RICHLAND COUNTY

TRANSPORTATION AD HOC COMMITTEE

AGENDA

TUESDAY JULY 19, 2022

4:00 PM

COUNCIL CHAMBERS

Richland County Council 2021-2022

Bill Malinowski
District 1

Derrek Pugh
District 2

Jesica Mackey
District 9
Vice Chair

Overture Walker
District 8
Chair

Gretchen Barron
District 7

Yvonne McBride
District 3

Chakisse Newton
District 11

Paul Livingston
District 4

Allison Terracio
District 5

Joe Walker, III
District 6

Cheryl English
District 10

Richland County
Transportation Ad Hoc Committee

AGENDA

July 19, 2022 - 4:00 PM
2020 Hampton Street, Columbia, SC 29204

The Honorable Overture Walker	The Honorable Bill Malinowski	The Honorable Derrek Pugh	The Honorable Paul Livingston	The Honorable Jesica Mackey, Chair
County Council District 8	County Council District 1	County Council District 2	County Council District 4	County Council District 9

1. CALL TO ORDER — The Honorable Jesica Mackey, Chair

2. APPROVAL OF MINUTES — The Honorable Jesica Mackey

a. June 28, 2022 **[PAGES 5-7]**

3. ADOPTION OF AGENDA — The Honorable Jesica Mackey

4. ITEMS FOR ACTION — The Honorable Jesica Mackey

a. Award of Construction – Screaming Eagle – Percival Intersection **[PAGES 8-12]**

b. Award of Engineering – Clemson – Sparkleberry Intersection **[PAGES 13-55]**

c. Request for Funding - Innovista Phase 3 **[PAGES 56-90]**

d. Approval of Reserve Fund Use Plan **[PAGES 91-94]**

5. ADJOURNMENT — The Honorable Jesica Mackey

Special Accommodations and Interpreter Services Citizens may be present during any of the County's meetings. If requested, the agenda and backup materials will be made available in alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), as amended and the federal rules and regulations adopted in implementation thereof. Any person who requires a disability-related modification or accommodation, including auxiliary aids or services, in order to participate in the public meeting may request such modification, accommodation, aid or service by contacting the Clerk of Council's office either in person at 2020 Hampton Street, Columbia, SC, by telephone at (803) 576-2061, or TDD at 803-576-2045 no later than 24 hours prior to the scheduled meeting.

Richland County Council
Transpiration AD Hoc Committee Meeting
MINUTES
June 28, 2022 – 4:00 PM
Council Chambers
2020 Hampton Street, Columbia, SC 29204

COUNCIL MEMBERS PRESENT: Jesica Mackey, Chair; Bill Malinowski, Derrek Pugh, Paul Livingston and Overture Walker

OTHERS PRESENT: Gretchen Barron, Dale Welch, Nathaniel Miller, Patrick Wright, Michael Maloney, Jeff McNesby, Justin Landy, Melissa Hughey, Ali Eliadorani, Anette Kirylo, Leonardo Brown, Tamar Black, John Thompson, Ashiya Myers, Angela Weathersby, Stacey Hamm, Aric Jensen, Lori Thomas and Abhijit Deshpande

1. **CALL TO ORDER** – Chairwoman Jesica Mackey called the meeting to order at approximately 4:00PM.

2. **APPROVAL OF MINUTES**

   a. May 24, 2022 – Mr. Pugh moved to approve the minutes as distributed, seconded by Mr. Livingston.

   In Favor: Malinowski, Pugh, Livingston and Mackey

   Not Present: O. Walker

   The vote in favor was unanimous.

3. **ADOPTION OF AGENDA –** Mr. Livingston moved to adopt the agenda as published, seconded by Mr. Pugh.

   In Favor: Malinowski, Pugh, Livingston and Mackey

   Not Present: O. Walker

   The vote was in favor.

   Mr. O. Walker arrived at approximately 4:06 PM.

4. **ITEMS FOR ACTION**

   a. Broad River Road Widening Project Right-of-Way Acquisition – Mr. Maloney stated staff is requesting approval to award Right-of-Way condemnation and acquisition to CECS, Inc. at a

cost of $1,330,804.65 for the Broad River Road Widening Project. In addition, to meet the aggressive thirty month design schedule, staff is requesting approval to initiate Eminent Domain powers for all parcels where Right-of-Way acquisition is necessary for the widening. At this time, there is no parcel identification or dollar amounts, but to commit to the acquisition process that would invoke a company to prepare for eminent domain, they are seeking preliminary approval. The list of parcels, with the dollar amounts per square foot, would come back to the committee within 12 months.

Mr. Pugh inquired if staff's request is blanket acquisition approval.

Mr. Maloney responded it would be for a process and the actual dollar amounts would be after the appraisals. The plans have to be at 60% approved by SCDOT for acquisition. At that point, we would have the entire list of parcels, with the dollar amounts per acre.

Mr. Malinowski inquired if staff is going to have a list of all the properties they need to get the right-of-way and file eminent domain on.

Mr. Maloney responded in the affirmative.

Mr. Malinowski inquired if the filing of eminent domain would become a court record.

Mr. Wright responded a condemnation would have to be filed, so it would be a court action.

Mr. Malinowski inquired if a court action could cause harm to the citizen.

Mr. Wright responded the action is for the property, not the citizen. The action is only to acquire the property.

Mr. Malinowski stated everyone should first have the option to determine if they would like to accept an offer for the right-of-way before eminent domain action.

Mr. Wright stated before they file an action they would have to speak with the property owner to give them the opportunity to give the property or receive fair market value for the property.

Mr. Malinowski requested a map of the project so the public could see the project.

Mr. Malinowski inquired if they are acquiring 130 or 150 parcels.

Mr. Maloney responded the assumption is there would be 20 parcels that would be secured by permission by the original offer.

Mr. Malinowski inquired what the estimated relocation assistance is for.

Mr. Maloney responded if the right-of-way created damages to the parcel that it is not operable as the business it currently is.

Mr. O. Walker moved to forward to Council with a recommendation to approve staff's recommendation to award Right-of-Way condemnation and acquisition to CECS, Inc. at a cost of $1,330,804.65 for the Broad River Road Widening Project. In addition, in order to complete the work under the aggressive thirty (30) month design schedule, to approve the initiation of Eminent Domain powers for all parcels where Right-of-Way acquisition is necessary..

In Favor: Malinowski, Pugh, Livingston, O. Walker and Mackey

The vote in favor was unanimous.

b. Southeast Richland Neighborhood Improvements (SERN) Sidewalk Phase 2 – Mr. Maloney stated this project is to extend sidewalks along Rabbit Run Road from Garners Park Road (formerly Rabbit Run Connector) to Trotter Road. The estimated cost is $712,000 for construction, $160,000 for engineering and professional services for a total of $872,000. The request is to use SERN funds for the sidewalk extension.

Mr. Malinowski inquired if the project was part of a previous list or just a part of the SERN.

Mr. Maloney responded the sidewalk was not a part of the Penny Projects. It is a part of the master plan area.

Mr. Malinowski inquired why this project was not completed with the previous work.

Mr. Maloney responded it was not in the Phase I scope, but the neighborhood have grown.

Mr. O. Walker moved to forward to Council with a recommendation to proceed with a project to extend a five foot wide concrete sidewalk along Rabbit Run Road from Garners Park Road (formerly Rabbit Run Connector) to Trotter Road, seconded by Mr. Livingston.

In Favor: Malinowski, Pugh, Livingston, O. Walker, and Mackey

The vote in favor was unanimous.

5. **ADJOURNMENT** – Mr. O. Walker moved to adjourn, seconded by Mr. Livingston.

In Favor: Malinowski, Pugh, Livingston, O. Walker and Mackey.

The vote in favor was unanimous.

The meeting adjourned at approximately 4:15PM.

RICHLAND COUNTY ADMINISTRATION
2020 Hampton Street, Suite 4069
Columbia, SC 29204
803-576-2050

Agenda Briefing

Prepared by:	Michael Maloney, PE	**Title**:	Interim Director
Department:	Transportation	**Division:**	Click or tap here to enter text.
Date Prepared:	July 5, 2022	**Meeting Date:**	July 26, 2022
Legal Review	Patrick Wright via email	**Date:**	July 7, 2022
Budget Review	Abhijit Deshpande via email	**Date:**	July 8, 2022
Finance Review	Stacey Hamm via email	**Date:**	July 7, 2022
Approved for consideration:	Assistant County Administrator	John M. Thompson, Ph.D., MBA, CPM, SCCEM	
Meeting/Committee	Transportation Ad Hoc		
Subject	Screaming Eagle / Percival Intersection Project Award of Construction		

RECOMMENDED/REQUESTED ACTION:

Staff requests approval to award the Screaming Eagle/Percival Intersection Project to C.R. Jackson, Inc. in the amount of $2,489,126.25. Council's approval will include a 15% contingency amount of $373,368.94 for a total approved for construction phase amount of $2,862,495.19.

Request for Council Reconsideration: ☒ Yes

FIDUCIARY:

Are funds allocated in the department's current fiscal year budget?	☒	Yes	☐	No
If no, is a budget amendment necessary?	☐	Yes	☒	No

ADDITIONAL FISCAL/BUDGETARY MATTERS TO CONSIDER:

This funding will come from the $2,505,692.84 currently available in the FY22 budget, and the remaining funds will come from the upcoming FY23 budget (JL 13320212).

COUNTY ATTORNEY'S OFFICE FEEDBACK/POSSIBLE AREA(S) OF LEGAL EXPOSURE:

None.

REGULATORY COMPLIANCE:

None applicable.

MOTION OF ORIGIN:

There is no associated Council motion of origin.

Council Member	Click or tap here to enter text.
Meeting	Choose an item.
Date	Click or tap to enter a date.

STRATEGIC & GENERATIVE DISCUSSION:

This project includes the following work:

1. The construction of a new intersection location to improve geometry of Screaming Eagles approach.
2. The widening of Percival Road at the intersection approaches to include a left turn lane on the east leg.
3. The installation of a new traffic signal to accommodate the new traffic patterns and road layout.

ADDITIONAL COMMENTS FOR CONSIDERATION:

The Engineer's Cost Estimate for this project was $2,324,900.00.

The total estimated cost for this project (i.e. design, construction, inspection, etc.) is $3.55M, and the total amount approved by Council is $3.1M. The required additional funding needed, between $150,000 to $450,000, will come from prior descoping reserve.

ATTACHMENTS:

1. Recommendation Memo

RICHLAND COUNTY FINANCE DEPARTMENT
PROCUREMENT DIVISION
2020 Hampton Street, Suite 3064
Columbia, SC 29201
803-576-2130

Attachment 1

July 5, 2022

To: Mr. Michael Maloney, Interim Director of Transportation

From: Vernon Lee Daniels, Buyer

CC: Ms. Erica Wade, OSBO Manager, Mrs. Jennifer Wladischkin, Procurement Manager, Mr. Michael Green, Project Manager

Re: RC-524-B-2022 Screaming Eagle/Percival Project

A bid opening was conducted at 2:00 PM on Thursday, June 30, 2022, via the County's online procurement portal. Procurement has reviewed the one (1) submitted bids for Screaming Eagle/Percival Project which were submitted via Bonfire and found no discrepancies. The bid received was as follows.

Screaming Eagle/Percival Project- BID RESULTS SUMMARY	
BIDDER	SUBMITTED BID
C.R. Jackson, Inc.	**$2,489,126.25**

Further review shows that C.R. Jackson, Inc. is duly licensed in South Carolina to perform this work. A copy of their license is attached.

A Non-Mandatory Pre-Bid Conference was held at 10:00 AM on June 7, 2022, during which attendees gained information and bidding directives for the project.

Attached is a final bid tab sheet for your reference which indicated C.R. Jackson, Inc.'s bid is 7% higher than the Engineer's Estimate of $2,324,900.00 for the project. The bid was compared to the engineer's estimate and the bid was consistent in price, yet varied slightly from the estimate. A review of the low bid also shows a commitment of 6% utilization of Small Local Business Enterprise (SLBE) companies.

Provided that Transportation can provide the additional funding, it is Procurement's recommendation that a contract be awarded to the lowest responsive and responsible bidder, C.R. Jackson, Inc. to include a 15 % construction contingency of $373,368.94.

SOUTH CAROLINA DEPARTMENT OF LABOR, LICENSING AND REGULATION

CCB 1062565

CONTRACTOR'S LICENSING BOARD

Hereby Certifies

C R JACKSON INC

100 INDEPENDENCE BLVD
COLUMBIA SC 29210-6846

Having given satisfactory evidence of the necessary qualifications required by laws of the State of South Carolina and is duly qualified and entitled to practice as a:

GENERAL CONTRACTOR

for the Classification(s) and Group Limitation* shown below:

Asphalt Paving-AP5, Concrete Paving-CP5, Grading-GD5, Water & Sewer Plants-WP5, Water & Sewer Lines-WL5

LICENSE NUMBER:.....G12195
Expiration Date:.....10/31/2022
Initial License Date:.....01/01/1992

* Group Limitations - $Amount Per Job:
Group #1 - $50,000 Group #3 - $500,000
Group #2 - $200,000 Group #4 - $1,500,000
Group #5 - $Unlimited

Qualifying Party(s) (Primary QP displays "PQ"): SEAN T WALKER (CQG.5535 PQ), WILLIAM T SUMNER (CQG.5537 PQ), MR HOWARD B VINSON (CQG.24511 PQ)

It is at the discretion of the licensee to designate whomever they elect to pull permits and conduct business for this license.

RC-524-B-2022	Screaming Eagle/Percival Project		
DUE DATE	**6/30/2022 2:00 PM**	**Total Cost**	**C.R. Jackson, Inc.**
			$ 2,489,126.246

RICHLAND COUNTY ADMINISTRATION
2020 Hampton Street, Suite 4069
Columbia, SC 29204
803-576-2050

Agenda Briefing

Prepared by:	Michael Maloney, PE	**Title**:	Interim Director
Department:	Transportation	**Division:**	Click or tap here to enter text.
Date Prepared:	July 5, 2022	**Meeting Date:**	July 26, 2022
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Finance Review	Stacey Hamm via email	**Date:**	July 7, 2022
Approved for consideration:	Assistant County Administrator	John M. Thompson, Ph.D., MBA, CPM, SCCEM	
Meeting/Committee	Transportation Ad Hoc		
Subject	Clemson Road/Sparkleberry Lane Intersection Project		

RECOMMENDED/REQUESTED ACTION:

Transportation staff requests approval to award design services to Holt Consulting Company, LLC at a cost of $1,730,853.35 for the Clemson Road/Sparkleberry Lane Intersection Project. Design will take the project to 100% Construction Plans and will include all necessary tasks to advertise the road improvement project for construction.

Request for Council Reconsideration: ☒ Yes

FIDUCIARY:

Are funds allocated in the department's current fiscal year budget?	☒	Yes	☐	No
If no, is a budget amendment necessary?	☐	Yes	☒	No

ADDITIONAL FISCAL/BUDGETARY MATTERS TO CONSIDER:

There is $1,987,283.08 available in the current budget for this project (JL 13320204).

COUNTY ATTORNEY'S OFFICE FEEDBACK/POSSIBLE AREA(S) OF LEGAL EXPOSURE:

None.

REGULATORY COMPLIANCE:

None applicable.

MOTION OF ORIGIN:

There is no associated Council motion of origin.

Council Member	Click or tap here to enter text.
Meeting	Choose an item.
Date	Click or tap to enter a date.

STRATEGIC & GENERATIVE DISCUSSION:

County Council approval is requested to award engineering services to Holt Consulting Company, LLC to develop Final Construction Plans, Right-of-Way Services, Utility Coordination and all other design tasks to submit this roadway improvement project for construction advertisement.

ADDITIONAL COMMENTS FOR CONSIDERATION:

In addition to traffic flow improvements to the Clemson Road/Sparkleberry Lane intersection, this project will include new sidewalks that will connect the recently constructed Clemson Road widening's Shared Use Pathway on the western side of the project.

The thirty (30) month design schedule will allow for construction advertisement Spring 2025.

ATTACHMENTS:

1. Attachment "A"- Scope of Services- Clemson Road/Sparkleberry Lane
2. Attachment "B"- CECS, Inc. Fee Proposal

ATTACHMENT "A"
SCOPE OF SERVICES AND SCHEDULE
CLEMSON ROAD AND SPARKLEBERRY LANE CORRIDOR IMPROVEMENTS

Introduction

Holt Consulting Co. (CONSULTANT) has been authorized by Richland County (COUNTY) to provide engineering services for corridor improvements along Clemson Road and Sparkleberry Lane. The corridor starts at the interchange ramps of Clemson Road and I-20 and extends to its intersection with Chimney Ridge Drive and along Sparkleberry Lane from the intersection with Clemson Road to north of its intersection with N. Donar Drive in Richland County, South Carolina. Clemson Road is considered a Urban Principal Arterial and Sparkleberry Lane a Major Urban Collector by the South Carolina Department of Transportation (DEPARTMENT). The DEPARTMENT holds all public rights-of-way adjacent to the project corridor and assumes all maintenance responsibilities for those said rights-of-way. The project will also include improvements along Sparkleberry Crossing Road which is not maintained by the DEPARTMENT

The project will consist of corridor improvements along the existing roadway from Clemson Road's intersection with the I-20 ramps to Chimney Ridge Drive and from Sparkleberry Lane's intersection with Clemson Road to just north of North Donar Drive. The project also contains proposed pedestrian accommodations by use of new sidewalks, as well as new traffic signals at various intersections. New pedestrian improvements will connect to the recently constructed Clemson Road widening Shared-Use Pathway on the western side only.

Project Location - The project is in Richland County, northeast of the City of Columbia; however, a large portion of the project is within the City of Columbia municipal limits – between I-20 and Chimney Ridge Drive and to North Donar Drive along Sparkleberry Lane.

Existing Conditions – Clemson Road is an existing 5-lane, curb and gutter with closed drainage section roadway while Sparkleberry Lane is a 3-lane facility with an earthen shoulder and ditch section. Sparkleberry Lane transitions back to a 2-lane roadway past North Donar Drive. Clemson Road and Sparkleberry Lane contain various driveway and side road locations with full access control. The corridor contains an extensive amount of utilities as well.

Sparkleberry Crossing Road consist of an existing 3-lane facility which is privately maintained with a curb and gutter section and closed drainage system. It also has various access points with full control access. The Holt Consulting Team will provide supplemental surveys however, will utilize surveys and SUE information provided by the previous OET firm for majority of their design and assumes no responsibility for areas which may not be accurate.

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

Task 1: Project Organization and Management
Task 2: Surveys
Task 3: Public Involvement
Task 4: Removed
Task 5: Traffic Analysis
Task 6: Geotechnical Investigation
Task 7: Stormwater Management/ Hydraulic Design
Task 8: Sediment and Erosion Control/NPDES Permitting
Task 9: Roadway Plans
Task 10: Roadway Structures
Task 11: Transportation Management Plan
Task 12: Pavement Marking and Signing
Task 13: Subsurface Utility Exploration
Task 14: Utility Coordination
Task 15: Right-of-way Services
Task 16: Bidding Services
Task 17: Construction Phase Support

Quality Control

The CONSULTANT shall implement all necessary quality control measures to produce plans and reports that conform to COUNTY guidelines and standards. Prior to submittal to the COUNTY, 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 as well. 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:

- On-Site Project meetings between the COUNTY, DEPARTMENT and CONSULTANT for clarification of scope, discussion of concepts, review of submittals, etc. at the discretion of the COUNTY. It is assumed there will be six (6) such 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.

- Prepare monthly invoices, status reports, and schedule updates. Assume a 30-month design schedule which 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 a 30-month design schedule.

- The CONSULTANT will include the COUNTY 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.

The CONSULTANT will attend meetings with the COUNTY and stakeholders from various organizations affected by this project to incorporate the needs and desires of these organizations into the decision-making process. It is assumed the CONSULTANT will attend thirty (30) project meetings (1 each month during the design services) and six (6) additional review coordination meetings with the DEPARTMENT, COUNTY, and others, as applicable. The CONSULTANT will attend these meetings and will prepare all necessary display materials, meeting agendas and minutes.

Deliverables:

1. Thirty (30) status reports (approximately monthly) and updated schedule. Six (6) additional meetings may be held specific to miscellaneous coordination efforts.
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.

Task 2

FIELD SURVEYS

The CONSULTANT will utilize the existing survey provided by the COUNTY and performed by Hussey, Gay, and Bell. No verification of existing survey will be performed and has been assumed to be accurate due to signing of final right-of-way plans by previous On-Call Engineering Team

Supplement surveys will be performed by the CONSULTANT and will consist of performing field surveys as outlined below which will include additional surveys along Sparkleberry Crossing Road, additional outfall pipes, and the existing 60" outfall pipe to Hughes Pond.

Task 3

ENVIRONMENTAL SERVICES AND PUBLIC INVOLVEMENT

Environmental Services

The CONSULTANT will define a project study area based on the anticipated limits of construction. Based on a desktop review of the project vicinity, it is assumed that the project study area will not contain jurisdictional features (wetlands or streams) or habitat for protected species; therefore, the project will not require Section 404/401 permitting. The CONSULTANT will conduct a field review of the project study area to confirm the absence of jurisdictional features and protected species habitat. The CONSULTANT will prepare a memo documenting the results of this field review.

Public Involvement

- Public Involvement Plan - The **CONSULTANT** will develop a public involvement plan (PIP) to outline a strategy for involving the public in the project's decision-making process as outlined in **COUNTY** Public Involvement Policy. The PIP will include the following:
    - 1.1..1. geographic outreach area defined in coordination with the COUNTY
    - 1.1..2. stakeholder identification (property owners, businesses, schools, and homeowners associations within the outreach area)
    - 1.1..3. key issues
    - 1.1..4. outreach strategy and plan
    - 1.1..5. schedule of public involvement activities

- Public Information Meeting - One (1) public meeting is anticipated to present the proposed intersection improvements to the public. It is assumed that the public meeting will be an open house style meeting and no formal presentations are expected. The **CONSULTANT** will attend the scheduled public meeting and have a minimum of six (6) personnel knowledgeable of the project in attendance. The following tasks will be completed in association with the public meeting:

    - Venue: The **CONSULTANT** will be responsible for procuring the venue once the **COUNTY** determines the date and time for the public meeting. It is assumed that the public meeting will be scheduled for 5:00 pm to 7:00 pm on a Tuesday

(scheduled around Council meetings) or Thursday at a venue along, or near, the project corridor.

- Meeting Plan - The **CONSULTANT** will prepare a meeting plan that provides meeting logistics, project team members who will be working the meeting and assigned role, meeting materials and the responsibility for each item.
- Pre-Meeting - The **CONSULTANT** will plan and facilitate a pre-meeting (at least a week prior to the public information meeting) for all project team members to discuss the meeting and project, as well as review any meeting displays and materials before they are finalized and printed.

1.1..1. Notifications: The **CONSULTANT** will prepare a draft postcard mailer advertising the public information meeting and submit to the **COUNTY** for review and approval. The **CONSULTANT** will be responsible for distributing the postcard mailer a minimum of 15 days prior to the public meeting. It is assumed that a combination of USPS EDDM service (residential and business residents/tenants) and direct mailing (non-resident property owners) will be used to distribute postcards. The **CONSULTANT** will develop a project letter and the **COUNTY** will be responsible for mailing to the property owners and stakeholders. The **COUNTY** will be responsible for the development of any media releases for promotion of the meeting (via social media, print and / or television notification). The **COUNTY** will also advertise the meeting on its website.

1.1..2. Public Meeting Materials: The **CONSULTANT**, with input from the **COUNTY**, will prepare all project design-related public meeting materials (deliverables would include plan view displays, project overview maps, and typical sections, as applicable). The CONSULTANT will also prepare a meeting handout, sign in sheets, and comment forms for use at the meeting. Drafts of all materials will be submitted to the **COUNTY** for review and approval. Final PDF versions will be provided to the **COUNTY** at least one week prior to the meeting for posting on the **COUNTY** website. The **CONSULTANT** will be responsible for the printing of all meeting materials, including displays, handouts, comment forms, and sign-in sheets. The **CONSULTANT** will also provide directional signage to direct the public to the meeting location.

1.1..3. Meeting Security: The **CONSULTANT** will arrange for security guards from local law enforcement agencies or private security firms for the public meeting.

- Public Meeting Summary - Upon conclusion of the public comment period, the **CONSULTANT** will prepare a public meeting summary to include a summary of the public comments received. The **CONSULTANT** will also prepare and provide a document (Word or Excel), in matrix format, which includes the public comment, citizen name and contact info, and a draft response to each comment. The **CONSULTANT** assumes up to

100 comments will be received and included in the public meeting summary. The **COUNTY** will be responsible for distributing individual response letters if desired.

- Task Management & Coordination – The CONSULTANT will participate in project status meetings as needed to facilitate the environmental and public involvement tasks. Four meetings are assumed. The CONSULTANT will also prepare and submit progress reports and invoices as needed for these tasks.

