 miles
District	09, 10



TRAFFIC DATA – Average Daily Traffic (ADT)

Project / Segment	Existing (2016)	Design (2041)
Spears Creek Church Road	10,400 ¹	21,800 ²

¹Per SCDOT 2016 ADT data, ²Assumed 3.0% growth rate

ACCIDENT DATA – Jan 2011 – Apr 2014 (3.25 years)

Project / Segment	Crashes	Notes
Spears Creek Church Road	85	52% rear-end crashes, 21% intersection-related, 27% other (zero fatalities)

PROJECT COSTS

Referendum Total (2012)	Current Estimate (2017 Q4 Estimate)
\$26.6 million	\$49.5 million

Costs include all Engineering & Environmental, R/W, Utilities, Construction & CE&I estimates / actuals

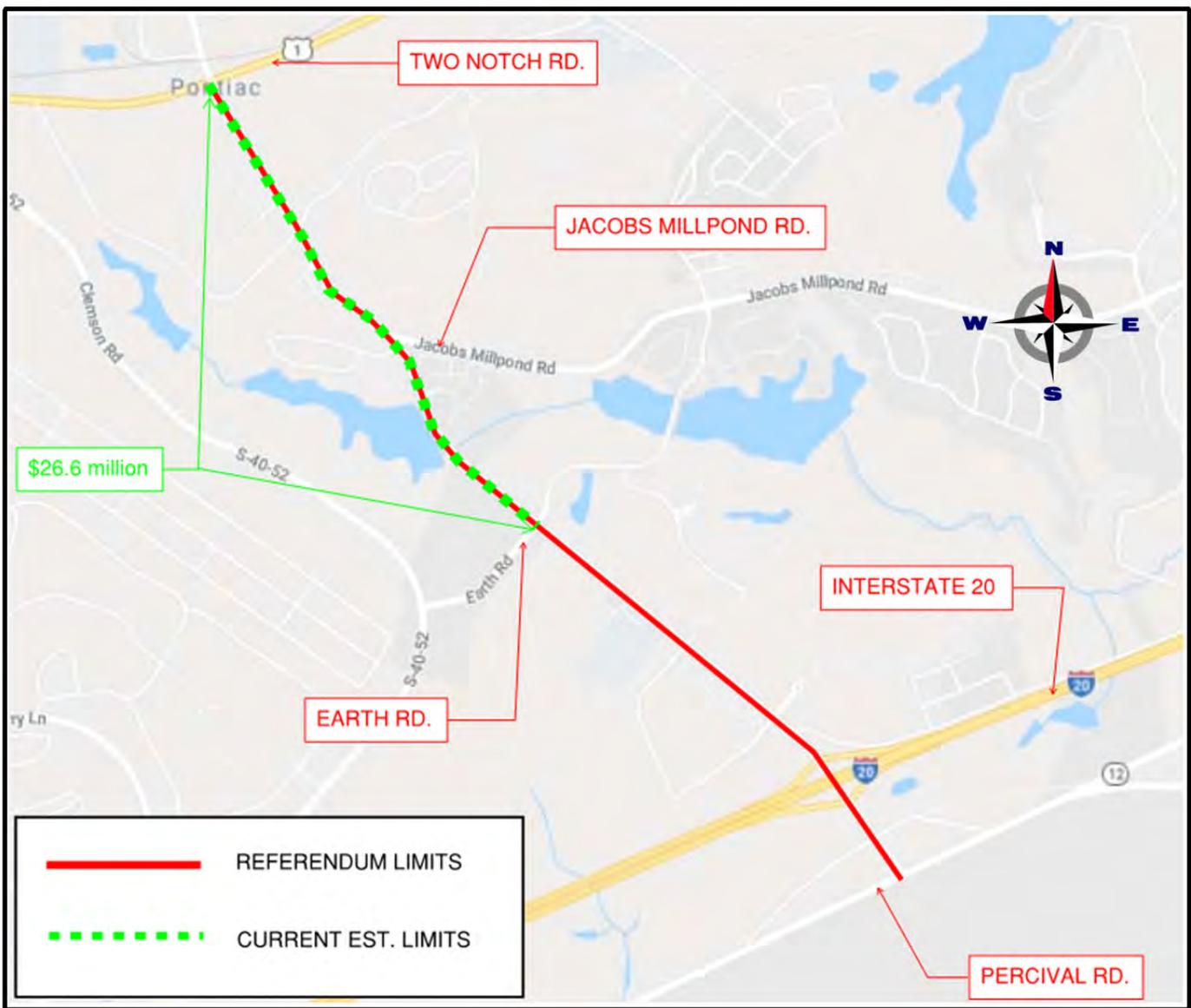
Preliminary design has not begun on the Spears Creek Church Road project; however, review of the proposed project scope and physical observation of existing conditions, the proposed Spears Creek Church Road improvements include multiple project and design-specific details that affect the overall cost estimate increase for this project. These items include the following (which were not included in the original cost-per-mile method for attaining the referendum values);

- Widening or replacement of bridge over I-20 (existing 2-lane bridge);
- Potential median widening of I-20 (for bridge widening pier protection);
- Potential alignment modifications to interstate exit / entrance ramps in order to provide adequate storage;
- Potential culvert replacement and / or raising of profile grade at Walden Pond outfall;
- Potential intersection improvements at Two Notch Rd and Percival Rd (addition of turn lanes; widening of Percival at intersection to provide 3-lane section);
- Potential intersection realignment of Jacobs Millpond Road to correct sub-standard geometry

Construct within Original Referendum Amount (Scenario 2):

Assuming the referendum value (2012) is to be maintained for this project; the scale and scope of improvements would need to be reduced. Utilizing current construction costs, detailed cost estimates and knowledge of project-specific issues, the proposed improvements would likely be reduced to approximately 1.3 miles.

The recommended limits of improvements, per the reduced scope, would assume a 5-lane widening beginning at the intersection with Two Notch Road and extending south along Spears Creek Church Road, terminating at the intersection with Earth Road. This portion of the corridor is the most congested with adjacent development and thus would address existing safety issues. Two Notch Road is a major arterial; therefore, a practical location for the project termini – see map below for project limits based on referendum value (2012) and potential scope reduction per current estimate (2017). The proposed, reduced scope limits would eliminate any work on the existing bridge over I-20 or the potential for any needed improvements along the interstate or ramps, both of which would be costly and time consuming. The reduced limits would require extensive coordination with SCDOT to study the associated traffic impacts to the remaining portion of Spears Creek Church Road.



Spears Creek Church Road Widening Project Map

Recommendation: Construct the project from Two Notch Road to the I-20 ramps, terminating the project on the north side of the interstate. This reduction in scope removes I-20 bridge widening / replacement and potential interstate and ramp improvements for a savings of approximately \$13.5 million from the current estimate of \$49.5 million. Initiate design studies immediately.

Memo

To: Dr. John M. Thompson, Ph.D., MBA, CPM
 From: David Beaty, P.E.
 CC: Tony Edwards, P.E.
 Date: April 20, 2018
 Re: Richland County Transportation Program Greenways – Summary and Recommendations

It is the intent of this memorandum to summarize and provide recommendations for completing the Greenway category of the Richland County Transportation Program.

I. Introduction:

The Richland County Transportation Program has a total funding of \$1.07 billion funded through the Transportation Sales Tax approved by voters in November of 2012. Per the referendum, \$80,888,356.00 was allotted to the Bike/Pedestrian/Greenway category with \$20,970,779.00 dedicated to Greenways. Projects are being developed to stay within their original referendum amount, unless additional outside funding is secured.

Fifteen greenway projects were included in the referendum, and the PDT prioritized the projects according to Council-directed guidelines. The following chart provides a summation of the projects in order of priority ranking:

Priority Rank	Project Name	Termini Start	Termini End	2012 Referendum Cost
1	Three Rivers Greenway Extension	Lex/Rich County line at I-26	Columbia Canal Walk	\$7,902,242.00
2	Lincoln Tunnel Greenway	Taylor St.	Elmwood Ave.	\$892,739.00
3	Gills Creek Section A	Kilbourne at Lake Katherine	Bluff Rd	\$2,246,160.00
4	Smith/Rocky Branch Section	Downtown	Granby Park	\$901,122.00
5	Gills Creek Section B	Wildcat Creek	Leesburg Rd.	\$2,785,897.00

Priority Rank	Project Name	Termini Start	Termini End	2012 Referendum Cost
6	Smith/Rocky Branch Section B	Clement Rd.	Colonial Dr.	\$1,415,316.00
7	Smith/Rocky Branch Section A	Three Rivers Greenway	Clement Rd.	\$431,183.00
8	Gills Creek Section C	Trenholm Rd.	Lake Katherine	\$344,667.00
9	Crane Creek Section A	Monticello Rd.	Broad River	\$1,541,816.00
10	Crane Creek Section B	Crane Creek A	Smith/ Rocky Branch	\$460,315.00
11	Columbia Mall Greenway	Trenholm (N of O'Neil Ct)	Trenholm (S of Dent MS)	\$648,456.00
12	Polo/Windsor Lake Connector	Polo Rd.	Windsor Lake	\$385,545.00
13	Woodbury/Old Leesburg Connector	Woodbury Dr.	Old Leesburg Rd.	\$116,217.00
14	Crane Creek Section C	Crane Forest	Crane Forest	\$793,908.00
15	Dutchman Blvd. Connector	Broad River Rd.	Lake Murray Blvd.	\$105,196.00

See Attachment 1 for maps of each greenway.

II. Current Status:

- 1) Three Rivers Greenway Extension - Construction is underway. Project is scheduled for completion in Fall 2018.
- 2) Lincoln Tunnel - Construction is complete.
- 3) Gills Creek Section A - 30% design is complete. The PDT and Richland County are currently negotiating the design fee with the On-call Engineering Team.
- 4) Smith/Rocky Branch Section C – No work to date other than staying abreast of studies.
 - Four studies performed by others to date include the 2010 Master Plan for the “University of South Carolina Vision for a Sustainable Future”; the June 2016 “Rocky Branch Greenway Master Plan” by the City of Columbia; the December 2017 “Capital City Mill District Area and Corridor Plan”; and the January 2018 EPA funded Greening America’s Communities/Rocky Branch Greenway.
- 5) Gills Creek Section B - Kings Grant Homeowner’s Association (HOA) letter has previously requested the project be removed from the Program.
- 6) Smith/Rocky Branch Section B – No work to date.
- 7) Smith/Rocky Branch Section A – No work to date.

- 8) Gills Creek Section C – No work to date. The PDT is planning to provide project overview to Gregg Park Homeowner’s Association (HOA) and the East Richland County Public Service Department (ERCPSD) in May 2018.
- 9) Crane Creek Section A – No work to date.
- 10) Crane Creek Section B – No work to date.
- 11) Columbia Mall Greenway – No work to date.
- 12) Polo/Windsor Lake Connector – No work to date.
- 13) Woodberry/Old Leesburg Connector – No work to date.
- 14) Crane Creek Section C – No work to date.
- 15) Dutchman Blvd. Connector - No work to date.

III. Maintenance

To date the Greenway category has been developed such that any Greenway located within the City of Columbia will ultimately be the maintenance and security responsibility of the City. Previous Maintenance Agreements have been completed between Richland County and the City of Columbia for the following:

- Three Rivers Greenway Extension
- Lincoln Tunnel
- Gills Creek Section A

The following additional greenways are located within the City of Columbia and will be developed under the premise that the City will provide maintenance and security once the construction of each project is complete:

- Smith/Rocky Branch Section C
- Gills Creek Section B
- Smith/Rocky Branch Section B
- Woodbury/Old Leesburg Connector
- Dutchman Blvd. Connector

The following greenways are located outside of the City of Columbia and will be developed under the premise that Richland County will provide maintenance and security once the construction of each project is complete:

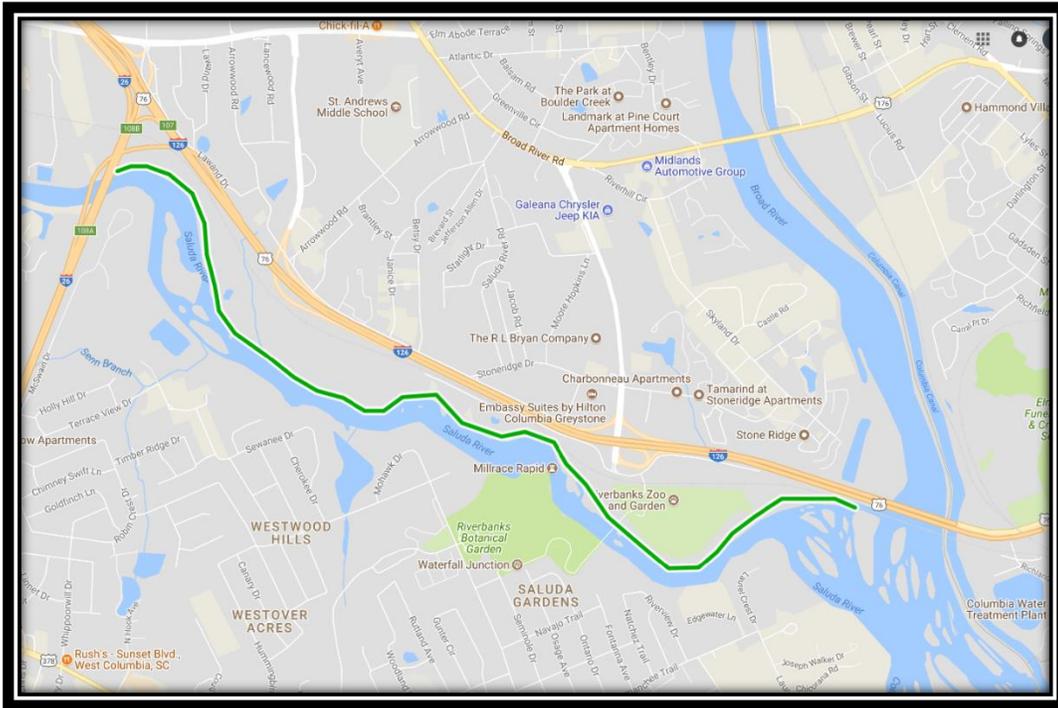
- Smith/Rocky Branch Section A
- Gills Creek North Section C
- Crane Creek Section A
- Crane Creek Section B
- Columbia Mall Greenway
- Polo/Windsor Lake Connector
- Crane Creek Section C

However due to the fact that approximately 75% of Gills Creek North Section C and 35% of Columbia Mall Greenway are located within the City of Forest Acres, it is recommended that coordination be made with the City of Forest Acres to determine the opportunity to have maintenance and security provided by the City of Forest Acres.

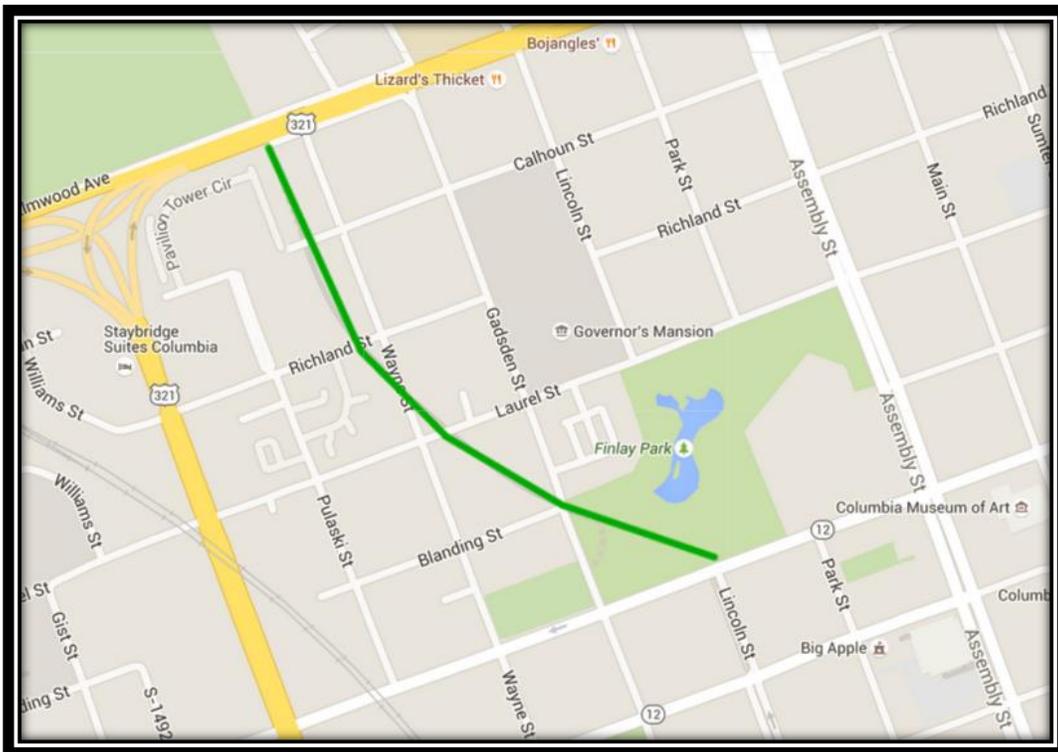
IV. Recommended Path Forward

- Three Rivers Greenway Extension – No action as construction is underway.
- Lincoln Tunnel – No action as construction is complete.
- Gills Creek Section A - Continue negotiating design fee to complete the project from 30% to 100% design.
- Gills Creek Section B – Transfer funding (\$2,785,897.00) to Gills Creek Section A as result of the Kings Grant HOA letter requesting project be removed from Program as well as the strong community support for Gills Creek Section A.
- Gills Creek Section C – Move forward with coordination and design.
- Smith/Rocky Branch Sections A, B and C – Combine the Concept Study phase (30% design) for all 3 sections utilizing one On-Call Engineering Team in an effort to combine the field studies, coordination, and conduct one combined public meeting to minimize the overall study time and cost. Upon completion and the results of the Concept Study, proceed as appropriate with the final design of each individual section according to the original prioritization.
- Crane Creek Sections A, B and C - Combine the Concept Study phase (30% design) for all 3 sections utilizing one On-Call Engineering Team in an effort to combine the field studies, coordination, and conduct one combined public meeting to minimize the overall study time and cost. Upon completion and the results of the Concept Study, proceed as appropriate with the final design of each individual section according to the original prioritization.
- Columbia Mall Greenway – Due to the proximity of this project to the Decker/Woodfield Neighborhood Improvement, it is recommended that a contract modification be developed with the current On-Call Engineering Team designing the Decker/Woodfield Neighborhood Improvement project to include this greenway.
- Polo/Windsor Lake Connector, Woodberry/Old Leesburg Connector, and Dutchman Blvd. Connector – Combine the Concept Study phase (30% design) for all 3 sections utilizing one On-Call Engineering Team in an effort to combine the field studies, coordination, and conduct one combined public meeting to minimize the overall study time and cost. Upon completion and the results of the Concept Study, proceed as appropriate with the final design of each individual section according to the original prioritization.

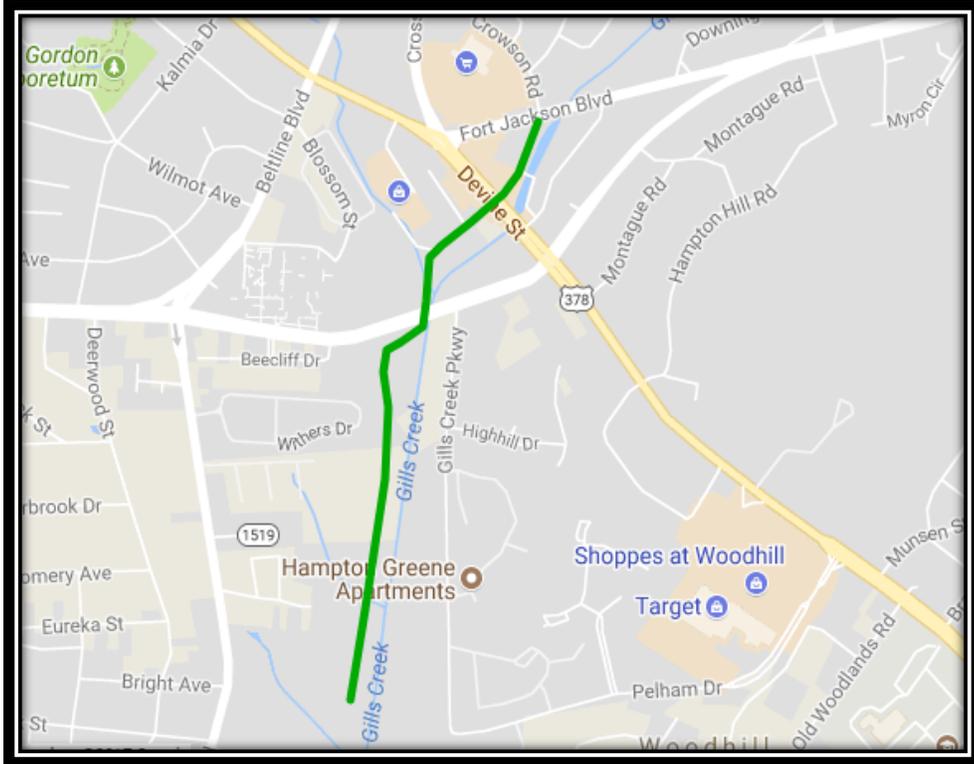
1 - Three Rivers Greenway Extension



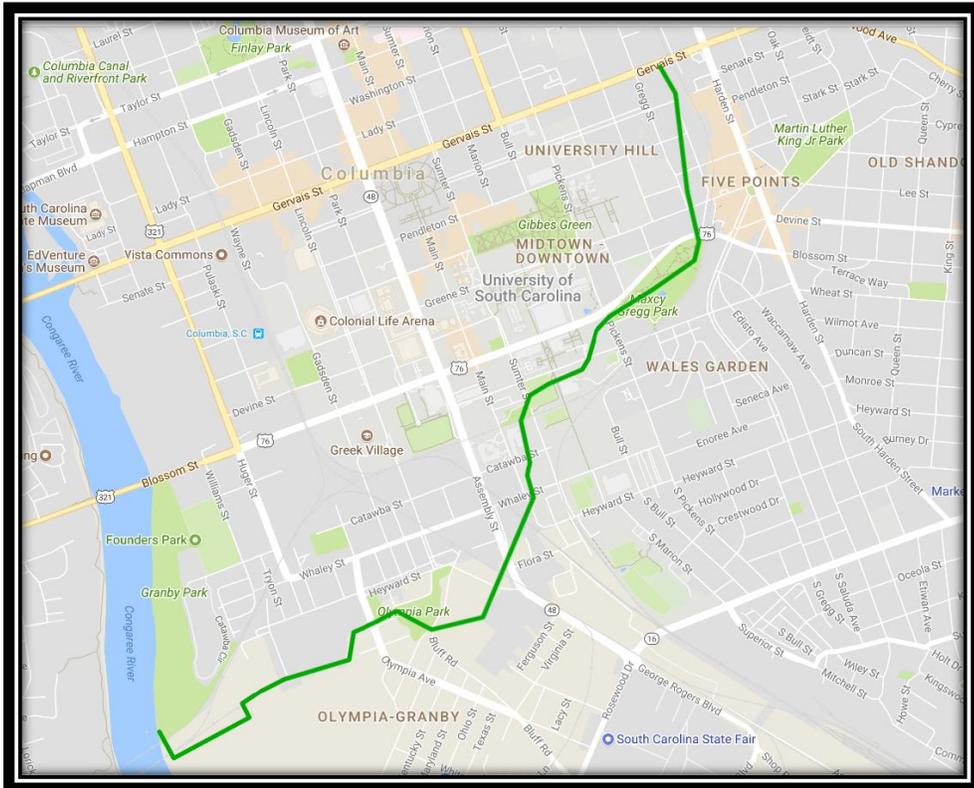
2 - Lincoln Tunnel Greenway



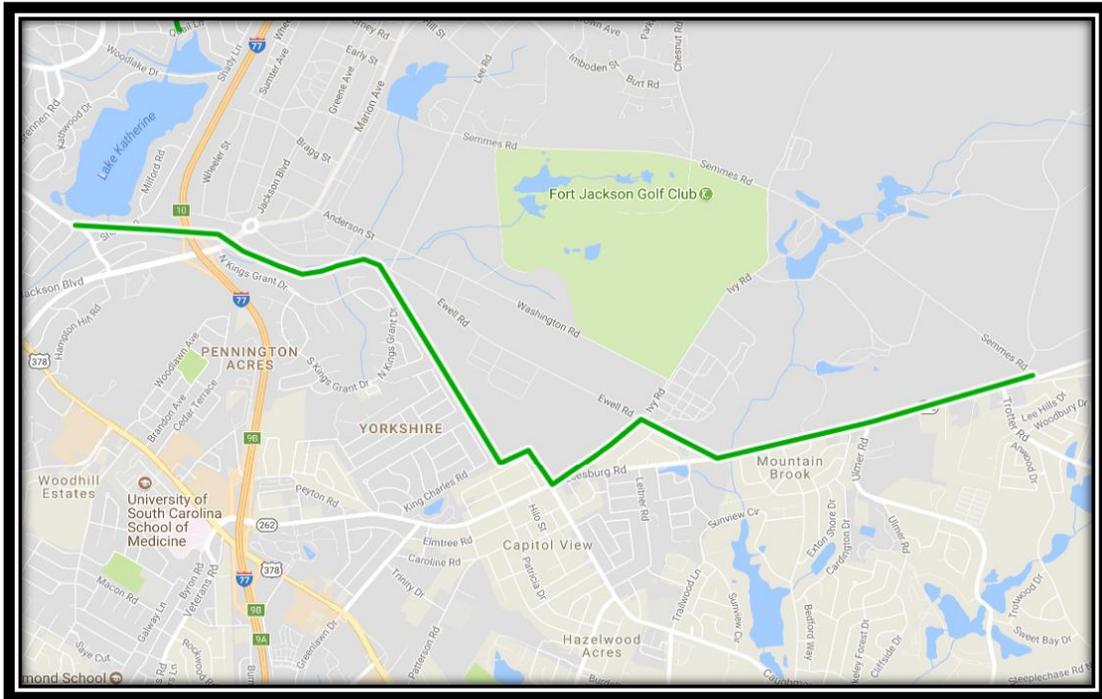
3 - Gills Creek Section A Greenway



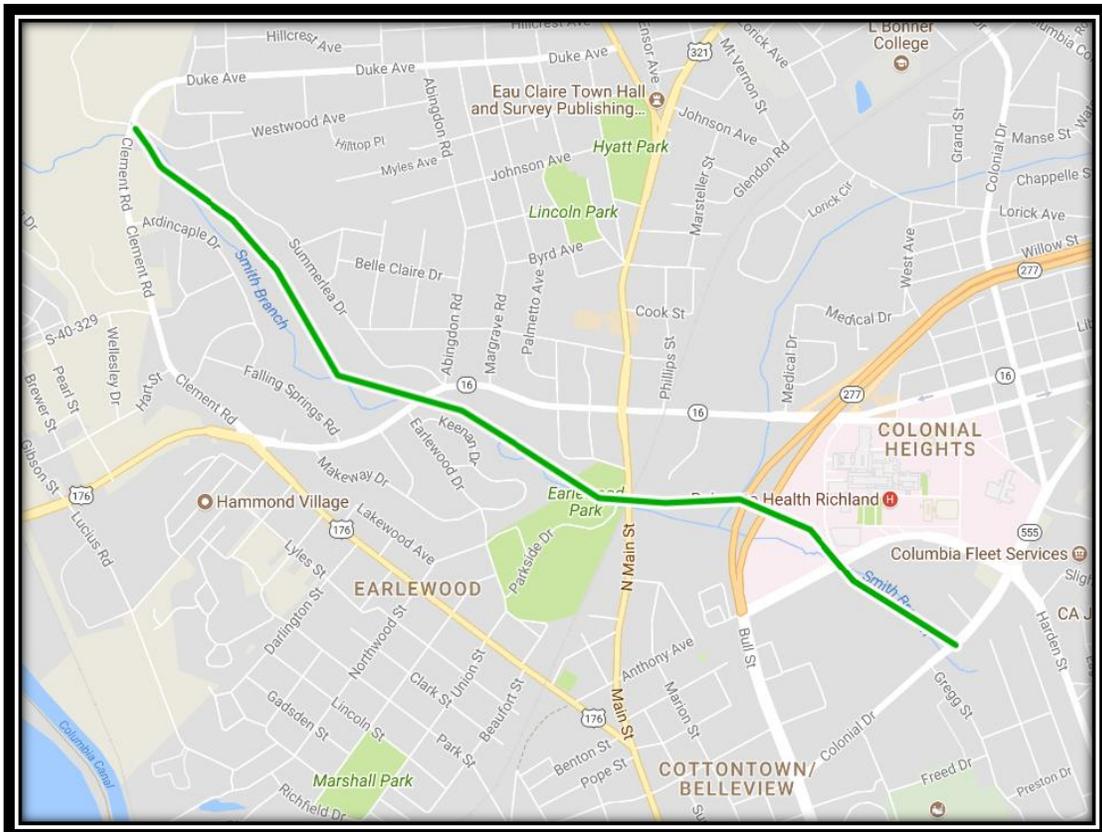
4 - Smith/Rocky Branch Section C Greenway



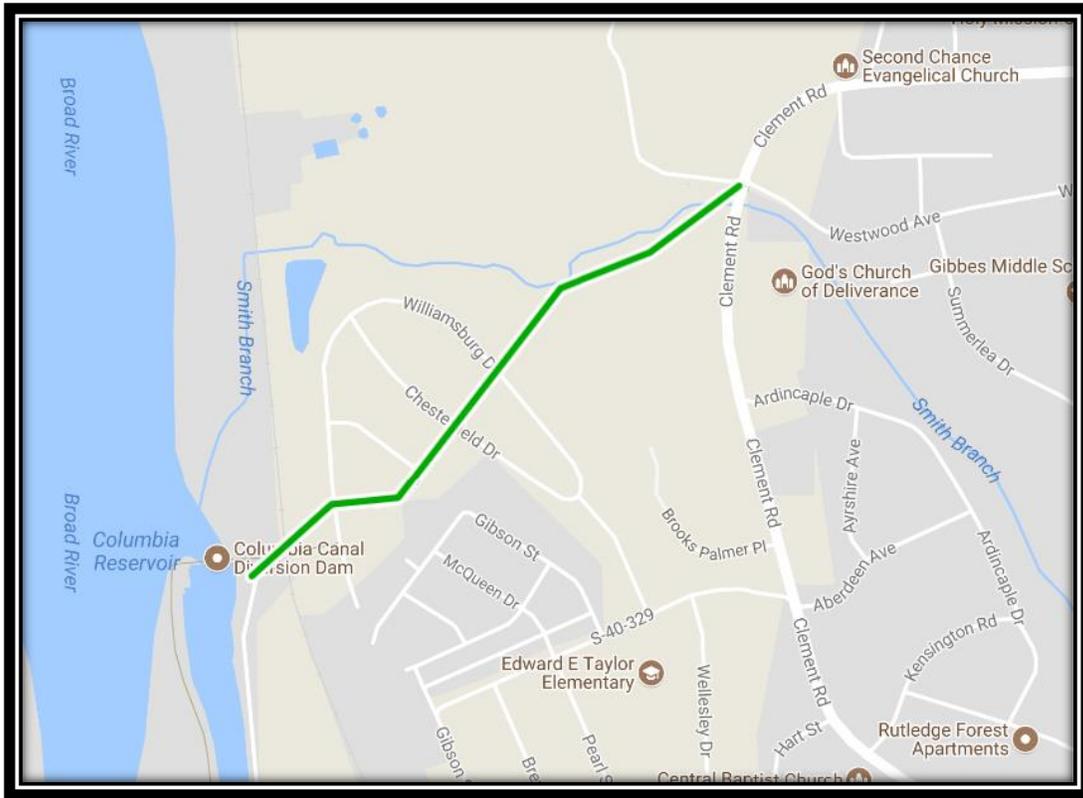
5 - Gills Creek Section B Greenway



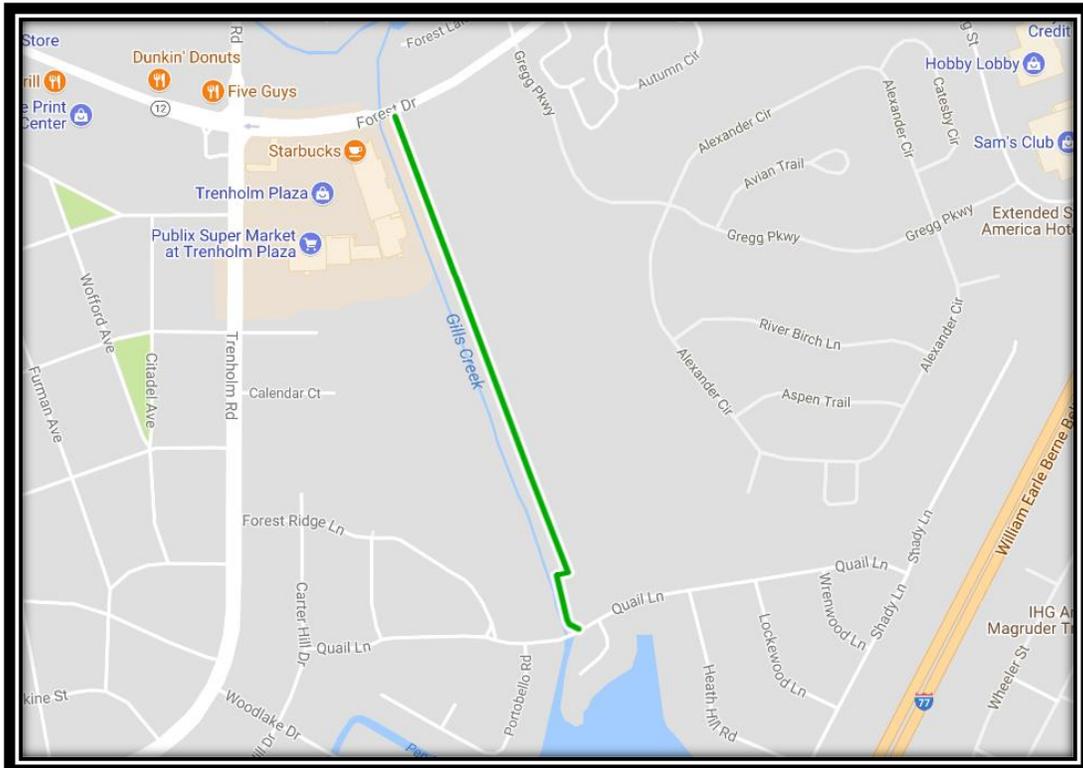
6 - Smith/Rocky Branch Section B Greenway



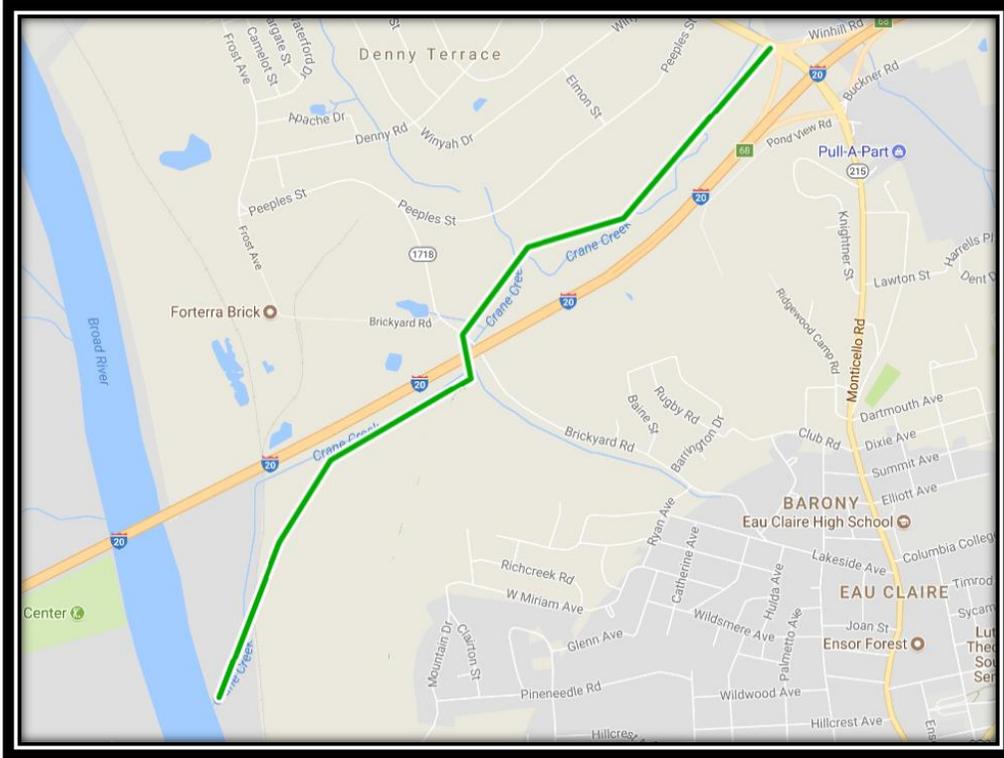
7 - Smith/Rocky Branch Section A Greenway



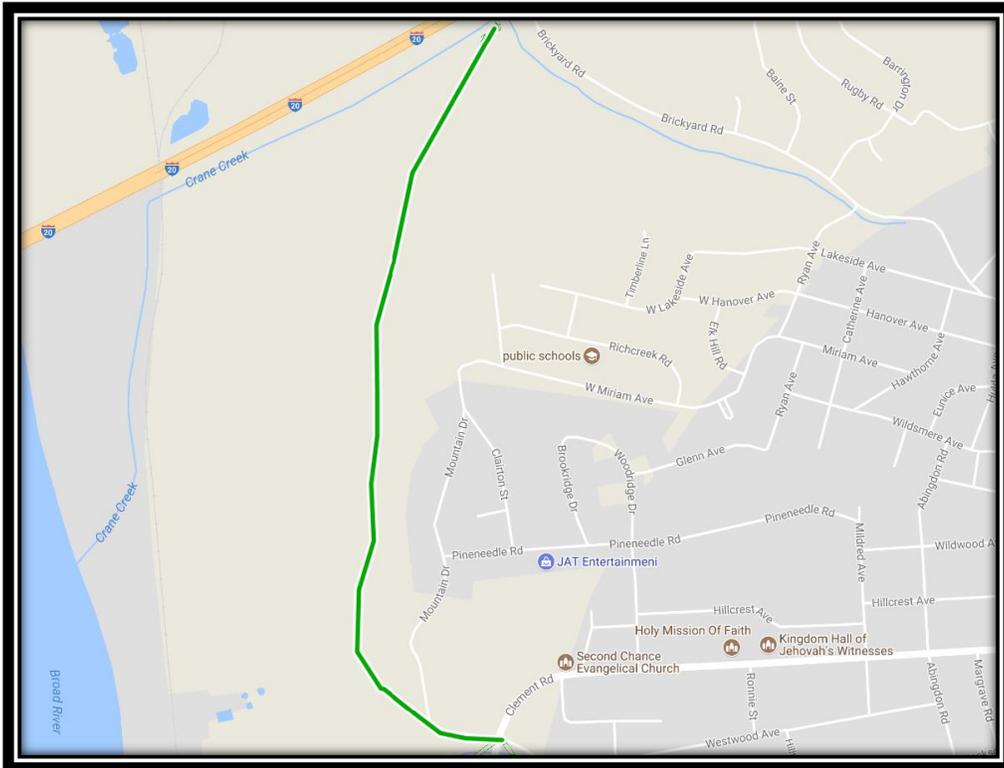
8 - Gills Creek North Section C Greenway