Deliverables:

- Public Involvement Plan (draft and final)
- Postcard mailer (draft and final) and printing/mailing (3,000)
- Property owner and stakeholder project letter
- Security for PIM
- Public meeting plan and pre-meeting
- Public meeting materials (draft and final PDFs)
    - Display boards (up to 12 @ 36"x48")
    - Meeting handouts (250 copies)
    - Comment forms (250 copies)
    - Sign-in sheets (25 copies)
- Public meeting summary and draft responses to public comments (up to 100 comments)

Task 4

OMITTED

Task 5

TRAFFIC REPORT

Data Collection

The CONSULTANT will collect data necessary to perform a detailed traffic analysis of existing and future design conditions. The data collection will include the following activities:

Field Investigation – The CONSULTANT will conduct a field visit to examine the existing roadway conditions and adjacent land use characteristics present within the study area, including:

1. Existing roadway speed limits
2. Number of lanes
3. Type and length of turn lanes
4. Intersection Traffic control

The field investigation will also identify those locations where horizontal and/or vertical sight distance may be limited at roadway and driveway intersections and identify locations where access management principles may be applied to consolidate driveway curb cuts.

Accident Data Collection – The CONSULTANT will obtain the most recent three years crash data along the study corridor.

Traffic Signal Timing Data Plan Collection – The CONSULTANT will obtain existing traffic signal timing and asbuilt information from the DEPARTMENT and the City of Columbia for the following signalized intersections :

1. Clemson Rd at Clemson Frontage Rd/Wildwood Centre Dr
2. Clemson Rd at Sparkleberry Ln
3. Sparkleberry Ln at Mallet Hill Rd

Traffic Volume Data Collection – The CONSULTANT will conduct manual turning movement counts in 15-minute intervals during the weekday A.M. peak (7:00 to 9:00 A.M.) and P.M. peak (4:00 to 6:00 P.M.) on either Tuesday, Wednesday or Thursday at the signalized intersections indicated above and the following unsignalized intersections:

1. Clemson Rd at Sparkleberry Crossing Rd
2. Sparkleberry Ln at Sparkleberry Crossing Rd
3. Sparkleberry Ln at Greenmeade Dr
4. Sparkleberry Crossing Rd at Arthur State Bank Driveway
5. Sparkleberry Crossing Rd at Radiate Church / Shopping Center Driveway

The CONSULTANT will conduct 24-hour bi-directional counts with vehicle classification during the mid-week at the following location:

1. Clemson Road between Sparkleberry Rd and Clemson Frontage Rd/Wildwood Centre Dr

All counts will be conducted while the local public schools are in session.

The CONSULTANT will utilize travel demand models and/or average annual growth rates to establish design year and background traffic growth.

Development Data Collection – The CONSULTANT will obtain information concerning planned and approved development projects affecting traffic within the corridor area. Information concerning projected land uses, zoning and development planning documents will also be obtained.

Traffic Analysis – The CONSULTANT will perform the necessary analyses of the proposed improvements for three (3) alternatives using the information obtained during the Data Collection task.

Conceptual Analysis – The CONSULTANT will identify the opening year and design year (20 years past opening date) peak hour Levels of Service for roadway segments and intersections within the study area using the procedures and methodologies outlined in the current editions of Highway Capacity Software (HCS), Synchro 11.0/SimTraffic or VISSIM (for non-traditional alternatives). The results of the conceptual design analysis will include:

1. The number and type of lanes on each approach of the study area intersections
2. Length of turn lanes to provide sufficient vehicle storage
3. LOS Tables
4. Opening year ADT and design year ADT

Accident Analysis – The CONSULTANT will identify the existing high crash locations within the corridor and will determine:

1. the total number of crashes, number of fatal crashes and fatalities, number of injury crashes and injuries;
2. the probable cause, time and location of all the fatal and serious injury crashes;
3. the total number of the property damage crashes;
4. the lighting and pavement condition of all the crash occurrences

The **CONSULTANT** will summarize the different crash types and determine the primary causes of the existing crashes. The CONSULTANT will identify those locations with frequent and/or severe crash histories that may be able to be addressed through design and traffic control measures implemented as part of this project. The CONSULTANT will evaluate the most recent three years of available crash data.

Report Preparation

The CONSULTANT will prepare a traffic study that will outline the evaluations performed and the recommended improvements along the corridor and comparative analysis of the existing roadway to the post improvement roadway. The results will provide Levels-of-Service for each scenario studied. In addition, the report will provide recommendations for lane closures~~, detours~~ and the resulting traffic impacts in the study area during construction. The CONSULTANT will submit a PDF of the traffic study to the COUNTY. Upon receipt of any comments, the CONSULTANT will revise the study accordingly and submit a PDF and two (2) final copies to the COUNTY for submittal to the DEPARTMENT for review. The CONSULTANT will revise the study as necessary per DEPARTMENT comments for final approval.

Traffic Staging Alternative: The **CONSULTANT** will analyze the proposed traffic staging plan during construction using HCS methodology and/or Synchro or VISSIM (for non-traditional alternatives) to review traffic capacity and operations of the proposed traffic staging options.

Traffic Signal Design: The CONSULTANT will prepare traffic signal design plans for the project as required. Traffic signal plans shall be designed in accordance with the latest editions of SCDOT's Traffic Signal Design Guidelines, Standard Signal Specifications and Special Provisions, Standard Drawings, and the Manual on Uniform Traffic Control Devices.

The scope of services stated above will include the traffic signal design and plans to be developed for the following intersections;

- Clemson Rd at Clemson Frontage Rd/Wildwood Centre Dr.
- Clemson Rd at Sparkleberry Ln
- Clemson Rd at Sparkleberry Crossing Rd
- Sparkleberry Ln at Sparkleberry Crossing Rd
- Sparkleberry Ln at Mallet Hill Rd (if any modifications are needed)

The CONSULTANT will prepare signal plans, plotted at a scale not smaller than 1" = 40', based on the Final Roadway Design Plans and the Pavement Marking and Signing Plans. The signal plans will depict the locations of the signal poles, poles, signal heads, pull boxes, conduits, pavement markings, and loop detectors. Phasing diagrams, details, pay items, and quantities will also be provided.

The CONSULTANT will revise SCDOT's Standard Signal Specifications and Special Provisions as necessary for this project.

The CONSULTANT will notify the COUNTY's designated Project Manager prior to performing any work on site.

Task 6

Geotechnical Investigation

General – The CONSULTANT will perform a preliminary and final geotechnical exploration for the roadway embankments, earth retaining structures, and pavements. The CONSULTANT shall gather samples, conduct tests, and analyze necessary soil and foundation data for the roadway embankment expansion, embankments, pavement thickness, and earth retaining structures. The results of the sampling, testing, analysis, and recommendations concerning the design shall be compiled into preliminary & final reports for submittal to the COUNTY. The following design standards will apply:

- 2007 SCDOT Standard Specifications for Highway Construction
- SCDOT Standard Drawings
- SCDOT Supplemental Specifications and Supplemental Technical Specifications
- 2019 SCDOT Geotechnical Design Manual (GDM), Version 2.0
- 2008 Pavement Design Guidelines
- SCDOT SCDOT Bridge Design Memorandum (to RPG Structural Engineers and Design Consultants, issued after April, 2006)
- SCDOT SCDOT "Seismic Design Specifications for Highway Bridges", 2008, Version 2.0, with latest interims

Assumptions

The following assumptions were made for the scope of work provided herein:

- Pavement design will be performed by the **COUNTY**;
- The Geotechnical Engineering **CONSULTANT** will stake and obtain boring coordinates for all geotechnical borings performed on the project.
- Geotechnical analysis and design will only be performed on the preferred alternative. Analysis and design of additional alternatives will require a contract modification.
- Permanent retaining walls are assumed. The total length of retaining walls is 1000 feet;
- It is anticipated that grade of the new roadway will be no higher than five (5) feet relative to the grade of the existing bridge. The roadway construction limits are assumed to extend no more than 1,200 feet in either direction along Clemson Road and Sparkleberry Road.
- SCDOT has no lane closure restrictions in the vicinity of the project.
- The preliminary and final investigations will be conducted both within and outside of the existing SCDOT right-of-way;
- If private property permissions are required for access to the proposed soil test boring locations, the effort associated with acquiring these written permissions will be performed by the **COUNTY**. The necessary signed permissions will be provided to the geotechnical **SUBCONSULTANT** prior to commencement of field investigation activities.
- Design for mast arm signal pole foundations are not included in the scope.
- Seismic analysis of embankments is not included in the scope.
- Seismic analysis of retaining walls is included in the scope.
- All pipe culverts will be less than or equal to 48 inches in diameter.
- Ground improvement design below embankments and retaining walls is not included in the scope.
- If permitting for the geotechnical investigation(s) is required, the permitting efforts will be performed under a separate task within this contract. The necessary permits will be provided to the geotechnical **SUBCONSULTANT** prior to commencement of field investigation activities.

Geotechnical Field Exploration (Preliminary Subsurface Exploration)

Prior to beginning the preliminary subsurface field exploration, the CONSULTANT will notify the COUNTY seven (7) days in advance so the COUNTY can coordinate with the DEPARTMENT. The CONSULTANT shall comply with all DEPARTMENT lane closure restrictions.

Preliminary boring locations will be located along or adjacent to the proposed alignments of the roadway and embankments, within the DEPARTMENT's right-of-way. The preliminary boring

locations will complement the final boring locations. Boring locations in the final exploration may occur outside or inside DEPARTMENT right-of-way. 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 3-days prior to field work. The CONSULTANT will mark utilities that are not marked by SC811 as part of SUE Task 14. Information obtained in Task 14 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 preliminary subsurface exploration plans including the anticipated final boring locations to the COUNTY prior to initiation of field work for review and acceptance. See Chapter 4 of the SCDOT GDM for subsurface exploration guidelines. The preliminary 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

Preliminary Soil Test Borings
STBs will be performed as defined in Chapters 4 and 5 of the GDM.

- Up to four (4) STB's will be performed. Each to a depth of 30 feet for roadway embankments, pavements, and retaining walls.

STBs shall be advanced using mud rotary drilling techniques and include Standard Penetration Tests (SPT). SPTs shall be performed continuously in the upper 10 feet using a 24-inch spoon and on 5-foot centers thereafter to the boring termination or refusal depth. Refusal is defined as drilling tool and SPT refusal (N-value of 50 blows per 1 inch). STBs will be paid per foot; unit price includes rotary wash drilling to a depth up to 150 feet below the existing ground surface or mudline, 24-hour groundwater readings, measurement of hammer energy (ASTM D4633), and water hauling or water truck rental to advance rotary wash borings. SPT samples shall be stored for seven years or until completion of substructure installation, whichever is earlier.

Geophysical testing using Multi-channel Analysis of Surface Waves (MASW) testing will be performed at the site. Unit price includes all necessary labor, equipment, travel, and supplies to define shear wave velocities to a depth of 100 feet below existing ground surface. An electronic copy of spreadsheet and 1-D plot of shear wave velocities versus depth as well as hard copy of the report shall be provided.

Backfill of Boreholes - Boreholes will be backfilled with drill cuttings, clean fill, or bentonite chips. The upper 10 feet of the boreholes will be grouted flush with the ground surface. Grout seal will be paid per foot; unit price includes all necessary time, equipment, and materials required to grout in casings or backfill test holes through tremie grouting prior to borehole abandonment.

Bulk samples: A total of two (2) bulk samples shall be collected.

Pavement Coring: Coring through asphalt pavement and patching the resulting core hole. Cores will be transported to the laboratory for examination and thickness shall be reported. Assume four (4) cores.

Traffic Control: Two (2) days of lane closure are anticipated to perform the field work. Traffic

control necessary to perform the field work will be executed in accordance with the SCDOT's standards and adhere to any lane closure restrictions.

Access and Utilities: Clearing is not anticipated to access potential test locations. It is the responsibility of the CONSULTANT to coordinate all field activities including clearance of underground utilities and to obtain any necessary permits to access each test location. The preliminary subsurface exploration will stay within the SCDOT's existing right-of-way.

Lodging: For quantity estimation purposes, estimate six (6) days for lodging. This estimate assumes a two-man crew on the drill rig one (1) field geologist/engineer for two (2) nights.

Mileage: For quantity estimation purposes, estimate 60 miles (from Columbia, SC) for field engineer or geologist travel. Includes two (2) roundtrips.

Meals: For quantity estimation purposes, estimate six (6) days for meals. This estimate assumes a two-man crew drill rig and one (1) field geologist/engineer for two (2) days.

Field Engineering

The CONSULTANT will provide oversight of field operations by a field engineer and/or field geologist. Soil Classification in accordance with USCS (ASTM 2487) will be performed by a field engineer and/or field geologist who will have a minimum of 3-years of experience in supervision of field equipment and field personnel.

Field Investigation Quantities

The following quantities are estimated.

- Truck/Trailer Drill Rid Mobilization: 120 miles (round-trip from Richburg, SC)
- Traffic Control – Lane Closure: 2 days
- Pavement Coring: 4 holes
- Survey Crew & Equipment: 4 hours
- Soil Test Borings (0-150 ft): 120 feet
- Disturbed (Bulk) Soil Samples: 2 samples
- 4" Steel Casing: 40 feet
- Grout Seal of Test Holes: 40 feet
- Geophysical Testing using MASW Methods: 1 test
- Mileage: 60 miles
- Lodging: 6 nights
- Per Diem: 6 days

Laboratory Testing

The 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 will be performed on selected samples in order to evaluate the types of soils encountered, confirm visual classifications, and estimate engineering properties for use in design. Laboratory testing for the preliminary exploration will be the following:

- Twenty-Two (22) Moisture Content Tests; ASTM D2216

- Twenty-Two (22) Atterberg Limits Tests; ASTM D4318
- Twenty (20) Wash #200 Tests; ASTM D1140
- Two (2) Grain Size Tests; ASTM D6913
- Two (2) California Bearing Ratio Tests; ASTM D1883
- Two (2) Soil pH Tests; ASTM G51
- Two (2) Soil Chloride Content Tests; AASHTO T291
- Two (2) Soil Sulfate Content Tests; ASTM C1580
- Two (2) Soil Resistivity Tests; AASHTO T288

Preliminary Roadway Geotechnical Engineering Report

The Preliminary Roadway Geotechnical Engineering Report will be conducted in general accordance with the procedures outlined in the GDM. The report will include a subsurface profile for the preliminary geotechnical subsurface exploration in accordance with the GDM Chapter 7. The preliminary geotechnical engineering report will be written in accordance with the GDM Chapter 21 and will include preliminary recommendations for pavement thickness. The preliminary report will be signed and sealed by a registered SC Professional Engineer.

Geotechnical Field Exploration (Final Subsurface Exploration)

Prior to beginning the final subsurface investigation field exploration, the CONSULTANT will notify the COUNTY seven (7) days in advance so the COUNTY can coordinate with the DEPARTMENT. The CONSULTANT shall comply with all DEPARTMENT lane closure restrictions. CONSULTANT has assumed that COUNTY will obtain permission from property owners for CONSULTANT to perform borings outside of the DEPARTEMNT right-of-way.

CONULTANT will observe that utility location marks remain from preliminary exploration. If utility marks have faded or expired then a new utility locate from SC811 will be requested.

Final boring locations will be determined by the CONSULTANT. The CONSULTANT will provide copies of the proposed final subsurface exploration plans to the COUNTY prior to initiation of field work for review and acceptance. The testing locations will be coordinated with the preliminary exploration to avoid testing in the same location. See Chapter 4 of the SCDOT GDM for subsurface exploration guidelines. The final 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

Final Soil Test Borings

Soil Test Borings: STBs will be performed as defined in Chapters 4 and 5 of the GDM.

Up to twenty (20) STB's will be performed:

- Four (4) @ 15 feet for roadway embankments
- Twelve (12) @ 25 feet each for earth retaining structure design.

All STBs shall be advanced using mud rotary drilling techniques and include Standard Penetration

Tests (SPT). For the bridge approach embankment borings, SPTs shall be performed continuously in the upper 10 feet using a 24-inch spoon and on 5-foot centers thereafter to the boring termination or refusal depth. Refusal is defined as drilling tool and SPT refusal (N-value of 50 blows per 1 inch). STBs will be paid per foot; unit price includes rotary wash drilling to a depth up to 150 feet below the existing ground surface or mudline, 24-hour groundwater readings, measurement of hammer energy (ASTM D4633), and water hauling or water truck rental to advance rotary wash borings. SPT samples shall be stored for seven years or until completion of substructure installation, whichever is earlier.

Boreholes will be backfilled with drill cuttings, clean fill, or bentonite pellets. The upper 10 feet of the boreholes performed within the existing roadway will be grouted flush with the ground surface. Grout seal will be paid per foot; unit price includes all necessary time, equipment, and materials required to grout in casings or backfill test holes through tremie grouting prior to borehole abandonment. Assume forty (40) feet of grout seal.

Piezocone Penetration Tests (CPT): Four (4) CPTu soundings each to a depth of 25 feet are estimated. The CPT soundings shall be performed in accordance with ASTM D5778. CPT soundings will be paid for on a per foot basis; unit price includes preparation of sounding logs showing cone resistance, sleeve friction, friction ratio and inferred soil description.

Pavement Coring: Coring through asphalt pavement and patching the resulting core hole. Core thickness shall be reported. Assume four (4) cores.

Traffic Control: Two (2) days of traffic control lane closures and three (3) days of traffic control shoulder closures are anticipated to perform the field work. Traffic control necessary to perform the field work will be executed in accordance with the SCDOT's standards and adhere to any lane closure restrictions.

It is the responsibility of the CONSULTANT to coordinate all field activities including clearance of underground utilities and to obtain any necessary permits and/or private property permissions to access each test location.

Mileage: For quantity estimation purposes, estimate 150 miles (from Columbia, SC) for field engineer and licensed engineer travel. Assumes five (5) round-trips.

Lodging: For quantity estimation purposes, estimate fifteen (15) days for lodging. This estimate assumes a two-man drill crew and one (1) field engineer/geologist for five (5) nights.

Meals: For quantity estimation purposes, estimate fifteen (15) days for meals. This estimate assumes a two-man drill crew and one field engineer/geologist for five (5) days.

Field Engineering

The CONSULTANT will provide oversight of field operations by a field engineer and/or field geologist. Soil Classification in accordance with USCS (ASTM D2487) will be performed by a field engineer and/or field geologist who will have a minimum of 3-years of experience in

supervision of field equipment and field personnel.

Field Investigation Quantities
The following quantities are estimated:

- Truck/Trailer SPT Drill Rid Mobilization: 120 miles (round-trip from Richburg, SC)
- Truck/Trailer CPT Drill Rid Mobilization: 120 miles (round-trip from Richburg, SC)
- Traffic Control – Lane Closure: 2 days
- Traffic Control – Shoulder Closure 1-15 ft: 3 days
- Pavement Coring: 4 holes
- Survey Crew & Equipment: 24 hours
- Soil Test Borings on land (0-150 ft): 360 feet
- CPTu Testing: 100 feet
- 4" Steel Casing: 160 feet
- Grout Seal of Test Holes: 40 feet
- Mileage: 150 miles
- Lodging: 15 nights
- Per Diem: 15 days

Laboratory Testing
The CONSULTANT will 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 will be performed on selected samples in order to evaluate the types of soils encountered, confirm visual classifications, and estimate engineering properties for use in design. Laboratory testing may include, as an estimate, the following:

- 56 Moisture Content Tests; ASTM D2216
- 56 Atterberg Limits Tests; ASTM D4318
- 56 Wash #200 Tests; ASTM D1140

Final Roadway Geotechnical Engineering Report

The Final Roadway Geotechnical Engineering Report shall be conducted in general accordance with the procedures outlined in the GDM. The report shall include a subsurface profile for the final geotechnical subsurface explorations in accordance with the GDM Chapter 7. The final geotechnical engineering report shall be written in accordance with the GDM Chapter 21 and will include a recommended pavement section for the new pavement and existing pavement. The final report will be signed and sealed by a registered SC Professional Engineer. The report shall be submitted with the Final Roadway Plans.

Phase I Environmental Site Assessment

CONSULTANT will prepare a Limited Phase I Environmental Site Assessment (ESA) Report in general accordance with ASTM 1527-13 standards, for the project area that will be affected by the corridor improvement. Although a revised ASTM E1527-21 has been published, it has not been legislatively deemed to meet All Appropriate Inquiry (AAI) requirements. Therefore, CONSULTANT will continue to follow the guidelines of ASTM E1527-13, while incorporating some aspects of the updated ASTM guidance. For scoping purposes, it is assumed that the assessment limits will include up to **45** individual tax parcels, located in Richland County. The Limited Phase I ESA will include site inspections, review of available historical data, an environmental database search, and review of environmental records. The Limited Phase I ESA will not include completion of the ASTM questionnaire, review of pertinent deeds, or interviews with owners or operators. No sampling and analysis of soil or groundwater will be performed as part of this Limited Phase I ESA. Site reconnaissance will include inspection of the assessment area from public rights-of-ways, and no access to private property is anticipated. The Limited Phase I will include a review of files available at South Carolina Department of Health and Environmental Control (SCDHEC) through the Freedom of Information Act (FOIA). The results of the Limited Phase I study will be used to recommend those properties that may require a Phase II ESA investigation, if any. One (1) Limited Phase I ESA report will be prepared to include the assessment area defined above.*

Phase II Environmental Site Assessment

Assumptions:

- All drilling and assessment work will be done on private property. No traffic control will be required. **COUNTY** is responsible for obtaining all written property access permissions.
- The drilling locations will be based on access and avoiding existing utilities.
- The Statewide Utility One-call Service (SC811) will be contacted by the **CONSULTANT** team and a utility locate request will be made prior to field work. SC811 may not mark all the subsurface utilities at the site.
- The **CONSULTANT** is not responsible for damage to unmarked and/or incorrectly marked utility lines.
- Drilling boreholes will be properly abandoned by the driller. Boreholes will be filled to grade with soil. Asphalt patch will be installed where drilling had occurred in paved areas. No concrete repair is anticipated.
- Standard laboratory turnaround time will be requested (i.e., 10 working days).
- The drilling subcontractor will be available within four (4) weeks of notice to proceed, or the deliverable schedule may need to be extended.
- Disposal costs of up to three (3) 55-gallon drums of non-hazardous drummed investigative derived waste (IDW) is included within this scope of work. If additional drummed material is generated and requires disposal, additional costs will be incurred. Additionally, if analytical results indicate hazardous concentrations of constituents of concern, additional fees will be incurred for disposal of hazardous waste.

- Any suspected USTs located during the GPR survey will be marked in the field with marking paint and survey stakes, as possible. Removal or abandonment of any identified USTs is not included within this scope of work.
- If difficult drilling or auger refusal is encountered, additional drilling fees may be incurred.
- Fees assume all work is done sequentially and only one mobilization/demobilization will be required.

Based the findings of the Limited Phase I ESA detailed above, the Phase II ESA will include subsurface investigations to further investigate if past operations may have impacted areas of proposed road improvements. It is the CONSULTANTS understanding the SCDOT may wish to assess soil for potential impacts stemming from past operations on lands adjoining the proposed intersection, and to locate suspected underground storage tanks (UST) where possible. If contamination is identified, it may potentially impact the road improvement schedule and methods.

The specifics of the Phase II ESA services will depend on the contaminants of concern, past operation type, and what information is identified for each site during the preparation of the Limited Phase I ESA. However, for the purpose of this scope, the CONSULTANT assumes the following number of soil borings will be required and the following number of soil samples will be collected from the each noted site:

- 20 subsurface soil borings to 10 feet in depth;
- 10 near-surface soil samples (0-6 inches in depth);

No groundwater samples are anticipated, as the CONSULTANT does not believe groundwater will be encountered within 10 feet of ground surface, which is the anticipated depth of road work activities. However, if groundwater is encountered and sample(s) are warranted, additional fees may be incurred. Additionally, a GPR survey is included to potentially locate suspected out-of-use USTs.

The CONSULTANT proposes to conduct GPR field investigations in order to assess the presence and size of any remaining out-of-use USTs. F&ME field personnel will use GPR, a magnetometer, and other field equipment to assess the presence, size, orientation, and location of the UST(s) and associated piping. The CONSULTANT will mark in the field the location and orientation of any out-of-use UST and identified piping. Additionally, the CONSULTANT will attempt to access the contents of the out-of-use UST(s) (if the fill port is accessible) to determine the type of fuel and estimate the quantity of product remaining (if any). Assume two (2) days of GPR field work.

A South Carolina licensed driller will provide the Geoprobe drilling subcontractor services. The soil cores generated from drilling the temporary well points will be field screened using an organic vapor analyzer/photoionization device (OVA/PID) if evidence of impacts is observed. Field screening will determine which soil sample from each soil boring will be submitted for laboratory analysis. Drill cuttings will be placed in labeled 55-gallon drums, to await proper disposal following receipt of analytical results. Please note, that if contamination is identified under this scope of work, additional assessment work may be warranted.