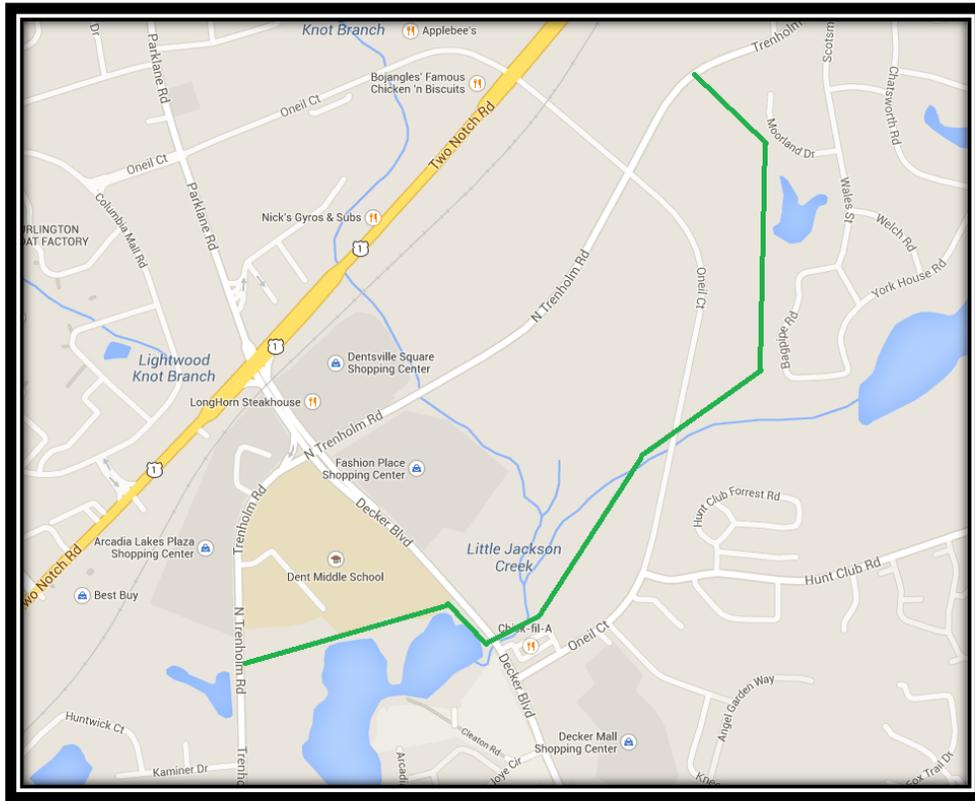
9 - Crane Creek Section A Greenway



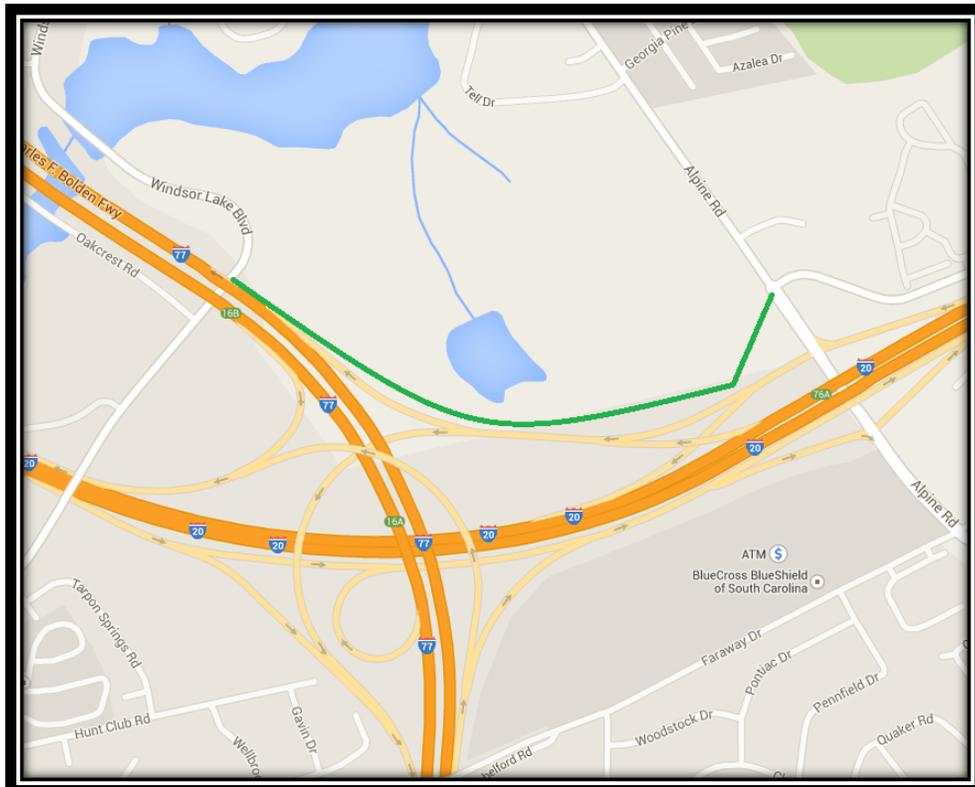
10 - Crane Creek Section B Greenway



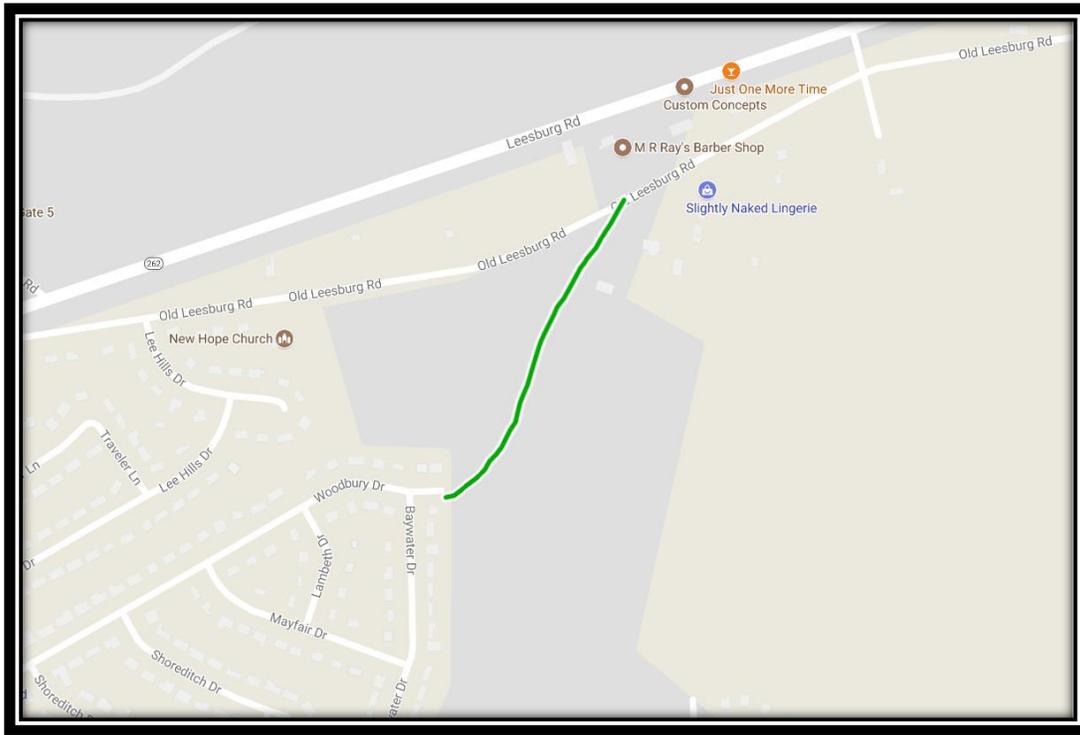
11 - Columbia Mall Greenway



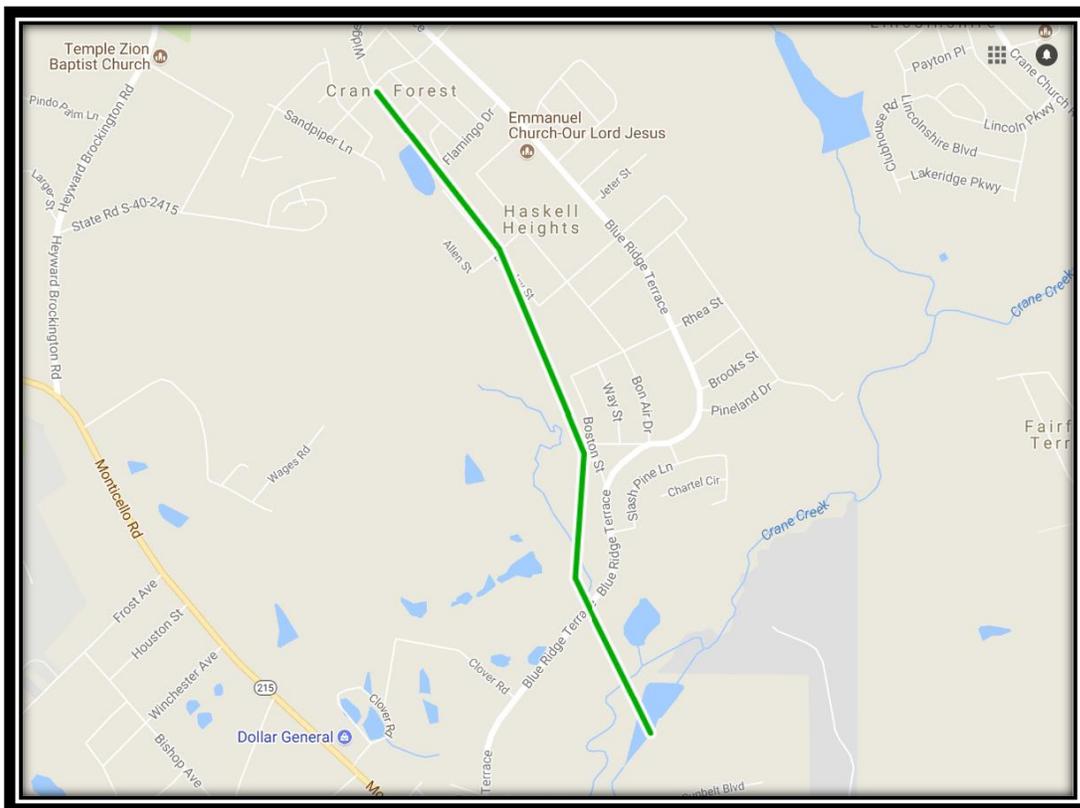
12 - Polo Rd/Windsor Lake Connector Greenway



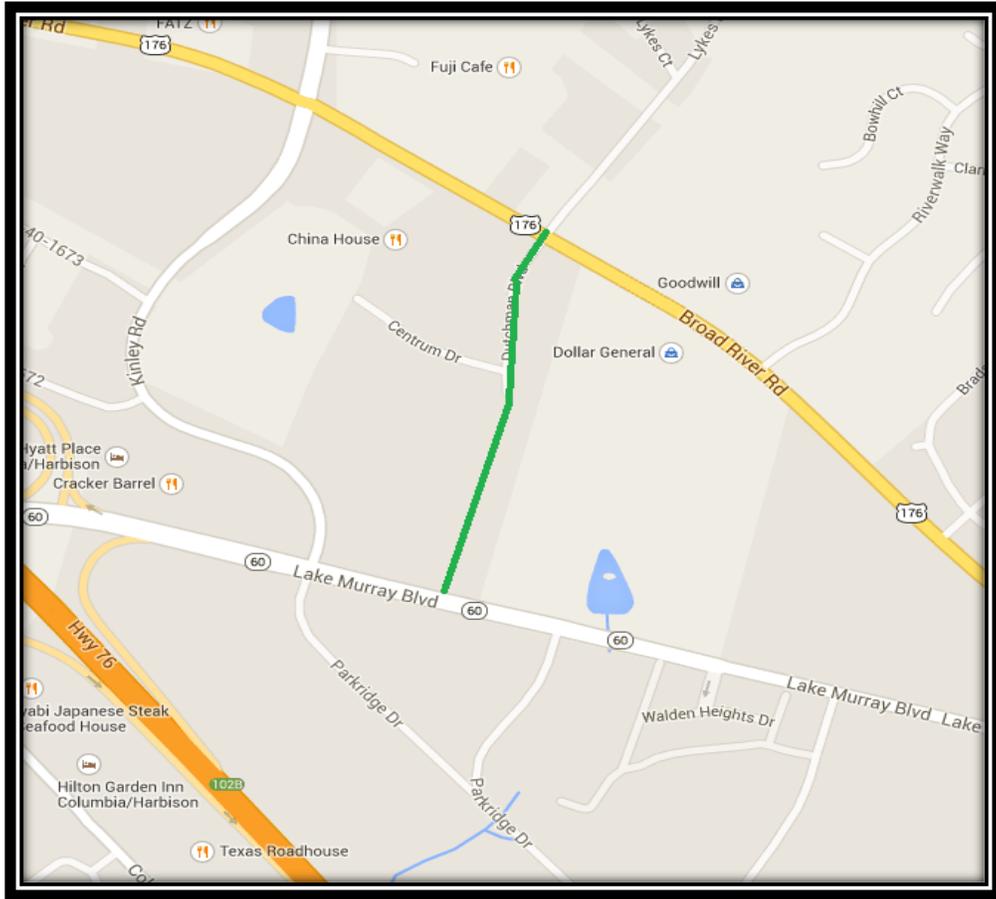
13 - Woodbury/Old Leesburg Connector Greenway



14 - Crane Creek Greenway Section C Greenway



15 - Dutchman Blvd Connector Greenway



Change Order

RICHLAND COUNTY
 Department of Transportation
 P.O. Box 192
 2020 Hampton St.
 Columbia, S.C. 29201

Order No: 3 (FINAL)
 Contract No: PDT-425-CN-2016
 Project: Bluff Road Widening Phase 1
 Contractor: Cherokee, Inc.

The following changes are hereby made to the
CONTRACT DOCUMENTS:

Item	Description	Add	Delete	Unit Price	Contract Increase	Contract Decrease
1052000	UTILITY RELOCATION NO.1	0.00	0.0094736842	\$370,500.00	\$ -	\$ 3,510.00
1052000	UTILITY RELOCATION NO.2	0.1907434550	0.00	\$955,000.00	\$ 182,160.00	\$ -
2023000	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT	216.05	0.00	\$20.00	\$ 4,321.00	\$ -
2033000	BORROW EXCAVATION	0.00	85.84	\$25.00	\$ -	\$ 2,146.00
2034518	18" DIAMETER PIPE ADDITIONAL FOUNDATION WORK	0.00	101.00	\$40.00	\$ -	\$ 4,040.00
2034524	24" DIAMETER PIPE ADDITIONAL FOUNDATION WORK	0.00	60.00	\$50.00	\$ -	\$ 3,000.00
2034530	30" DIAMETER PIPE ADDITIONAL FOUNDATION WORK	0.00	200.00	\$55.00	\$ -	\$ 11,000.00
2034536	36" DIAMETER PIPE ADDITIONAL FOUNDATION WORK	0.00	52.00	\$70.00	\$ -	\$ 3,640.00
2034542	42" DIAMETER PIPE ADDITIONAL FOUNDATION WORK	14.00	0.00	\$85.00	\$ 1,190.00	\$ -
2103000	FLOWABLE FILL	1656.00	0.00	\$125.00	\$ 207,000.00	\$ -
3069900	MAINTENANCE STONE	0.00	105.00	\$35.00	\$ -	\$ 3,675.00
3100310	HOT MIX ASPHALT BASE COURSE - TYPE A	44.59	0.00	\$91.75	\$ 4,091.13	\$ -
4011004	LIQUID ASPHALT BINDER PG64-22	143.86	0.00	\$512.00	\$ 73,656.32	\$ -
4012060	FULL DEPTH ASPHALT PATCHING 6" UNIFORM	0.00	1715.00	\$57.00	\$ -	\$ 97,755.00
4013200	MILLING EXISTING ASPHALT PAVEMENT 2.0"	346.11	0.00	\$4.00	\$ 1,384.44	\$ -
4013990	MILLING EXISTING ASPHALT PAVEMENT (VARIABLE)	1947.71	0.00	\$10.20	\$ 19,866.64	\$ -

Change Order

4020320	HOT MIX ASPHALT INTERMEDIATE COURSE -TYPE B	1724.56	0.00	\$77.00	\$ 132,791.12	\$ -
4030320	HOT MIX ASPHALT SURFACE COURSE -TYPE B	1041.25	0.00	\$77.00	\$ 80,176.25	\$ -
5029000	PORTLAND CEMENT CONCRETE (SPECIAL USE)	0.00	60.00	\$250.00	\$ -	\$ 15,000.00
6020005	PERM. CONS SIGNS (GRND MOUNTED)	0.00	116.00	\$8.50	\$ -	\$ 986.00
6023055	TEMPORARY YELLOW PAVEMENT MARKERS BI-DIR - 4" X 4"	0.00	1.00	\$5.50	\$ -	\$ 5.50
609105A	PAVEMENT MARKINGS (TEMPORARY - PAINT) - 4" WHITE BROKEN LINES	0.00	500.00	\$0.28	\$ -	\$ 140.00
609115A	PAVEMENT MARKINGS (TEMPORARY - PAINT) - 4" WHITE SOLID LINES	0.00	5760.00	\$0.17	\$ -	\$ 979.20
609115B	PAVEMENT MARKINGS (TEMPORARY - PAINT) - 4" YELLOW SOLID LINES	0.00	10500.00	\$0.17	\$ -	\$ 1,785.00
609135A	PAVEMENT MARKINGS (TEMPORARY - PAINT) - 24" WHITE SOLID LINES	0.00	290.00	\$3.30	\$ -	\$ 957.00
6250005	4" WHITE BROKEN LINE - (GAPS EXCLUDED) - FAST DRY PAINT	2210.00	0.00	\$0.28	\$ 618.80	\$ -
6250010	4" WHITE SOLID LINE - (PVT. EDGE LINES) - FAST DRY PAINT	12403.18	0.00	\$0.17	\$ 2,108.54	\$ -
6250015	8" WHITE SOLID LINE - (CROSSWALK & CHANNELIZATION LINES) - FAST DRY PAINT	0.00	1945.00	\$1.10	\$ -	\$ 2,139.50
6250025	24" WHITE SOLID LINE - (STOP/DIAGONAL LINES) - FAST DRY PAINT	207.00	0.00	\$3.30	\$ 683.10	\$ -
6250030	WHITE SINGLE ARROW (LEFT, STRAIGHT, RIGHT) - FAST DRY PAINT	17.00	0.00	\$38.50	\$ 654.50	\$ -
6250035	WHITE WORD MESSAGE (ONLY) - FAST DRY PAINT	0.00	11.00	\$55.00	\$ -	\$ 605.00
6250040	WHITE COMBINATION ARROW (STR. & RT OR STR. & LT.) - FAST DRY PAINT	2.00	0.00	\$50.00	\$ 100.00	\$ -
6250045	RAILROAD CROSSING SYMBOLS - FAST DRT PAINT	0.00	2.00	\$275.00	\$ -	\$ 550.00
6250105	4" YELLOW BROKEN LINES (GAPS EXC) - FAST DRY PAINT	0.00	80.00	\$46.20	\$ -	\$ 3,696.00
6250110	4" YELLOW SOLID LINES (NO PASSING ZONE) - FAST DRY PAINT	37644.00	0.00	\$0.17	\$ 6,399.48	\$ -
6271005	4" WHITE BROKEN LINES (GAPS EXCLUDED) - THERMO. 90 MIL.	1064.00	0.00	\$0.77	\$ 819.28	\$ -
6271010	4" WHITE SOLID LINE - (PVT. EDGE LINES) - THERMO. 90 MIL.	490.00	0.00	\$0.50	\$ 245.00	\$ -
6271015	8" WHITE SOLID LINES - (CROSSWALK & CHANNELIZATION) - THERMO. 90 MIL.	0.00	313.00	\$2.20	\$ -	\$ 688.60

Change Order

6271025	24" WHITE SOLID LINES (STOP & DIAG. LINES) - THERMO. 125 MIL.	330.00	0.00	\$6.60	\$ 2,178.00	\$ -
6271030	WHITE SINGLE ARROW (LEFT, STRAIGHT, RIGHT) - THERMO. 125 MIL.	8.00	0.00	\$71.50	\$ 572.00	\$ -
6271040	WHITE COMBINATION ARROW (STR. & RT OR STR. & LT.) - THERMO. 125 MIL	2.00	0.00	\$82.50	\$ 165.00	\$ -
6271064	4" YELLOW BROKEN LINES (GAPS EXC.) - THERMO. 90 MIL.	0.00	80.00	\$0.77	\$ -	\$ 61.60
6271074	4" YELLOW SOLID LINES (PAVEMENT EDGE LINES) - THERMO. 90 MIL.	7038.00	0.00	\$0.50	\$ 3,519.00	\$ -
6300005	PERMANENT CLEAR PAVEMENT MARKERS MONO DIR. 4" X 4"	34.00	0.00	\$5.50	\$ 187.00	\$ -
6301005	PERMANENT YELLOW PAVEMENT MARKERS MONO DIR. 4" X 4"	168.00	0.00	\$5.50	\$ 924.00	\$ -
6301100	PERMANENT YELLOW PAVEMENT MARKERS BI DIR. 4" X 4"	0.00	69.00	\$5.50	\$ -	\$ 379.50
6319505	REMOVAL OF PAVEMENT MARKINGS	0.00	9395.00	\$1.00	\$ -	\$ 9,395.00
6510105	FLAT SHEET, TYPE III, FIXED SIZE & MSG. SIGN	2.00	0.00	\$17.05	\$ 34.10	\$ -
6750275	FURNISH & INSTALL 1.0" SCHEDULE 80 PVC CONDUIT	0.00	245.00	\$16.50	\$ -	\$ 4,042.50
6750278	FURNISH & INSTALL 2.0" SCHEDULE 80 PVC CONDUIT	35.00	0.00	\$16.50	\$ 577.50	\$ -
675027C	FURNISH & INSTALL 3.0" SCHEDULE 80 PVC CONDUIT	0.00	60.00	\$27.50	\$ -	\$ 1,650.00
6770388	FURNISH & INSTALL NO. 14 COPPER WIRE, 4 CONDUCTOR - (BLACK)	0.00	3990.00	\$2.35	\$ -	\$ 9,376.50
6770389	FURNISH & INSTALL NO. 14 COPPER WIRE, 4 CONDUCTOR - (GRAY)	0.00	170.00	\$2.42	\$ -	\$ 411.40
6770393	FURNISH & INSTALL NO. 14 COPPER WIRE, 8 CONDUCTOR - (BLACK)	3153.00	0.00	\$2.35	\$ 7,409.55	\$ -
6770394	FURNISH & INSTALL NO. 14 COPPER WIRE, 8 CONDUCTOR - (GRAY)	535.00	0.00	\$2.50	\$ 1,337.50	\$ -
6770413	FURNISH & INSTALL NO. 14 COPPER WIRE, 1 CONDUCTOR FOR LOOP WIRE	2674.00	0.00	\$0.75	\$ 2,005.50	\$ -
6780495	SAW CUT FOR LOOP DETECTOR	1006.00	0.00	\$5.50	\$ 5,533.00	\$ -
6800499	FURNISH & INSTALL ELECTRICAL SERVICE FOR TRAFFIC SIGNAL	1.00	0.00	\$880.00	\$ 880.00	\$ -
6800518	F&I- 13" X 24" X 18" D. ELEC. FLUSH UNDRD. ENCLOS- (STR. POLY.CONC.) HD	0.00	4.00	\$550.00	\$ -	\$ 2,200.00
682505B	F&I 28' STEEL STRAIN POLE, POLE BANDS & HARDWARE & FOUNDATION	3.00	0.00	\$7,500.00	\$ 22,500.00	\$ -