Collected soil samples, along with necessary quality control/quality assurance (QA/QC) duplicate samples and blanks will be submitted to the laboratory for analysis. Up to 20 subsurface soil

samples will be analyzed for volatile organic compounds (VOC), to include petroleum and solvent constituents. Up to ten (10) near surface soils samples will be collected. However, since likely contaminants will not be determined until the completion of the Limited Phase I ESA, we propose a laboratory analysis of $3,500 for the surface soil samples to allow for analysis of suspected but as yet unidentified contaminants.

We estimate that it will take CONSULTANT field personnel five (5) days to complete the drilling and assessment field work. The sampling methodology, findings, and recommendations of the Phase II ESA will be documented within a technical report to be issued at the completion of work.

Task 7

Hydrologic and Hydraulic Design

All hydraulic design and documents will be in compliance with the following design criteria:

- SCDOT's Requirements for Hydraulic Design Studies, latest edition;
- SCDOT Standard Drawings;
- The Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) as administered under general permit by the SC Department of Health and Environmental Control (DHEC);
- FEMA Regulations, 44CFR Chapter 1;
- The State Stormwater and Sediment and Erosion Control Regulations administered by DHEC, 26 S.C. Code Ann. Regs. 72-405 (Supp. 1995) et seq.;
- South Carolina State Water Law
- AASHTO "Highway Drainage Guidelines" dated 2007;
- SCDOT "Stormwater Quality Design Manual";
- SCDOT Supplemental Specifications

Site Visit and Data Review

The **CONSULTANT** shall perform a project data collection phase to gather technical and historical information pertinent to the project. This will include file research, report and publication review, contact with appropriate Federal, State and local agencies, review of survey data, gage data, geotechnical data, planning documents, and project plans, as well as contact with local maintenance personnel as appropriate.

Roadway Drainage Design

The **CONSULTANT** will perform the necessary roadway drainage design to analyze the sizing of proposed storm drainage piping systems and roadside ditches. The **CONSULTANT** will design closed drainage systems using Geopak Drainage.

The **CONSULTANT** will perform a hydrologic and hydraulic analysis on each of the cross-drainage structures for the post construction conditions. Based on this evaluation, the **CONSULTANT** will provide recommendations for retaining, replacing or development of other drainage alternatives for each cross-drainage structure.

The **CONSULTANT** will determine the pre-construction versus post-construction flows, and the outfall channel will be evaluated to determine the effects of the proposed construction. Outfalls will be evaluated in accordance with DEPARTMENT and NPDES regulations. If required to control stormwater quality or quantity, water quality or detention basins will be added using a hydraulic routing method. Energy dissipaters may also be utilized based on HEC-14 procedures. Outfall channel protective measures will be based on design methods in HEC-15 and/or HEC-11.

The **CONSULTANT** will attend an office meeting with the **DEPARTMENT** to discuss the roadway drainage.

The **CONSULTANT** will prepare a final roadway drainage report containing all calculations.

The **CONSULTANT** will develop drainage sheets showing existing drainage features, proposed drainage features, and sediment & erosion control features

The **CONSULTANT** will develop pipe cross sections for all proposed cross line pipes.

The **COUNTY** to provide development plans for Sparkleberry Crossing including stormwater design calculations for the existing detention basin.

Design Field Review

Representatives from the CONSULTANT, involved in drainage design will perform two (2) field reconnaissance reviews of the project during the plan development. All information gathered during this field investigation will be evaluated and plans revised accordingly.

Deliverables:

- One (1) copy of the Signed and Sealed Roadway Hydraulic Design Study Report, including the cross drainage recommendations.
- One (1) copy of all hydraulic reports listed above in .pdf format.

Task 8

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 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 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 9

Roadway Plans

Design Criteria – The CONSULTANT shall prepare and submit, for SCDOT and COUNTY review, design criteria for the project. These criteria shall address all design features for roadway and hydraulic design. Upon approval of design criteria, the CONSULTANT will be authorized to begin Preliminary Plans.

Preliminary Right-of-Way Design and Plans

The CONSULTANT will prepare Final Right-of-Way Plans according to standard DEPARTMENT criteria and format. Plans will be developed to the level of detail of approximately 70% Complete Construction Plans. New right-of-way will be annotated by the station and offset methodology in accordance with standard DEPARTMENT policy and procedures.

Right-of-Way Plans will be developed in accordance with the DEPARTMENT's *Road Design Reference Material For CONSULTANT Prepared Plans* dated June 2010, with the following exceptions:

1. A title sheet showing a location map, traffic data
2. Typical sections;
3. Geometric control (vertical and horizontal);
4. Reference points;
5. Horizontal and vertical alignments;
6. Roadway and drainage plan/profile sheets, at a scale of 1 in. equals 20 ft horizontal, showing existing conditions, existing utilities (from field survey or information received from utility owners), survey baseline, proposed centerline, edges of pavement, driveways, construction limits, drainage features, right-of-way, and easements. Proposed horizontal and vertical geometry will also be shown.
7. Review of clear zone barrier warrants and slope adjustments;
8. Limits of existing right-of-way and adjacent properties;
9. Development of preliminary storm drainage plan and type, size, invert elevation and location of major storm drainage features including outfall ditches, sediment basins and roadway ditches;
10. Type, size, and location of existing major utility facilities;
11. Preliminary cross-sections located at 100-foot intervals along tangent sections and 50-foot intervals in curves;
12. Construction limits;
13. Property lines, property parcel number, and ownership;
14. Proposed right-of-way and easements;
15. The CONSULTANT will conform to the SCDOT and FHWA design standards in preparation of the roadway plans. During plan development, the CONSULTANT will use the most recent standards in effect at the time of the contract execution as listed in Section 4.1.1.
16. In developing final right-of-way plans, the CONSULTANT will conform as much as possible to existing roadway alignments, profiles, and geometric designs.
17. All plans will be prepared using MicroStation and GeoPak.

The CONSULTANT will incorporate information obtained during the SUE phase of the project.

The CONSULTANT will provide curb grades around side roads and major driveway radii.

The CONSULTANT will establish horizontal and vertical alignments along with cross sections as needed to study the re-connection of driveways to the widened roadways. This design data will be shown in the plans to convey the extent/impact of the re-configuration of driveways necessary to provide access to the property. Driveways that are level with the widened roadway will not have a horizontal or vertical alignment set, but will be handled by only showing their connection in the roadway cross section and plan view based on the roadway cross section.

The CONSULTANT will attend the Right-of-Way Plans Design Field Review with the COUNTY to review the project design in the field.

The CONSULTANT will be responsible for providing an initial list of moving and demolition items for use by the right-of-way agent.

A set of preliminary Right-of-Way Plans will be submitted to the COUNTY for review and comment. Following the review of the preliminary Right-of-Way Plans, the CONSULTANT will submit final Right-of-Way Plans for review and approval. As applicable, the final Right-of-Way plans will address comments on the preliminary Right-of-Way plans.

Electronic media receivables for Right-of-Way Plans will be provided on CD and will include the information outlined in the DEPARTMENT's *Road Design Reference Material For CONSULTANT Prepared Plans* dated June 2010.

The CONSULTANT will provide final right-of-way CADD files to the COUNTY as necessary.

Design Field Review (DFR) #1

Representatives from the COUNTY, DEPARTMENT and CONSULTANT, involved in roadway and hydraulic design will perform one (1) field reconnaissance of the project during the preliminary plan development. CONSULTANT will prepare one set of plans for use during the Field Review. All information gathered during this field investigation will be evaluated and plans revised accordingly.

Cost Estimate

The CONSULTANT shall develop and submit a detailed cost estimate along with the submittal of preliminary plans. The estimate shall be developed to the level of detail similar to a typical 70% complete project that complies with DEPARTMENT RDM standards for 70% plans.

Final Roadway Design and Plans

While completing the final plans for construction, should changes be necessary which will affect right-of-way, these revisions will be promptly made, documented as revisions on plans, and identified to those implementing right-of-way appraisal and acquisition. The CONSULTANT will provide updated CADD files to the COUNTY as necessary.

The construction plans will be a continuation of Right-of-Way Plans. Original Right-of-Way Plans will be retained by the CONSULTANT after appropriate COUNTY reviews and signatures and then developed into construction plans.

Plan and profile sheets will show information necessary to permit construction stakeout and to indicate and delineate details necessary for construction.

Construction plans shall incorporate all items presented in the Roadway Construction Plans section of the DEPARTMENT's *Road Design Reference Material For CONSULTANT Prepared Plans* dated June 2010.

Design Field Review (DFR) #2

The CONSULTANT will attend the Final Roadway Plans Design Field Review with the COUNTY to review the project design in the field.

A set of Preliminary Construction Plans will be submitted to the COUNTY for review prior to final plan delivery. The Preliminary Construction cost estimate will be updated by the CONSULTANT and submitted with the Preliminary Construction Plans for use by the COUNTY.

On or before the contract completion date, the CONSULTANT will deliver to the COUNTY one complete set of Final Construction Plans, an Engineer's Estimate, and "Project Specific" Special Provisions. See Project Special Provisions and Engineer's Estimate for the description of the Engineer's Estimate and "Project Specific" Special Provisions.

Project Special Provisions and Engineer's Estimate

The CONSULTANT will prepare all "Project Specific" Special Provisions and include them in the format compatible with the DEPARTMENT Construction Administration Section. The CONSULTANT will work closely with COUNTY personnel in the COUNTY'S development of the construction document package.

Also, utilizing recent bid data from similar projects in the area, the CONSULTANT will prepare an Engineer's Estimate for construction of this project. The estimates will be based on the final summary of quantities and will be used in the final bid analysis and award.

For this task and all other tasks contained in this scope, the CONSULTANT will utilize the DEPARTMENT standard drawings, specifications, and design manuals that are current as of the first issuance of the task order scope by the COUNTY to the CONSULTANT.
Deliverables:

- One (1) PDF of Design Criteria Report
- One (1) full size to scale PDF of preliminary and final Right-of-Way plans and cost estimate
- Electronic PDF files of Final Roadway Construction Plans individually, electronically signed and sealed. See SCDOT Digital Signatures Manual.
- One (1) Cost Estimate for Preliminary, Final Right-of-Way & Construction Plans
- One (1) CD/DVD containing final plan design files
- One (1) electronic PDF and one (1) electronic MSWord copy of Special Provisions
- One (1) PDF of design and quantity calculations

Submittals are as follows:

a. 65% Plan submittal for COUNTY and DEPARTMENT review and comment.
b. 70% Plan submittal for COUNTY and DEPARTMENT review and comment.
c. Revised 70% Plan Submittal for DEPARTMENT Review and Approval.
d. 90% Plan submittal for COUNTY Review and Comment.

e. Revised 90% Plan Submittal for DEPARTMENT Review and Comment.
f. 100% Plan Submittal for DEPARTMENT Review and Approval.

Task 10

Roadway Structures

The CONSULTANT shall design and detail roadway structures, such as, mechanically stabilized earth (MSE) walls, cantilever walls, custom drainage boxes, box culverts, barrier walls, and/or sound walls etc. as they are determined to be necessary due to right-of-way constraints, environmental restrictions or site conditions.

10.1 *Design Basis Statement*

The CONSULTANT will conform to the following SCDOT and FHWA design standards in preparation of the roadway structure plans:

- Road Standard Drawings and Details, latest versions;
- SCDOT Bridge Drawings and Details, latest versions
- 2010 SCDOT Geotechnical Design Manual, with latest interims;
- 2008 SCDOT Seismic Design Specifications for Highway Bridges, Version 2.0;
- SCDOT Bridge Design Manual, 2006 edition;
- SCDOT Bridge Design Memorandums (to RPG Structural Engineers and Design CONSULTANTs, issued after April, 2006);
- SCDOT Standard Specifications for Highway Construction, 2007 edition;
- ANSI/AASHTO/AWS D1.5 Bridge Welding Code, the latest edition.
- Standard Special Provisions and Supplemental Specifications used by the SCDOT
- FHWA Publication No. FHWA-NHI-07-071, "Earth Retaining Structures" Reference Manual.

10.2 *Earth Retaining Structure Plans*

For purposes of this scope, the CONSULTANT shall estimate 800 total linear feet of Earth Retaining Structures in case it is determined they are necessary to reduce and/or eliminate right of way impacts. The CONSULTANT shall be prepared to design and detail earth retaining structures, such as, mechanically stabilized earth (MSE) walls, reinforced soil slopes, cantilever walls, or soldier pile walls, if they are determined to be necessary.

If earth retaining structures are determined to be necessary for this project, the CONSULTANT shall develop earth retaining structure plan sheets in sufficient detail and appropriate format to clearly illustrate significant design features, dimensions and clearances. Cost-effectiveness of the earth retaining structures shall be considered in the development of the project, including any requirement for ground modifications, and the costs shall be compared to costs for constructing the project without earth retaining structures so the most cost-effective solution can be selected. Constructability of the earth retaining structures shall be considered in the development of the plan sheets, including maintenance of traffic, access for construction equipment, the placement of

reinforcing steel and /or anchorages of structures to the supporting soils, clearances required for the use of equipment, and foundation considerations. The earth retaining structure sheets shall also be prepared as follows:

10.1.1 ***Plan Sheets -*** Prepare in conformity with current practices of the SCDOT with regard to method of presentation, scales, billing of pay items, special drawings and summaries thereof. Standard drawings of the SCDOT shall be used to the extent feasible and shall be furnished by the SCDOT, 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 SCDOT. 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.

10.1.2 ***Special Provisions*** - The CONSULTANT will prepare special provisions concerning items of construction not covered by the SCDOT's standard specifications, supplemental specifications or standard special provisions, as well as special treatments during construction. An electronic copy of the special provisions shall also be provided to the SCDOT.

10.1.3 ***Detailed Estimate of Quantities and Construction Costs*** - The CONSULTANT will prepare detailed estimates of quantities and construction costs. The quantities shall be included with the bridge or road plans as applicable.

10.1.4 ***QA/QC*** - Prior to submittal to the SCDOT, all plans sheets and documents shall be thoroughly reviewed by the CONSULTANT for completeness, correctness, accuracy and consistency with the above referenced requirements and in accordance with internal QA/QC procedures. Roadway Structure plans will be submitted to SCDOT Structural Design Support group for Quality Assurance review in conjunction with the road plans and/or 95% Bridge Plans as applicable. The CONSULTANT shall respond to all comments and provide verification plan sets as necessary to close out all comments. The plans are not considered complete until all review comments receive a status of 4 (Resolved as Noted) or 5 (Closed).

Deliverables:

- 1 electronic PDF copy of Earth Retaining Structures special provisions
- 1 electronic PDF copy of detailed estimate of quantities and construction cost for Earth Retaining Structures

Task 11

Transportation Management Plan

Maintenance of Traffic Plans

The design and preparation of one set of Work Zone Traffic Control plans will be accomplished for the roadway project. The plans will include a description of the sequential steps to be followed in implementing the plans, and will be developed at a scale of 1"= 50', unless otherwise agreed upon. The traffic control plans will include lane closures, traffic control devices, temporary lane markings, and construction signing and sequencing notes. The plans will identify lane widths, transition taper widths, and any geometry necessary to define temporary roadway alignments. Also, the plans will address the type of surface to be used for all temporary roadways. Standard traffic control details will be incorporated into the plans for most work activities, but detailed staging plans will be required where impacts upon the normal traffic flow are significant.

Temporary drainage design will be shown on the Maintenance of Traffic Plans. The temporary drainage will be designed to accommodate a 2-year design event.

Conceptual traffic control plans will be submitted with the right-of-way plans. Preliminary traffic control plans will be submitted in conjunction with the 95% complete roadway plans, and the final signed and sealed traffic control plans along with quantities will be submitted with the final roadway construction plans.

CONSULTANT will initiate development of the Transportation Management Plan (TMP) as detailed in the "Rule on Work Zone Safety and Mobility". The CONSULTANT will prepare checklists and provide to the DEPARTMENT identifying preliminary TMP assumptions.
Quantity Computations – Based upon the final signing and pavement marking plans, quantity computations will be performed by CONSULTANT for each item of work designated as unit price pay items. Computations will be tabulated in the quantity summaries on the final plans.

Task 12

Pavement Marking and Signing

Final pavement marking/signing plans will be prepared at a scale of 1”=50’ unless otherwise agreed upon. The plans will consist of an itemized listing of estimated quantities; typicals for installation (DEPARTMENT typicals may be used where applicable), details showing lane lines, edge lines, stop bars, symbol and word messages and other appropriate markings and sign designation numbers and locations. The plans will include dimensions sufficient for field layout. The *Manual on Uniform Traffic Control Devices (MUTCD): 2009 Edition* and DEPARTMENT details will be incorporated into the plans.

Task 13

Subsurface Utility Exploration

The CONSULTANT will utilize the existing SUE information provided by the COUNTY and performed by CECS. No verification of existing SUE will be performed and has been assumed to be accurate due to signing of final right-of-way plans by previous On-Call Engineering Team.

Supplemental SUE information shall consists of the below which includes SUE data along Sparklebery Crossing Road and an area missing around Greenmead Drive.

Sub –Surface Utility Engineering (SUE)

Within 45 days of Notice to Proceed of the contract and if requested by the COUNTY, the CONSULTANT shall provide the COUNTY with a recommendation as to the extent of SUE services to be provided. This should include as much information as can be assembled on utility type, approximate location, owner, prior rights, and any preliminary assessment of impact with respect to the scope of the proposed project. This information will be used to specifically define the limits of the SUE work to be performed. For estimating purposes, assumptions will be made as to the extent of utilities that currently exist within the project corridor. The cost associated with designating and locating the utilities will be estimated on a per linear foot basis for underground and aerial facilities and per each for test holes. The per linear foot and per each cost will be all inclusive of the labor, equipment, and deliverables required for SUE.

SUE Work

The CONSULTANT shall perform work in two (2) phases. The first phase consists of designating services (Quality Level B, C and D). For the purpose of this Agreement, "designate" shall be defined as indicating, by marking, the presence and approximate horizontal position of the subsurface utilities by the use of geophysical prospecting techniques. The second phase consists of test hole services (Quality Level A). For the purpose of this Agreement, "locate" means to obtain the accurate horizontal and vertical position of the subsurface utilities by excavating a test hole. The CONSULTANT shall provide these services as an aide in the design of right-of-way and construction plans for the project.

Unless specifically stated otherwise, the CONSULTANT shall adhere to the ASCE Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data (CI/ASCE 38-02).

Designating

In the performing of designating services under this Agreement, the CONSULTANT shall:

- Provide all equipment, personnel and supplies necessary for the completion of Quality Level 'B' information for approximately 5500 LF of underground utilities.
- Provide all equipment, personnel and supplies necessary for the completion of Quality Level 'C' information for approximately 1000 LF of underground utilities
- Provide all equipment, personnel and supplies necessary for the accurate recording of information for approximately 500 LF of aerial utilities.

- Conduct appropriate records and as-built plans research and investigate site conditions.
- Obtain all necessary permits from city, county, state or any other municipal jurisdictions to allow CONSULTANT personnel to work within the existing streets, roads and rights-of-way.
- Designate the approximate horizontal position of existing utilities by paint markings in accordance with the APWA Uniform Color Code scheme along the utility and at all bends in the line in order to establish the trend of the line. All utilities shall be designated as well as their corresponding lateral lines up to the point of distribution, existing right-of-way limits, or whichever is specifically requested and scoped for each individual project.
- Survey designating marks, which shall be referenced to project control provided by the surveyor of record.
- Draft survey information using SCDOT CADD guidelines for Subsurface Utility Engineering CONSULTANTs (latest version).
- Final review and seal of all appropriate work by a professional engineer and/or land surveyor licensed in South Carolina in responsible charge of the project.
- Provide notification to key the COUNTY personnel concerning the upcoming SUE services to be provided by the CONSULTANT.

Locating

In the performance of locating services under this Agreement, the CONSULTANT shall:

- Provide all equipment, personnel and supplies necessary for the completion of Quality Level 'A' information for an estimated 5 test holes.
- Conduct appropriate records and as-built plans research and investigate site conditions.
- Obtain all necessary permits from city, county, state or any other municipal jurisdictions to allow CONSULTANT personnel to work within the existing streets, roads and rights-of-way.
- Perform electronic sweep of the proposed conflict and other procedures necessary to adequately "set-up" the test hole.
- Excavate test holes to expose the utility to be measured in such a manner that insures the safety of excavation and the integrity of the utility to be measured. In performing such excavations, the CONSULTANT shall comply with all applicable utility damage prevention laws. The CONSULTANT shall schedule and coordinate with the utility companies and their inspectors, as required, and shall be responsible for any damage to the utility during excavation.
- Provide notification to the TOWN concerning (a) the horizontal and vertical location of the top and/or bottom of the utility referenced to the project survey datum; (b) the elevation of the existing grade over the utility at a test hole referenced to the project survey datum; (c) the outside diameter of the utility and configuration of non-encased, multiconduit systems; (d) the utility structure material composition, when reasonably ascertainable; (e) the benchmarks and/or project survey data used to determine elevations; (f) the paving thickness and type, where applicable; (g) the

general soil type and site conditions; and (h) such other pertinent information as is reasonable ascertainable from each test hole site.

- Provide permanent restoration of pavement within the limits of the original cut. When test holes are excavated in areas other than roadway pavement, these disturbed areas shall be restored as nearly as possible to the condition that existed prior to the excavation.
- Draft horizontal location and, if applicable, profile view of the utility on the project plans using CADD standards as outlined above. A station and offset distance and/or northing and easting coordinates (State Plane) with elevations shall be provided with each test hole.
- Test hole information shall be formatted and presented on CONSULTANT's certification form and listed in a test hole data summary sheet.
- Certification form shall be reviewed and sealed by a professional engineer or land surveyor licensed in South Carolina and in responsible charge of the project.
- Provide notification to key TOWN personnel concerning the upcoming SUE services to be provided by the CONSULTANT.

Aerial Facilities

- Provide all equipment, personnel and supplies required to perform its services. Determine which equipment; personnel and supplies are required to perform such services.
- Conduct appropriate records research.
- Prepare appropriate field sketches of poles and aerial utilities, which shall be referenced to project control provided by the client.
- Plot survey information onto base plans provided by the client using Computer Aided Drafting and Design ("CADD") systems.
- Provide a pole data sheet that includes available information such as:
    - survey shot number
    - pole tag number
    - pole class
    - pole material type
    - pole diameter
    - pole owner
    - type of utility
    - owner of utility
    - number of guy anchors
- miscellaneous notes
- Compare survey information plotted on base plans with information provided from field sketches and evaluate all plotted information in the field for accuracy and reliability.
- Final plot all information using DEPARTMENT CADD guidelines for Subsurface Utility Engineering CONSULTANTs (latest version) to account for any corrections noted from the previous step and review plan sheets against:
    - records
    - field sketches

- CADD drafting
- field notes

- Final review and seal of all appropriate work by a professional engineer and/or land surveyor licensed in South Carolina in responsible charge of the project.
- Return final work product to the client and review project with the same.
- Will provide all services to the standard of care applicable in the subsurface utility engineering profession.

Task 14

Utility Coordination

Project Description

The CONSULTANT will provide Utility Coordination services within the project limits.

Assumptions:

- Five (7) utilities
- One (1) site visit
- Ten (10) meetings

General Responsibilities and Duties

The CONSULTANT shall have the responsibility of coordinating the Project development with all utilities that may be affected. All utility relocations shall be handled in accordance with the SCDOT's "A Policy for Accommodating Utilities on Highway Rights of Way" and the Code of Federal Regulations, Title 23, Chapter 1, Subchapter G, part 645, subparts A & B.

These services shall be performed by individuals skilled and experienced in utility coordination services.

The CONSULTANT shall work with designers of the Project to avoid conflicts with utilities where possible, and minimize impacts where conflicts cannot be avoided. This may include, but is not limited to, utilizing all available utility data, whether obtained from SUE services, as-built plans, or provided by the SCDOT or some other source. The CONSULTANT will be expected to determine all utility conflict points, including all work to properly analyze each conflict point, and make recommendations for resolution of the conflict where possible.

The utility company shall not begin their relocation work until authorized in writing by the SCDOT.

The CONSULTANT shall prepare and maintain a Utility Conflict Matrix (UCM) in order to track each utility within the project limits during the life of the Project.

Proposed Schedule

- Early UC Email: 90 days from NTP
- Preliminary UC Report: 30 days after Final ROW Plans approval

- Right-of-Way Date: TBD
- Final UC Report: 10 days prior to Utility Obligation Date
- Utility Certification: 3 months prior to Construction Obligation Date
- Construction Obligation Date: TBD
- Construction Let Date: TBD
- Construction Completion Date: TBD

Early Utility Coordination (0% Final Plan Drawings) Project Preliminary Review:

The CONSULTANT shall coordinate with the SCDOT Program Manager to collect and review available project plans and the proposed scope of construction.

Utility Introduction Letter: (Required) The CONSULTANT shall develop a Utility Introduction Letter for each utility company. This letter shall be populated by the CONSULTANT with the utility company's information (to include the company's contact person, mailing address, telephone number and appropriate email address) and electronically sent to the SCDOT State Utility Engineer for signature and mailing.