Change Order

6825092	FURNISH & INSTALL 3/8" GALVANIZED STEEL CABLE (SPAN WIRE)	178.00	0.00	\$5.28	\$ 939.84	\$ -
6825484	FURNISH & INSTALL 10' BREAK-AWAY ALUM PEDESTAL POLE AND BASE	1.00		\$770.00	\$ 770.00	\$ -
6845511	F&I CONTROLLER AND 332/336 CABINET ASSEMBLY - BASE MOUNTED - INCLUDING	1.00	0.00	\$16,500.00	\$ 16,500.00	\$ -
6865723	F&I - 12" 1-WAY 3-SECTION (RA, YA, YAF) VEH TRAFFIC SIGNAL	2.00	0.00	\$880.00	\$ 1,760.00	\$ -
6865834	BACKPLATE W/ RETROREFL. BORDERS FOR TRAFFIC SIGNAL	4.00	0.00	\$245.00	\$ 980.00	\$ -
6885982	REMOVE FOUNDATION FOR STEEL STRAIN POLE - 18" BELOW GRADE	4.00	0.00	\$1,500.00	\$ 6,000.00	\$ -
6885992	TEMPORARY ADJUSTMENT OF TRAFFIC SIGNAL EQUIPMENT	3.00	0.00	\$5,500.00	\$ 16,500.00	\$ -
6887951	FURNISH & INSTALL CONCRETE CABINET FOUNDATION	1.00	0.00	\$1,500.00	\$ 1,500.00	\$ -
7141815	36" SMOOTH WALL STL PIPE (TRENCHLESS) COOPER E-80	2.00	0.00	\$1,550.00	\$ 3,100.00	\$ -
7143618	18" SMOOTH WALL PIPE	0.00	101.00	\$65.00	\$ -	\$ 6,565.00
7143624	24" SMOOTH WALL PIPE	0.00	60.00	\$75.00		\$ 4,500.00
7143630	30" SMOOTH WALL PIPE	0.00	200.00	\$85.00	\$ -	\$ 17,000.00
7143636	36" SMOOTH WALL PIPE	0.00	52.00	\$135.00		\$ 7,020.00
7143642	42" SMOOTH WALL PIPE	14.00	0.00	\$150.00	\$ 2,100.00	\$ -
7149999	CLEANING EXISTING PIPE	0.00	60.00	\$25.00	\$ -	\$ 1,500.00
7191605	CATCH BASIN - TYPE 16	0.00	2.00	\$3,850.00	\$ -	\$ 7,700.00
7191650	CATCH BASIN - TYPE 18	0.00	1.00	\$7,000.00	\$ -	\$ 7,000.00
7192105	MANHOLE	0.00	1.00	\$2,500.00	\$ -	\$ 2,500.00
7196000	EXTRA DEPTH OF BOX	0.00	39.00	\$400.00	\$ -	\$ 15,600.00
7196151	CATCH BASIN - TYPE 9 (TOP ONLY)	0.00	2.00	\$700.00	\$ -	\$ 1,400.00
7203210	CONCRETE CURB AND GUTTER (2'-0") VERTICAL	0.00	525.00	\$20.00	\$ -	\$ 10,500.00
7204100	CONCRETE SIDEWALK (4" UNIFORM)	820.95	0.00	\$40.00	\$ 32,838.00	\$ -

Change Order

7204600	CONCRETE SIDEWALK (6" UNIFORM)	0.00	11.00	\$60.00	\$ -	\$ 660.00
7204900	DETECTABLE WARNING SURFACE	0.00	103.00	\$45.00	\$ -	\$ 4,635.00
7205000	CONCRETE DRIVEWAY (6" UNIFORM)	96.80	0.00	\$60.00	\$ 5,808.00	\$ -
7206000	CONCRETE MEDIAN	25.11	0.00	\$60.00	\$ 1,506.60	\$ -
7209000	PEDESTRIAN RAMP CONSTRUCTION	0.00	373.57	\$140.00		\$ 52,299.80
8063300	72" CHAIN LINK FENCE	0.00	358.00	\$30.00		\$ 10,740.00
8091010	RIGHT OF WAY MARKER (REBAR AND CAP)	0.00	35.00	\$165.00	\$ -	\$ 5,775.00
8091050	RIGHT OF WAY PLAT	0.00	1.00	\$2,500.00	\$ -	\$ 2,500.00
8100200	TEMPORARY COVER	0.00	0.75	\$2,200.00	\$ -	\$ 1,650.00
8104005	FERTILIZER (NITROGEN)	10.00	0.00	\$4.40	\$ 44.00	\$ -
8105005	AGRICULTURAL GRANULAR LIME	0.00	1000.00	\$0.60	\$ -	\$ 600.00
8109901	MOWING	0.00	3.00	\$375.00	\$ -	\$ 1,125.00
8131000	SODDING	0.00	0.91	\$12,000.00	\$ -	\$ 10,896.00
8151201	HYDRAULIC EROSION CONTROL PRODUCT (HECP) - TYPE 1	0.00	0.25	\$1,500.00	\$ -	\$ 375.00
8152004	INLET STRUCTURE FILTER - TYPE F (WEIGHTED)	0.00	320.00	\$12.50	\$ -	\$ 4,000.00
8152006	INLET STRUCTURE FILTER - TYPE F (NON-WEIGHTED)	0.00	50.00	\$12.00	\$ -	\$ 600.00
8153000	SILT FENCE	0.00	1243.00	\$4.00	\$ -	\$ 4,972.00
8153090	REPLACE/REPAIR SILT FENCE	0.00	110.00	\$5.00	\$ -	\$ 550.00
8154050	REMOVE SILT RETAINED BY SILT FENCE	0.00	940.00	\$6.00	\$ -	\$ 5,640.00
8154155	INLET FILTER CLEANING	0.00	95.00	\$110.00	\$ -	\$ 10,450.00
8156215	INLET STRUCTURE FILTER - TYPE D2	0.00	10.00	\$450.00	\$ -	\$ 4,500.00
8156217	FILTER MATERIAL FOR INLET STRUCTURE FILTER - TYPE D2	0.00	10.00	\$250.00	\$ -	\$ 2,500.00

Change Order

CO#2	CHANGE ORDER #2 HMA SURFACE D for roadway	17.48	0.00	\$78.13	\$ 1,365.49	\$ -
CO#2	CHANGE ORDER #2 HMA SURFACE D for driveways	4.38	0.00	\$224.25	\$ 982.22	\$ -
CO#3	Tap Sleeve, Valve, 2MJ Caps, & Thrust Blocking 12"x12"	1.00	0.00	\$ 12,787.50	\$ 12,787.50	\$ -
CO#3	Additional Asphalt, Flow Fill, Thermoplastic Markings, for Cut and Cap of Water Line	1.00	0.00	\$ 19,517.39	\$ 19,517.39	\$ -
Totals					\$ 891,086.79	\$ 389,567.10
Net Contract Increase/Decrease					\$ 501,519.69	

CHANGE TO CONTRACT VALUE:

Original Contract Price:	<u>\$5,014,290.86</u>
Current Contract Price adjusted by previous Change Orders:	<u>\$5,092,887.24</u>
The Contract Price due to this Change Order will be	
increased by:	<u>\$ 891,086.79</u>
decreased by:	<u>\$ 389,567.10</u>
The new Contract Price (including this Change Order) will be:	<u>\$5,594,406.93</u>

CHANGE TO CONTRACT TIME:

The Contract Time will be increased by: _____ 0 Calendar Days

The new date for completion of all work will be: _____ 8/31/2017

Requested By: _____ Date: _____
Cherokee, Inc.
PO Box 90448
Columbia, SC 29290 X _____

Accepted By: _____ Date: _____
Richland County PDT
201 Arbor Lake Drive
Columbia, SC 29223 X _____

Accepted By: _____ Date: _____
Richland County
2020 Hampton Street
Columbia, SC 29204 X _____

Service Order
For
On Call Engineering Services Agreement

SERVICE ORDER NO. Holt #10

Date: May 22, 2018

This Service Order No. Holt #10 is issued by Richland County, South Carolina (the “County”), to Holt Consulting Company, LLC. (the “Consultant”) pursuant to that Agreement dated February 11, 2015 between the County and the Consultant called “On Call Engineering Services Agreement Related to the Richland County, South Carolina Sales Tax Public Transportation Improvement Plan” (the “Agreement”).

This Service Order, together with the Agreement, form a Service Agreement. A Service Agreement represents the entire and integrated agreement between the parties and supersedes prior negotiations, representations, or agreements, either written or oral. A Service Agreement may be amended or modified only by a Change Order or Change Directive as provided for in the Agreement.

I. Scope of Services.

A. Unless otherwise provided in an exhibit to this Service Order, this Service Order and the Service Agreement are based on the information set forth below:

See Exhibit A – Scope of Services

B. Unless otherwise provided in an exhibit to this Service Order, the Consultant’s Services to be provided pursuant to this Service Order are:

See Exhibit A – Scope of Services

C. Unless otherwise provided in an exhibit to this Service Order, the County's anticipated dates for commencement of the Services and Completion of the Services are set forth below:

1. Commencement Date: _____, 2018
2. Completion Date: *See Exhibit A – Scope of Services - Schedule*

D. Key personnel assigned by Consultant to this Service Scope of Work:

1. R. Kennedy Holt (Principal)
2. Paul A. Holt, P.E. (Project Manager)

II. Insurance

The Consultant shall maintain insurance as set forth in the Agreement. If the Consultant is required to maintain insurance exceeding the requirements set forth in the Agreement, those additional requirements are as follows:

N/A

III. Owner's Responsibilities.

In addition to those responsibilities the County may have as stated in the Agreement, the County in connection with this Service Order only shall:

N/A

IV. Consultant's Compensation.

A. The Consultant shall be compensated for Services provided under this Service Order as follows:

<i>Direct Labor -</i>	<i>\$ 47,727.00</i>
<i>Subconsultant Fees -</i>	<i>\$ 308,289.50</i>
<i>Total -</i>	<i><u>\$ 356,016.50</u></i>

*Contingency – Not to Exceed \$ 35,601.65**

**Requires approval from Richland County to authorize contingency*

B. Additional Services. Unless otherwise provided in an exhibit to this Service Order, any Additional Services by the Consultant shall be paid as Additional Services as provided in the Agreement.

V. Additional Exhibits.

The following exhibits and/or attachments are incorporated herein by reference thereto:

Exhibit A – Scope of Services

VI. Execution of Service Agreement

The Execution of this Service Order by the County below constitutes a Service Order to the Consultant. The execution of this Service Order by the Consultant creates the Service Agreement.

NOW, THEREFORE, in consideration of the foregoing, the sufficiency of which is hereby acknowledged by the parties, this Service Agreement is entered into Under Seal as of the Effective Date of _____, 2018.

WITNESS:

RICHLAND COUNTY, SOUTH CAROLINA

By:

Its:

Date:

CONSULTANT:

HOLT CONSULTING COMPANY, LLC

By:

Its:

Date:

ATTACHMENT "A"

SCOPE OF SERVICES

GILLS CREEK SECTION A GREENWAY

Introduction

Introduction

Holt Consulting Company (**CONSULTANT**) has been authorized by Richland County (**COUNTY**) to provide design and engineering services for the Gills Creek Greenway in Richland County, South Carolina. This proposed project will consist of approximately two thousand five hundred (2,500) LF of a greenway and trail with boardwalks and supporting facilities that extend along Gills Creek from S-2205 (Beecliff Drive) to S-407 (Mikell Lane).

The overall scope of work for the Gills Creek Greenway includes; evaluate existing conditions, development of 70% right-of-way plans, final construction plans, and acquirement of all needed permits for construction of Section A of the Gills Creek Greenway.

Project Location - This project will consist of approximately two thousand five hundred (2,500) LF of boardwalk (14' wide), that meet City standards. The Project will begin at S-2205 (Beecliff Drive) and will end at S-407 (Mikell Lane).

Proposed Project Scope – Right-of-way through Final Construction Plans will be developed for the implementation of the bicycle and pedestrian accommodations for approximately two thousand five hundred (2,500) LF from S-2205 (Beecliff Drive) to S-407 (Mikell Lane).

The **CONSULTANT** will provide construction documents and permitting for the installation of the Gills Creek Greenway. The Phase 1 Concept Report shall provide design guidance for the development of the Plans.

Summary of Anticipated Services - An outline of the services anticipated for this project is shown below.

- Task 1 - Project Management
 - Task 2 - Environmental Services/Permitting
 - Task 3 – Field Surveys
 - Task 4 - Greenway Design
 - Task 5 - Storm Water Management/Hydraulic Design
 - Task 6 – Sediment and Erosion Control/NPDES Permitting
 - Task 7 - Geotechnical Investigation and Engineering Services
 - Task 8 – Structural Services
 - Task 9 – Electrical Design
 - Task 10 – Utility Coordination Assistance
 - Task 11 – Pre-Bid Services
 - Task 12 – Construction Phase Services
-

QUALITY CONTROL

*The **CONSULTANT** shall implement all necessary quality control measures to produce plans and reports that conform to **COUNTY** and **CITY** guidelines and standards. Prior to submittal to the **COUNTY** and **CITY**, all plans and reports shall be thoroughly reviewed for completeness, accuracy, correctness, and consistency. Subconsultants for this project will be required to implement and maintain a stringent quality control program. The **COUNTY** reserves the right to request QA/QC documents (red-lines, checklists, etc.) from the **CONSULTANT** with project deliverables.*

TASK 1 – PROJECT MANAGEMENT

The **CONSULTANT** shall institute a program for conformance with **COUNTY** requirements for monitoring and controlling project engineering budget, schedule, and invoicing procedures. The **CONSULTANT**'s subconsultants shall be included in this program. Proposed dates of submittals, completion of tasks, and final completion of pre-construction services as noted in this agreement will be negotiated with the **COUNTY**. Included in management of the project will be:

- Project meetings between the **COUNTY**, South Carolina Department of Transportation (SCDOT), GCWA, City of Columbia, and **CONSULTANT** for clarification of scope, discussion of concepts, review of submittals, etc. at the discretion of the **COUNTY**. It is anticipated that four (4) such meetings will be necessary. Two (2) of the **CONSULTANT**'s staff shall attend these meetings.
- The **CONSULTANT** will prepare meeting agenda and meeting materials, as well as, record the minutes of each meeting in which it participates and distribute to the appropriate **COUNTY** personnel. The **CONSULTANT** shall provide the **COUNTY** with an agenda two (2) business days prior to any meeting and the minutes of any meeting within three (3) business days.
- Prepare monthly invoices, status reports, and schedule updates. Assume a nine (9)-month design schedule and nine (9) month permitting period for a total contract time of eighteen (18) months that will impact the duration of preparing invoices, status reports, and schedule updates.
- The **CONSULTANT** will provide coordination with its SUB-CONSULTANTS during the execution of their work. Assume an eighteen (18) month schedule.
- The **CONSULTANT** will provide a schedule outlining tasks that will be required to complete the scope of work. A Gantt Chart Schedule shall be submitted to the **COUNTY** within ten (10) business days of receipt of the Notice-To-Proceed. The schedule shall list each task and its duration.
- The **CONSULTANT** will include the **COUNTY** and stakeholders including, but not limited to, GCWA, City of Columbia, and other local government agencies in any

discussions concerning the project prior to submittal of deliverables if that process has the advantage of expediting the completion of any task of the project.

Assumptions:

1. Up to four (4) project meetings will be held on-site with the stakeholders and any additional personnel deemed necessary.
2. Eighteen (18) month schedule based on the anticipated Army Corps of Engineer permitting approval process.

Deliverables:

1. Eighteen (18) monthly status reports and updated schedule.
2. Meeting agendas and meeting minutes covering all project meetings. Meeting agendas are to be provided to the **COUNTY** within two (2) business days prior to all meetings. Meeting minutes are to be provided to the **COUNTY** within three (3) business days after all meetings. Assumed meeting agendas and minutes to be provided for a total of fourteen (14) monthly progress meetings plus six (6) meetings with stakeholders and SCDOT.

TASK 2 - ENVIRONMENTAL SERVICES/PERMITTING

The **CONSULTANT** shall prepare and deliver to the **COUNTY** all local, state, and federal permitting required to ensure the project is in compliance with the appropriate environmental regulations. The **CONSULTANT** will review the proposed trail route and make a determination of the environmental and/or navigable waterway permits expected to be required for the subject project within (4) four weeks of the notice to proceed and permission to enter subject properties.

With regards to wetlands delineation and preliminary Jurisdictional Determination (JD), the **CONSULTANT** shall perform a preliminary JD on the project area that shall not exceed 5 acres (an approximately 50' wide swath centered on the field flagged trail location and extending beyond current termini at Becliff Drive to Mikell Lane). The **CONSULTANT** shall attend one (1) site visit with a representative of the USACE to review the waters of the US at their request. If there are any proposed wetland impacts, the **CONSULTANT** shall prepare an ACOE permit package prior to the application of a floodplain development permit. The **CONSULTANT** shall prepare the permit application package for the **COUNTY** to submit all permits to the corresponding agencies.

The trail will be placed to avoid the wetlands wherever practicable knowing that avoidance and alternate analysis are areas the USACOE reviews thoroughly.

Threatened and Endangered Species:

The **CONSULTANT** shall prepare a biological assessment (BA) to include a discussion of potential impacts to each resource. The **CONSULTANT** shall comply with Section 7 of the endangered species act and provide the corresponding BA to the **COUNTY**. Concessions in either the scope of work or construction activities or mitigation will be required prior to **COUNTY** approval.

Cultural Resources:

The **CONSULTANT** shall review publicly-available data to determine if the project area contains archeological or historic resources eligible for listing on, or potentially eligible for listings on the national register of historic places. The **CONSULTANT** shall prepare the Section 106 project review form, with all supporting documentation. This information will be prepared for the **COUNTY** to submit to the State Historic Preservation Office for review (*An archaeological survey is not included in this scope of services*).

Water Quality:

The **CONSULTANT** shall utilize SCDHEC's Water Quality Information Tool to determine if sensitive waters including 303(d) listed waters, TMDL watersheds, and outstanding resource waters are located within the project study area. Findings will be documented in the permit application. If applicable, the **CONSULTANT** shall coordinate with the **COUNTY** to determine the necessary stormwater control measures to protect sensitive waters.

Section 404(b)(1): Guidelines and Public Interests review Factors:

The **CONSULTANT** shall use and document how the 404(b)(1) guidelines area used in the selection of the preferred alternative using the USACE Public Interest Review Factors.

Mitigation Plan:

The **CONSULTANT** shall complete the USACE mitigation worksheet to determine the required credits for the regulatory requirements. The **CONSULTANT** will coordinate with the **COUNTY** to determine availability of credits at the proposed Richland County Mitigation Site. (*Development of a detailed compensatory mitigation plan is not included in this scope*).

Agency Coordination:

The **CONSULTANT** shall submit the completed permit application package along with all necessary documentation to the **COUNTY** for final processing and negotiations with the pertinent agencies.

Assumptions:

1. *Wetlands will be delineated in the field and locations captured using GPS.*
2. *A NEPA Document will not be required and is not part of the project scope.*
3. *The area for proposed delineation will not exceed 5 acres.*
4. *Assumes that a Nationwide Permit will be required due to the impact of the boardwalk installation on the wetlands. CONSULTANT to provide calculations documenting area of impact and confirm if this is required.*
5. *All permit fees will be paid for by the county.*
6. *A survey for archeological cultural resources is not included in the scope of services.*
7. *Formal consultation with USFWS is not included in the scope of services.*

8. *Development of a detailed compensatory mitigation plan is not included in this scope of services.*
9. *Submittal of a separate SCDHEC Navigable Waters Permit application or supporting materials is not included in this scope of services.*

Deliverables:

1. *Permit Determination Form*
2. *Preliminary Jurisdictional Determination Request Package*
3. *USACE Nationwide Permit Application Package, including supplemental documentation*
4. *Rare and Endangered Species Biological Assessment*
5. *Section 106 Project Review Form*

TASK 3 – FIELD SURVEYS

Property surveys shall begin at Fort Jackson on the west side of the creek and extend to Mikell Lane. Topo (horizontal only) location surveys shall begin at Beecliff Drive and extend to Mikell Lane. Detailed bridge survey of the existing Rosewood Drive bridge over Gills creek shall also be included.