Utility Record Collection and Review: The CONSULTANT shall initiate early coordination with all utility companies that are located within the Project limits. Coordination shall include, but shall not be limited to, contacting each utility company to advise the company of the proposed Project, obtaining copies of as-built plans for the existing utility facilities (if available), perform a review of utility as-built plans and determine the utility company's requirements for the relocation of their facilities.

Site Visit: The CONSULTANT shall perform a site visit for a visual inventory of existing utilities within the proposed project limits. If it is determined by the SCDOT that an in-depth SUE mapping investigation will not be performed, the CONSULTANT is encouraged to use the "One Call" design ticket service provided by SC811 prior to their Site Visit.

Coordination Meeting with Utility Companies: The CONSULTANT shall coordinate and conduct a preliminary review meeting with the utility companies (if deemed necessary) for the completion of Early Utility Coordination.

SUE Mapping Recommendation: The CONSULTANT shall develop a SUE recommendation for the project dependent on the information gathered and the projected level of Utility Coordination expected for the Project as directed by the SCDOT Program Manager.

Utility Clearance Separation Values: The CONSULTANT shall determine the minimum vertical separation values required by each utility. These values will provide the SCDOT Project Manager vertical clearance design criteria during preliminary project development.

Early Utility Coordination Email: The CONSULTANT shall prepare and send the Early Utility Coordination Email to the SCDOT Program Manager, SCDOT Utility Office and the District

Utility Coordinator. Email to be used as an informal summary of the Early Utility Coordination tasks.

Early Utility Coordination Deliverables

The CONSULTANT shall prepare and submit to the SCDOT an Early Utility Coordination Email within 90 days after receiving the Notice To Proceed (NTP) which includes:

1. List of all utility companies and contact information within the project limits.
2. Utility Introduction Letter (Required).
3. Early assessment of each Utility Company's facilities located within project limits.
4. Utility Companies Coordination Meeting Notes.
5. SUE Mapping Recommendation.
6. Utility Clearance Separation Values.
7. Utility Relocation Schedule.

Preliminary Utility Report (30% Final Plan Drawings)

Initial Plan Distribution: The CONSULTANT shall provide the utility company with preliminary design plans as soon as the plans have reached a level of completeness adequate to allow the company to begin understanding the Project impacts.

Coordination Meeting with Utility Companies: The CONSULTANT shall coordinate and conduct a review meeting with the utility companies to assess and explain the impact of the Project to the company. The SCDOT's Program Manager, Resident Construction Engineer (RCE), Resident Maintenance Engineer (RME), District Utility Coordinator and Utilities Manager (or designee) shall be included in this meeting.

Collection and Review of Prior Right Documentation: The CONSULTANT shall request the prior rights documents for each utility company's facilities. If there is a dispute over prior rights with a utility, the CONSULTANT shall be responsible for resolving the dispute and making a recommendation to the SCDOT. The CONSULTANT shall meet with the SCDOT's Program Manager to present the prior rights information gathered. This information must be sufficient for the SCDOT's Program Manager to certify the extent of the utility company's prior rights. The SCDOT shall have final approval authority as to the determination of whether the utility company has prior rights.

Preliminary Utility Report: The CONSULTANT shall prepare the Preliminary Utility Report.

Progress Review Meeting: The CONSULTANT shall conduct a progress review meeting with the SCDOT Project Manager.

Preliminary Utility Report Deliverables

The CONSULTANT shall prepare and submit to the SCDOT a Preliminary Utility Report within 30 days after receiving the Final ROW Plan Approval which includes:

1. List of all utility companies and contact information within the project limits.
2. Utility Company Coordination Meeting Notes.
3. Preliminary recommendation as to the extent of each utility company's prior rights.
4. Preliminary assessment of the impact to each utility company, including costs, as can best be determined at the time.
5. Recommendations for In-Contract Utility Relocations.
6. Recommendations for early Utility Relocations prior to the start of construction.
7. Preliminary Utility Report to be delivered in an electronic format (pdf).

Constructability Review Meeting

Constructability Review Meeting: The CONSULTANT shall plan and conduct a Constructability Review Meeting with all utility companies in order to discuss any conflicts with proposed utility relocations vs. roadway construction work and any conflicts between various utilities. The SCDOT's Program Manager, Resident Construction Engineer (RCE), Resident Maintenance Engineer (RME), District Utility Coordinator and Utilities Manager (or designee) shall be invited to the meeting.

Final Utility Report (90% Final Plan Drawings)

Relocation Sketch Request: The CONSULTANT shall request each utility company to provide a Relocation Drawing of their affected utilities. The utility company may use the SCDOT's design plans for preparing Relocation Drawings. These plans shall contain all available data that may be helpful to the utility company in assessing the utility impact. If a party other than the utility company or its agent prepares Relocation Drawings, there shall be a concurrence box on the plans where the utility company signs and accepts the Relocation Drawings as shown.

Utility Agreement Collection: The CONSULTANT shall be responsible for collecting the following from each utility company that is located within the project limits: Final Relocation Drawings including letter of "no cost" where the company does not have a prior right; Utility Agreements including cost estimate, relocation plans and prior rights documentation where the company has a prior right; Letters of "no conflict" with supporting documentation where the company's facilities will not be impacted by the Project; Applicable approved permits must be in place for all Utility Companies; Easement acquisition documentation when applicable.

Utility Agreement Review: The CONSULTANT shall review all Relocation Drawings and Utility Agreements to ensure that relocations comply with the SCDOT's "A Policy for Accommodating Utilities on Highway Rights of Way" and the Code of Federal Regulations, Title 23, Chapter 1, Subchapter G, part 645, subparts A and B. The CONSULTANT shall also ensure that there are no conflicts with the proposed highway improvements, and ensure that there are no conflicts between each of the utility company's relocation plans.

Final Utility Report: The CONSULTANT shall prepare the Final Utility Report.

Utility Conflict Matrix: The CONSULTANT shall complete the Final Utility Conflict Matrix.

Final Utility Report Deliverables

The CONSULTANT is expected to assemble the information included in the Utility Agreements and Relocation Drawings in a final and complete form and in such a manner that the Department may approve the submittals with minimal review. Each Utility Agreement and Relocation Drawing submitted must be accompanied by a certification from the CONSULTANT stating that the proposed relocation will not conflict with the proposed highway improvement and will not conflict with another utility company's relocation plan. The report shall also contain the CONSULTANT's recommendation for approval of the Utility Agreements and Relocation Drawings and the CONSULTANT's recommendation that, from a utilities standpoint, the Project is ready to be let to contract. The CONSULTANT shall prepare and submit to the Department a Final Utility Report no later than a minimum of 120 days prior to the Obligation date that includes: List of all utility companies and contact information within the project limits:

1. List of all utility companies and contact information within the project limits.
2. Utility Companies Coordination Meeting Notes.
3. All prior rights supporting documentation.
4. Description of each utility company's relocation plans.
5. Final assessment and explanation of the Project impact to each utility company.
6. Utility Company Relocation Drawings.
7. Letters of "No Cost".
8. Utility Agreements.
9. Letters of "No Conflict".
10. Recommendation for approval of the Final Utility Agreements and Relocation Drawings.
11. Verification of no conflict of the Final Utility Agreements, Relocation Drawings and the Project.
12. Final estimated utility relocation cost for all utilities.
13. Utility Conflict Matrix (UCM).
14. Utility Relocation Schedule.
15. Utility Permits.
16. Utility Easement Documentation.
17. Utility Special Provisions.
18. Memorandum of Agreement (MOA).

U-Sheets (100% Plan Drawings) - U-Sheets:

The CONSULTANT shall prepare and maintain a compilation of all utility relocation plans on one set of the project plans. These plans (U-sheets) will be used during the project development, and

the final set may be included in the bid documentation for information only and will reference the actual relocation plans prepared by the utility.

U-Sheet Deliverables

1. U-Sheets

Task 15

Right-of-Way Services

The **CONSULTANT** shall perform all right-of-way acquisition services in accordance with the following tasks for approximately 30 parcels requiring acquisition or permissions:

Perform all title searches for properties which must be acquired to construct the project and provide to the **COUNTY** a Preliminary and Final Certificate of Title signed by a licensed South Carolina attorney (as required by the SCDOT's Right of Way Manual). Titles certificates shall advise all names of any parties that should be included for payments, and if the investigation reveals that condemnation is necessary to clear title, it shall provide names of all parties that should be served with condemnation, provide recording information for those parties who have an interest in the property and advise whether or not advertisement is required. Preliminary title abstracts must be provided prior to the property being appraised.

The **CONSULTANT** shall be responsible for all appraisal services to include cost estimates, appraisals, and technical appraisal reviews. The appraisal services shall comply with the established guidelines in the SCDOT Appraisal Manual. The appraiser's used by be The **CONSULTANT** shall be from the SCDOT's approved fee appraiser/ fee review lists.

Acquire in accordance with all state laws and regulations, both Federal and State, and in the name of the **COUNTY**, the right of way necessary to construct the project. Title shall be in fee simple absolute and have a recordable warranty deed unless otherwise authorized by the **COUNTY**. The title shall be filed, within seven (7) days of payment to the landowner, in the ROD office in Richland County and the original file stamped instrument will be returned to the **COUNTY**. The **CONSULTANT** is responsible for all cost associated with recording of the deeds.
Prepare exhibits in accordance with SCDOT's exhibit preparation guide.

- In the event of condemnation, the necessary documents as required by the Eminent Domain Procedure Act Sections 28-2-10 et. Seg., South Carolina Code of Laws (1976) as amended will be prepared and submitted electronically to the County's attorney as direct, for the attorney to file the case with the Clerk of Court. The procedure for Condemnation shall be by way of trial after rejection of the amount tendered as provided in Section 28-2-240.

- Retain all records dealing with property acquisition and all other costs associated with this project for three (3) years after the final acquisition for the project.

- **CONSULTANT** is responsible for establishing and maintaining Quality Control and Quality Assurance procedures for the entire right of way acquisition process.

CONSULTANT shall provide a final moving items list, removal and disposal items lists, and a UST and fencing list based on the appraisal and negotiations in accordance with the County's construction schedule.

Assumptions:
**Total number of tracts may vary due upon receipt of plans.*

Task 16

Bidding Services

- The CONSULTANT shall prepare the bid documents necessary to successfully bid the project. Documents shall include all standard County documents as well as special provisions of both the County and the SCDOT.
- The CONSULTANT shall provide the COUNTY with necessary information to be used for advertising for the project. The COUNTY will be responsible for any fees associated with the advertisement.
- The CONSULTANT shall conduct the Pre Bid Conference. The CONSULTANT shall prepare the Pre Bid Agenda for distribution at the conference.
- The CONSULTANT shall conduct the Bid Opening. The CONSULTANT shall COUNTY in evaluate of the bids received, prepare the bid tabulations, and recommend award to the lowest responsive bidder. The CONSULTANT will complete the necessary paperwork associated with awarding of the contract.

Task 17

Construction Phase Support

The COUNTY will advise the CONSULTANT of the contractor's schedule and will inform the CONSULTANT when services are required. The work shall consist of providing technical assistance during the construction phase of the project. The work shall be performed on an "as needed" basis as requested by the COUNTY and shall include, but not necessarily be limited to the following activities

Construction Administration

Partnering/Pre-Construction Conference

- The CONSULTANT shall attend a partnering/preconstruction conference with the COUNTY and DEPARTMENT, the contractor, utility companies, and any other concerned parties. In attendance from CONSULTANT will at a minimum be the project manager,

structural engineer, and utility coordinator. The CONSULTANT will respond to the Contractor's questions pertinent to the CONSULTANT's design.

- Shop Drawings/Working Drawings
    - The CONSULTANT will review all shop drawings for compliance with the intent of the plans, specification, and contract provisions. Shop drawings will be reviewed on an advisory basis. The CONSULTANT will provide a letter of recommendation and/or comments as appropriate to the COUNTY. Each sheet of shop drawings reviewed by the CONSULTANT shall be stamped by the CONSULTANT indicating the appropriate action to be taken with the submittal (approved, rejected, approved as corrected, etc.)
    - Working drawings will be reviewed as requested by the COUNTY. Working drawings will be reviewed on an advisory basis. The CONSULTANT shall provide a letter of recommendation and/or comments as appropriate to the COUNTY.
- The CONSULTANT will provide technical assistance to the COUNTY during construction of the project. This will include responses to field questions, assist coordination with the utility companies and COUNTY as necessary to respond to field changes, and meeting on site during the construction of the project when requested.
- The CONSULTANT is expected to attend COUNTY's Construction Coordination Meetings assumed to be once a month for Six (6) months following the start of construction.

Field Meetings

The CONSULTANT will attend field review meetings as deemed necessary by the SCDOT. The purpose of the CONSULTANT's site visits will be to provide the SCDOT a greater degree of confidence that the completed work will conform in general to the contract documents.

- The CONSULTANT will attend site construction visits at the request of SCDOT resulting from contractor requests for interpretation and clarification of the information presented in the plans and special provisions up to one (1) site visit.
- The CONSULTANT will attend site construction visits at the request of COUNTY resulting from contractor requests or a change in existing field conditions that differ from those presented in the plans up to one (1) site visit.
- The CONSULTANT will attend utility coordination meetings during construction to be available for questions. The CONSULTANT will provide support for utility coordination throughout construction. The COUNTY will provide day-to-day utility coordination on the project.
- Meetings resulting from errors or omissions are not included.

Other Design Activities

- Design activities and any necessary plan preparation resulting from requests by the Contractor or a change in existing field conditions that are not considered errors or omissions.
- Interpretation of Plans, Specification and Contract Provisions
    - The CONSULTANT shall be prepared to provide interpretation and clarifications of the information presented in the plans and special provisions and provide

recommendations for handling site conditions that differ from those presented in the plans.

- If requested by the COUNTY, the CONSULTANT shall revise the final construction plans to incorporate any design modifications requested by the COUNTY's field construction personnel.

Value Engineering Proposal Review

- The CONSULTANT shall review value engineering proposals submitted by the contractor.
- The CONSULTANT shall review these proposals to determine their practicality for use in the project and ensure that the proposal does not impact the integrity of the design or intent of the plans, specifications, or special provisions.
- The CONSULTANT shall provide written evaluation of the proposals along with recommendations as to whether the COUNTY should accept the proposals or not.

Services Not Provided

Services not provided by the CONSULTANT include, but are not limited to, the following:

- Lighting and Electrical plans
- Landscaping and irrigation plans
- Falling Weight Deflectometer (FWD) testing
- Video Pipe Inspection
- The CONSULTANT shall not be the "responsible engineer" referenced IN 2009-04 who evaluates the structural condition and performs the preliminary inspection of existing pipes and culverts to determine if they can be retained. The DEPARTMENT shall determine if existing pipes and culverts are to be retained due to structural conditions. The CONSULTANT will indicate the retention/extension of all existing pipes/culverts which meet the hydraulic requirements unless otherwise directed by the DEPARTMENT
- Sight-specific Response Analysis study
- Fabricating or erecting signs for public meetings
- Alternate designs for bidding
- Construction Engineering and Inspection (CEI)
- Location of water and sewer utility services for each utility customer in the project area.
- All other services not specifically included in this scope of work
- Temporary or permanent ITS
- Utility relocation design.
- Design of temporary bridge and temporary retaining wall structures.
- Permittee Responsible Mitigation (PRM) Plan

Services of the COUNTY

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

- Access to and use of all reports, data and information in possession of the COUNTY which may prove pertinent to the work set forth herein.
- 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.
- Coordinate and procure venue for Public Meeting
- Prepare and mail all public notice letters, develop media releases and coordinate promotion of meeting
- Coordinate, fabricate and erect signs promoting Public Meeting
- Develop and provide necessary hard copies of project handout, comment cards and sign-in sheets
- Provide Security guard for the public information meeting.
- Prepare responses to public comments and develop/mail response letters (at County discretion)
- Existing roadway plans.
- Provide existing signalized intersection coordination timing(s), existing interconnect plan, and location of master, if applicable.
- Provide Existing utility data provided by Utility Owners within the project area
- Contract documents (project-specific special provisions to be supplied by CONSULTANT)
- As-built roadway plans.

Schedule

Below is a summary of significant milestones and anticipated submittal timeframes:

Notice to Proceed

Surveys Complete .....2 months from NTP

Preliminary Plans Complete .....6 months from NTP

Public Information Meeting.....8 months from NTP

Public Information Meeting Summary .....9 months from NTP

Preliminary Right-of-Way Plans.....11 months from NTP

Final Right-of-Way Plans .....13 months from NTP

Right-of-Way Acquisition Complete.....26 months from NTP

Preliminary Roadway Construction Plans .....28 months from NTP

Final Roadway Construction Plans.....30 months from NTP

The submittal dates include time for COUNTY/DEPARTMENT review as noted. Per the Intergovernmental Agreement between the COUNTY and the DEPARTMENT, the DEPARTMENT has 25 business days for their review.

Clemson/Sparkleberry Intersection Imp. (Prelim. through Final Construction)
Richland County

Holt Consulting Company, LLC
MFE Version 2.46

Project Fee Summary

Fee Totals Broken Down by Task

Task	Task Description	Labor	Directs	Subs	Total	
01	Project Organization & Management	$ 133,840.00	$ -	$ 8,200.00	$ 142,040.00	8.4%
02	Surveys	$ -	$ -	$ 48,315.20	$ 48,315.20	2.8%
03	Public Involvement	$ 10,620.00	$ -	$ 23,949.61	$ 34,569.61	2.0%
		$ -	$ -	$ -	$ -	-
05	Traffic Analysis	$ -	$ -	$ 305,046.00	$ 305,046.00	17.9%
06	Geotechnical Investigations	$ -	$ -	$ 166,344.00	$ 166,344.00	9.8%
07	Stormwater Management/ Hydraulic Design	$ 107,870.00	$ -	$ -	$ 107,870.00	6.3%
08	Sediment and Erosion Control/NPDES Permitting	$ 21,300.00	$ -	$ -	$ 21,300.00	1.3%
09	Roadway Plans	$ 297,180.00	$ -	$ -	$ 297,180.00	17.5%
10	Roadway Structures	$ 41,490.00	$ -	$ -	$ 41,490.00	2.4%
11	Transportation Management Plan	$ 39,940.00	$ -	$ -	$ 39,940.00	2.3%
12	Pavement Marking and Signing	$ 26,460.00	$ -	$ -	$ 26,460.00	1.6%
13	Subsurface Utility Exploration	$ -	$ -	$ 21,085.00	$ 21,085.00	1.2%
14	Utility Coordination	$ -	$ -	$ 53,072.56	$ 53,072.56	3.1%
15	Right-of-way Services	$ 7,200.00	$ -	$ 301,315.00	$ 308,515.00	18.2%
16	Bidding Services	$ 22,860.00	$ -	$ 3,460.00	$ 26,320.00	1.5%
17	Construction Phase Support	$ 39,230.00	$ -	$ 20,995.98	$ 60,225.98	3.5%
		$ -	$ -	$ -	$ -	-
		$ -	$ -	$ -	$ -	-
		$ -	$ -	$ -	$ -	-
	Totals	$ 747,990.00	$ -	$ 951,783.35	$ 1,699,773.35	

Holt Consulting Company, LLC

Task	Task Description	Direct Labor	Overhead	Profit	FCCM	Labor Total	Directs	Total
01	Project Organization & Management	$ 133,840.00	$ -	$ -	$ -	$ 133,840.00	$ -	$ 133,840.00
02	Surveys	$ -	$ -	$ -	$ -	$ -	$ -	$ -
03	Public Involvement	$ 10,620.00	$ -	$ -	$ -	$ 10,620.00	$ -	$ 10,620.00
		$ -	$ -	$ -	$ -	$ -	$ -	$ -
05	Traffic Analysis	$ -	$ -	$ -	$ -	$ -	$ -	$ -
06	Geotechnical Investigations	$ -	$ -	$ -	$ -	$ -	$ -	$ -
07	Stormwater Management/ Hydraulic Design	$ 107,870.00	$ -	$ -	$ -	$ 107,870.00	$ -	$ 107,870.00
08	Sediment and Erosion Control/NPDES Permitting	$ 21,300.00	$ -	$ -	$ -	$ 21,300.00	$ -	$ 21,300.00
09	Roadway Plans	$ 297,180.00	$ -	$ -	$ -	$ 297,180.00	$ -	$ 297,180.00
10	Roadway Structures	$ 41,490.00	$ -	$ -	$ -	$ 41,490.00	$ -	$ 41,490.00
11	Transportation Management Plan	$ 39,940.00	$ -	$ -	$ -	$ 39,940.00	$ -	$ 39,940.00
12	Pavement Marking and Signing	$ 26,460.00	$ -	$ -	$ -	$ 26,460.00	$ -	$ 26,460.00
13	Subsurface Utility Exploration	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	Utility Coordination	$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	Right-of-way Services	$ 7,200.00	$ -	$ -	$ -	$ 7,200.00	$ -	$ 7,200.00
16	Bidding Services	$ 22,860.00	$ -	$ -	$ -	$ 22,860.00	$ -	$ 22,860.00
17	Construction Phase Support	$ 39,230.00	$ -	$ -	$ -	$ 39,230.00	$ -	$ 39,230.00
		$ -	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -	$ -	$ -
		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Totals	$ 747,990.00	$ -	$ -	$ -	$ 747,990.00	$ -	$ 747,990.00
		(A)	(B)	(C)	(D)	(E)	(F)	

Summary of DBE Qualifying Fees

	Total Fee	Qual. Percentage	Qualifying Fee
Holt Consulting Company, LLC	$ 747,990.00		$ -
Neel-Schaffer	$ 331,071.00		$ -
CSS	$ 63,630.20	100.0%	$ 63,630.20
Three Oaks	$ 22,719.61	100.0%	$ 22,719.61
IPW	$ 82,018.54	100.0%	$ 82,018.54
THC	$ 286,000.00		$ -
F&ME	$ 166,344.00		$ -
	$ -		$ -
	$ -		$ -
	$ -		$ -
	$ -		$ -
Total DBE Qualifying Fee			$ 168,368.35
Percentage of Fee Total			9.9%

Fee Summary

A - Direct Labor	$	747,990.00
B - Overhead [A x 0]	$	-
C - Profit [(A+B) x 0]	$	-
D - FCCM [A x 0]	$	-
E - Labor Total	$	747,990.00
F - Total Non-Salary Direct Expenses	$	-
G - Subconsultant Fees	$	951,783.35
Fee Total	$	1,699,773.35

fee total less profit: $1,699,773.35

Prepared by: _____

RICHLAND COUNTY ADMINISTRATION
2020 Hampton Street, Suite 4069
Columbia, SC 29204
803-576-2050

Agenda Briefing

Prepared by:	Michael Maloney, PE	**Title:**	Interim Director
Department:	Transportation	**Division:**	Click or tap here to enter text.
Date Prepared:	July 1, 2022	**Meeting Date:**	July 26, 2022
Legal Review	Patrick Wright via email	**Date:**	July 7, 2022
Budget Review	Abhijit Deshpande via email	**Date:**	July 12, 2022
Finance Review	Stacey Hamm via email	**Date:**	July 12, 2022
Approved for consideration:	Assistant County Administrator	John M. Thompson, Ph.D., MBA, CPM, SCCEM	
Meeting/Committee	Transportation Ad Hoc		
Subject	Innovista Phase 3 – Project Funding		

RECOMMENDED/REQUESTED ACTION:

The City of Columbia requests approval to receive the balance of the funds from the $50,000,000 Innovista Project once Phase 2 of the project is complete. The balance will be used to supplement other funding to complete Phase 3.

Request for Council Reconsideration: ☒ Yes

FIDUCIARY:

Are funds allocated in the department's current fiscal year budget?	☒	Yes	☐	No
If no, is a budget amendment necessary?	☐	Yes	☒	No

ADDITIONAL FISCAL/BUDGETARY MATTERS TO CONSIDER:

The maximum amount of available funds in the FY23 budget is $2,551,793.55 under JL13320104, objects 530100, 530700, and 532200. The City request will have this cap until another budget cycle is approved.

COUNTY ATTORNEY'S OFFICE FEEDBACK/POSSIBLE AREA(S) OF LEGAL EXPOSURE:

None.

REGULATORY COMPLIANCE:

None applicable.

MOTION OF ORIGIN:

"…to approve the City of Columbia's request of $150,000 of Innovista Transportation Related Project funding (Phases I, II, and III) for the City's FY22 budget. Additionally, to approve a letter of commitment to the City of Columbia for up to $4,088,663 of future Innovista Project funds to support efforts to secure outside Federal Funding (BUILD Grant or other) for the Innovista Phase III Project (aka Williams Street Connector)."

Council Member	Recommendation of the Transportation Ad Hoc Committee
Meeting	Regular Session
Date	May 4, 2021

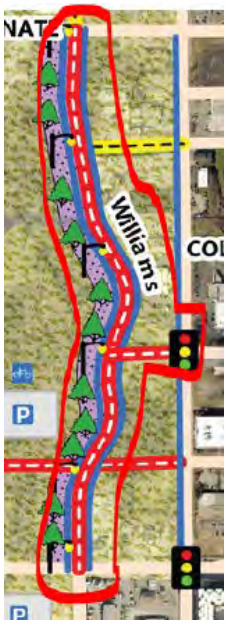
STRATEGIC & GENERATIVE DISCUSSION:

Previously, the County Council has limited the request to $4,088,663 based on staff recommendation. However, after Innovista Phase 2 is completed, there may be additional project fund balance. Funding above $4,088,663 will not be released until Phase 2 is accepted by the City, and there are additional funds available in the project balance. There is also a cap on the FY23 fund availability.

The City is applying for additional grant funding for this project. This grant will ensure the implementation of the vision represented in the master plan.

Should the City be unsuccessful in obtaining the afore mentioned grant, the following is the backup plan for use of the available funding being requested from the Penny Program:

Current project estimate for the Columbia Riverfront Gateway Project is $27,875,586. The project can be broken into smaller sections based on available funding. Current available funding includes the Penny $4 million and the State FY22-23 Budget of $9 million (Williams Street Gateway Infrastructure Project). With this funding, the project will include the extension of Williams Street (from Senate to Blossom) and extend Greene Street (from Huger to Williams), but would remove the Devine, Gist, and Pendleton new roadways as well as the trail connecting the riverfront property to Granby Park and the associated gravel parking area for trail users.



Full Project Improvements

Reduced Project Improvements

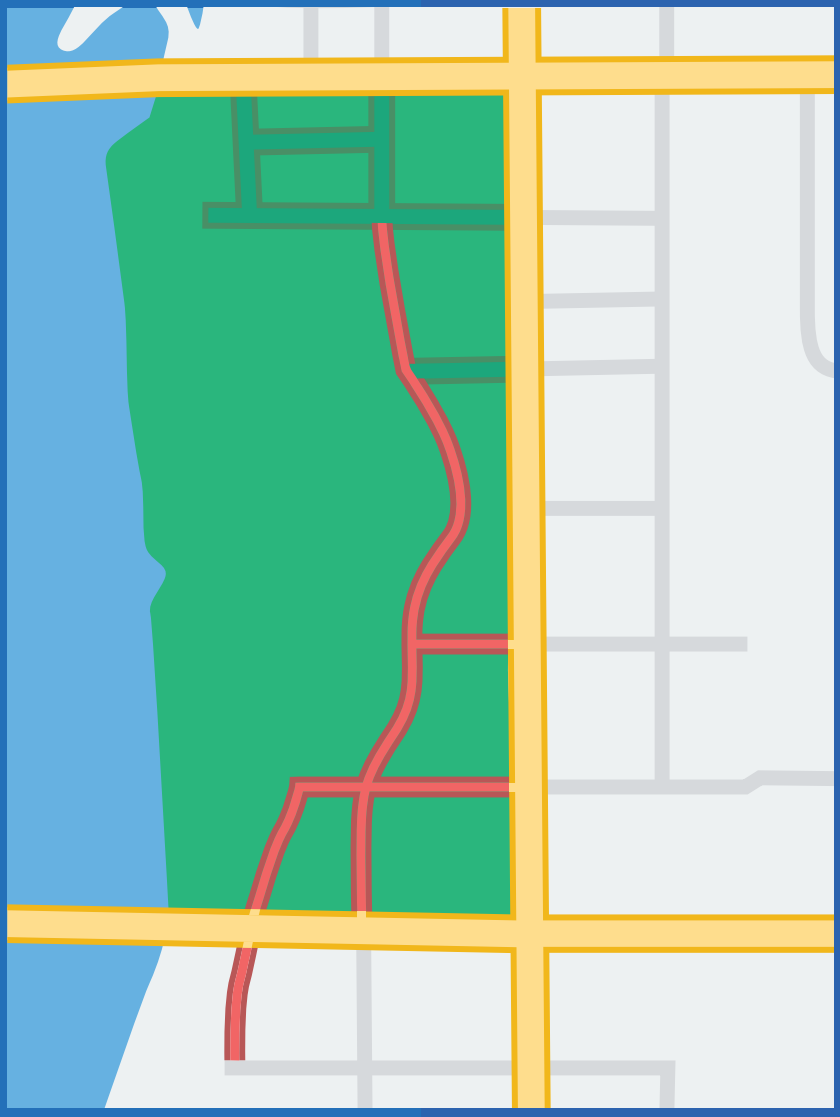
ATTACHMENTS:

1. Columbia River Gateway Project

Columbia Riverfront Gateway Project

Columbia, SC (6th Congressional District)

Application Type: Capital
Applicant Name: City of Columbia, SC
Eligible Applicant Type: Local Government



RAISE FUNDS REQUESTED
$20,671,820

Table of Contents

Please note that maps shown in the narrative are included in the RAISE Grant application as separate, larger-scale attachments so they may be viewed in more detail.

Infrastructure that improves the quality of life and reduces the carbon footprint of Columbia

Executive Summary

Proposed Project

- 5,800 ft. of new roads
- 1,500 ft. of improved roads
- 4,700 ft. of new sidewalks
- 3 electric car charging stations
- 2 bike share stations
- 5 “smart signals”
- Parking lot
- Pedestrian/Bicycle trail to Granby Park

The completed project improves safety and connectivity, alleviates traffic congestion, and reduces travel times. It addresses equity by enhancing access, removing barriers to opportunities, and increasing transportation choices and economic strength. It considers the impact of climate change by supporting a modal shift, utilizing demand management, and incorporating zero-emission vehicle infrastructure.

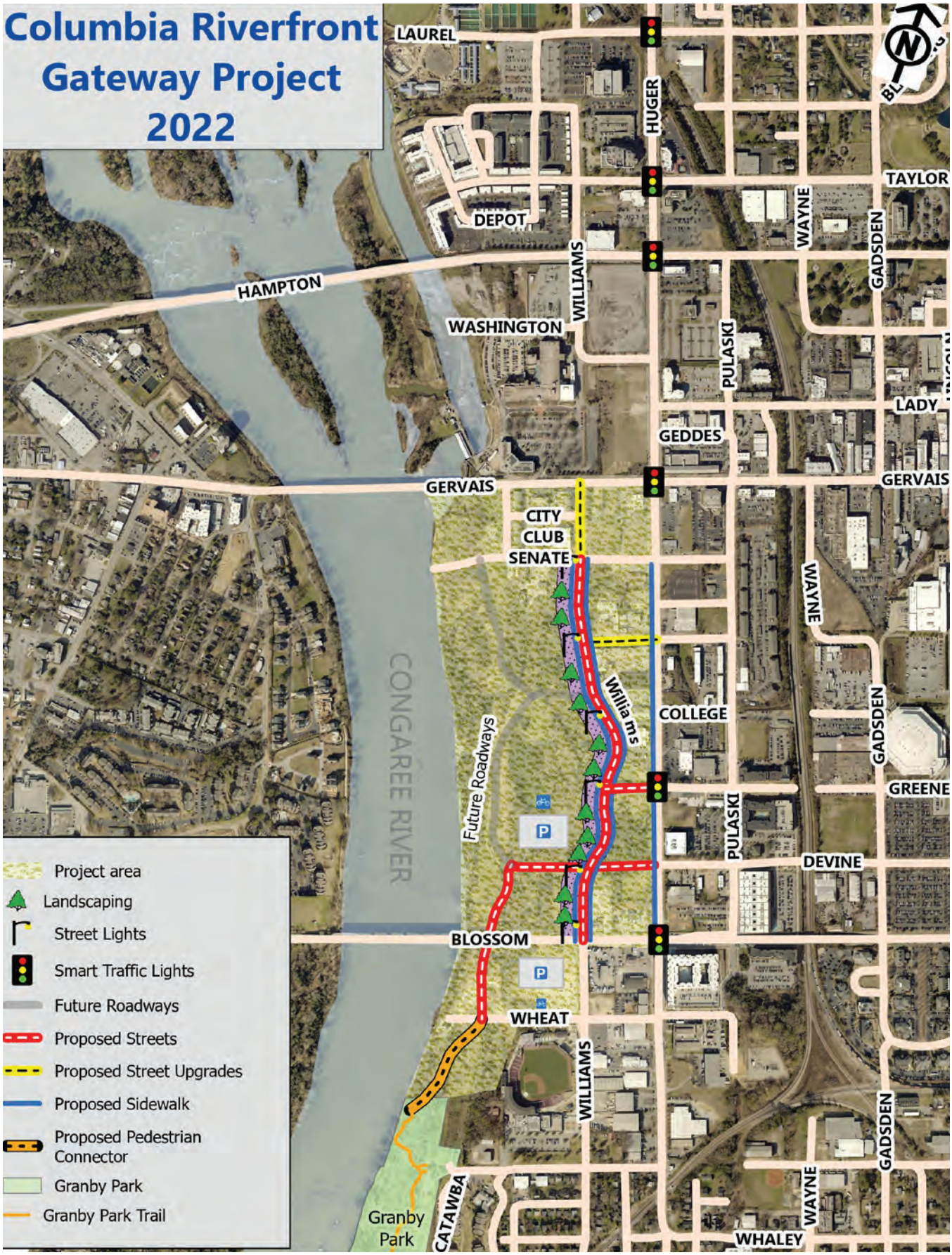
Project Area Current Condition

- Relatively untouched 70 acres on western edge of Columbia along Congaree River; no river access
- No streets in interior; streets along periphery in poor condition
- No water or sewer services or utilities in interior
- Few structures; most physically and economically obsolete
- Bordered by heavily congested primary arteries—Huger Street to the east with average daily traffic (ADT) count of 26,700 & Blossom Street to the south with 27,500 ADT
- Huger Street connects six large, high-occupancy sporting, arts, and tourism venues but has few sidewalks and no bike lanes
- Over 20 years, vehicle miles traveled increased 20%; project area population increased 50%
- 0.25% of land mass of City but almost 3% of all traffic accidents occur in project area
- Only section of City Central not experiencing significant growth

Anticipated Changes

Once completed, the project will provide local and regional benefits by:

- Alleviating travel bottlenecks, offering transportation alternatives, and moving people, goods, and services safer, quicker, and more efficiently.
- Enabling revitalization and realization of previous long-term development goals in an overburdened community.
- Providing river access, completing a regional 12.5-mile bicycle-pedestrian greenway, and offering additional, eco-friendly transportation choices.


Columbia Riverfront Gateway Project 2022
LAUREL
HUGER
DEPOT
TAYLOR
WAYNE
GADSDEN
HAMPTON
WILLIAMS
WASHINGTON
PULASKI
LADY
GEDDES
GERVAIS
CITY CLUB SENATE
CONGAREE RIVER
Future Roadways
Williams
COLLEGE
GREENE
DEVINE
BLOSSOM
WHEAT
CATAWBA
Granby Park
WHALEY
Project area
Landscaping
Street Lights
Smart Traffic Lights
Future Roadways
Proposed Streets
Proposed Street Upgrades
Proposed Sidewalk
Proposed Pedestrian Connector
Granby Park
Granby Park Trail

Project Description

Overview

The *Columbia Riverfront Gateway Project* will provide infrastructure needed to positively impact the quality of life and reduce the carbon footprint of Columbia, South Carolina. The project will develop new roadways, enhance existing roadways, and offer alternatives for motorists, pedestrians, and cyclists along a major corridor of Columbia. The project's intent is to maintain Gervais, Blossom and Huger streets as primary access routes yet reduce traffic congestion, improve safety, and augment and encourage pedestrian and bicycle usage. It will reduce connectivity barriers, level the playing field, and enable economic competitiveness for the City of Columbia and the region as a whole. This new gateway to the Congaree riverfront will be the linchpin in many of Columbia's other long-range goals and transportation plans, ones that have been years in the making for a riverfront that has been essentially untouched since the founding of Columbia in 1786. Should it receive RAISE Grant funding, it is able to move forward quickly and meet obligation date requirements.

Specifically, the *Columbia Riverfront Gateway Project* will lengthen Williams Street from Senate Street to Blossom Street. It will extend Greene Street so it intersects with the newly created Williams Street. Devine Street will be lengthened to intersect Williams Street and continue another 1.5 blocks toward the river before it turns southward, goes under the Blossom Street Bridge (as Gist Street), and intersects with Wheat Street. Here, a pedestrian/bicycle trail will be installed to connect the project area to Granby Park. Moderate improvements will also be made to the sections of existing streets that intersect with the proposed new roadways. Sidewalks will be added along the eastern edge of the project area on Huger Street, and "smart signal" technology will be installed along this entire corridor. Three dual-port electric car charging stations, a parking lot, and two bike share stations will be installed in the project area, too.

The following are transportation challenges the project will address.

Traffic Congestion

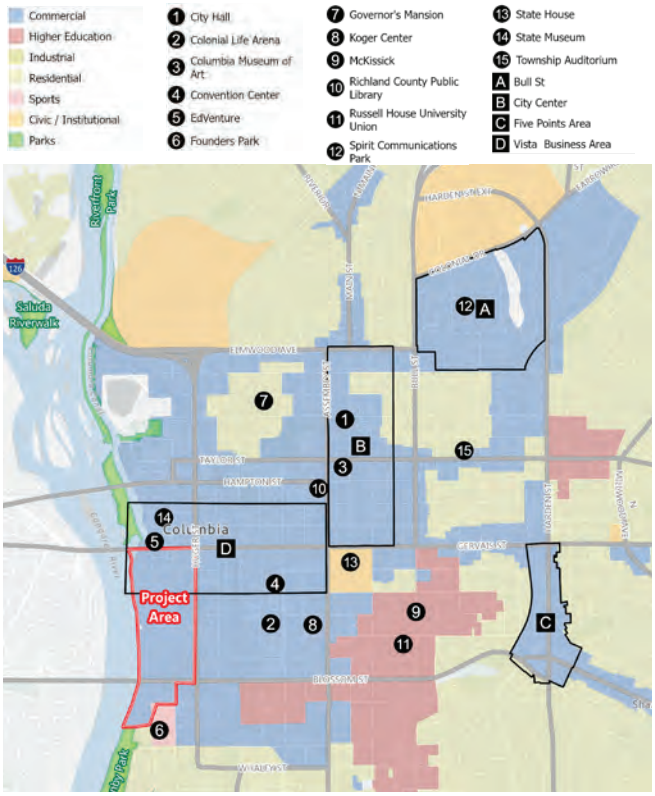
Columbia is the commercial, educational, and governmental center of the region and is experiencing growth structurally, economically, and demographically. Columbia's Metropolitan Statistical Area (MSA) population has increased more than 29% since 2000 and is expected to increase another 10% by 2030 and another 25% by 2060. In fact, the population of Census Tract 29 (in the project area) has increased almost 50 percent during that same time, and it is expected to increase a phenomenal 189 percent by 2050 according to *Central Midlands Region Population Projection Report 2020-2050* (2018). Improved transportation systems and options must be made so acceptable levels of service, safety, equity, and accessibility are maintained for Columbia's MSA and its visitors.

Huger Street, the project's eastern border, is a 4-lane, undivided 35 mph roadway with an annual average daily traffic (AADT) count of 24,900, changing to a 6-lane roadway with an AADT count of 35,900 near its intersection with Gervais Street, the project's northern border. A primary transportation improvement will be the use of innovative signalization technology along the Huger Street corridor, which allows traffic to move more efficiently and reduce traffic delays. These, in turn, result in decreased travel time through the City, improved intersection and pedestrian safety, and less traffic congestion from special events.

This is especially beneficial because the project corridor currently serves as a gateway to arts, entertainment, and

sports events by providing access to downtown Columbia, restaurants, businesses, and entertainment and athletic venues. It is also a primary route to many institutions/destinations near the project area, such as the University of South Carolina campus, Founders (baseball) Park, the Columbia Metropolitan Convention Center, Colonial Life Arena, Williams Brice (football) Stadium, the Koger Center for the Arts, and many others. Improvements such as those proposed will certainly mitigate traffic congestion and positively impact the City and the region. More streamlined, effective traffic flow will allow motorists, cyclists, and pedestrians a more cost-effective, eco-friendly, and efficient access to their homes, places of employment, and a myriad of nearby event venues.

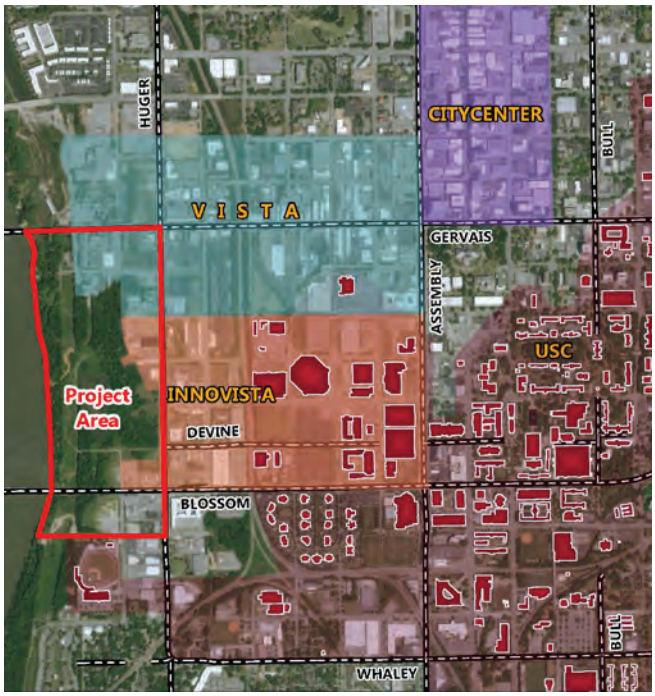
The project's proposed changes *are especially* timely as the SC Department of Transportation (SCDOT) has announced it will close and replace the structurally deficient Blossom Street Bridge located between Huger and Gadsden streets over



the Norfolk Southern and CSX Transportation railroads. With an ADT of between 26,900 and 31,700, Blossom Street is a major east-west connection across downtown Columbia and one of the three connections across the Congaree River to West Columbia. Consequently, construction for this project (which is scheduled to begin in 2023 or 2024) will significantly impact traffic patterns and greatly increase congestion in the area. Having more efficient traffic flow on Huger or an additional north-south option via Williams and Gist streets, will help mitigate the anticipated surge in congestion.

Inadequate Bike/Pedestrian Infrastructure

The project area's heavily congested streets currently have few sidewalks and no dedicated bike paths or lanes. Planned improvements for pedestrian and bicycle accommodations include enhanced connection points to Huger, Blossom, and Gervais streets and new sidewalks, pedestrian paths, and bike facilities along the proposed project, including two bike share stations. Pedestrian-level lighting will be included as part of the project to ensure pedestrians and cyclists recognize this roadway as a safe and useful alternative to the heavily traveled and congested primary routes.



This project will permit bike/pedestrian infrastructure and connectivity as a *planned and integral* part, as opposed to elements that must be incorporated into existing roadways and development. This results in a well-designed system that is safer and will better serve all users. Consequently, the infrastructure improvements proposed by the *Columbia Riverfront Gateway Project* will offer transportation choices that enhance the livability and promote needed economic opportunities not only for the project corridor but also of the surrounding areas and region as a whole. These enhancements address the systemic inequities in the US transportation system. Providing separate bike/pedestrian facilities addresses equity in that they provide a safe route, connect citizens without the use of a car to jobs and amenities, and increase neighborhood desirability.

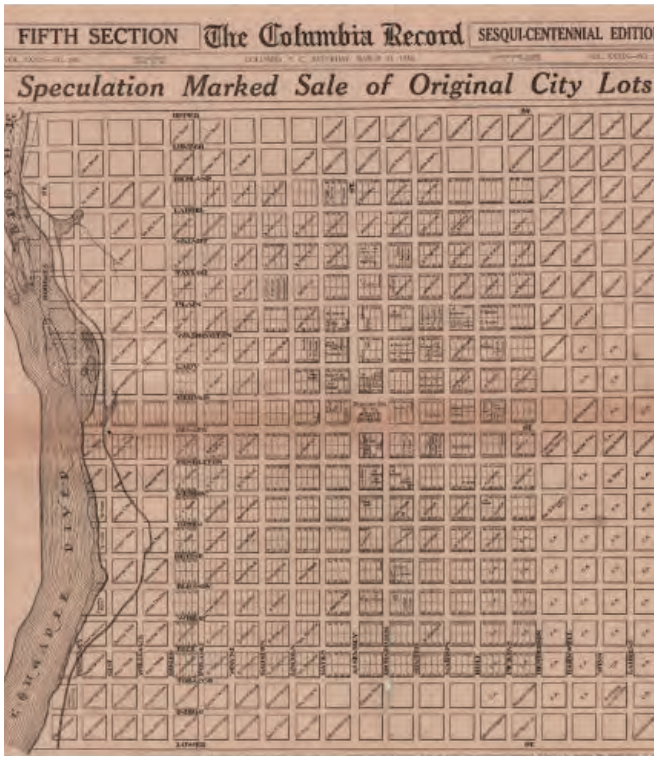
Development Barrier

In its present state, the majority of the project area—the undeveloped land—lacks streets, utilities, paths, or greenways. In addition to being a barrier to connectivity, the lack of infrastructure impedes development and the City's revitalization plans. Using the State Capitol as the unofficial center of downtown Columbia, you will see the project area is surrounded by the Central Business District, the University of South Carolina (UofSC), the Vista, and the Innovista—all of which are experiencing significant growth and development *except* the project area. For example, Columbia's Downtown District underwent an extensive redevelopment initiative from 2003-2010, which spurred more than $400 million in new construction, renovation, new businesses, and new residences along Main Street and the Central Business District. Additionally, in the late 1990s, a project west of the City's Downtown District—the Vista—led to more than $500 million in new investments and created a nationally recognized arts and entertainment district. Finally, during the past 15 years, UofSC and the Innovista have seen the completion of $231 million worth of housing projects, the $37.4 million Columbia Convention Center, $228 million worth of UofSC projects, and about $60 million in additional public infrastructure projects, including the Greene Street Bridge (currently under construction and scheduled to open summer 2022).

These developments would not have happened without the public infrastructure needed to support and connect those facilities. Growth in the City directly correlated to where infrastructure enhancements occurred, more specifically, where that infrastructure provided connectivity among key developments and attractions. As it sits now, the undeveloped land is an obstacle to progress and improvement. For revitalization to occur in this overburdened community along the western edge of Columbia, the infrastructure proposed in the *Columbia Riverfront Gateway Project* must be completed.

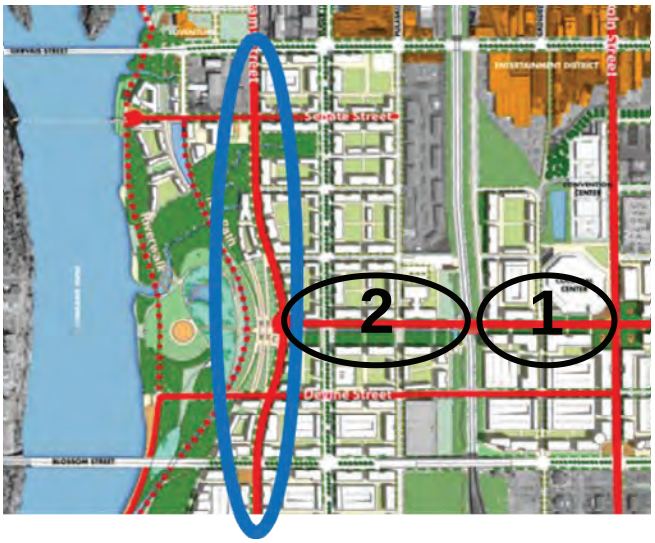
Project History

Components of the *Columbia Riverfront Gateway Project* have been part of the long-range vision for Columbia as evidenced by their inclusion or mention in numerous earlier (or current) plans, studies, and recommendations. In fact, Williams and Gist streets were part of Columbia's original 1786 perfect street-grid design by John Gabriel Guignard, although they were never completed. Today, Guignard's descendants have reserved a parcel of land to complete Williams Street, while the UofSC Development Foundation has land allocated for Gist Street.


FIFTH SECTION The Columbia Record SESQUI-CENTENNIAL EDITIO

Speculation Marked Sale of Original City Lots

The first major comprehensive planning effort undertaken was in 1905 with The Improvement of Columbia, South Carolina and then mentioned again in the 1969 Central City Columbia, South Carolina Master Plan.



The extensions of Greene and Devine streets are part of the original 2007 Innovista Master Plan. This three-phased plan aimed to capitalize on a unique opportunity to extend the historic street grid mentioned previously; construct mixed-use housing, offices, retail spaces, and research facilities; and increase connections between the downtown and the nearby river. Greene Street, in fact, serves as the Plan's principal pedestrian, cyclist, and vehicle transportation spine between the two areas. Phase 1 of this multi-modal project was completed in 2017. Phase 2 began in early 2020, includes the new Greene Street Bridge, and is scheduled to open summer 2022. This bridge provides pedestrians, cyclists, and vehicles direct access to Huger Street for the first time in decades. The last phase of this original plan—the land west of Huger Street (i.e., the project area)—remains undeveloped.

Major amendments to TCP 2018: The Columbia Plan (2008) included the adoption of the Plan Columbia: Land Use Plan (2015), which thoroughly updated the land use elements of TCP 2018, and Walk Bike Columbia (2015), which detailed long-range bicycle and pedestrian elements. Both identified areas for corridor planning and transportation efforts such as those detailed in this project.