Control Surveys:

The **CONSULTANT** shall provide all survey for the project in State Plane Coordinates and shall reference the horizontal datum to NAD 83 (2011 adjustment). The vertical control surveys for this project shall be tied to the nearest existing NAVD 88 monument. The survey will serve as the base mapping for the engineering design.

Conventional Total Station locations will be required for tree surveys.

The **CONSULTANT** shall coordinate with SC 811 utility locating service prior to commencement of surveying. Any impacted utilities within the project corridor shall be identified. The location of the locating services shall be from Beecliff to Mikell only.

The **CONSULTANT** shall provide horizontal control points along the trail where boardwalks, drainage features, and parking areas will be installed. Horizontal control points will also be required where ADA ramps will be required.

Vertical control will only be required for the detailed bridge survey.

Design Surveys:

The **CONSULTANT** shall field locate and stake the centerline of the trail location and review with **COUNTY** staff for approval. Once the trail location has been approved by **COUNTY** staff, GCWA, and the City of Columbia, a survey swath of 50', 25' on either side of the proposed centerline, will be performed.

The **CONSULTANT** shall survey enough boundary of each parcel along preliminary alignment to identify the location of trail.

A detailed bridge survey of the Rosewood Drive bridge over Gills Creek shall also be required. Surveys shall extend 75' north and south of the face of bridge and include a cross section of the channel in these areas.

The **CITY** Arborist shall identify trees within the 50' surveyed easement to determine health and size of grand trees in fair or better condition. Trees to be surveyed will be verified by GCWA and the County during the trail flagging exercise. Deliverables will be conveyed to the City in CAD and PDF format.

Survey all trees 12" in diameter trees or larger which fall within the survey swath.

Assumptions:

- 1. Trail easement plats are not included as part of the project scope.*
- 2. Any revisions in the alignment due to property negotiations are not included as part of this scope. If alignment revisions occur due to property negotiations, a contract modification regarding fee shall be obtained.*

Deliverables:

- 1. Survey of centerline swath of field flagged trail*
- 2. Survey sanitary sewer manholes locations that fall within 50' wide swath horizontally from Beecliff to Mikell.*
- 3. Survey of flood hazard areas, inclusive of on-site flagging that fall within 50' wide swath.*
- 4. Survey identifying all trees greater than 12" in diameter within the 50' wide swath. Flagging shall be verified in partnership with the City.*

TASK 4 – GREENWAY DESIGN

Site Analysis and Review:

The **CONSULTANT** shall access and perform a detailed review of the existing conditions along the planned greenway path via site observations, wetlands delineation, and tree survey, and shall take into account tree protection and health requirements below when delineating the greenway route. The **CONSULTANT** shall use this review to adjust the routes as necessary to minimize wetland impacts, earth work, existing trees, utilities, private property ownership and any special conditions. This work will be done prior to wetland delineation and after property corners are marked but prior to the remainder of tasks 2 and 3.

Tree Protection and Health:

Trees located within the 50' surveyed swath which are in poor condition or which are non-native, invasive species as defined by the Southeast Exotic Pest Plant Council may be marked for removal and if so, should be removed as part of the greenway construction. Grand trees in fair or good condition shall be flagged and protected during construction using best practices. In no case shall

any part of the proposed greenway surface, structure, or utility trenching be located within the radius of the structural root zone of any trees to remain on site; where the greenway surface, structure, or utility trenching will encroach into the structural root zone of a tree, the path must be realigned or the tree must be removed prior to construction to prevent future maintenance issues. The structural root zone is defined as the zone of rapid root taper that provides the tree stability against wind throw, and is calculated as follows:

Radius of the Structural Root Zone (in feet) = Inches of Diameter at Breast Height (DBH) x 1/3.
No utility trenching shall occur in areas where conduit shall be encased beneath concrete pathways.

Design Criteria:

The **CONSULTANT** shall design the trail and boardwalks to meet the current City of Columbia Greenway standards and shall comply with the AASHTO *Guide for the development of Bicycle Facilities 2012 edition* and be ADA compliant. This will include 14' sidewalks and boardwalks with railings within the 14' at a reasonable inset. The **CONSULTANT** will also meet the City of Columbia and SCDOT standards while within the SCDOT Right-of-Way. The **CONSULTANT** shall also provide recommendations for connections to adjacent neighborhoods. The boardwalks will be designed to be a minimum of 12" above the natural high-water level (NHWL) of Gills Creek which is assumed to be at the 135' elevation mark. **COUNTY** provided LiDAR data (2-ft. Contours) shall be used as the base mapping for the project.

70% Plans:

The **CONSULTANT** shall prepare a set of right-of-way level plans based off the concept report and field conditions. Utilizing input received to date, the design criteria as well as any additional field information, the horizontal and vertical design for the project will be refined. The **CONSULTANT** shall prepare Rights-of-Way and Easement plans and submit them to the **COUNTY** for review. The **COUNTY** will acquire all Rights-of-Way and easements for the project. The Rights-of-Way to be acquired across private property shall be a minimum of twenty (20) feet wide, and the centerline of the Rights-of-Way will align with the centerline of the designed trail surface. Plans will also include bench locations with bump outs. Benches and bump outs shall be located at points of interest and at half-mile intervals. Benches and bump outs shall be anchored to prevent migration during a flood event.

Final Greenway Plans:

After review, approval and right-of-way and/or easement acquisitions are acquired, the **CONSULTANT** shall deliver the final construction plans. The **CONSULTANT** shall maintain a copy of the marked up 70% plans and specifications. Construction drawings and specifications will be completed to include plan and profile sheets of all boardwalk stream crossings that will provide sufficient detail to support the development of permit drawings for the joint permit applications. The **CONSULTANT** will review the final set of construction plans and specifications as well as final cost estimate with the **COUNTY** for approval. Plans shall include locations of trash receptacles and handrails which meet the City of Columbia standards or an acceptable alternative standard to be approved by the City of Columbia. The City will waive the fee for the meters for the water fountains.

Agency Coordination:

The **CONSULTANT** shall submit the completed permit application package to the **COUNTY** for final processing and negotiations with the pertinent agencies.

Assumption:

- *Any revisions in the alignment due to property negotiations are not included as part of this scope. If alignment revisions occur due to property negotiations, a contract modification regarding fee shall be obtained.*

Deliverables:

1. *Typical sections and handrail details shall be submitted to City for approval before extensive design services can begin.*
2. *70% construction drawings and specifications and cost estimate.*
3. *Final construction drawings, specifications and cost estimate*
4. *SCDOT and City of Columbia encroachment permits*

TASK 5 – STORMWATER MANAGEMENT/HYDRAULIC DESIGN

It is assumed that the Gills Creek Greenway will be an elevated boardwalk thus adding new impervious areas to the project. No new drainage systems are anticipated to be needed for this project.

Even though no new drainage systems are anticipated, a Stormwater Management Report will be required due to the anticipated disturbed area on this project exceeding 1.0-acre.

Hydrologic analysis of the watershed will be performed with the appropriate method for the Sandhills physiographic region. Pre-and post-construction peak discharges will be computed at each outfall. Outfalls will be evaluated in accordance with NPDES regulations.

A Stormwater Management Design Report will be prepared for the project based on the City of Columbia and Richland County guidelines and will be submitted for review with the Final Construction Plans. The report will include a project description, drainage approach and methodology, design calculations, soils descriptions, and location maps.

The **CONSULTANT** will also prepare any hydraulic studies required by the United States Army Corps of Engineers as part of the environmental permit. The hydraulic studies will be based on City of Columbia and Richland County requirements and will include an evaluation of the impacts from the proposed construction.

FEMA Floodplain Analysis and Permitting

The **CONSULTANT** will perform a preliminary analysis of the hydrologic/hydraulic characteristics of the existing Floodplain and proposed greenway using the one-dimensional computer program HEC-RAS. The **COUNTY** shall provide the original flood study model from FEMA; it is assumed that the available flood study model will be in HEC-RAS format and

accurately reflect the information provided in the Effective Dec. 21, 2017 FIS (45079CV001B - 45079CV004B) and FIRM (45079C0376L – Dec. 21, 2017).

Should the original flood study model not be in HEC-RAS format and/or have errors, and/or insufficient data, the **CONSULTANT** will update the modeling as necessary.

The greenway is located in a FEMA Zone AE with Base Flood Elevations and a defined floodway. The floodplain will be assessed to determine the impacts of the project. If feasible, improvements will be designed to achieve the required No Impact. **CONSULTANT** will coordinate with the local floodplain manager as necessary. Should a CLOMR/LOMR become necessary, the **CONSULTANT** shall notify the County immediately.

Assumptions:

1. SCDHEC’s NOI form will be used for this project.
2. FEMA No Impact anticipated for this project.
3. No detention basins will be required.
4. FEMA modeling to ensure no impact will be achieved.
5. No CLOMR/LOMR is included as part of the scope.
6. The **COUNTY** shall provide FEMA model data and COUNTY LiDAR data at no cost to **CONSULTANT**.
7. Gills Creek Special Protection Area requirements are not applicable to this project.
8. Richland County Buffer requirements are not applicable to this project.

Deliverables

1. One (1) Signed and Sealed set of drainage sheets will be provided for inclusion in the Final Roadway Construction Plans.
2. One (1) hard copy of the Signed and Sealed Stormwater Management Report to include a No-Impact model/report.

TASK 6 – SEDIMENT AND EROSION CONTROL/NPDES PERMITTING

Sediment and Erosion Control

The project will include the development of Erosion and Sediment Control (E&S) Plans as well as the preparation of Supporting Documentation for the National Pollutant Discharge Elimination System (NPDES) Notice of Intent Permit Application.

The E&S Plans will be prepared on replications of the plan sheets and at the same plan scale, unless otherwise agreed upon. The E&S Plans will reflect a proposed design for minimizing erosion and off-site sedimentation during construction. The erosion and sediment control design will include the temporary placement of sediment dams, silt basins, inlet structure filters, sediment tubes, silt ditches, and diversion dikes at specific locations along the project. The plans will reference the City of Columbia and Richland County standards to assist the contractor with the construction of these items. The plans will also identify the need to maintain, clean, and relocate these erosion control measures as the project progresses and address the removal of temporary erosion control devices following construction. The placement of erosion control measures outside proposed Rights-of-Way through the use of temporary easements will be investigated as a

possibility if they will not fit within proposed Right-of-Way. Quantities for erosion and sediment control items will be calculated based on City of Columbia and Richland County Standards. Any required erosion control computations will be completed with approved methods and submitted to the **COUNTY**.

NPDES Permitting

The project will require the acquisition of a NPDES permit for construction activities. The NPDES permit is required by the South Carolina Department of Health and Environmental Control (SCDHEC) for all land disturbing activities in South Carolina.

The **CONSULTANT** will develop the NPDES permit application as well as the submittal of any required supporting data and submit to the **COUNTY** and **CITY**, where applicable. The Stormwater Management Report for the project will contain all supporting data developed by the **CONSULTANT** for the project.

The **CONSULTANT** will provide additional calculations and revise the construction plans as required by the permit reviewer.

Deliverables:

1. One (1) Signed and Sealed set of erosion control sheets will be provided for inclusion in the Final Construction Plans
2. One (1) hard copy of the Signed and Sealed Stormwater Pollution Prevention Plan (SWPPP)
3. NPDES Permit

TASK 7 – GEOTECHNICAL INVESTIGATION AND ENGINEERING SERVICES

General

The **CONSULTANT** shall provide geotechnical exploration for approximately two thousand five hundred (2,500) linear feet of boardwalk along the west side of Gills Creek from Rosewood Drive to Mikell Lane. The exploration will be done by hand auger and/or drill-rig after the trail centerline is marked. A report will be prepared that will outline the necessary information to design boardwalk foundations along the section of greenway trail from Beecliff Drive to Mikell Lane based on the requirements set forth in the Structural Services Section.

Field Exploration (Final Subsurface Exploration)

Prior to beginning the subsurface field exploration, the **CONSULTANT** will notify the **COUNTY** at least seven (7) days in advance so the **COUNTY** can coordinate with the SCDOT, City, and property owners. The **CONSULTANT** shall comply with all City of Columbia and SCDOT lane closure restrictions.

Boring locations will be located along or adjacent to the proposed alignment of the pathway where boardwalk is planned. The exploration will be performed in one phase. A preliminary exploration is not proposed. Boring locations in the final exploration may occur outside and/or inside SCDOT and/or **COUNTY** Right-of-Way.

Permission to access private property will be obtained by the **COUNTY**.

Clearance of utilities will be the responsibility of the **CONSULTANT**. A request for utility marking will be made to the Statewide Utility One-call Service (SC811) at least three (3) -days prior to field work. The **CONSULTANT** will mark utilities that are not marked by SC811 as part of Task 3. Information obtained in Task 3 will be shared with geotechnical staff prior to field exploration work.

Proposed boring locations will be determined by the **CONSULTANT**. The **CONSULTANT** will provide copies of the proposed subsurface exploration plan to the **COUNTY** prior to initiation of field work for review and acceptance. The subsurface exploration plan will include, as a minimum, the following:

- Description of the soil or rock stratification anticipated
- Description of the proposed testing types
- Depth of tests
- Location of tests

Field Exploration

SCDOT and/or City of Columbia Encroachment Permit – **CONSULTANT** understands that no project specific encroachment permit is required. **CONSULTANT** shall comply with all lane closure restrictions if needed to access the site.

Borings – The boring locations will be located along the proposed boardwalk alignment.

Subsurface Exploration – A soil test boring will be performed at (300) foot intervals along the boardwalk alignment. The following is a summary of the quantity, depth, and procedure proposed.

- Ten (10) borings will be performed along the alignment of planned boardwalk to a depth of ten (10) feet or auger refusal, whichever is shallower. The borings will be either Standard Penetration Test borings and/or Hand Auger borings depending on access.
- Slope stability or settlement calculations for embankments and retaining walls are not included.
- Seismic design for boardwalks, pedestrian bridge, sidewalk, retaining walls and other structures is not included.
- Pavement and embankment design for sidewalk are not included.
- Pavement design for parking lots is not included.
- Clearing will be needed to access some or all of the soil boring locations.

Other Field Testing Items

Traffic control is not anticipated for this phase of the project from Rosewood Drive to Mikell Lane. At the completion of field work, all test locations shall be surveyed for latitude and longitude,

elevation, and station by **CONSULTANT**.

Field Engineering – **CONSULTANT** will provide oversight of drill rig operations by a field engineer technician and/or field geologist. Field personnel will consist of one (1) field services supervisor and/or one (1) geologist per drill rig. Soil Classification will be in accordance with USCS (ASTM D-2487). The Field Services Supervisor will have a minimum of three (3) years of experience in supervision of field equipment and field personnel and will coordinate field activities including clearance of underground utilities through South Carolina 811.

Laboratory Testing – **CONSULTANT** shall be AASHTO certified in the anticipated laboratory testing outlined below and/or any additional testing that may be required. See Chapter 5 of the SCDOT GDM for AASHTO and ASTM designations. The laboratory testing on selected samples will evaluate the types of soils encountered, confirm visual classifications, and estimate engineering properties for use in design. Laboratory testing for the exploration is estimated to include the following: Ten (10) natural moisture content tests, ten (10) grain size distribution with wash no. 200 sieve, and ten (10) moisture-plasticity relationship determinations (Atterberg Limits).

Boardwalk Geotechnical Engineering Report

The Geotechnical Engineering Report will not be conducted in strict accordance with the procedures outlined in the SDCDOT GDM. This report will cover pedestrian boardwalk foundations and pedestrian bridge foundations which are not contemplated by the SCDOT GDM. The report will include soil parameters for design of concrete-encased wood post foundations for the boardwalk and recommendations for pedestrian bridge foundations.

Assumptions:

- 1. Assumes that a drill rig will not be able to access some or all of the boardwalk alignment.*
- 2. Pedestrian bridge, parking lots, and building structures are not included in this phase of the project.*

Deliverables:

- 1. Soil parameters for boardwalk foundation design.*

TASK 8 – STRUCTURAL SERVICES

The **CONSULTANT** will develop structure plans to construct boardwalks as detailed in the Gills Creek Greenway Concept Report. The **CONSULTANT** will provide the following:

Design Basis Statement

The **CONSULTANT** shall design all boardwalk footings, structural decking, beams, piles/pier system in accordance with ACI, AASHTO, ASTM and IBC current to the reviewing agencies with jurisdiction over construction and the standards of the current City of Columbia Greenway Standards. The loading requirements for all bridges and boardwalks shall be as directed by the City of Columbia. All footings/piles will be designed to meet or exceed this loading requirement. Boardwalks shall also be designed to flood. The structural design will include the

required calculations to prepare typical cross sections and spans details of the Greenway boardwalk that can be used throughout the entire project. For purposes of this scope, it is assumed that the structural design will include the following:

- General Notes
- High Boardwalk typical section with handrail (shall meet ADA compliance)
- Low Boardwalk typical section without handrail unless higher than 30-inches above existing ground (shall meet ADA compliance)
- Boardwalk foundation design for up to two (2) different soil types
- One (1) abutment design for transition from boardwalk to concrete path
- Typical span detail for a 7.5-foot span, 15-foot span, and 22.5-foot span.
- Live Loading to include pedestrian and City of Columbia Maintenance equipment (Kubota vehicle or similar and Genie GS2632 scissor lift or similar), however no traffic loading is assumed.
- Loading associated with pathway lighting

Structure Plans (95%)

The **CONSULTANT** shall develop 95% structure plans in sufficient detail and appropriate format to clearly illustrate significant design features, dimensions and clearances. The 95% structure plans will be approved by the **CITY** prior to beginning final structure plans and will be submitted concurrently with the Final Greenway Plans if possible. It is assumed that the boardwalk elevations and a final profile will be developed prior to structural design commencing.

Comments made by the **CITY** on the 95% structure plans shall be incorporated into the 100% Final Structure Plans (discussed below) and a response to each comment shall be provided in a comment matrix for submittal.

Final Structure Plans (100%)

The **CONSULTANT** will develop final structure plans. The final structure plans for the structure(s) will be based upon the approved 95% structure plans. The final structure plans will be prepared as follows:

Prepare in conformity with current practices of the **CITY** with regard to method of presentation, scales, billing of pay items, special drawings and summaries thereof. Standard drawings of the **CITY** shall be used to the extent feasible and shall be furnished by the **CITY** to be modified by the **CONSULTANT** to fit the particular needs of the project. Construction drawings shall be on sheets of the size, and with standard markings utilized by the **CITY**. Scale of drawings and lettering size shall be such as to provide clear and legible reproductions when reduced to half size. The construction plans shall bear the **CONSULTANT's** seal and signature as a registered professional engineer, in the State of South Carolina, on each plan sheet.

The **CONSULTANT** will prepare special provisions concerning items of construction not covered by the City's standard specifications, supplemental specifications or standard structure special provisions, as well as special treatments during construction. Special Provisions provided by the

CONSULTANT shall include a cover sheet listing all special provisions provided by the **CONSULTANT** for this project. The cover sheet shall be sealed and signed by a registered professional and sealed by the engineer of record for the project. An electronic copy of the special provisions shall also be provided to the **CITY**.

Prior to submittal to **CITY**, all plans and documents shall be thoroughly reviewed by the **CONSULTANT** for completeness, correctness, accuracy and consistency with the above-referenced requirements.

On Site Meetings

Representatives from the **CITY** and **CONSULTANT** involved in structure design will attend two (2) field review meetings of the project during the plan development. All information gathered during this field investigation will be evaluated and plans revised accordingly. The **CONSULTANT** will provide a summary of each field review.

Deliverables:

1. Two half size sets and one electronic pdf file of 95% structure plans
2. One full size set and one electronic pdf file of final signed and sealed Final Structure Plans
3. One set of electronic Final Structure Plans in MicroStation format after **CITY** approval has been received
4. One hard copy and one electronic copy of detailed quantities
5. One hard copy and one electronic Microsoft Word copy of Special Provisions
6. One hard copy and Microsoft Word copy of list of required Supplemental Specifications
7. Hard copies of design quantity calculations if requested by the City
8. A copy of all deliverables to be conveyed to the **CITY** as part of the greenway conveyance

Assumptions:

1. Handrail details will be approved by the **CITY** in a timely manner.
2. The level of details provided in the plans for this project will be similar to those in the Three Rivers Greenway Boardwalk Bridge Plans.
3. No seismic design is required.
4. All typical sections shall be designed in accordance with AASHTO *Guide for the Development of Bicycle Facilities* 2012 – Fourth Edition and meet all ADA criteria.

TASK 9 – ELECTRICAL ENGINEERING SERVICES

The **CONSULTANT** will provide electrical engineering design services along the new greenway from Beecliff Road to Mikell Lane. Electrical engineering design shall consist of the below.