The project dovetails (and facilitates) several of the goals of the University of South Carolina 2010 Master Plan, such as integrating all modes, improving the bicycle system, and promoting a pedestrian friendly campus. Moreover, in its 2018 update, one of the planning priorities was to "connect the campus to the Congaree River."

The project's Gist Street intersection with Wheat Street was discussed in the Capital City Mill District and Corridor Plan (2017), as well as a greenway connection between Granby Park (in the district) and Riverfront Park (just north of the project area), which cannot occur without the proposed Gist Street's access. This project also follows through on recommendations put forth in the City of Columbia Climate Protection Action Plan (updated 2020), including expanding community bicycle infrastructure and additional measures to improve traffic signal synchronization. Envision Columbia Vision Statement identifies what the ideal state for citizens, businesses, students, and tourist should look like as Columbia celebrates its 250th anniversary in 2036. It has been at

the forefront of the comprehensive plan update (as required by SC State Code of Laws) outlined in *Columbia Compass: Envision 2036* (2020). The *Transportation* section reiterates the City's stance that transportation is about mobility and accessibility for all. The *Columbia Riverfront Gateway Project* reinforces those plans and brings them to life.

Detailed Statement of Work

To alleviate or mitigate these transportation challenges, the Columbia Riverfront Gateway Project will:

- Construct a new roadway (i.e., Williams Street) that connects Gervais Street (US Routes 1 and 378) to Blossom Street (US Routes 21 and 76), and extend existing roadways (i.e., Devine Street and Greene Street) from Huger Street (US Route 321) to the newly created roadway (i.e., Williams Street). Devine Street will traverse Williams Street and extend an additional 610 feet westward toward the Congaree River before it turns southward, goes under the Blossom Street Bridge (as Gist Street), and intersects with existing Wheat Street.
- Add significant sections of fill to overcome topographic challenges on-site due to existing storm water channels and an old, abandoned railroad corridor.
- Install curbs and gutters.
- Install utilities to include storm drainage, water, sanitary sewer, and underground power to meet the needs of the corridor.
- Enhance existing sidewalk connectivity and construct new sidewalks in conjunction with the proposed roadways.
- Add ADA-compliant intersection ramps in areas where existing roadways connect to the proposed roadways.
- Install pedestrian-level lighting along the proposed roadways and sidewalks to encourage safe pedestrian access.
- Install landscape along the roadway/sidewalk areas (e.g., trees along the street, landscaped medians in strategic areas, etc.).
- Incorporate parking along portions of the project to support the parking demands in the area. Include an environmentally friendly parking lot adjacent to the pedestrian connectivity to Granby Park, accommodating visitors to the park as well as providing parking support for Founders Park.
- Provide bike-friendly facilities (to include bike lanes and bike racks) and install two public bike share stations, each of which would include 16 docks, 1 kiosk with wayfinding features, and 12 bicycles.
- Install one electric vehicle charging station.
- Add ADA-compliant sidewalks along Huger Street from Blossom Street to Gervais St.
- Upgrade existing signalized intersections along Huger Street from Blossom Street to Laurel Street with smart signal technology, which adjusts signal timing to real-time traffic conditions.
- Extend pedestrian and bicycle connectivity from Wheat Street to Granby Park via a greenway extension facilitating connectivity along the riverfront between the park system and the residential communities adjacent to Granby Park.

A Detailed Statement of Work is attached to this application.

Project Location

The *Columbia Riverfront Gateway Project* is located in Columbia, SC, (a Census-designated Urbanized Area, UACE #18964), which lies at the geographic center of the state. Columbia serves as the county seat of Richland County, as well as the state capitol. Anchored by the City of Columbia, the Columbia Metropolitan Statistical Area (MSA) is comprised of six counties (Calhoun, Fairfield, Kershaw, Lexington, Richland, and Saluda) and its estimated population is 829,470 according to the 2020 Census. The population of the City of Columbia is 136,632 (2020 Census), although its daytime population easily doubles that number. It is the second largest city in South Carolina by population but the largest city by land mass.

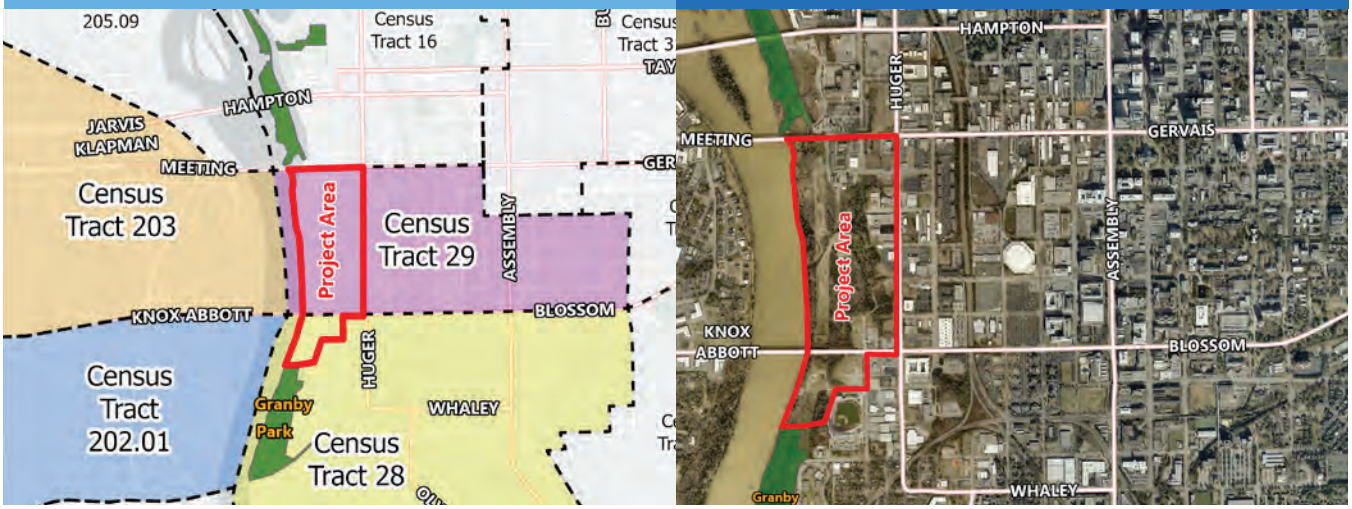
The project area is bordered to the north by Gervais Street, to the south by Wheat Street, to the east by Huger Street, and to the west by the Congaree River. Across the river lie the cities of West Columbia (directly to the west of the project area—across the Gervais Street Bridge) and Cayce (to the southwest of the project area—across the Blossom Street Bridge).

The Census Tracts in which the project lies (29 and 28), as well as the two that lie directly across the river (Census Tracts 203 and 202.01) are deemed "Areas of Persistent Poverty." Census Tracts 28 and 203 are also deemed as "Historically Disadvantaged Communities." Census Tracts 203 and 202.1 are also deemed Federally Designated Opportunity Zones.

According to the US Census, the number of persons in poverty in Columbia (22.8%) is double that of the nation (11.4%), and the median household income in Columbia ($47,416) is 27% less than the US average ($64,994). Additionally, the white-only population of the US is 76.3%, yet it is 52.6% in Columbia. Many of these factors (i.e., resultant socio-economic stressors in the area) have contributed to the area's persistent environmental health disparities. Consequently, the term 'overburdened community' has often been assigned to the City of Columbia.

Largest City
in South Carolina
by land mass

Columbia Metropolitan Area
Estimated Population
829,470



1. 2020 Census 2. U.S. Bureau of Labor Statistics, May 2021

Grant Funds, Sources, and Uses of All Project Funding

Project Costs

The total cost of the Columbia Riverfront Gateway Project is $27,875,586.

Sources & Amount of Funds

The City of Columbia respectfully requests $20,671,820 in RAISE Grant funding. It will provide a non-federal match of $7,203,766, which represents 26 percent of the total project cost.

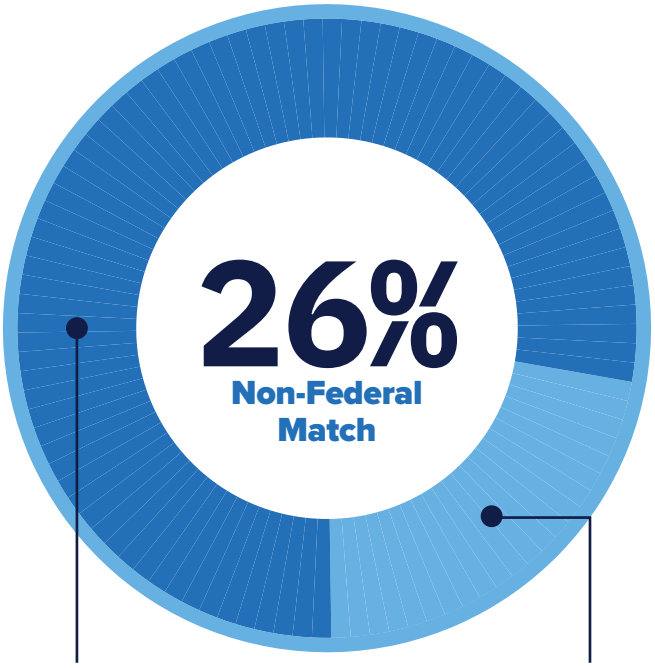
Non-Federal & Federal Funding Commitments

The sources of the non-federal match funds are the Richland County Penny Sales Tax; Guignard Associates, LLC (the primary landowner in the project area); and the University of South Carolina Development Foundation. Documentation of these commitments is included with this application as attachments.

Of the $50 million Richland County Penny Sales Tax monies that have been designated to the Innovista Transportation-Related Projects, close to $46 million is being spent on construction of Greene Street improvements while $4,088,663 has been allocated to Williams Street construction. The University of South Carolina Development Foundation will donate approximately 4.75 acres of land (valued at $2,157,003) south of Blossom Street on which the Gist Street extension and the trail to Granby Park will be built. Guignard Associates, LLC, will donate 0.846 acres of the land (valued at $958,100) north of Blossom Street on which parts of Williams Street, Greene Street, and the Devine Street extension will be built.

Aside from RAISE Grant funding, no additional federal funding is being utilized for the project.

Total Project Cost
$27.87MM



RAISE Grant
$20.67MM

Non-Federal Match
$7.2MM

Budget & Use of Funds

The following is a funding breakdown for the project. As shown, 62.73% of the project budget is allocated to construction costs, while approximately 37.27% is devoted to non-construction costs. A Detailed Project Budget is also attached to this application.

PROJECT ELEMENT	ESTIMATED COST	NON-FEDERAL FUNDS	RAISE GRANT FUNDS	OTHER FEDERAL FUNDS
Mobilization/Traffic Control/ Quality Control	$1,100,000	$284,268	$815,732	$0
Grading	$1,330,438	$343,819	$986,618	$0
Roadway	$2,225,125	$575,029	$1,650,096	$0
Drainage/Erosion Control	$1,828,625	$472,564	$1,356,061	$0
Landscape	$2,355,719	$608,778	$1,746,941	$0
Traffic Signalization (6 intersections)	$241,056	$62,295	$178,761	$0
Water & Sewer Improvements	$885,063	$228,723	$656,340	$0
Street Lighting	$517,500	$133,735	$383,765	$0
Electrical	$1,253,494	$323,935	$929,559	$0
Gist Street Bridge	$1,500,000	$387,638	$1,112,362	$0
Bike Stations	$375,000	$96,910	$278,090	$0
Charging Stations	$125,000	$32,303	$92,697	$0
Pedestrian Trail Bridge	$250,000	$64,606	$185,394	$0
Parking Area	$585,869	$151,403	$434,465	
Subtotal Construction	$14,572,888	$3,766,008	$10,806,880	$0
20% Contingency	$2,914,578	$753,202	$2,161,376	$0
Construction Cost	$17,487,465	$4,519,209	$12,968,256	$0
Design Services (4% of Est. Construction Cost)	$699,499	$180,768	$518,730	$0
CM/CEI Services (7% of Est Construction Cost)	$1,224,123	$316,345	$907,778	$0
Right of Way Acquisition	$8,225,100	$2,125,577	$6,099,523	$0
Right of Way Acquisition Temp	$239,400	$61,867	$177,533	$0
Total Project Cost	**$27,875,586**	**$7,203,766**	**$20,671,820**	**$0**

Merit Criteria

Columbia's RAISE Application, if funded, will have significant impact both locally and regionally. It will result in improved safety and connectivity, enable economic opportunities, reduce congestion, expand transportation choices, and address climate change and racial equity.

Safety

The *Columbia Riverfront Gateway Project* will provide significant safety benefits. The project will develop new roadways and enhance existing roadways in the project corridor so that all users—motorists, cyclists, and pedestrians—are better and more safely served.

According to a study conducted by the Columbia Police Department (CPD) from January 2016 to March 2022, 1,005 accidents occurred within an area encompassing the project corridor. (The CPD study borders are the Congaree River on the west, Gervais Street to the north, Blossom Street to the south, and Pulaski Street to the east, which is one block east of Huger Street.) Although the study area of 0.35 square miles represents only 0.25% of the 134.9 square miles of Columbia, the collisions reported represent 2.62% percent of the total collisions within the City. Overall during the study, two intersections of the three major thoroughfares accounted for more than 59% of the collisions—Gervais at Huger and Blossom at Huger.

Additional proposed roadway improvements include building 12-foot wide lanes, correcting the existing deteriorating roadway surface by repaving, enhancing roadway aesthetics by using imprinted and textured pavement stamping for designated crosswalks and landscape amenities where appropriate, improving night traffic safety with street lighting, and creating pedestrian routes and crosswalks.

For pedestrians, cyclists, and mass transit users, the project will adjust sidewalks and curbs to better pedestrian paths, crosswalks, bus stop locations, as well as meet ADA requirements. Sidewalk "bump outs" will be constructed at intersections to improve safety and aesthetics. Pedestrian signal heads will also be upgraded or added at intersections within the project corridor to coordinate pedestrian movements with the "smart signal" technology. Pedestrian signal heads provide traffic signal indications exclusively intended for controlling pedestrian traffic. They consist of the illuminated symbols of a walking person (representing *walk*) and an upraised hand (representing *don't walk*).

(green: 1-2 crashes; black: 3-4 crashes; red: 5+ crashes)

By adding these connectivity measures, bicyclists and pedestrians traveling through the City are no longer forced onto busy streets with no dedicated paths, lanes, and sidewalks, thereby improving safety. Combining dedicated bike paths and the proposed public bike share stations magnifies these safety benefits. As cities build more protected bike lane networks, the number of cyclists is increasing and the risk of injury or death is decreasing, research from the National Association of City Transportation Officials (NATCO) shows.

Improved safety measures are critical as South Carolina, unfortunately, continues to be among the lowest-ranked states with respect to bicycle and pedestrian safety (specifically, regarding the number of per capital fatalities for pedestrians and bicyclists as a result of crashes with motor vehicles). According to the *2018 Benchmarking Report* by the Alliance for Biking and Walking, South Carolina ranked 40th among states for walking safety and 46th among states for bicycle safety. Although 2.4 percent of work trips in South Carolina are by bicycle or foot, bicyclists or pedestrians account for more than six times that amount (15.3 percent) of traffic fatalities in the state.

From 2015-2019 nationwide, the Alliance reported that 11 bicyclists are killed per year per 10,000 bicyclists who bike to work. However, that number is almost three times that amount in South Carolina with 41 deaths per 10,000 bicyclists who bike to work. Pedestrians in South Carolina fared no better. The national number of pedestrian deaths per 10,000 pedestrians who walk to work is 16 while that number is double in South Carolina with 32.

Safety gains are particularly important for low-income people and people of color, who make up a large part of the cycling population but often lack protected bike lanes in their neighborhoods. They disproportionately bear the burden of fatalities and injuries from dangerous drivers and poorly designed streets. An analysis from the League of American Bicyclists found that Black and Hispanic cyclists had a fatality rate 30% and 23% higher, respectively, than white cyclists, and similar racial/ethnic safety gaps were found for pedestrians, too. In South Carolina, 48% of pedestrian fatalities and 50% of bicyclist fatalities are non-white (including Hispanic and unknown race).

These proposed changes will be even more critical when the Blossom Street Bridge will be torn down/replaced, and congestion is exacerbated greatly. While the bridge project recommends that safe and adequate pedestrian and bicycle detours be developed for the area to maintain a low risk for vehicular collisions with pedestrians and bicycles, those safety measures do not currently exist in the area. Moreover, the new bridge renderings include sidewalks on the bridge and improved bike/ped connections under the bridge, thereby making our project's proposed lanes and sidewalks all the more necessary for connectivity and accessibility.

Another primary transportation improvement that will improve safety in the area is the use of innovative signalization technology along the Huger Street corridor. In addition to reducing travel time and congestion, the adaptive "smart signal" technology can compensate for unexpected changes in traffic patterns, such as storm evacuations or special events. This is especially pertinent for this area as the project area lies along one of the main thoroughfares to the SC State Fairgrounds (which averages almost a half million visitors annually) and the 80,250-seat Williams-Brice (UofSC football) Stadium. The project area is also adjacent to the 8,242-seat Founders (UofSC baseball) Park, and in close proximity to the 18,000–seat Colonial Life Arena, the 2,256-seat Koger Center for the Arts, the 142,500 square foot Columbia Metropolitan Convention Center, and the 60,000 square foot UofSC Alumni Center event venue. Having smooth traffic flow in this area is critical, especially when two or more major events occur simultaneously.

Independent studies have shown crash reductions from 5 to 20 percent occur when "smart signals" are implemented. Such crash reduction numbers are compounded by the other infrastructure enhancements planned, all of which should provide significant benefits from a traffic accident perspective and result in an expected fewer property damage and injury accidents within the project corridor.

Environmental Sustainability

The *Columbia Riverfront Gateway Project* will reduce congestion and make it easier and safer for pedestrians, bicyclists, and mass transit users to access Columbia's downtown area and destinations along the project corridor. The new and improved roads, enhanced sidewalks and bike facilities,

and improved lighting, landscaping, and road amenities will also foster commercial revitalization and economic development, providing commercial and employment opportunities within cycling and walking distance of residential neighborhoods, UofSC, and along the project corridor, which is encircled by seven CMRTA bus routes.

Approximately 28,000 vehicles per day travel across the Gervais Street Bridge. The average daily traffic (ADT) volumes for Huger Street (between Blossom and Devine Street) is 26,700, and the ADT for the Blossom Street Bridge is 27,500. In addition, the ADT at the intersection of Huger and Gervais streets (just north of the project corridor) is 57,381, and the ADT at the intersection of Huger and Blossom (just south of the project corridor) is 47,777. (2019 SC Department of Transportation)

Improving signalization from the proposed adaptive signals will create more efficient traffic flow and decreased stops, resulting in an approximate average travel time reduction of 6.4 percent (as reflected in the attached BCA Spreadsheet). The benefits include decreased travel time through the City, reduced air pollutant emissions from vehicles during stops, improved intersection and pedestrian safety, and reduced traffic congestion from special events such as concerts and sporting events.

Columbia implemented a bike share system, Blue Bike SC, in 2018. Centered in the downtown area, the system offers 17 short-term bicycle rental stations. Between the system's launch in August 2018 and January 2020, the system's 135 bikes have been ridden more than 47,000 miles in 18,000 trips. The COMET (i.e., the region's bus system) invested in the program in 2019 to fund 8 additional stations and allows COMET (mass transit) users to ride a Blue Bike free of charge. The project's two additional bike share stations will further augment the City's existing network and reinforce its commitment to sustainability.

To further reduce the impact on climate change, the project seeks to install three dual-port charging stations and parking spots for zero-emission

vehicles. The EV charging stations not only help Columbia achieve its climate change goals, they lower emissions and pave the way for other forms of clean transportation. EV charging stations also increase property value, lower the cost of driving, and support environmental justice. As an added bonus, the EV charging stations create future income potential for the City of Columbia through timed EV charging rates. All major auto manufacturers have announced plans to produce all or most of their vehicles as EV only before the end of this decade. Having these stations would put Columbia ahead of the curve in this migration to e-cars. The City would benefit with potential income stream, EV owners with convenience, and the environment with cleaner air.

With improved traffic flow and redesigned areas that encourage walking and cycling, the number of vehicles in the area would predictably decline. Consequently, this reduction in the number of cars and vehicle miles traveled reduces the amount of Green House Gas (GHG) emissions produced by vehicles in the area. Motor vehicles generally have the highest level of pollution-output-per-mile in the first few miles of operation—those miles before the engine have warmed up. That is why using walking or cycling as a substitute mode for short neighborhood trips is such an environmentally beneficial option. Such changes not only decrease pollution and vehicle usage, they also translate to a national reduction in oil dependency.

The planned improvements to the project area are expected to reduce the amount of travel time in

the area, thereby resulting in quantifiable emission savings. In fact, the total number of annual weekday vehicle hours traveled (VHT) savings in passenger car-hours is 685,625 and 28,568 in truck-hours (as reflected in the attached BCA Spreadsheet).

Given the adjacency of the project area to the Congaree River, careful consideration will be given to the storm water management systems utilized to ensure that water quality remains a project priority. Measures to reduce and minimize silt and trash debris in the storm water conveyed to the river may include rain gardens, bioswales, forebays, infiltration trenches, pervious pavements, water quality drainage box inserts, and other features consistent with Best Management Practices (BMPs).

Reducing congestion, emissions, and the City's carbon footprint begins with new transportation management. When discussing sustainability, Columbia realized sustainable transportation options must be at the forefront of those discussions, as reflected in its Climate Action Plan and its updated master plan, Columbia Compass: Envision 2036. Columbia's commitment to achieving these goals is evidenced by its engaging a platform for green development, modal shifts, and demand management technology from this project's beginning.

Quality of Life

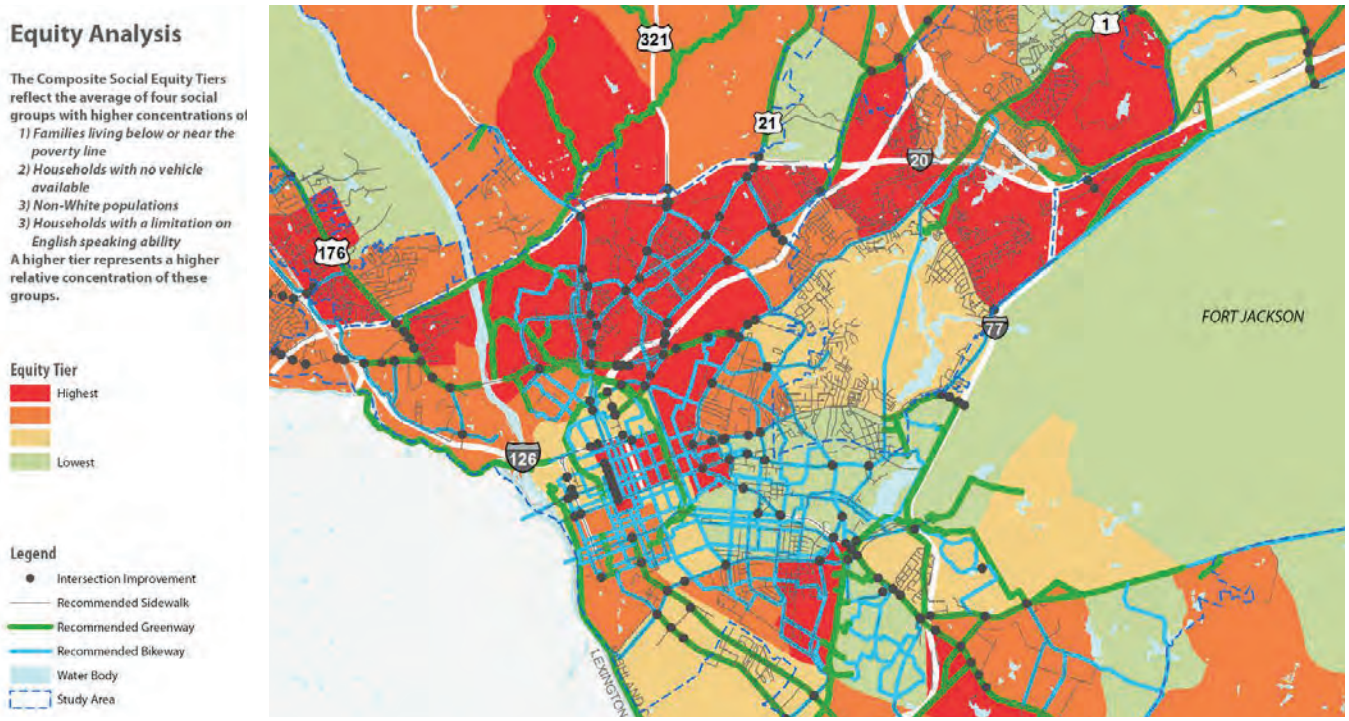
The *Columbia Riverfront Gateway Project* will greatly improve the quality of life and working environments not only in the affected local neighborhoods but throughout the City and the Midlands Region as a whole. The additional roadways and various transportation improvements will positively impact user mobility, reduce congestion, and create affordable and equitable transportation choices by improving accessibility and connectivity. It will also increase desirability of this overburdened neighborhood and enable revitalization, including the completion of the regional greenway and development of a proposed waterfront park.

Continued population and economic growth in South Carolina—and Columbia in particular—have resulted in a significant increase in the demand for mobility, as well as an increase in vehicle miles of travel (VMT). Resultant congestion on South Carolina's urban highways is growing because of increases the past two decades in vehicle travel (about 20%), movement of goods (almost 51% [GDP]), and population (15%).

To foster a high quality of life in Columbia, it is critical that the City provide and preserve a safe and modern transportation system that can accommodate future growth in population, vehicle travel, and economic development. Additionally, it must work to integrate various modes of transportation, which will not only reduce congestion but also create a pedestrian- and bicycle-friendly atmosphere that will positively impact mobility and increase accessibility.

More streamlined traffic flow, less congestion, and more transportation choices will allow motorists, bus riders, cyclists, and pedestrians a more cost-effective and efficient access to their homes and places of employment. Adding bike shares to bike lanes and sidewalks also addresses equity and mobility efforts and connects citizens without the use of a car to jobs. This is an important factor as Census Tract 29 has a relatively high share of people who commute to work by foot (33.6%) or bicycle (1%). Additionally, in Census Tract 28, 16.1% of commuters walk to work and 1% cycle. To the northeast of the project (Census Tract 31), 27.9% of its residents walk and 1.9% cycle to work. Providing the means to navigate the area efficiently and safely will greatly benefit not only those living within the project area but those surrounding it as well. (Census Reporter, ACS 2020 5-year)

Walk Bike Columbia, Columbia's 20-year master plan mentioned previously, envisions an expanded and accessible network of transit, sidewalks, greenways, trails, and on-street bicycle connections linking people to jobs, schools, and other destinations in an equitable and sustainable manner. The plan's recommendations were built upon, among other parameters, a comprehensive equity analysis that measured families in poverty, households with no vehicle, non-white population, and households with



limited English-speaking proficiency. Concentrations were plotted in tiers, and the project area reflected the second highest equity tier.

Columbia is the job center of the region, with more than 40% of Columbia residents working within the downtown area. Additionally, most of the employee market in the downtown area is comprised of employees from service or office-oriented businesses within a few miles of the project corridor. The centrality of the region's jobs in downtown Columbia, therefore, presents challenges and opportunities. The highly centralized commute pattern highlights the importance of preserving mobility to regional job centers and providing a range of transportation commute options, including a highly connected grid system and enhanced bicycle/pedestrian options.

Negative heath effects related to the transportation system can fall hardest on vulnerable members of the community, such as low-income residents, minorities, children, persons with disabilities, and older adults. Households in low-income areas typically own fewer vehicles, have longer commutes, and have higher transportation costs, too. Inadequate or substandard infrastructure in low-income and minority communities prevent people from using active transportation (i.e., walking or cycling) and make it unsafe for those who do rely on these modes to get around, leading to higher incidences of collisions involving pedestrians and cyclists. Strategies taken to improve equity—increase active transportation, improve safety, improve air quality, and improve connectivity—are found in the *Columbia Riverfront Gateway Project*. Currently, as this area is predominantly undeveloped (or underdeveloped), it has poor to no streets and lighting, no sidewalks, and excessive vegetation, making pedestrian and bicycle access uncomfortable and inconvenient (or impossible). New and upgraded streets, sidewalks, bike lanes, landscaping, lighting, signage, and mass transit amenities as proposed in this project develop and improve the visual character of the corridor. Such enhancements are not only esthetically pleasing in the overburdened community, but are also integral to retail, commercial, and residential growth.

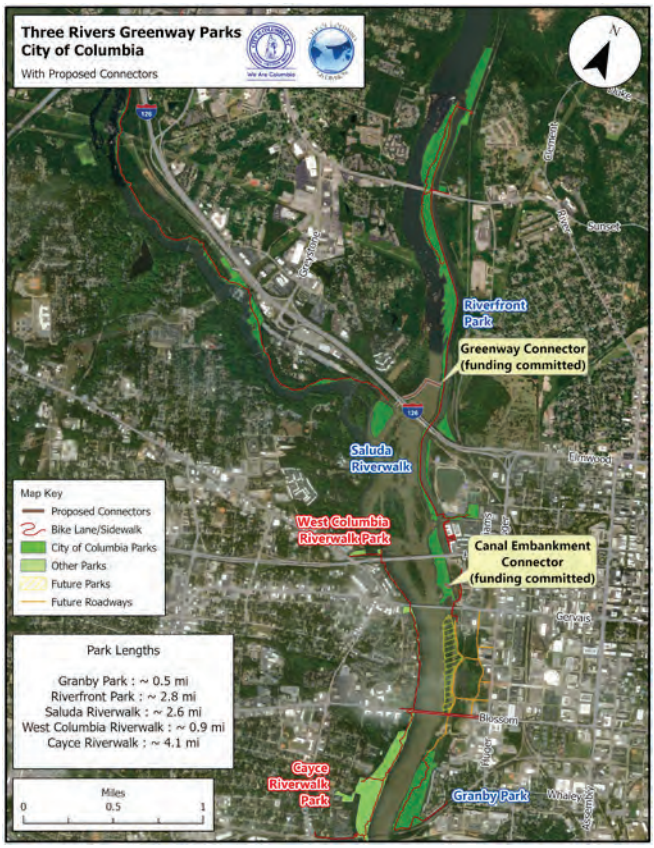
More bicycle- and pedestrian-friendly thoroughfares will enhance the livability of the project corridor and surrounding neighborhoods. They will have an immediate positive impact on the affected college campus (UofSC), as well as on the lives of the

students, staff, and faculty. Enhancements such as these align perfectly with the Walk Bike Columbia Plan. The proposed infrastructure improvements augment access to economic opportunities and social services, lessening poverty by providing quality transportation that, in turn, promotes economic opportunities and growth.

Improves Mobility and Community Connectivity

This project will provide significant benefits to the City of Columbia while also adding meaningful enhancements to portions of Cayce and West Columbia, cities located just across the Congaree River from the project area. Both the Blossom Street Bridge and the Gervais Street Bridge include sidewalks used by residents who travel between Columbia and West Columbia/Cayce, and a significant number of individuals commute to work each day via car, bicycle, or on foot between the cities. While these areas are not part of this application, their close proximity to the project area (only 500 feet) will ensure that their residents, businesses, and visitors will also feel the impact of this project when completed. The enhancements proposed in this project will allow for more transportation choices and make this area in particular—and the Midlands Region as a whole—more accessible to everyone. It has often been said that "a rising tide lifts all boats." The *Columbia Riverfront Gateway Project* can be the economic catalyst to do just that.

The project elements will allow motorists, cyclists, and pedestrians a more cost-effective and efficient access to their homes, places of employment, a myriad of nearby event venues, and the Congaree River. Moreover, additional bicycle- and pedestrian-friendly thoroughfares enhance the livability of the corridors, surrounding neighborhoods, and the adjacent University of South Carolina campus, as well. These relatively unaltered 70-acres on the western edge of the City occupies almost 4 percent of the downtown acreage, but its lack of infrastructure sits in stark contrast with the rest of the City Central.



As mentioned earlier, the lack of infrastructure through this large swath of land adds to congestion on the large vehicular thoroughfares bordering the project area, as there are no alternate north-south routes between Gervais and Blossom streets. This also poses additional connectivity (and safety) challenges to bicyclists and pedestrians traveling through the City since they are forced onto busy streets with no dedicated paths, lanes, or sidewalks. The lack of streets, paths, or greenways in this undeveloped area also means all residents, regardless of travel mode, are denied access to the Congaree River. Moreover, these barriers are preventing the completion of the Three Rivers Greenway, a regional trail system comprised of three riverwalks on both sides of the Congaree River. The project area is the critical missing link to the 12.5-mile linear park.

Over the past decade, Columbia and its sister cities on both sides of the Congaree, Broad, and Saluda rivers have completed over 15 miles of publicly

accessible riverwalk. The Three Rivers Greenway is a regional trail system comprised of three riverwalks on both sides of the Congaree River. The project area is the critical missing link to the completion of the 12.5-mile linear park. The project's proposed roadways would enable the completion of this trail system and make the area publicly accessible for the first time in more than 230 years.

The long-anticipated Columbia Waterfront Park will also become a reality with the creation of these streets. Considered the "jewel in the crown" of the Innovista Master Plan, the park will cap development of the Greene Street spine from downtown Columbia and the UofSC campus to the Congaree River. As outlined in several of the attached Letters of Support, creation of this park will allow for direct access to the Congaree River via an expansive waterfront deck, a new kayak/canoe launch, and a completed network of walking and biking trails. Current park planning also includes a botanical garden and a wildlife interpretive center.

We can anticipate the park will revitalize the area and accelerate private, multi-use development in adjacent properties. It will spur new investment, serve as a catalyst for tourism, and become a significant public amenity that greatly enhances the quality of life of residents and visitors who will benefit from the development of this much-needed green space within the City of Columbia.

Economic Competitiveness and Opportunity

The improvements in transportation outcomes envisioned by this project will translate into long-term economic productivity for the Midlands Region as a whole and Columbia in particular. The proposed roadways will advance the area's economic competitiveness by increasing land productivity, tourism opportunities, and expanding and attracting private development, which will result in commercial growth and long-term job creation. By increasing the efficiency of the movement of goods and services, the *Columbia Riverfront Gateway Project* will reduce congestion, thereby lowering transportation costs and decreasing the cost of doing business—both of which are beneficial to business owners and ultimately consumers. In addition, by enhancing multi-modal connections to centers of employment, education, and services, the project creates a pedestrian- and bicycle-friendly atmosphere. Doing so positively impacts user mobility and improves accessibility, consequently promoting equity by providing more transportation opportunities for the area's under-employed and disadvantage populations.

In *The Economic Impacts of the Richland County Transportation Plan* (Miley & Associates, Inc., October 2012, Page 3—a copy of which is attached to this application), the Williams Street extension and related improvements are "one of the most potent components in the Transportation Plan in terms of ongoing economic impacts." The direct economic impact indicated that the construction of Williams Street would result in the development of more than 1.1 million new square feet of office and commercial development, along with the creation of 1,400 new jobs and $3.4 million in annual property taxes, not including the capital investment that would occur as properties in the surrounding areas are also developed.

Since that study was completed in 2012, the City can now generate more up-to-date (and more impressive) numbers from three sources: (1) figures from project-ready landowners/developers within/adjacent to the project corridor, (2) figures from actual developments near the project corridor, and (3) updated projections for three key districts directly adjacent to the project.

1. Project-Ready Landowners/Developers

Attached to this application are letters of support from surrounding property owners indicating they will make their property available for development or redevelopment, as well as developers who will develop/redevelop their property to its highest and best commercial use when the proposed roadways are constructed. Property owners include Guignard Associates, LLC, Stormwater Studios, State Credit Union, University of South Carolina Development Foundation, and Dominion Energy. The following developers with properties adjacent to or near the project area have provided the following plans and projections:

DEVELOPER	DEVELOPMENT SQUARE FOOTAGE	CAPITAL INVESTMENT	ANNUAL PROPERTY TAXES
Kahn Development Company	270,000	$30-$45 million	$600,000 - $1.3 million
PMC Property Group	225,000	$58 million	$900,000

2. Surrounding Area Growth

To illustrate the extent of actual development taking place, the five properties listed here (which are located east of the project area across Huger Street) have been completed since 2012 and have resulted in an average redevelopment of 63,124 sq. ft. per acre and produced $98,113 in property taxes per acre. (A compilation of before and after photos of this growth is attached to this application.)

Development Since 2012

PROPERTY	ACREAGE	SQUARE FEET	PROPERTY TAX (2019)
Greene Crossing 1	2.0	103,500	$228,270
Greene Crossing 2	2.7	155,800	$338,220
Greene Crossing 3	3.8	99,720	$241,400
Palmetto Compress Warehouse	3.8	352,600	$320,900
Park Place	3.9	311,000	$460,640
Total	**16.2**	**1,022,620**	**$1,589,430**
Averages		**63,124 sq. ft./acre**	**$98,113 property tax/acre**

As shown in the "CDC Development and Investment Overview" flyer attached to this application, Columbia has experienced a significant amount of growth and development in the area surrounding the project site within the last decade. Twenty-nine projects totaling nearly $1 billion have been developed along the perimeter of the project site in that period. This immense level of development gives the City high confidence in its projection of future development.

NON-RESIDENTIAL INVESTMENT $402.3 M

1. **SC STATE MUSEUM** 301 Gervais Street
2. **ALLSOUTH FEDERAL CREDIT UNION** 730 Elmwood Avenue
3. **LAND TECH** Lady at Huger
4. **CITY MARKET** 707 Gervais Street
5. **ALOFT HOTEL** Lincoln at Lady
6. **HYATT PLACE HOTEL** 823 Gervais Street
7. **USC ALUMNI CENTER** 900 Senate Street
8. **MOORE SCHOOL OF BUSINESS** 1705 College Street
9. **HORIZON II** Blossom at Assembly
10. **KROGER SUPERCENTER** 301 S. Assembly Street
11. **AGAPE SENIOR CENTER** 1614 Main Street
12. **COLUMBIA MARRIOTT** 1200 Hampton Street
13. **USC LAW SCHOOL** Gervais/Pickens/Senate/Bull
14. **SPIRIT COMMUNICATIONS PARK** Bull Street
15. **HILTON GARDEN INN & HOMEWOOD 2 SUITES** 1615 Gervais Street
16. **GREENE STREET REDEVELOPMENT** Greene Street

RESIDENTIAL INVESTMENT $577.5 M

1. **CANALSIDE PHASE III** 383 Taylor Street
2. **PULASKI SQUARE** 900 Pulaski Street
3. **GREENE CROSSING** 708 Pulaski Street
4. **PALMETTO COMPRESS WAREHOUSE** 612 Devine Street
5. **PARK PLACE** Blossom at Huger
6. **612 WHALEY** 612 Whaley Street
7. **PARK 7 GROUP** Assembly at Pendleton
8. **650 LINCOLN PHASE 1 AND 2** 650 Lincoln Street
9. **HUB AT COLUMBIA** 1426 Main Street
10. **LAND BANK APARTMENTS** 1401 Hampton Street
11. **STATION AT FIVE POINTS** Gervais at Harden
12. **KLINE CITY CENTER** Gervais at Huger
13. **BULL STREET COMMONS** Bull Street

TOTAL INVESTMENT $979.8 M

3. Potential Future Growth

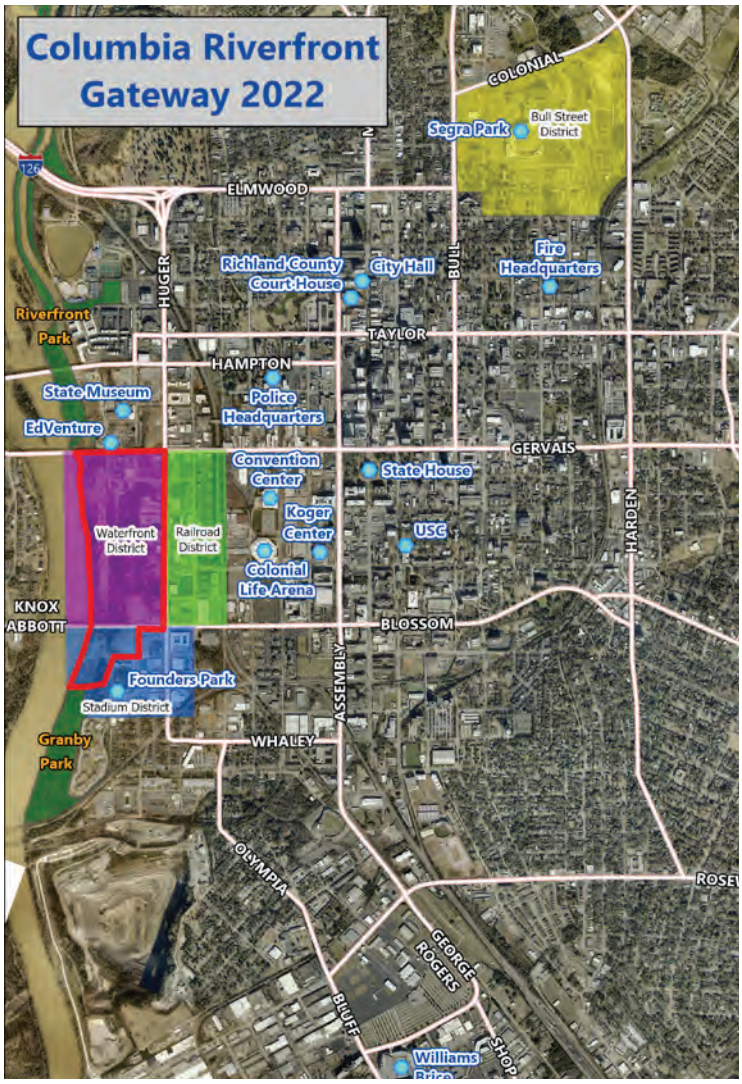
To get a more accurate picture of the redevelopment potential for the areas adjacent to the Williams Street extension—that is, one based on actual numbers from actual projects constructed within the City—the average square footage per acre and average property tax per acre have been calculated for the undeveloped parcels in these areas.

The areas studied are the:

1. Waterfront District—the land between Huger Street and the proposed Williams Street directly adjacent to the envisioned Columbia Waterfront Park.
2. Railroad District—the land between Huger Street eastward to the railroad.
3. Stadium District—the land across Blossom Street near the UofSC baseball stadium, Founders Park.

Projecting the build-out of all three areas over the next ten years—using averages based on the actual redevelopment that has occurred in the area since 2012—one can reasonably project that up to 4.7 million sq. ft. of development is possible, which could result in nearly $7.3 million in annual property taxes (based on 2019 numbers). As shown in the table below, it is reasonable to project that as a result of the *Columbia Riverfront Gateway Project*, new investment in these three districts would total almost $880 million or more over the next decade. The majority of this development would not occur without the USDOT's investment in the infrastructure improvements proposed by the *Columbia Riverfront Gateway Project*. That infrastructure, in turn, would lead to significant local investment in the project site and these three districts.

The acreage in the Waterfront District that is currently vacant or underdeveloped will become "waterfront property" once Williams Street is constructed, too, which will significantly increase its value. The estimated property value increase for these acres (especially once the Columbia Waterfront Park is built) is at least 40% based on results from similar park projects.



PROPERTY	ACREAGE	SQUARE FEET POTENTIAL	PROJECTED CAPITAL INVESTMENT	PROPERTY TAX POTENTIAL
Waterfront	26.6	1,679,117	$213,502,765	$2,609,805
Railroad	24.3	1,533,930	$195,042,000	$2,384,145
Stadium	24.0	1,514,993	$192,634,074	$2,354,711
Total	**74.9**	**4,394,994**	**$601,178,840**	**$7,348,661**

RAISE Grant request
$20,671,820

Projected Capital Investment
$601,178,840

Benefit
$1 → $29.08

Public investment in road improvements is generally followed by private investment. Tax dollars improving traffic flow, pedestrian access, and appearance are a signal to the private sector that there is a real commitment to improving the area—and private dollars ensue. The previously mentioned Innovista Master Plan projected that, for every $1 of public money invested in infrastructure, $7.60 of private sector development would follow. As reflected in these anticipated development numbers and the actual development numbers of the City Center, the original 2007 projection was actually quite conservative and today represents a very attainable goal.

The Council of Economic Advisers determined that one job-year is created by every $76,923 in transportation infrastructure spending. Of this, 64% represents direct and indirect effects, and 36% represents induced effects. Using this analysis, the City of Columbia's RAISE application has the potential to create approximately 296 jobs, with approximately 190 of those being direct and indirect. Moreover, the Alliance for Biking and Walking reported that bicycle and walking projects create from 11 to 14 jobs per $1 million spent and that up to $11.80 in benefits is gained for every $1 invested in making an area bicycle and pedestrian friendly. Job projections deduced from all these studies illustrate how this project has the potential to make a very definite economic difference for Columbia and the Midlands Regions of South Carolina.

State of Good Repair

The *Columbia Riverfront Gateway Project* will ensure good condition of transportation infrastructure by:

Reducing traffic on primary arteries surrounding the project area.

Without Williams Street, Huger Street will continue to be the only North-South connector in the project area. This strains the existing roadway, causing greater damage with ever-increasing volumes. In turn, operations and maintenance costs increase and the life expectancy decreases, requiring more frequent capital improvements.

Improving traffic flow with adaptive signal (i.e., "smart signal") technology

The project's reduction in the number of stops required at intersections and the potential mode shift will also directly benefit the longevity of the pavement along Huger, Blossom, and Gervais streets. By providing additional green time on the approaches through the reduction of stops, the frequency of stops and the potential for stopping vehicles at speed are reduced. Pushing or shoving of pavement, especially with tractor trailer configurations, is common at intersections with frequent stops. The design proposed will help to minimize the occurrence of this, thus extending the life of the pavement. Furthermore, the design will increase the foundational structure of the roadway to provide additional resiliency to pushing of pavement, especially in the summer months when asphalt temperatures can increase significantly.

Providing new development opportunities close to work centers.

Live-work-home developments can be accessed via more direct routes—walking, cycling, or less vehicular miles traveled (i.e., shorter commutes). Moreover, higher density developments within the project area or on adjacent properties will result in higher tax revenues to cover transportation impacts, operations, and maintenance once the area is developed.

Encouraging non-motorized transportation alternatives.

Other modes of connectivity such as the planned bicycle lanes and pedestrian trails are less costly to maintain than roads. They also reduce congestion; thereby adding to the reduction to wear and tear on the nearby roads.

Repairing and repaving existing substandard roadway.

Reinforcing the existing side streets (i.e., Pendleton and the beginning spur of Williams) sustains a longer lifespan of these roads and decreases lifecycle costs.

The proposed roadway improvements and bicycle/vehicle transportation features will produce an increase in pedestrian, bicycle, and mass transit usage, additional road capacity, reduced congestion, and decreased travel time—all of which will contribute to decreased operational costs for drivers and the City alike.

Partnership and Collaboration

Unlocking the waterfront area of Columbia between the Wheat Street and Gervais Street has been an aspiration of the City of Columbia, the University of South Carolina, and other entities within the region *for decades*. This project brings together the community in a unique partnership of stakeholders who share a transforming vision for Columbia. As previously discussed, millions of dollars—federal, state, and local—have been directed to social and economic development initiatives within Downtown Columbia. Community partnerships have been an integral part of these revitalization efforts and critical to their success. More than 40 organizations—property owners, vested developers, businesses, nonprofits, governmental entities—have been very involved in the planning process of the *Columbia Riverfront Gateway Project*, all of whom have provided verbal and/or written commitment.

Principal Partner

UNIVERSITY OF SOUTH CAROLINA

The state's flagship university with 35,000+ students, 7,000+ faculty/staff, and hundreds of thousands of annual visitors to its research campus

While the City of Columbia is the lead applicant, part of the *Columbia Riverfront Gateway Project* will be done in partnership with SC Department of Transportation (SCDOT) and built according to SCDOT standards. Although Huger, Gervais, and Blossom streets (the streets around the periphery of the project area) are located in the City of Columbia, they are owned and maintained by SCDOT. Because Williams, Devine, Greene, Gist, and Wheat streets are owned and maintained by the City of Columbia, the City will administer work within the project boundaries. Columbia will provide and certify the inspections and other City services, as well as manage the construction aspects of the project. The City will own Williams and Gist streets once completed, as well as the other on-site roadways developed as a result of this project.

This broad range of collaborators demonstrates how this transportation project integrates with other development and public service efforts in the area. The project elements (long-sought-after goals of the collaborators) are innovative, sustainable, equitable, and transformative for residents and tourists alike. This myriad of stakeholders—the City of Columbia, UofSC, various governmental agencies, business organizations, nonprofit entities, commercial developers, and private landowners—are ready and anxious to catalyze change in an underutilized area and transform the City and the entire Midlands Region. These letters speak volumes about the importance of this project and reflect its regional and national significance.

Innovation

Currently, the traffic signals along Huger Street—the main artery into the project area—operate independently of each other. This conventional signal system uses pre-programmed, daily signal timing schedules. This results in poor traffic signal timing, which contributes to traffic congestion and delays. However, the *Columbia Riverfront Gateway Project* plans to implement adaptive signal technology (i.e., "smart signal"), which adjusts the timing of red, yellow, and green lights to accommodate changing traffic patterns and eases traffic congestion.

Conventional signal systems use pre-programmed, daily signal timing schedules that do not monitor system performance, nor can they adjust automatically to accommodate traffic patterns that are different from the peak periods during which they were designed to operate. Adaptive signal control technologies adjust when green lights start and end to accommodate current traffic patterns to promote smooth flow and ease traffic congestion. The main benefits of adaptive signal control technology over conventional signal systems are that the technology can:

- Automatically adapt to unexpected changes in traffic conditions.
- Improve travel time reliability and prolong the effectiveness of traffic signal timing.
- Reduce congestion and fuel consumption.
- Reduce the complaints that agencies receive in response to outdated signal timing.
- Make traffic signal operations proactive by monitoring/responding to gaps in performance.
- Allow for needed real-time customization to support the many sporting, arts, and entertainment events happening in close proximity to the project site.