1. Lighting Design
 - a. Exterior Lighting – Lights are to be chosen and/or approved by the City.

- a. Photometric calculations based on the requirements of IBC, City of Columbia, Richland County and the Illuminating Engineering Society of North America (IESNA) (where site conditions allow).
 - b. Specification and layout of an LED lighting fixture per City selection (LED Granville or similar) including flood proof fixtures where required. Lighting shall be directionally focused down and along the greenway surface and shall provide a minimum footcandle rating of 0.5 footcandles along the greenway surface.
 - c. Specification, Quantity and Layout of Emergency Call Boxes with required circuiting.
 - d. Lighting controls for energy-efficient use of lighting
 - e. Circuiting and conduit for Camera placement with layout of Camera at Trailhead.
 - f. Pull-Boxes for conduit at a maximum interval of 500'
2. Power Distribution system including:
 - a. Service and utility coordination
 - b. Electrical circuiting, risers and panel schedule
 - c. Electrical load calculations
 3. Code Compliance:
 - a. National Electric Code (NFPA 70), latest version
 - b. International Building Code (FBC), latest version
 - c. Richland County Building Department
 - d. National Fire Alarm Code (NFPA 72), latest version
 - e. City of Columbia
 4. Technical Specifications

TASK 10 – UTILITY COORDINATION ASSISTANCE

Utility Coordination

The **CONSULTANT** shall coordinate the project development with the **CITY's** Utility Coordinator. Coordination and assistance shall involve inviting the **CITY's** Utility Coordinator and SCE&G to necessary project meetings, providing updates to schedule, and providing project files as requested by **CITY's** Utility Coordinator. **CONSULTANT** shall identify utility relocations necessary to construct the project and provide those locations to the **CITY** Utility Coordinator. The **CONSULTANT** will provide electronic copies and pdf's of the Survey as well as a listing of the utilities that exist within the project limits as soon as the information becomes available so that early coordination with utility companies can begin. The **CITY's** Utility Coordinator will handle coordination of the project development with utility companies.

TASK 11 – PRE-BID SERVICES

The **CONSULTANT** shall assist the **COUNTY** in certain pre-bid services as follows:

- Prepare draft bid specifications for review by the **COUNTY**
- Attend a mandatory pre-bid conference held by the **COUNTY**
- Provide bid instruction and answer questions, as needed, at and following the pre-bid conference

- Schedule and coordinate on-site pre-bid reconnaissance of the project area
- Assist in bid analysis as desired by the **COUNTY**
- The **COUNTY** shall provide the general conditions to the **CONSULTANT**.

TASK 12 – CONSTRUCTION PHASE SERVICES

Pre-Construction/Partnering Conference

The **CONSULTANT** will attend the Pre-Construction/Partnering Conference and respond to questions by the **CONTRACTOR** pertinent to the design and proposed construction methodology. Assume there will be one (1) Pre-Construction/Partnering Conference. Two (2) of the **CONSULTANT**'s staff shall attend this meeting.

Construction Phase Project Meetings

The **CONSULTANT** will attend meetings with the **COUNTY** to discuss construction issues as needed during the construction of this project. Assume there will be two (2) Construction Phase Project Meetings. One (1) of the **CONSULTANT**'s staff shall attend these meetings.

Construction Phase Assistance

The **CONSULTANT** will assist **COUNTY** personnel during the construction phase when problems or questions arise relating to the design and proposed construction methodology. Assume four (4) hours per month for project construction duration of six (6) months

Construction Revisions

The **CONSULTANT** will make necessary revisions to construction plans that arise during the construction phase of the project. Assume three (3) construction revisions and eight (hours) per revision.

Shop Drawing Review:

The **CONSULTANT** shall review the Contractor's Shop Drawings in a timely manner following the award of the contract and during construction.

As-Built Plans:

The **CONSULTANT** will not be responsible for the development of as-built drawings of the greenway trail.

PROJECT DELIVERABLES

- Monthly reports and invoice submittals
- Meeting Agendas & Meeting minutes – to be submitted to **COUNTY** within three days of meeting.
- Approved Preliminary Jurisdictional Determination
- Approved USACOE Nationwide Permit
- Right-of-way plans and Engineer's Estimate for review
- Right-of-way plans, Special Provisions and updated Engineer's Estimate
- Preliminary construction plans and Engineer's Estimate
- Final construction plans, project specific specifications, and Engineer's Estimate
- NPDES permit application/Notice of Intent
- Erosion control computations, if necessary
- Stormwater Pollution Prevention Plan
- Stormwater Management Report
- CAD files of all design and survey
- No impact statement
- HEC-RAS study and necessary FEMA permit

SERVICES NOT PROVIDED

The **CONSULTANT** will not be responsible for the following services or deliverables and others not necessarily mentioned in this scope of work.

- Lighting protection System Design
- Waterline and water fountain design
- Landscaping and irrigation design
- As-built plans – these will be the responsibility of the Contractor
- Utility relocation design and plans
- Right-of-Way Exhibits
- Right-of-Way acquisition
- Video pipe inspections
- Eminent Domain advertisement notice
- Public Involvement (other than those activities detailed in scope of work)
- Administering or advertising the bid process
- Fabricating or erecting signs for public meetings
- Public Meetings
- Alternate designs for bidding
- Bid documents and preparation (other than those documents specifically mentioned in this scope of work)
- Payment of fees required by state and federal review/approval agencies (without reimbursement for said necessary fees)
- Construction Engineering and Inspection (CEI)
- FEMA permit and LOMAR/CLOMAR permit
- Floodplain Development Permit

- USACOE Navigation Permit

SERVICES OF THE COUNTY

The **COUNTY** agrees to provide to the **CONSULTANT**, and at no cost to the **CONSULTANT**, the following upon request:

- Existing Policies and Procedures of the **COUNTY** with reference to geometrics, standards, specifications and methods pertaining to all phases of the **CONSULTANT**'s work
- Eminent Domain advertisement notice
- Contract documents (project specific special provisions to be supplied by the **CONSULTANT**)
- Payment of fees required by state and federal review process
- Payment of fees for advertising for bid
- Right-of-Way acquisition
- Right-of-Way verification
- Moving, demolition and reset items list
- As-built plans
- LiDAR surveys
- FEMA model



BUILD vs TIGER Fact Sheet

The Better Utilizing Investments to Leverage Development (BUILD) Transportation Grants solicitation will make \$1.5 billion available to surface transportation projects that align with the merit criteria described in the Notice of Funding Opportunity (NOFO). BUILD replaces the pre-existing TIGER grants program. Like TIGER, FY 2018 BUILD Transportation Grants are for investments in surface transportation infrastructure and are to be awarded on a competitive basis for projects that will have a significant local or regional impact. For this round of BUILD, no more than \$150 million can be awarded to a single State.

To reflect the Administration’s Infrastructure Initiative, DOT plans to award a greater share of BUILD Transportation funding to projects located in rural areas that align well with the merit criteria than to those in urban areas. Rural applicants can highlight their needs in response to several of the evaluation criteria, including to deploy rural broadband as part of an eligible transportation project. BUILD encourages local governments to proactively raise new sources of revenue with a new criterion to evaluate local activities to generate additional non-Federal revenue for transportation infrastructure.

BUILD applications will be evaluated based on the following merit criteria: safety, economic competitiveness, quality of life, environmental protection, state of good repair, innovation, partnership, and additional non-Federal revenue for infrastructure investments. Below is a side-by-side comparison of the merit criteria used in TIGER and BUILD:

TIGER	BUILD
<p>Merit criteria</p> <p><i>Primary criteria</i></p> <ul style="list-style-type: none"> • Safety • State of Good Repair • Economic Competitiveness • Environmental Sustainability • Quality of Life <p><i>Secondary criteria</i></p> <ul style="list-style-type: none"> • Innovation • Partnership <p><i>Other criteria</i></p> <ul style="list-style-type: none"> • Demonstrated Project Readiness • Project Costs and Benefits • Cost Sharing or Matching <p><i>Additional considerations</i></p> <ul style="list-style-type: none"> • Geographic diversity among recipients 	<p>Merit criteria</p> <ul style="list-style-type: none"> • Safety • State of Good Repair • Economic Competitiveness • Environmental Protection • Quality of Life • Innovation • Partnership • Non-Federal Revenue for Transportation Infrastructure Investment <p><i>Other criteria</i></p> <ul style="list-style-type: none"> • Demonstrated Project Readiness • Project Costs and Benefits <p><i>Additional considerations</i></p> <ul style="list-style-type: none"> • Geographic diversity among recipients

For additional explanation of the criteria, please see the BUILD NOFO

What stayed the same from TIGER competitions?

The eligible costs and project types have not changed. The minimum and maximum project award sizes are the same as in FY 2017.

10. What actions can be taken to improve public awareness of traumatic injury as a public health issue?

11. What actions could be taken to improve the rapid extrication of motor vehicle crash patients?

12. What actions could be taken to improve the rapid transport of trauma patients?

13. What actions could be taken to improve prehospital care for pediatric trauma patients?

14. What actions could be taken to improve tribal prehospital trauma care?

15. What research is needed to improve prehospital trauma care during a mass casualty incident?

16. What is the potential role of 9–1–1 in improving prehospital trauma care outcomes?

17. What is the potential role of bystander care, such as Stop the Bleed, in improving prehospital trauma care outcomes?

18. What is the potential role of vehicle telematics in improving prehospital trauma care outcomes?

19. What is the potential role of telemedicine in improving prehospital trauma care outcomes?

20. What is the potential role of community paramedicine, mobile integrated healthcare, and other emerging EMS subspecialties in improving prehospital trauma care outcomes?

21. How could data-driven and evidence-based improvements in EMS systems improve prehospital trauma care?

22. How could enhanced collaboration among EMS systems, health care providers, hospitals, public safety answering points, public health, insurers, and others improve prehospital trauma care?

23. What are some opportunities to improve exchange of evidence based prehospital trauma care practices between military and civilian medicine?

24. Do you have any additional comments regarding prehospital trauma care?

Authority: 44 U.S.C. Section 3506(c)(2)(A).

Issued in Washington, DC, on April 19, 2018.

Jeff Michael,

Associate Administrator, Research and Program Development.

[FR Doc. 2018–08504 Filed 4–26–18; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Office of the Secretary of Transportation

Notice of Funding Opportunity for the Department of Transportation's National Infrastructure Investments Under the Consolidated Appropriations Act, 2018

AGENCY: Office of the Secretary of Transportation, DOT.

ACTION: Notice of funding opportunity.

SUMMARY: The Consolidated Appropriations Act, 2018 (Pub. L. 115–141, March 23, 2018) (“FY 2018 Appropriations Act” or the “Act”) appropriated \$1.5 billion to be awarded by the Department of Transportation (“DOT” or the “Department”) for National Infrastructure Investments. This appropriation stems from the program funded and implemented pursuant to the American Recovery and Reinvestment Act of 2009 (the “Recovery Act”). This program was previously known as the Transportation Investment Generating Economic Recovery, or “TIGER Discretionary Grants,” program and is now known as the Better Utilizing Investments to Leverage Development, or “BUILD Transportation Discretionary Grants,” program. Funds for the FY 2018 BUILD Transportation program are to be awarded on a competitive basis for projects that will have a significant local or regional impact. The purpose of this Final Notice is to solicit applications for BUILD Transportation Discretionary Grants.

DATES: Applications must be submitted by 8:00 p.m. E.D.T. on July 18, 2018.

ADDRESSES: Applications must be submitted through *Grants.gov*.

FOR FURTHER INFORMATION CONTACT: For further information concerning this notice, please contact the BUILD Transportation program staff via email at *BUILDgrants@dot.gov*, or call Howard Hill at 202–366–0301. A TDD is available for individuals who are deaf or hard of hearing at 202–366–3993. In addition, DOT will regularly post answers to questions and requests for clarifications as well as information about webinars for further guidance on DOT’s website at *www.transportation.gov/BUILDgrants*.

SUPPLEMENTARY INFORMATION: Many of the selection criteria of BUILD Transportation grants overlap with previous rounds of National Infrastructure Investments discretionary grants, though the program is refocused on infrastructure investment that will

make a positive impact throughout the country. The FY 2018 BUILD Transportation program will continue to give special consideration to projects located in rural areas. For this round of BUILD Transportation Discretionary Grants, the maximum grant award is \$25 million, and no more than \$150 million can be awarded to a single State, as specified in the FY 2018 Appropriations Act. Each section of this notice contains information and instructions relevant to the application process for these BUILD Transportation Discretionary Grants, and all applicants should read this notice in its entirety so that they have the information they need to submit eligible and competitive applications.

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A. Program Description

The Consolidated Appropriations Act, 2018 (Pub. L. 115–141, March 23, 2018) (“FY 2018 Appropriations Act” or the “Act”) appropriated \$1.5 billion to be awarded by the Department of Transportation (“DOT” or the “Department”) for National Infrastructure Investments. Since this program was first created, \$5.6 billion has been awarded for capital investments in surface transportation infrastructure over nine rounds of competitive grants. Throughout the program, these discretionary grant awards have supported projects that have a significant local or regional impact.

The Department is committed to addressing the unmet transportation infrastructure needs of rural areas. Rural America is home to many of the nation’s most critical transportation infrastructure assets, including 444,000 bridges, 2.98 million miles of roadways, and 30,500 miles of Interstate highways. More than 55 percent of all public road miles are locally-owned rural roads. While only 19 percent of the nation’s population lives in rural areas, 49 percent of all traffic fatalities occur on rural roads (2015). In addition, Americans living in rural areas and on Tribal lands continue to disproportionately lack access to basic broadband service. The Department believes that underinvestment in rural transportation systems has allowed a slow and steady decline in the transportation routes that connect rural

American communities to each other and to the rest of the county. New investment is necessary to grow rural economies, facilitate freight movement, improve access to reliable and affordable transportation options and enhance health access and safety for residents. To address these rural transportation infrastructure needs, DOT intends to award a greater share of BUILD Transportation Discretionary Grant funding to projects located in rural areas that align well with the selection criteria than to such projects in urban areas.

B. Federal Award Information

1. Amount Available

The FY 2018 Appropriations Act appropriated \$1.5 billion to be awarded by DOT for the BUILD Transportation program. The FY 2018 BUILD Transportation Discretionary Grants are for capital investments in surface transportation infrastructure and are to be awarded on a competitive basis for projects that will have a significant local or regional impact. Additionally, the Act allows for up to \$15 million (of the \$1.5 billion) to be awarded as grants for the planning, preparation or design of eligible projects. DOT is referring to any such awarded projects as BUILD Transportation Planning Grants. The FY 2018 Appropriations Act also allows DOT to retain up to \$25 million of the \$1.5 billion for award, oversight and administration of grants and credit assistance made under the BUILD Transportation program. If this solicitation does not result in the award and obligation of all available funds, DOT may publish additional solicitations.

The FY 2018 Appropriations Act allows up to 20 percent of available funds (or \$300 million) to be used by the Department to pay the subsidy and administrative costs for a project receiving credit assistance under the Transportation Infrastructure Finance and Innovation Act of 1998 (“TIFIA”) program, if that use of the FY 2018 BUILD funds would further the purposes of the BUILD Transportation program.

2. Award Size

The FY 2018 Appropriations Act specifies that BUILD Transportation Discretionary Grants may not be less than \$5 million and not greater than \$25 million, except that for projects located in rural areas (as defined in Section C.3.ii.) the minimum BUILD Transportation Discretionary Grant size is \$1 million. There is no statutory minimum grant size, regardless of

location, for BUILD Transportation Planning grants.

3. Restrictions on Funding

Pursuant to the FY 2018 Appropriations Act, no more than 10 percent of the funds made available for BUILD Transportation Discretionary Grants (or \$150 million) may be awarded to projects in a single State. The Act also directs that not less than 30 percent of the funds provided for BUILD Transportation Discretionary Grants (or \$450 million) shall be used for projects located in rural areas. Further, DOT must take measures to ensure an equitable geographic distribution of grant funds, an appropriate balance in addressing the needs of urban and rural areas, and investment in a variety of transportation modes.

4. Availability of Funds

The FY 2018 Appropriations Act requires that FY 2018 BUILD Transportation Discretionary Grants funds are only available for obligation through September 30, 2020. Obligation occurs when a selected applicant and DOT enter into a written grant agreement after the applicant has satisfied applicable administrative requirements, including transportation planning and environmental review requirements. All FY 2018 BUILD funds must be expended (the grant obligation must be liquidated or actually paid out to the grantee) by September 30, 2025. After this date, unliquidated funds are no longer available to the project. As part of the review and selection process described in Section E.2., DOT will consider whether a project is ready to proceed with an obligation of grant funds from DOT within the statutory time provided. No waiver is possible for these deadlines.

5. Previous TIGER Awards

Recipients of TIGER Discretionary Grants may apply for funding to support additional phases of a project awarded funds in the TIGER program. However, to be competitive, the applicant should demonstrate the extent to which the previously funded project phase has been able to meet estimated project schedules and budget, as well as the ability to realize the benefits expected for the project.

C. Eligibility Information

To be selected for a BUILD Transportation Discretionary Grant, an applicant must be an Eligible Applicant and the project must be an Eligible

1. Eligible Applicants

Eligible Applicants for BUILD Transportation Discretionary Grants are State, local, and tribal governments, including U.S. territories, transit agencies, port authorities, metropolitan planning organizations (MPOs), and other political subdivisions of State or local governments.

Multiple States or jurisdictions may submit a joint application and must identify a lead applicant as the primary point of contact, and also identify the primary recipient of the award. Each applicant in a joint application must be an Eligible Applicant. Joint applications must include a description of the roles and responsibilities of each applicant and must be signed by each applicant.

2. Cost Sharing or Matching

Per the FY 2018 Appropriations Act, BUILD Transportation Discretionary Grants may be used for up to 80 percent of a project located in an urban area¹ and the Secretary may increase the Federal share of costs above 80 percent for a project located in a rural area. Urban area and rural area are defined in Section C.3.ii of this notice.

For a project located in an urban area, the Federal share of the costs for which an expenditure is made under a BUILD Transportation grant may not exceed 80 percent. Non-Federal sources include State funds originating from programs funded by State revenue, local funds originating from State or local revenue-funded programs, or private funds. Toll credits under 23 U.S.C. 120(i) are considered a non-Federal source. Unless otherwise authorized by statute, State or local cost-share may not be counted as the non-Federal share for both the BUILD Transportation grant and another Federal grant program. The Department will not consider previously-incurred costs or previously-expended or encumbered funds towards the matching requirement for any project. Matching funds are subject to the same Federal requirements described in Section F.2. as awarded funds.

3. Other

i. Eligible Projects

Eligible projects for BUILD Transportation Discretionary Grants are capital projects that include, but are not limited to: (1) Highway, bridge, or other road projects eligible under title 23, United States Code; (2) public transportation projects eligible under chapter 53 of title 49, United States

¹ To meet match requirements, the minimum total project cost for a project located in an urban area must be \$6.25 million.

Code; (3) passenger and freight rail transportation projects; (4) port infrastructure investments (including inland port infrastructure and land ports of entry); and (5) intermodal projects.² The FY 2018 Appropriations Act allows up to \$15 million for the planning, preparation or design of projects eligible for BUILD Transportation funding. Activities eligible for funding under BUILD Transportation Planning Grants are related to the planning, preparation, or design—including environmental analysis, feasibility studies, and other pre-construction activities—of surface transportation projects. Research, demonstration, or pilot projects are eligible only if they will result in long-term, permanent surface transportation infrastructure that has independent utility as defined in Section C.3.iii. Applicants are strongly encouraged to submit applications only for eligible award amounts.

ii. Rural/Urban Definition

For purposes of this notice, DOT defines “rural area” as an area outside an Urbanized Area³ (UA) as designated by the U.S. Census Bureau. In this notice, an “urban area” is defined as an area inside a UA as designated by the U.S. Census Bureau.⁴

The Department will consider a project to be in a rural area if the majority of the project (determined by geographic location(s) where the majority of the money is to be spent) is located in a rural area. Costs incurred on an Urbanized Area border, including an intersection with an Urbanized Area, will be considered urban for the purposes of the FY 2018 BUILD Transportation Program. Rural and urban definitions differ in some other DOT programs, including TIFIA and the Nationally Significant Freight and Highway Projects Program (FAST Act § 1105; 23 U.S.C. 117).

This definition affects three aspects of the program. The FY 2018 Appropriations Act directs that (1) not less than \$450 million of the funds provided for BUILD Transportation Discretionary grants are to be used for projects in rural areas; (2) for a project

in a rural area the minimum award is \$1 million; and (3) the Secretary may increase the Federal share above 80 percent to pay for the costs of a project in a rural area.

iii. Project Components

An application may describe a project that contains more than one component, and may describe components that may be carried out by parties other than the applicant. DOT may award funds for a component, instead of the larger project, if that component (1) independently meets minimum award amounts described in Section B and all eligibility requirements described in Section C; (2) independently aligns well with the selection criteria specified in Section E; and (3) meets National Environmental Policy Act (NEPA) requirements with respect to independent utility. Independent utility means that the component will represent a transportation improvement that is usable and represents a reasonable expenditure of DOT funds even if no other improvements are made in the area, and will be ready for intended use upon completion of that component’s construction. All project components that are presented together in a single application must demonstrate a relationship or connection between them. (See Section D.2.iv. for Required Approvals).

Applicants should be aware that, depending upon the relationship between project components and applicable Federal law, DOT funding of only some project components may make other project components subject to Federal requirements as described in Section F.2.

DOT strongly encourages applicants to identify in their applications the project components that have independent utility and separately detail costs and requested BUILD Transportation funding for those components. If the application identifies one or more independent project components, the application should clearly identify how each independent component addresses selection criteria and produces benefits on its own, in addition to describing how the full proposal of which the independent component is a part addresses selection criteria.

iv. Application Limit

Each lead applicant may submit no more than three applications. Unrelated project components should not be bundled in a single application for the purpose of adhering to the limit. If a lead applicant submits more than three applications as the lead applicant, only

the first three received will be considered.

v. Program of Projects

Applicants that demonstrate the ability to generate additional non-Federal revenue for transportation infrastructure investment as described in Section E.1.i.h. of this notice may apply for multiple projects, exceeding the three application limit, that collectively constitute a “program of projects”. A program of projects consists of independent projects that address the same transportation challenge and whose combined benefits, including funding efficiency, are greater than if the projects are completed individually. For a program of projects, applicants must submit an application for each project within the program and describe how each project constitutes a program. Each project application within a program of projects must meet eligibility criteria described in Section C of this notice, demonstrate independent utility, and individually address the merit criteria within this notice. DOT will evaluate each application within a program of projects in the same manner in which it evaluates individual project applications. Each project within a program of projects is subject to the \$25 million award maximum and total awards cannot exceed \$150 million per State. Only applicants that generate additional non-Federal revenue as described in Section E.1.i.h. may submit applications exceeding the three application limit for consideration as a program of projects, and only one program of projects may be submitted by each eligible applicant.

D. Application and Submission Information

1. Address

Applications must be submitted to *Grants.gov*. Instructions for submitting applications can be found at www.transportation.gov/BUILDgrants along with specific instructions for the forms and attachments required for submission.

2. Content and Form of Application Submission

The application must include the Standard Form 424 (Application for Federal Assistance), Standard Form 424C (Budget Information for Construction Programs), cover page, and the Project Narrative. More detailed information about the Project Narrative follows. Applicants should also complete and attach to their application the “BUILD 2018 Project Information”

²Please note that the Department may use a BUILD Transportation Discretionary Grant to pay for the surface transportation components of a broader project that has non-surface transportation components, and applicants are encouraged to apply for BUILD Transportation Discretionary Grants to pay for the surface transportation components of these projects.

³Updated lists of UAs as defined by the Census Bureau are available on the Census Bureau website at http://www2.census.gov/geo/maps/dc10map/UACUC_RefMap/ua/.

⁴See www.transportation.gov/BUILDgrants for a list of UAs.

form available at www.transportation.gov/BUILDgrants.

The Department recommends that the project narrative follow the basic outline below to address the program

requirements and assist evaluators in locating relevant information.

I. Project Description	See D.2.i.
II. Project Location	See D.2.ii.
III. Grant Funds, Sources and Uses of all Project Funding	See D.2.iii.
IV. Merit Criteria	See D.2.iv.(1).
V. Project Readiness	See D.2.iv.(2) and E.1.ii.

The project narrative should include the information necessary for the Department to determine that the project satisfies project requirements described in Sections B and C and to assess the selection criteria specified in Section E.1. To the extent practicable, applicants should provide supporting data and documentation in a form that is directly verifiable by the Department. The Department may ask any applicant to supplement data in its application, but expects applications to be complete upon submission.

In addition to a detailed statement of work, detailed project schedule, and detailed project budget, the project narrative should include a table of contents, maps and graphics, as appropriate, to make the information easier to review. The Department recommends that the project narrative be prepared with standard formatting preferences (a single-spaced document, using a standard 12-point font such as Times New Roman, with 1-inch margins). The project narrative may not exceed 30 pages in length, excluding cover pages and table of contents. The only substantive portions that may exceed the 30-page limit are documents supporting assertions or conclusions made in the 30-page project narrative. If possible, website links to supporting documentation should be provided rather than copies of these supporting materials. If supporting documents are submitted, applicants should clearly identify within the project narrative the relevant portion of the project narrative that each supporting document supports. At the applicant's discretion, relevant materials provided previously to an operating administration in support of a different DOT financial assistance program may be referenced and described as unchanged. The Department recommends using appropriately descriptive file names (e.g., "Project Narrative," "Maps," "Memoranda of Understanding and Letters of Support," etc.) for all attachments. DOT recommends applications include the following sections:

i. Project Description

The first section of the application should provide a concise description of the project, the transportation challenges that it is intended to address, and how it will address those challenges. This section should discuss the project's history, including a description of any previously completed components. The applicant may use this section to place the project into a broader context of other transportation infrastructure investments being pursued by the project sponsor, and, if applicable, how it will benefit communities in rural areas.

ii. Project Location

This section of the application should describe the project location, including a detailed geographical description of the proposed project, a map of the project's location and connections to existing transportation infrastructure, and geospatial data describing the project location. If the project is located within the boundary of a Census-designated UA, the application should identify the UA.

iii. Grant Funds, Sources and Uses of Project Funds

This section of the application should describe the project's budget. This budget should not include any previously incurred expenses. At a minimum, it should include:

- (A) Project costs;
- (B) For all funds to be used for eligible project costs, the source and amount of those funds;
- (C) For non-Federal funds to be used for eligible project costs, documentation of funding commitments should be referenced here and included as an appendix to the application;
- (D) For Federal funds to be used for eligible project costs, the amount, nature, and source of any required non-Federal match for those funds;
- (E) A budget showing how each source of funds will be spent. The budget should show how each funding source will share in each major construction activity, and present that data in dollars and percentages. Funding sources should be grouped into three categories: non-Federal; BUILD;

and other Federal. If the project contains individual components, the budget should separate the costs of each project component. If the project will be completed in phases, the budget should separate the costs of each phase. The budget detail should sufficiently demonstrate that the project satisfies the statutory cost-sharing requirements described in Section C.2;

In addition to the information enumerated above, this section should provide complete information on how all project funds may be used. For example, if a particular source of funds is available only after a condition is satisfied, the application should identify that condition and describe the applicant's control over whether it is satisfied. Similarly, if a particular source of funds is available for expenditure only during a fixed time period, the application should describe that restriction. Complete information about project funds will ensure that the Department's expectations for award execution align with any funding restrictions unrelated to the Department, even if an award differs from the applicant's request.

iv. Criteria

This section of the application should demonstrate how the project aligns with the Criteria described in Section E.1 of this notice. The Department encourages applicants to either address each criterion or expressly state that the project does not address the criterion. Applicants are not required to follow a specific format, but the outline suggested below, which addresses each criterion separately, promotes a clear discussion that assists project evaluators. To minimize redundant information in the application, the Department encourages applicants to cross-reference from this section of their application to relevant substantive information in other sections of the application. The guidance in this section is about how the applicant should organize their application. Guidance describing how the Department will evaluate projects against the Merit Criteria is in Section E.1 of this notice. Applicants also should review that section before

considering how to organize their application.

(1) Merit Criteria

(a) Safety

This section of the application should describe the anticipated outcomes of the project that support the Safety criterion (described in Section E.1.i.(a) of this notice). The applicant should include information on, and to the extent possible, quantify, how the project would improve safety outcomes within the project area or wider transportation network, to include how the project will reduce the number, rate, and consequences of transportation-related accidents, serious injuries, and fatalities among transportation users, or how the project will eliminate unsafe grade crossings or contribute to preventing unintended releases of hazardous materials.

(b) State of Good Repair

This section of the application should describe how the project will contribute to a state of good repair by improving the condition or resilience of existing transportation facilities and systems (described in Section E.1.i.(b) of this notice), including the project's current condition and how the proposed project will improve it, and any estimation of impacts on long-term cost structures or impacts on overall life-cycle costs. If the project will contribute to a state of good repair of transportation infrastructure that supports border security, the applicant should describe how.

(c) Economic Competitiveness

This section of the application should describe how the project will support the Economic Competitiveness criterion (described in Section E.1.i.(c) of this notice). The applicant should include information about expected impacts of the project on the movement of goods and people, including how the project increases the efficiency of movement and thereby reduces costs of doing business, improves local and regional freight connectivity to the national and global economy, reduces burdens of commuting, and improves overall well-being. The applicant should describe the extent to which the project contributes to the functioning and growth of the economy, including the extent to which the project addresses congestion or freight connectivity, bridges service gaps in rural areas, or promotes the expansion of private economic development.

(d) Environmental Protection

This section of the application should describe how the project addresses the

environmental protection criterion (described in Section E.1.i.(d) of this notice). Applicants are encouraged to provide quantitative information, including baseline information that demonstrates how the project will reduce energy consumption, stormwater runoff, or achieve other benefits for the environment such as brownfield redevelopment.

(e) Quality of Life

This section should describe how the project increases transportation choices for individuals, expands access to essential services for people in communities across the United States, improves connectivity for citizens to jobs, health care, and other critical destinations, particularly for rural communities, or otherwise addresses the quality of life criterion (described in Section E.1.i.(e) of this notice). If construction of the transportation project will allow concurrent installation of fiber or other broadband deployment as an essential service, the applicant should describe those activities and how they support quality of life. Unless the concurrent activities support transportation, they will not be eligible for reimbursement.

(f) Innovation

This section of the application should describe innovative strategies used and the anticipated benefits of using those strategies, including those corresponding to three categories (described in Section E.1.i.(f) of this notice): (i) Innovative Technologies, (ii) Innovative Project Delivery, or (iii) Innovative Financing.

(i) Innovative Technologies

If an applicant is proposing to adopt innovative safety approaches or technology, the application should demonstrate the applicant's capacity to implement those innovations, the applicant's understanding of whether the innovations will require extraordinary permitting, approvals, or other procedural actions, and the effects of those innovations on the project delivery timeline.

(ii) Innovative Project Delivery

If an applicant plans to use innovative approaches to project delivery, applicants should describe those project delivery methods and how they are expected to improve the efficiency of the project development or expedite project delivery.

If an applicant is proposing to use SEP-14 or SEP-15 (as described in section E.1.i.(f) of this notice) the applicant should describe that proposal.

The applicant should also provide sufficient information for evaluators to confirm that the applicant's proposal would meet the requirements of the specific experimental authority program.⁵

(iii) Innovative Financing

If an applicant plans to incorporate innovative funding or financing, the applicant should describe the funding or financing approach, including a description of all activities undertaken to pursue private funding or financing for the project and the outcomes of those activities.

(g) Partnership

This section of the application should include information to assess the partnership criterion (described in Section E.1.i.(g) of this notice) including a list of all project parties and details about the proposed grant recipient and other public and private parties who are involved in delivering the project. This section should also describe efforts to collaborate among stakeholders, including with the private sector.

(h) Non-Federal Revenue for Transportation Infrastructure Investment

If an applicant generates additional non-Federal revenue (as described in Section E.1.i.(h) of this notice), this section should provide evidence of newly secured and committed revenue for transportation infrastructure investments and identify the source of the revenue. If new revenue for transportation infrastructure investments has not already been secured, the applicant should explain necessary steps to securing revenue and provide a timeline of key milestones leading to its commitment. To ensure new revenue does not supplant existing sources, applications should provide estimates of future revenue levels absent and, separately, with the new revenue. If applicable, this section should describe any fiscal or legal constraints that affect the applicant's ability to generate non-Federal revenue.

(2) Project Readiness

This section of the application should include information that, when considered with the project budget information presented elsewhere in the application, is sufficient for the Department to evaluate whether the project is reasonably expected to begin

⁵ SEP-14 information is available at https://www.fhwa.dot.gov/programadmin/contracts/sep_a.cfm. SEP-15 information is available at https://www.fhwa.dot.gov/ipd/p3/tools_programs/sep15_procedures.aspx.

construction in a timely manner. To assist the Department's project readiness assessment, the applicant should provide the information requested on technical feasibility, project schedule, project approvals, and project risks, each of which is described in greater detail in the following sections. Applicants are not required to follow the specific format described here, but this organization, which addresses each relevant aspect of project readiness, promotes a clear discussion that assists project evaluators. To minimize redundant information in the application, the Department encourages applicants to cross-reference from this section of their application to relevant substantive information in other sections of the application.

The guidance here is about what information applicants should provide and how the applicant should organize their application. Guidance describing how the Department will evaluate a project's readiness is described in Section E.1.ii of this notice. Applicants also should review that section when considering how to organize their application.

(a) Technical Feasibility

The applicant should demonstrate the technical feasibility of the project with engineering and design studies and activities; the development of design criteria and/or a basis of design; the basis for the cost estimate presented in the BUILD application, including the identification of contingency levels appropriate to its level of design; and any scope, schedule, and budget risk-mitigation measures. Applicants should include a detailed statement of work that focuses on the technical and engineering aspects of the project and describes in detail the project to be constructed.

(b) Project Schedule

The applicant should include a detailed project schedule that identifies all major project milestones. Examples of such milestones include State and local planning approvals (programming on the Statewide Transportation Improvement Program); start and completion of NEPA and other Federal environmental reviews and approvals including permitting; design completion; right of way acquisition; approval of plans, specifications and estimates; procurement; State and local approvals; project partnership and implementation agreements, including agreements with railroads; and construction. The project schedule should be sufficiently detailed to demonstrate that:

(1) All necessary activities will be complete to allow BUILD Transportation funds to be obligated sufficiently in advance of the statutory deadline (September 30, 2020 for FY 2018 funds), and that any unexpected delays will not put the funds at risk of expiring before they are obligated;

(2) the project can begin construction quickly upon obligation of BUILD Transportation funds, and that the grant funds will be spent expeditiously once construction starts, with all BUILD Transportation funds expended by September 30, 2025; and

(3) all real property and right-of-way acquisition will be completed in a timely manner in accordance with 49 CFR part 24, 23 CFR part 710, and other applicable legal requirements or a statement that no acquisition is necessary.

(c) Required Approvals

(1) Environmental Permits and Reviews. The application should demonstrate receipt (or reasonably anticipated receipt) of all environmental approvals and permits necessary for the project to proceed to construction on the timeline specified in the project schedule and necessary to meet the statutory obligation deadline, including satisfaction of all Federal, State and local requirements and completion of the NEPA process. Specifically, the application should include:

(a) Information about the NEPA status of the project. If the NEPA process is complete, an applicant should indicate the date of completion, and provide a website link or other reference to the final Categorical Exclusion, Finding of No Significant Impact, Record of Decision, and any other NEPA documents prepared. If the NEPA process is underway, but not complete, the application should detail the type of NEPA review underway, where the project is in the process, and indicate the anticipated date of completion of all milestones and of the final NEPA determination. If the last agency action with respect to NEPA documents occurred more than three years before the application date, the applicant should describe why the project has been delayed and include a proposed approach for verifying and, if necessary, updating this material in accordance with applicable NEPA requirements.

(b) Information on reviews, approvals, and permits by other agencies. An application should indicate whether the proposed project requires reviews or approval actions by other agencies,⁶

⁶ Projects that may impact protected resources such as wetlands, species habitat, cultural or

indicate the status of such actions, and provide detailed information about the status of those reviews or approvals and should demonstrate compliance with any other applicable Federal, State or local requirements, and when such approvals are expected. Applicants should provide a website link or other reference to copies of any reviews, approvals, and permits prepared.

(c) Environmental studies or other documents, preferably through a website link, that describe in detail known project impacts, and possible mitigation for those impacts.

(d) A description of discussions with the appropriate DOT operating administration field or headquarters office regarding the project's compliance with NEPA and other applicable Federal environmental reviews and approvals.

(e) A description of public engagement about the project that has occurred, including details on the degree to which public comments and commitments have been integrated into project development and design.

(2) State and Local Approvals. The applicant should demonstrate receipt of State and local approvals on which the project depends, such as State and local environmental and planning approvals and Statewide Transportation Improvement Program (STIP) or (Transportation Improvement Program) TIP funding. Additional support from relevant State and local officials is not required; however, an applicant should demonstrate that the project has broad public support.

(3) Federal Transportation Requirements Affecting State and Local Planning. The planning requirements applicable to the relevant operating administration apply to all BUILD Transportation projects,⁷ including

historical resources require review and approval by Federal and State agencies with jurisdiction over those resources.

⁷ Under 23 U.S.C. 134 and § 135, all projects requiring an action by FHWA must be in the applicable plan and programming documents (e.g., metropolitan transportation plan, transportation improvement program (TIP) and statewide transportation improvement program (STIP)). Further, in air quality non-attainment and maintenance areas, all regionally significant projects, regardless of the funding source, must be included in the conforming metropolitan transportation plan and TIP. Inclusion in the STIP is required under certain circumstances. To the extent a project is required to be on a metropolitan transportation plan, TIP, and/or STIP, it will not receive a BUILD Transportation grant until it is included in such plans. Projects not currently included in these plans can be amended by the State and MPO. Projects that are not required to be in long range transportation plans, STIPs, and TIPs will not need to be included in such plans in order to receive a BUILD Transportation grant. Port, freight rail, and intermodal projects are not required to be on the State Rail Plans called for in the Passenger Rail Investment and Improvement Act of

intermodal projects located at airport facilities.⁸ Applicants should demonstrate that a project that is required to be included in the relevant State, metropolitan, and local planning documents has been or will be included in such documents. If the project is not included in a relevant planning document at the time the application is submitted, the applicant should submit a statement from the appropriate planning agency that actions are underway to include the project in the relevant planning document.

To the extent possible, freight projects should be included in a State Freight Plan and supported by a State Freight Advisory Committee (49 U.S.C. 70201, 70202), if these exist. Applicants should provide links or other documentation supporting this consideration.

Because projects have different schedules, the construction start date for each BUILD Transportation grant must be specified in the project-specific agreements signed by relevant operating administration and the grant recipients, based on critical path items that applicants identify in the application and will be consistent with relevant State and local plans.

(d) Assessment of Project Risks and Mitigation Strategies

Project risks, such as procurement delays, environmental uncertainties, increases in real estate acquisition costs, uncommitted local match, or lack of legislative approval, affect the likelihood of successful project start and completion. The applicant should identify all material risks to the project and the strategies that the lead applicant and any project partners have undertaken or will undertake in order to mitigate those risks. The applicant should assess the greatest risks to the

2008, or in a State Freight Plan as described in the FAST Act. However, applicants seeking funding for freight projects are encouraged to demonstrate that they have done sufficient planning to ensure that projects fit into a prioritized list of capital needs and are consistent with long-range goals. Means of demonstrating this consistency would include whether the project is in a TIP or a State Freight Plan that conforms to the requirements Section 70202 of Title 49 prior to the start of construction. Port planning guidelines are available at StrongPorts.gov.

⁸Projects at grant obligated airports must be compatible with the FAA-approved Airport Layout Plan, as well as aeronautical surfaces associated with the landing and takeoff of aircraft at the airport. Additionally, projects at an airport: Must comply with established Sponsor Grant Assurances, including (but not limited to) requirements for non-exclusive use facilities, consultation with users, consistency with local plans including development of the area surrounding the airport, and consideration of the interest of nearby communities, among others; and must not adversely affect the continued and unhindered access of passengers to the terminal.

project and identify how the project parties will mitigate those risks.

To the extent it is unfamiliar with the Federal program, the applicant should contact the appropriate DOT operating administration field or headquarters offices, as found in contact information at www.transportation.gov/BUILDgrants, for information on the pre-requisite steps to obligate Federal funds in order to ensure that their project schedule is reasonable and that there are no risks of delays in satisfying Federal requirements.

BUILD Transportation Planning Grant applicants should describe their capacity to successfully implement the proposed activities in a timely manner.

(3) Benefit Cost Analysis

This section describes the recommended approach for the completion and submission of a benefit-cost analysis (BCA) as an appendix to the Project Narrative. The results of the analysis should be summarized in the Project Narrative directly, as described in Section D.2.

Applicants should delineate each of their project's expected outcomes in the form of a complete BCA to enable the Department to evaluate the project's cost-effectiveness by estimating a benefit-cost ratio and calculating the magnitude of net benefits and costs for the project. In support of each project for which an applicant seeks funding, that applicant should submit a BCA that quantifies the expected benefits of the project against a no-build baseline, provides monetary estimates of the benefits' economic value, and compares the properly-discounted present values of these benefits to the project's estimated costs.