By receiving and processing data from sensors to optimize and update signal timing settings, adaptive signal control technologies can determine when and how long lights should be green. First, traffic sensors collect data. Next, traffic data is evaluated, and signal timing improvements are developed. Finally, the adaptive signal control technology implements signal timing updates. The process is repeated every few minutes to keep traffic flowing smoothly. Traditional signal retiming might only repeat this process every 3 to 5 years.

The traditional signal timing process is time-consuming and requires substantial amounts of manually collected traffic data. Traditional time-of-day signal timing plans do not accommodate variable and unpredictable traffic demands, which result in customer complaints, frustrated drivers, excess fuel consumption, increased delays, and degraded safety. Customer complaints are the most frequently cited performance measure in operations surveys conducted by the FHWA. In their absence, months or years may pass before inefficient traffic signal timing settings are updated. However, this technology continuously collects information and updates signal timing accordingly.

Project Readiness: Environmental Risk

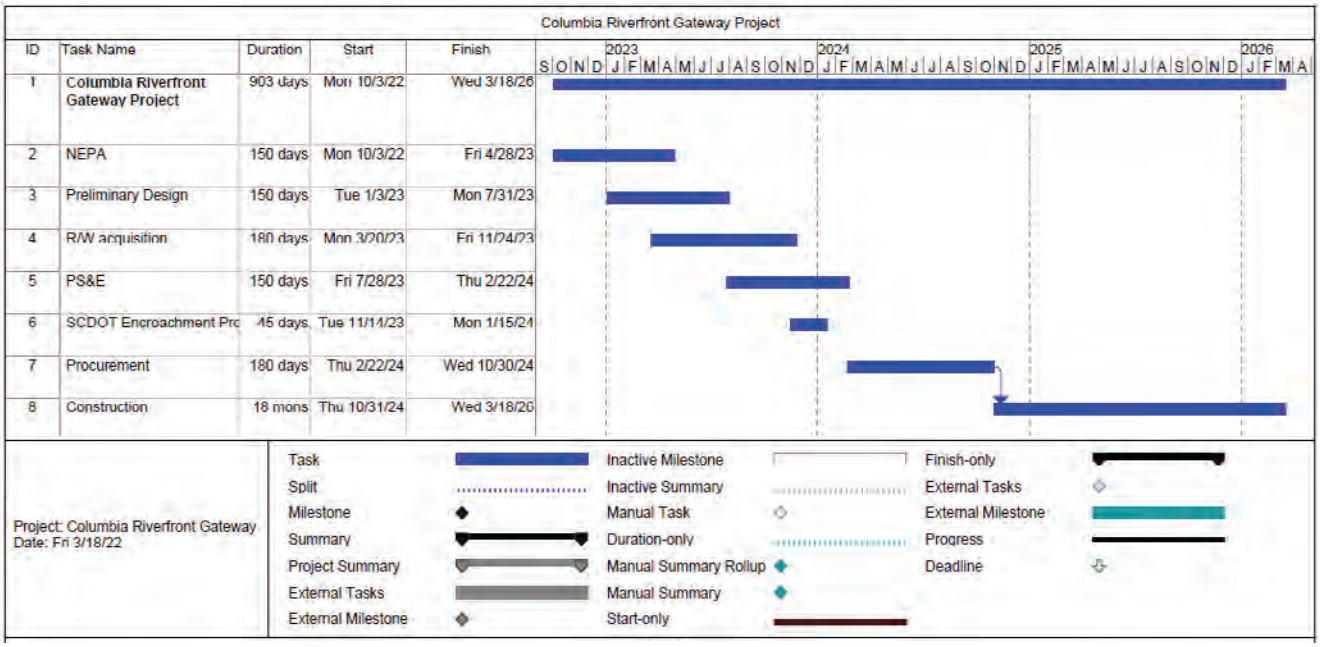
As demonstrated by the Detailed Statement of Work and Detailed Budget mentioned previously, the Columbia Riverfront Gateway Project is technically and financially feasible. As supported by the Detailed Project Schedule and information regarding approvals, risks, and environmental permits provided below, this project is ready to move forward quickly and would be able to meet all local, state, and federal requirements by the September 30, 2026, obligation date should it receive RAISE funding.

Project Schedule

The Detailed Project Schedule (a copy of which is attached to the application) contains a list of all project milestones and shows that the Columbia Riverfront Gateway Project will be completed in a timely manner. It demonstrates that all necessary pre-construction activities will be completed by September 30, 2026, that construction can begin quickly, and that funds will be spent steadily and expeditiously once construction starts. It allows enough float time to deal with unexpected delays without putting the funds at risk of expiring before they are obligated. (Utility needs such as water, sanitary sewer, storm drainage, electrical, communication, etc., necessary to support the project and associated development have been identified and are also included in the project.)

Pre-construction activities that have been completed already include:

- Boundary and topographical surveys
- Master planning
- Preliminary civil engineering
- Preliminary cost estimating
- Limited geotechnical and environmental investigations
- Zoning compliance and analysis of available utilities



Required Approvals

Should it be funded, the *Columbia Riverfront Gateway Project* is ready to move forward quickly. No right-of-way and easement acquisitions are necessary for the traffic signal work along Huger Street because it is an existing roadway and the signal systems are currently operated by the City of Columbia. However, these activities will need to take place for Williams Street, the extension of Devine and Greene streets, and the creation of Gist Street. Preliminary discussions regarding acquisitions necessary prior to construction have begun (as reflected in the attached Letters of Support from affected landowners within the project area) and will be completed prior to the September 30, 2026, obligation date. Gist Street will require multiple permits; however, Columbia has had an initial site visit with SCDOT to discuss the extension underneath the Blossom Street Bridge and received favorable feedback. As discussed below, the City is prepared to begin the National Environmental Policy Act (NEPA) process, which would be completed well before the deadline, too. Design work would also conclude prior to that date. Consequently, RAISE Grant funding would allow work on the *Columbia Riverfront Gateway Project* to begin quickly. The majority of the requested funding would, therefore, be allocated for construction costs associated with the project.

Environmental Permits and Reviews

The City of Columbia is experienced with all environmental and National Environmental Policy Act (NEPA) regulations/guidelines including, but not limited to, 23 Code of Federal Regulations (CFR) 771 and 40 CFR Parts 1500-1508. Therefore, the City understands the critical milestones in the NEPA process and has programmed those elements into the project's master schedule. As shown in the Detailed Project Schedule, the NEPA document will be completed and signed by all responsible parties prior to September 30, 2026.

The City has been involved in preparing and/or supporting a multitude of NEPA documents over the years. As with previous efforts, the City's Engineering Department will be the lead project manager working alongside a consultant to prepare the necessary documentation and complete the process. In anticipation of the RAISE Grant submittal, effort is already underway to determine the path forward and pull needed documentation together as it relates to this project in preparation of proceeding immediately upon award notification. The City anticipates a designation of a Categorical Exclusion based on the preparation of the preliminary design.

State and Local Approvals

Additional legislative approvals (e.g., user fees, toll rates, etc.) are not applicable or necessary for this project. However, the *Columbia Riverfront Gateway Project* is broadly supported by local elected officials and the area's state and national legislators.

Federal Transportation Requirements Affecting State and Local Planning

Because there has been no federal funding allocated to the *Columbia Riverfront Gateway Project* to date, it does not appear in the SC Statewide Transportation Improvement Program (STIP). However, the Central Midlands Council of Governments (CMCOG), in discussion with the SC Department of Transportation, has added the *Columbia Riverfront Gateway Project* to its Long-Range Transportation Plan (LRTP), which is the 25-year transportation vision for the metropolitan area. If federal funds are approved, it could be formally placed in the STIP. With RAISE Grant funding announcements anticipated in the summer of 2022, the *Columbia Riverfront Gateway Project*, if selected for funding, could be placed in the STIP well in advance of the obligation deadline.

Assessment of Project Risks and Mitigation Strategies

Because the *Columbia Riverfront Gateway Project* is bordered by three streets that are main arteries for the City of Columbia (i.e., Huger, Gervais, Blossom), their heavy day-to-day usage and the location of existing businesses and utilities along these corridors need to be taken into consideration. Potential obstacles before, during, and after construction will need to be mitigated as much as possible. Methods to manage these obstacles have been proposed as follows:

Environmental Issues

While there are no expected Recognized Environmental Concerns within this project's footprint, environmental site assessment and geotechnical investigations will be performed, to include records searches and on-ground inspections in an effort to mitigate risks from potentially hazardous materials.

Utility Impacts and Issues

With the exception of the connection points to the existing corridors, there are no utilities along the project route that will require relocation. However, all of the utilities necessary to support the development that will occur as a result of the project are being planned for as part of this RAISE Grant submission to ensure this project results in development-ready parcels. The City of Columbia is the water and sanitary sewer provider to the site and will own the storm drainage installed as part of the project. In addition, coordination effort is already underway to include other necessary utility providers in the scope of the project so that a well-planned design and construction schedule is secured.

Right-Of-Way Impacts and Issues

Preliminary discussions regarding acquisitions necessary prior to construction have begun (as reflected in the attached Letters of Support from affected landowners within the project area) and will be completed prior to the September 30, 2026, obligation date. The acquisition will proceed using the same methodology utilized for the previous phases of the Innovista Master Plan project mentioned previously (e.g., Greene Street Phase 1 and Phase 2). The property owners involved in acquisitions pertaining to this project are familiar with those guidelines and thus, the acquisition should proceed without delay once the exact location of the proposed roadway is designed, and limits are known.

Work Zone Safety & Traffic Control

Due to the scope of the project, it is important to mitigate construction impacts to local businesses, traffic, pedestrians, etc., to minimize effects. Close communication with the City of Columbia and frequent communication with local residents will occur to address potential community issues before they are critical. Public information meetings will be held early to allow the public to weigh in on the scope of the project and the traffic control during construction operations. Traffic control plans will be detailed to minimize impacts to local vehicle and pedestrian traffic. Pedestrian traffic issues will be identified early on to allow continued access during construction, as well as implementing safe pathways during construction. Due to the high volume of traffic and issues surrounding construction requirements, no on-street parking will be allowed in work zones where there is active construction activity. Fortunately, construction activities will be primarily relegated to the undeveloped parcel of land within the project area; therefore, minimal inconveniences to the existing corridors during construction are anticipated.

Benefit-Cost Analysis

A Benefit-Cost Analysis (BCA) was conducted for the *Columbia Riverfront Gateway Project* (a copy of which is attached to this application). Based on the results of this analysis, the benefits realized are 5.61 (NPV 7%).

The *Columbia Riverfront Gateway Project* is a transformative project focused on creating critical mobility connections through 70 undeveloped acres along the western edge of the City of Columbia, the Congaree River. The project will construct approximately 5,800 ft. of new roads; improve 1,500 ft. of existing roads; create 4,700 ft. of new sidewalks; add a ped/bike trail from the project area to Granby Park; provide 3 dual-port electric car charging stations, a parking area, and 2 bike share stations; and install "smart signals" along 5,750 ft. of roadway. The overall project will improve safety for all users and remove barriers for mobility across all modes—especially the most vulnerable of users who depend on pedal or feet power to move within Columbia. Beyond creating equitable access and enhanced safety, the project will also reduce congestion through the implementation of adaptive signals, which in turn improves the quality of life for adjacent residents and facility users, as well as reducing emissions though decreased congestion and further reliance of single occupancy vehicles. Additional benefits to overall watershed sustainability and enhancement to the Congaree River will also be realized with this project. The *Columbia Riverfront Gateway Project* will provide comprehensive benefits for the residents of the City of Columbia—benefits that not only strengthen the economic recovery but provide real transportation choices for those who need them.

Background and Methodology

The BCA weighs the costs (capital and maintenance) and benefits (environmental protection, quality of life, economic competitiveness, safety, and state of good repair) that would accrue during the analysis period considered. This BCA includes the benefits and cost for the components of the proposed *Columbia Riverfront Gateway Project* that would be fully constructed should the RAISE grant be awarded to the City of Columbia. The analysis period was 26 years (Project Use Start + 20 years of operation – base years). All costs and benefits are presented in 2020 base year dollars. A 7% discount rate was used for all benefits and costs except the carbon benefits, which were discounted at 3% per year. The BCA for this project follows the principles documented in the USDOT *Benefit-Cost Analysis Guidance for Discretionary Grant Programs* (2022) and uses the recommended parameter values where applicable.

The following categories of benefits were considered in the BCA:

- **Safety:** The expected reduction in collisions and associated costs.
- **Travel Time Savings:** Includes reductions in travel time for all modes of transportation.
- **Environmental Sustainability:** Includes reductions in the following pollutants that impact air quality: CO2, NOX, SO2, and PM2.5.
- **Mode Shift:** Includes an analysis of the shift in mobility from cars to bike and pedestrian with a new network and connectivity improvement.
- **Health Benefits:** Includes the health benefits of increased physical activity and decreased healthcare costs from new users of the project.
- **State of Good Repair:** Includes reductions in roadway maintenance costs.

The individual benefits and costs were used to describe a total monetary benefit for each long-term outcome and for the project. Costs and benefits were also computed for near-term economic impacts. It should be noted that there are several benefits under each category that were not easily quantifiable. The RAISE narrative qualitatively describes these additional benefits that are not fully captured with the benefit cost analysis or documentation.

Safety Benefits: $106,635,465.40

The USDOT and the SCDOT support projects that predictably reduce the number, rate, and severity of surface transportation-related crashes, injuries, and fatalities among drivers. The quantitative safety measures of the *Columbia Riverfront Gateway Project* include a reduction in fatal, injury, and property damage only (PDO) crashes.

The anticipated injury and PDO crash reductions of the *Columbia Riverfront Gateway Project* are attributable to the reduction of conflicts between vehicles through the reduction of rear end collisions, collisions between vehicles and cyclists, and collisions between vehicles and pedestrians. The Crash Modification Factors (CMF) Clearinghouse provides information on the expected impact of a given countermeasure on the safety performance of a location based on statistically significant data from peer reviewed research papers for sites that received that countermeasure. Several applicable CMFs were included in this analysis. A CMF for the installation of adaptive signal control is 0.527. The CMF for the installation of high-visibility crosswalks is 0.60, and the CMF for roadway lighting and illumination if 0.68 for non-motorists.

The average annual number of injuries was broken down by severity to better estimate the anticipated benefits. The cumulative number of average annual injuries is reported on Tab B of the BCA Spreadsheet (a copy of which is attached to this application) along with the cumulative number of vehicles involved PDO crashes. The annual expected injuries avoided and property damage avoided for each year of the analysis were calculated using the current annual averages and the CMF factors listed on page 4 of the CMF Clearinghouse. The annual number of injuries avoided and the annual reduction in vehicles involved in PDO crashes are reported in Tab B as well. Finally, a cost associated with each injury or vehicle in a PDO crash was derived using guidance from the RAISE *Benefit-Cost Analysis Resource Guide* on the value of injuries based on severity of the crash. The resulting injury and PDO cost savings are $224,482,087 in total cost savings or $106,635,465.40 in present dollars for the *Columbia Riverfront Gateway Project*.

Value of Travel Time Savings: $14,610,606.47

The value of travel time savings is vital to networks that provide increased connectivity throughout a corridor. The Columbia Riverfront Gateway Project is expected to provide a decrease in travel times along Huger Street, Gervais Street, and Blossom Street by increasing network connectivity and providing mode choice between key destinations within the Vista of Columbia. The proposed project will connect the following destinations: Granby Park, USC Baseball Stadium, EdVenture Children's Museum, SC State Museum, Riverfront Park, Saluda Riverwalk, and Riverbanks Zoo. These destinations represent locations for recreation and activity, but also represent places of employment. Furthermore, the network connectivity throughout the region is now enhanced with this missing link being added to the network.

The total travel time savings through the reduction of delays associated with the project is projected to be $14,610,606.47 in present dollar value. This is calculated based on a savings of vehicle hours traveled against the AADT under no-build and build scenarios. Tab C in the BCA Spreadsheet provides a summary of the calculations.

Emissions Reduction Benefits: $129,327.80

The USDOT and the SCDOT support projects that promote environmental sustainability through improved energy efficiency, reduced dependence on oil, and reduced greenhouse gas emissions. The quantitative sustainability measures of the *Columbia Riverfront Gateway Project* include air quality impacts, water quality impacts, and fuel consumption impacts. The project is projected to lead to decreases in emissions of greenhouse gases and particulate matter, based on the decrease in idle emissions associated with carbon dioxide (CO2), sulfur dioxide (SOx), nitrogen oxides (NOx), and

particulate matter (PM). (The decrease in VMT each year of the project life was previously described.)

The *Columbia Riverfront Gateway Project* will improve the overall operational efficiency of the corridor with the installation of adaptive signals; more importantly, it will provide a mode choice that produces no emissions. Through the implementation of the project, start up and idling for trucks and cars will be reduced. The reduction of idling and elimination of emissions are more impactful to emissions than a moving vehicle. The proposed design is configured to reduce the number of stops a vehicle must encounter as well as waiting for a movement, thereby reducing emissions and improving air quality. An idling emissions savings of $139,909.42 is projected for passenger cars and $52,471.08 for trucks, totaling $192,380.50 in idling savings or $129,327.80 in present dollars. Tab D in the BCA Spreadsheet details the calculations of the analysis.

Facility Amenities Benefits: $1,211,431.30

The quantitative sustainability measures of the *Columbia Riverfront Gateway Project* amenities have a long-term benefit on health and overall mobility. The project as currently envisioned will include amenities that will benefit not only the community from a recreation perspective, but also mobility between destinations for work. FHWA's *Benefit-Cost Analysis Guidance for Discretionary Grant Programs* (2022) provides guidance on the calculation of the total benefits associated with walking and cycling facility improvements and the induced demand that will result due to the construction of the facilities.

Approximately 300 pedestrians, 100 cyclists, and 89 annual trips per bike share dock were used in the calculation of the benefit cost. (This data was determined based on available open-source data for the City of Columbia as well as the City of Columbia's *Walk Bike Plan*.) The proposed *Columbia Riverfront Gateway Project* over the lifetime of the project could expect approximate pedestrian benefits of $1,682,317 and bicycle pedestrian benefits of $867,910, totaling $2,550,227 in total facility benefits, or $1,211,431.30 in present dollars. Details of the calculations are contained in Tab E of the BCA Spreadsheet.

Health Benefits: $272,511.54

More people walking and biking can help to encourage increased physical activity levels for the community. This, in turn, can lead to an overall reduction in healthcare costs for the City of Columbia and the greater Midlands region. Within South Carolina, 33% of adults report little to no physical activity, which is one of the highest percentages in the southeast and the United States. The most popular activity among adults is walking. The City of Columbia Riverfront Gateway project will provide additional facilities to promote both walking and biking. Furthermore, through the elimination in gaps in the network with the proposed project, biking and walking trips can also facility mobility to destinations for work and recreation.

More than 1,965 new cycling trips and 11,252 induced pedestrian trips are estimated to be generated through the Columbia Riverfront Gateway Project. Through these induced trips, a pedestrian mortality reduction benefit of about $175,849 and a cycling mortality reduction benefit of almost $236,935 are projected. The combination of these reductions combines for a total benefit of approximately 412,784 or $272,511.84 in present dollars. Details of the calculations are contained in Tab F of the BCA Spreadsheet.

BCA Summary

The *Columbia Riverfront Gateway Project* is expected to positively impact the area and (as reflected in the table) have a high benefit-to-cost ratio.

SUMMARY OF COSTS AND BENEFITS	ESTIMATED COST
Costs	
Total Capital Expenditures	$ (27,875,585.71)
Total Operations & Maintenance Costs	$ (663,861.54)
Total Savings vs. No-Build Scenario	$ 72,000.00
Total Costs (2020 Dollars)	$ (21,908,696.54)
Benefits	
Safety Benefits	$ 106,635,465.40
Travel Time Savings	$ 14,610,606.47
Emissions Reductions	$ 129,327.80
Pedestrian and Bicycle Facility Amenities	$ 1,211,431.30
Health Benefits	$ 272,511.54
Total Benefits (2020 Dollars)	$ 122,859,342.51
Benefit-Cost Ratio	**5.61**

Columbia Riverfront Gateway Project

CITY OF COLUMBIA
1737 MAIN STREET
COLUMBIA, SC 29201

RICHLAND COUNTY ADMINISTRATION
2020 Hampton Street, Suite 4069
Columbia, SC 29204
803-576-2050

Agenda Briefing

Prepared by:	Michael Maloney, PE	**Title**:	Interim Director
Department:	Transportation	**Division:**	Click or tap here to enter text.
Date Prepared:	July 1, 2022	**Meeting Date:**	July 26, 2022
Legal Review	Patrick Wright via email	**Date:**	July 7, 2022
Budget Review	Abhijit Deshpande via email	**Date:**	July 7, 2022
Finance Review	Stacey Hamm via email	**Date:**	July 7, 2022
Approved for consideration:	Assistant County Administrator	John M. Thompson, Ph.D., MBA, CPM, SCCEM	
Meeting/Committee	Transportation Ad Hoc		
Subject	Reserve Fund Use Plan		

RECOMMENDED/REQUESTED ACTION:

Transportation Staff recommends the Reserve Fund Use plan for approval.

Request for Council Reconsideration: ☒ Yes

FIDUCIARY:

Are funds allocated in the department's current fiscal year budget?	☐	Yes	☒	No
If no, is a budget amendment necessary?	☐	Yes	☒	No

ADDITIONAL FISCAL/BUDGETARY MATTERS TO CONSIDER:

Not applicable.

COUNTY ATTORNEY'S OFFICE FEEDBACK/POSSIBLE AREA(S) OF LEGAL EXPOSURE:

None.

REGULATORY COMPLIANCE:

Not applicable.

MOTION OF ORIGIN:

"…the committee recommended Council approve the request to move the remaining balance of $31,130,528.15 from the Administrative/Debt Service costs and to transfer the General Fund proceeds to the Program Reserve Fund to be used as County Council approves for referendum projects."

Council Member	Recommendation of the Transportation Ad Hoc Committee
Meeting	Regular Session
Date	June 7, 2022

STRATEGIC & GENERATIVE DISCUSSION:

The attached letter requests that we await the results of key projects nearing the bidding process to better project costs on the remaining approved projects. When the construction inflation rate becomes stable the projections will have greater accuracy.

We offer recommendations on use:

1. Inflation Coverage – Carry a controlled decline of the reserve fund to near the end of program.
2. Road Maintenance System – The resurfacing program has three bid sets remaining before expenses reach the referendum limit.
3. Project Descoped – Review the remaining descopes in the planning or early design phase that will best serve the public.

ADDITIONAL COMMENTS FOR CONSIDERATION:

Click or tap here to enter text.

ATTACHMENTS:

1. Letter dated June 20, 2022 Transportation Penny Reserve Fund Use Plan

RICHLAND COUNTY
DEPARTMENT OF PUBLIC WORKS
400 Powell Road
Columbia, SC 29203

6/20/2022

Dr. John Thompson
Assistant County Administrator
2020 Hampton Street
Columbia, SC 29204

Transportation Penny Reserve Fund Use Plan

Dear Dr. Thompson,

The County Council has approved placing funds into two reserve funds over the past two months.

One reserve fund deprogrammed from the Penny, the I-20/Broad River Road Interchange. This fund is now designated as a Project Reserve of $52.5 million to be used as approved by County Council.

The second reserve fund deprogrammed from the Penny, the use of undesignated Administration Costs. This fund is now designated as a Program Reserve of $31.1 million to be used as approved by County Council.

We plan to keep these allocations unused until key projects are bid and under contract. This includes the following projects, the Bull and Elmwood intersection, and widening Blythewood Road and Atlas Road. These projects will help identify if current estimates will cover actual contract prices, or if inflation is outpacing the estimates. If the latter is true, reserves will become very important to funding the currently approved program list and for projecting these results into future project estimates.

With these key indicator projects under contract, we may plan for the reserve fund. We recommend the following uses:

1. Inflation Coverage – We recommend the fund maintain a declining balance for inflation until the last two years of the program.
2. Road Maintenance System – There is inadequate funding for the capital improvement of the existing roads. In the last ten years of the program, available funds should be used to provide the best overall transportation experience in Richland County.

a. We recommend this not occur at one time, rather in Annual Allocations not to exceed $5 million per year. This will help create the incremental decline in the project reserve.

3. Project Descopes – A reserve balance may serve some of the later scheduled projects that underwent descopes. This should only be reviewed where a project is either not started, in preliminary design, or the added scope will not setback the project.

That covers our current foresight for the Penny Program in Richland County. We look forward to your support in this outlook to the future and we seek your input on the priorities of the options we offer.

Sincerely,

Richland County Government
Transportation Department

Michael Maloney, PE
Interim Director