The primary economic benefits from projects eligible for BUILD Transportation Grants are likely to include savings in travel time costs, vehicle operating costs, and safety costs for both existing users of the improved facility and new users who may be attracted to it as a result of the project. Reduced damages from vehicle emissions and savings in maintenance costs to public agencies may also be quantified. Applicants may describe other categories of benefits in the BCA that are more difficult to quantify and value in economic terms, such as improving the reliability of travel times or improvements to the existing human and natural environments (such as increased connectivity, improved public health, storm water runoff mitigation, and noise reduction), while also providing numerical estimates of the magnitude and timing of each of these additional impacts wherever possible.

Any benefits claimed for the project, both quantified and unquantified, should be clearly tied to the expected outcomes of the project.

The BCA should include the full costs of developing, constructing, operating, and maintaining the proposed project, as well as the expected timing or schedule for costs in each of these categories. The BCA may also consider the present discounted value of any remaining service life of the asset at the end of the analysis period. The costs and benefits that are compared in the BCA should also cover the same project scope.

The BCA should carefully document the assumptions and methodology used to produce the analysis, including a description of the baseline, the sources of data used to project the outcomes of the project, and the values of key input parameters. Applicants should provide all relevant files used for their BCA, including any spreadsheet files and technical memos describing the analysis (whether created in-house or by a contractor). The spreadsheets and technical memos should present the calculations in sufficient detail and transparency to allow the analysis to be reproduced by DOT evaluators. Detailed guidance for estimating some types of quantitative benefits and costs, together with recommended economic values for converting them to dollar terms and discounting to their present values, are available in the Department's guidance for conducting BCAs for projects seeking funding under the BUILD Transportation program (see www.transportation.gov/BUILDgrants/additional-guidance).

3. Unique Entity Identifier and System for Award Management (SAM)

Each applicant must: (1) Be registered in SAM before submitting its application; (2) provide a valid unique entity identifier in its application; and (3) continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency. The Department may not make a BUILD Transportation grant to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time the Department is ready to make a BUILD Transportation grant, the Department may determine that the applicant is not qualified to receive a BUILD Transportation grant and use that determination as a basis for making

a BUILD Transportation grant to another applicant.

4. Submission Dates and Times

i. Deadline

Applications must be submitted by 8:00 p.m. E.D.T. on July 18, 2018. The *Grants.gov* "Apply" function will open by June 3, 2018.

To submit an application through *Grants.gov*, applicants must:

- (1) Obtain a Data Universal Numbering System (DUNS) number;
- (2) Register with the System for Award Management (SAM) at www.SAM.gov;
- (3) Create a *Grants.gov* username and password; and
- (4) The E-Business Point of Contact (POC) at the applicant's organization must respond to the registration email from *Grants.gov* and login at *Grants.gov* to authorize the applicant as the Authorized Organization Representative (AOR). Please note that there can be more than one AOR for an organization.

Please note that the *Grants.gov* registration process usually takes 2–4 weeks to complete and that the Department will not consider late applications that are the result of failure to register or comply with *Grants.gov* applicant requirements in a timely manner. For information and instruction on each of these processes, please see instructions at <http://www.grants.gov/web/grants/applicants/applicant-faqs.html>. If applicants experience difficulties at any point during the registration or application process, please call the *Grants.gov* Customer Service Support Hotline at 1(800) 518–4726, Monday–Friday from 7:00 a.m. to 9:00 p.m. EST.

ii. Consideration of Applications

Only applicants who comply with all submission deadlines described in this notice and electronically submit valid applications through *Grants.gov* will be eligible for award. Applicants are strongly encouraged to make submissions in advance of the deadline.

iii. Late Applications

Applicants experiencing technical issues with *Grants.gov* that are beyond the applicant's control must contact BUILDgrants@dot.gov prior to the application deadline with the user name of the registrant and details of the technical issue experienced. The applicant must provide:

- (1) Details of the technical issue experienced;
- (2) Screen capture(s) of the technical issues experienced along with corresponding *Grants.gov* "Grant tracking number";

(3) The "Legal Business Name" for the applicant that was provided in the SF–424;

(4) The AOR name submitted in the SF–424;

(5) The DUNS number associated with the application; and

(6) The *Grants.gov* Help Desk Tracking Number.

To ensure a fair competition of limited discretionary funds, the following conditions are not valid reasons to permit late submissions: (1) Failure to complete the registration process before the deadline; (2) failure to follow *Grants.gov* instructions on how to register and apply as posted on its website; (3) failure to follow all instructions in this notice of funding opportunity; and (4) technical issues experienced with the applicant's computer or information technology environment. After the Department reviews all information submitted and contact the *Grants.gov* Help Desk to validate reported technical issues, DOT staff will contact late applicants to approve or deny a request to submit a late application through *Grants.gov*. If the reported technical issues cannot be validated, late applications will be rejected as untimely.

E. Application Review Information

1. Criteria

This section specifies the criteria that DOT will use to evaluate and award applications for BUILD Transportation Discretionary Grants. The criteria incorporate the statutory eligibility requirements for this program, which are specified in this notice as relevant. Projects will also be evaluated for demonstrated project readiness and benefits and costs.

i. Merit Criteria

Applications that do not demonstrate a likelihood of significant long-term benefits based on these criteria will not proceed in the evaluation process. DOT does not consider any merit criterion more important than the others. BUILD Transportation Planning Grant applications will be evaluated against the same criteria as capital grant applications. While the FY 2018 Appropriations Act allows funding solely for pre-construction activities, the Department will prioritize FY 2018 BUILD Transportation funding for projects which demonstrate the ability to move into the construction phase within the period of obligation. The selection criteria, which will receive equal consideration, are:

(a) Safety

The Department will assess the project's ability to foster a safe transportation system for the movement of goods and people. The Department will consider the projected impacts on the number, rate, and consequences of crashes, fatalities and injuries among transportation users; the project's contribution to the elimination of highway/rail grade crossings, or the project's contribution to preventing unintended releases of hazardous materials.

(b) State of Good Repair

The Department will assess whether and to what extent: (1) The project is consistent with relevant plans to maintain transportation facilities or systems in a state of good repair and address current and projected vulnerabilities; (2) if left unimproved, the poor condition of the asset will threaten future transportation network efficiency, mobility of goods or accessibility and mobility of people, or economic growth; (3) the project is appropriately capitalized up front and uses asset management approaches that optimize its long-term cost structure; (4) a sustainable source of revenue is available for operations and maintenance of the project and the project will reduce overall life-cycle costs; (5) maintain or improve transportation infrastructure that supports border security functions; and (6) the project includes a plan to maintain the transportation infrastructure in a state of good repair. The Department will prioritize projects that ensure the good condition of transportation infrastructure, including rural transportation infrastructure, that support commerce and economic growth.

(c) Economic Competitiveness

The Department will assess whether the project will (1) decrease transportation costs and improve access, especially for rural communities, through reliable and timely access to employment centers and job opportunities; (2) improve long-term efficiency, reliability or costs in the movement of workers or goods; (3) increase the economic productivity of land, capital, or labor; (4) result in long-term job creation and other economic opportunities; or (5) help the United States compete in a global economy by facilitating efficient and reliable freight movement.

Projects that address congestion in major urban areas, particularly those that do so through the use of congestion

pricing or the deployment of advanced technology, projects that bridge gaps in service in rural areas, and projects that attract private economic development, all support local or regional economic competitiveness.

(d) Environmental Protection

The Department will consider the extent to which the project improves energy efficiency, reduces dependence on oil, reduces congestion-related emissions, improves water quality, avoids and mitigates environmental impacts and otherwise benefits the environment, including through alternative right of way uses demonstrating innovative ways to improve or streamline environmental reviews while maintaining the same outcomes. The Department will assess the project's ability to: (i) Reduce energy use and air or water pollution through congestion mitigation strategies; (ii) avoid adverse environmental impacts to air or water quality, wetlands, and endangered species; or (iii) provide environmental benefits, such as brownfield redevelopment, ground water recharge in areas of water scarcity, wetlands creation or improved habitat connectivity, and stormwater mitigation.

(e) Quality of Life

The Department will consider the extent to which the project: (i) Increases transportation choices for individuals to provide more freedom on transportation decisions; (ii) expands access to essential services for communities across the United States, particularly for rural communities; and (iii) improves connectivity for citizens to jobs, health care, and other critical destinations, particularly for rural communities. Americans living in rural areas and on Tribal lands continue to disproportionately lack access and connectivity, and the Department will consider whether and the extent to which the construction of the transportation project will allow concurrent installation of fiber or other broadband deployment as an essential service.

(f) Innovation

The Department will assess the extent to which the applicant uses innovative strategies, including: (i) Innovative technologies, (ii) innovative project delivery, or (iii) innovative financing.

(i) Innovative Technologies

DOT will assess innovative approaches to transportation safety, particularly in relation to automated vehicles and the detection, mitigation,

and documentation of safety risks. When making BUILD Transportation award decisions, the Department will consider any innovative safety approaches proposed by the applicant, particularly projects which incorporate innovative design solutions, enhance the environment for automated vehicles, or use technology to improve the detection, mitigation, and documentation of safety risks. Innovative safety approaches may include, but are not limited to:

- Conflict detection and mitigation technologies (e.g., intersection alerts and signal prioritization);
- Dynamic signaling or pricing systems to reduce congestion;
- Signage and design features that facilitate autonomous or semi-autonomous vehicle technologies;
- Applications to automatically capture and report safety-related issues (e.g., identifying and documenting near-miss incidents); and
- Cybersecurity elements to protect safety-critical systems.

For innovative safety proposals, the Department will evaluate safety benefits that those approaches could produce and the broader applicability of the potential results. DOT will also assess the extent to which the project uses innovative technology that supports surface transportation to significantly enhance the operational performance of the transportation system.

Innovative technologies include: broadband deployment and the installation of high-speed networks concurrent with the project construction; connecting Intelligent Transportation System (ITS) infrastructure; and providing direct fiber connections that support surface transportation to public and private entities, which can provide a platform and catalyst for growth of rural communities. The Department will consider whether and the extent to which the construction of the transportation project will allow concurrent broadband deployment and the installation of high-speed networks.

(ii) Innovative Project Delivery

DOT will consider the extent to which the project utilizes innovative practices in contracting, congestion management, asset management, or long-term operations and maintenance.

The Department also seeks projects that employ innovative approaches to improve the efficiency and effectiveness of the environmental permitting and review to accelerate project delivery and achieve improved outcomes for communities and the environment. The Department's objective is to achieve

timely and consistent environmental review and permit decisions. Participation in innovative project delivery approaches will not remove any statutory requirements affecting project delivery. While BUILD Transportation award recipients are not required to employ innovative approaches, the Department encourages BUILD Transportation applicants to describe innovative project delivery methods for proposed projects.

Additionally, DOT is interested in projects that apply innovative strategies to improve the efficiency of project development or expedite project delivery by using FHWA's Special Experimental Project No. 14 (SEP-14) and Special Experimental Project No. 15 (SEP-15). Under SEP-14 and SEP-15, FHWA may waive statutory and regulatory requirements under title 23 on a project-by-project basis to explore innovative processes that could be adopted through legislation. This experimental authority is available to test changes that would improve the efficiency of project delivery in a manner that is consistent with the purposes underlying existing requirements; it is not available to frustrate the purposes of existing requirements.

When making BUILD Transportation award decisions, the Department will consider the applicant's proposals to use SEP-14 or SEP-15, whether the proposals are consistent with the objectives and requirements of those programs, the potential benefits that experimental authorities or waivers might provide to the project, and the broader applicability of potential results. The Department is not replacing the application processes for SEP-14 or SEP-15 with this notice or the BUILD Transportation program application. Instead, it seeks detailed expressions of interest in those programs. If selected for an BUILD Transportation award, the applicant would need to satisfy the relevant programs' requirements and complete the appropriate application processes. Selection for a BUILD Transportation award does not mean a project's SEP-14 or SEP-15 proposal has been approved. The Department will make a separate determination in accordance with those programs' processes on the appropriateness of a waiver.

(iii) Innovative Financing

DOT will assess the extent to which the project incorporates innovations in transportation funding and finance through both traditional and innovative means, including by using private sector funding or financing and recycled

revenue from the competitive sale or lease of publicly owned or operated assets.

(g) Partnership

The Department will consider the extent to which projects demonstrate strong collaboration among a broad range of stakeholders. Projects with strong partnership typically involve multiple partners in project development and funding, such as State and local governments, other public entities, and private or nonprofit entities. DOT will consider rural applicants that partner with State, local, or private entities for the completion and operation of transportation infrastructure to have strong partnership. DOT will also assess the extent to which the project application demonstrates collaboration among neighboring or regional jurisdictions, including neighboring rural areas, to achieve local or regional benefits. In the context of public-private partnerships, DOT will assess the extent to which partners are encouraged to ensure long-term asset performance, such as through pay-for-success approaches.

DOT will also consider the extent to which projects include partnerships that bring together diverse transportation agencies or are supported, financially or otherwise, by other stakeholders that are pursuing similar objectives. For example, DOT will consider the extent to which transportation projects are coordinated with economic development, housing, water and waste infrastructure, power and electric infrastructure, broadband and land use plans and policies or other public service efforts.

(h) Non-Federal Revenue for Transportation Infrastructure Investment

The Administration believes that attracting significant new, non-Federal revenue streams dedicated to transportation infrastructure investment is desirable to maximize investment in transportation infrastructure. The Department will assess the extent that applications provide evidence that the applicant will secure and commit new, non-Federal revenue to transportation infrastructure investment.

New revenue means revenue that is not included in current and projected funding levels and results from specific actions taken to increase transportation infrastructure investment. For example, an applicant may generate new revenue through asset recycling, tolling, tax-increment financing, or sales or gas tax increases. New revenue does not include the proceeds of a new bond

issuance unless an applicant raises or commits to raising new revenue to repay the bonds. The Department will consider actions to create new revenue only if those actions occurred after January 1, 2015 or will occur in the future; it will not consider actions that occurred before January 1, 2015. For applications that propose to generate revenue over multiple years, the maximum time period that should be used is 10 years, beginning on January 1, 2018. Among otherwise similar applications, applicants that generate more new non-Federal revenue for future transportation infrastructure investment will be more competitive. The Department recognizes that applicants have varying abilities and resources to generate non-Federal revenue. If an applicant describes broader legal or fiscal constraints that affect its ability to generate non-Federal revenue, the Department will consider those constraints. As mandated by the FY 2018 Appropriations Act, the Department will not use the Federal share as a selection criterion in awarding projects.

ii. Demonstrated Project Readiness

During application evaluation, the Department may consider project readiness to assess the likelihood of a successful project. In that analysis, the Department will consider significant risks to successful completion of a project, including risks associated with environmental review, permitting, technical feasibility, funding, and the applicant's capacity to manage project delivery. Risks do not disqualify projects from award, but competitive applications clearly and directly describe achievable risk mitigation strategies. A project with mitigated risks or with a risk mitigation plan is more competitive than a comparable project with unaddressed risks.

iii. Project Costs and Benefits

The Department may consider the costs and benefits of projects seeking BUILD Transportation funding. To the extent possible, the Department will rely on quantitative, data-supported analysis to assess how well a project addresses this criterion, including an assessment of the project's estimated benefit-cost ratio and net quantifiable benefits based on the applicant-supplied BCA described in Section D.2.vi.

iv. Additional Considerations

The FY 2018 Appropriations Act requires the Department to consider contributions to geographic diversity among recipients, including the need for a balance between the needs of rural

and urban communities when selecting BUILD Transportation projects.

2. Review and Selection Process

DOT reviews all eligible applications received by the deadline. The BUILD Transportation grants review and selection process consists of at least Technical Review and Senior Review. In the Technical Review, teams comprising staff from the Office of the Secretary (OST) and operating administrations review all eligible applications and rate projects based on how well the projects align with the selection criteria. The Senior Review Team, which includes senior leadership from OST and the operating administrations determines which projects to advance to the Secretary as Highly Rated. The FY 2018 Appropriations Act mandated BUILD Transportation grant awards by December 18, 2018. To ensure the Department meets the statutory deadline specified in the FY 2018 Appropriations Act, the Department may revise the evaluation process based on the number of applications received. The Secretary selects from the Highly Rated projects for final awards.

3. Additional Information

Prior to award, each selected applicant will be subject to a risk assessment as required by 2 CFR 200.205. The Department must review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)). An applicant may review information in FAPIIS and comment on any information about itself. The Department will consider comments by the applicant, in addition to the other information in FAPIIS, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants.

F. Federal Award Administration Information

1. Federal Award Notice

Following the evaluation outlined in Section E, the Secretary will announce awarded projects by posting a list of selected projects at www.transportation.gov/BUILDgrants. Notice of selection is not authorization to begin performance. Following that announcement, the relevant operating administration will contact the point of contact listed in the SF 424 to initiate negotiation of the grant agreement for authorization.

2. Administrative and National Policy Requirements

All awards will be administered pursuant to the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards found in 2 CFR part 200, as adopted by DOT at 2 CFR part 1201. Additionally, applicable Federal laws, rules and regulations of the relevant operating administration administering the project will apply to the projects that receive BUILD Transportation Discretionary Grants awards, including planning requirements, Service Outcome Agreements, Stakeholder Agreements, Buy America compliance, and other requirements under DOT's other highway, transit, rail, and port grant programs.

For projects administered by FHWA, applicable Federal laws, rules, and regulations set forth in Title 23 U.S.C. and Title 23 CFR apply. For an illustrative list of the applicable laws, rules, regulations, executive orders, polices, guidelines, and requirements as they relate to a BUILD Transportation project administered by the FHWA, please see https://ops.fhwa.dot.gov/Freight/infrastructure/tiger/fy2016_gr_exhbt/index.htm. For BUILD Transportation projects administered by the Federal Transit Administration and partially funded with Federal transit assistance, all relevant requirements under chapter 53 of title 49 U.S.C. apply. For transit projects funded exclusively with BUILD Transportation Discretionary Grants funds, some requirements of chapter 53 of title 49 U.S.C. and chapter VI of title 49 CFR apply. For projects administered by the Federal Railroad Administration, FRA requirements described in 49 U.S.C. Subtitle V, Part C apply.

Federal wage rate requirements included in subchapter IV of chapter 31 of title 40, U.S.C., apply to all projects receiving funds under this program, and apply to all parts of the project, whether funded with BUILD Transportation Discretionary Grant funds, other Federal funds, or non-Federal funds.

3. Reporting

i. Progress Reporting on Grant Activities

Each applicant selected for BUILD Transportation Discretionary Grants funding must submit quarterly progress reports and Federal Financial Reports (SF-425) to monitor project progress

and ensure accountability and financial transparency in the BUILD Transportation program.

ii. System Performance Reporting

Each applicant selected for BUILD Transportation Discretionary Grant funding must collect information and report on the project's observed performance with respect to the relevant long-term outcomes that are expected to be achieved through construction of the project. Performance indicators will not include formal goals or targets, but will include observed measures under baseline (pre-project) as well as post-implementation outcomes for an agreed-upon timeline, and will be used to evaluate and compare projects and monitor the results that grant funds achieve to the intended long-term outcomes of the BUILD Transportation program are achieved. To the extent possible, performance indicators used in the reporting should align with the measures included in the application and should relate to at least one of the selection criteria defined in Section E. Performance reporting continues for several years after project construction is completed, and DOT does not provide BUILD Transportation Discretionary Grant funding specifically for performance reporting.

iii. Reporting of Matters Related to Recipient Integrity and Performance

If the total value of a selected applicant's currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds \$10,000,000 for any period of time during the period of performance of this Federal award, then the applicant during that period of time must maintain the currency of information reported to the SAM that is made available in the designated integrity and performance system (currently FAPIIS) about civil, criminal, or administrative proceedings described in paragraph 2 of this award term and condition. This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

G. Federal Awarding Agency Contacts

For further information concerning this notice please contact the BUILD Transportation program staff via email at BUILDgrants@dot.gov, or call Howard Hill at 202-366-0301. A TDD is available for individuals who are deaf or hard of hearing at 202-366-3993. In addition, DOT will post answers to questions and requests for clarifications on DOT's website at www.transportation.gov/BUILDgrants. To ensure applicants receive accurate information about eligibility or the program, the applicant is encouraged to contact DOT directly, rather than through intermediaries or third parties, with questions. DOT staff may also conduct briefings on the BUILD Transportation Discretionary Grants selection and award process upon request.

H. Other information

1. Protection of Confidential Business Information

All information submitted as part of or in support of any application shall use publicly available data or data that can be made public and methodologies that are accepted by industry practice and standards, to the extent possible. If the application includes information the applicant considers to be a trade secret or confidential commercial or financial information, the applicant should do the following: (1) Note on the front cover that the submission "Contains Confidential Business Information (CBI)"; (2) mark each affected page "CBI"; and (3) highlight or otherwise denote the CBI portions. DOT protects such information from disclosure to the extent allowed under applicable law. In the event DOT receives a Freedom of Information Act (FOIA) request for the information, DOT will follow the procedures described in its FOIA regulations at 49 CFR 7.17. Only information that is ultimately determined to be confidential under that procedure will be exempt from disclosure under FOIA.

Issued on: April 20, 2018.

Elaine L. Chao,

Secretary.

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