

HOT SPOT FEASIBILITY ANALYSIS BIKE/PEDESTRIAN NETWORK GAP STUDY

PREFERRED CONCEPTS AND IMPLEMENTATION PLAN TECHNICAL MEMO - FINAL

September 2022



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1 Introduction and Project Description

To address the rapidly growing area and increasing demand for multi-modal amenities, the Capital Area Metropolitan Planning Organization (CAMPO) is assessing bicycle and pedestrian improvements at three locations (see **Exhibit 1**) in a multi-jurisdictional area:

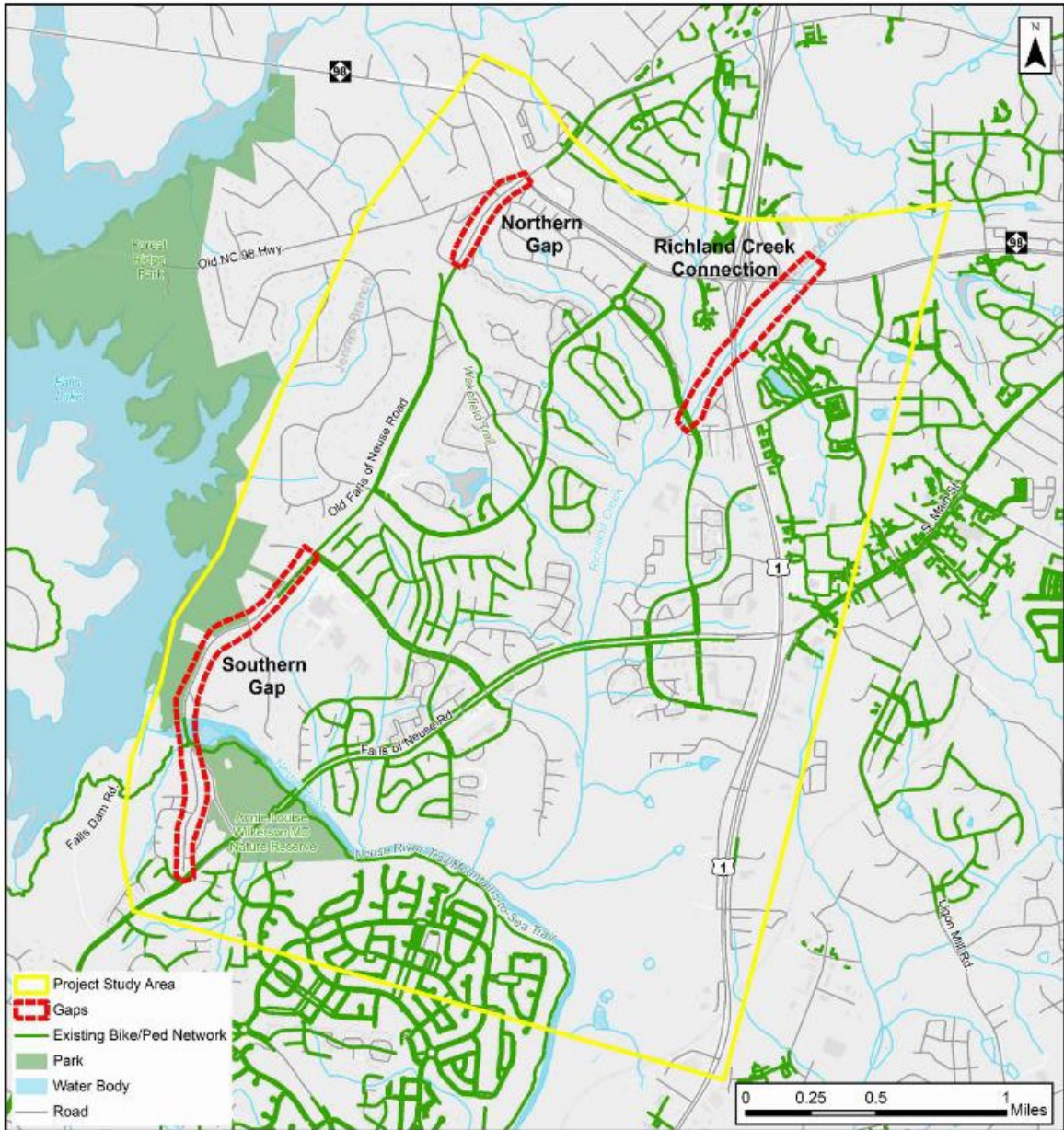
- Northern Gap (0.4-mile segment of Old Falls of Neuse Road, between the Garden Hill Drive/Keith Store Road intersection and the NC 98/Durham Road intersection)
- Southern Gap (1.3-mile segment of Old Falls of Neuse Road, between Wakefield Pines Drive and Falls of Neuse Road); and
- Richland Creek Connection (1.1-mile new location trail between US 1/Capital Boulevard in Raleigh to the City limits boundary with the Town of Wake Forest.

Steering Committee meetings were held for this study comprised of representatives from CAMPO, the City of Raleigh, the Town of Wake Forest, and NCDOT. Discussions from those meetings led to the development of two concept alternatives for the Northern and Southern Gap sections adjacent to Falls of Neuse Road, each accommodating a 10-foot paved multi-use path; one with a 4-foot shoulder, and the other to accommodate a curb and gutter roadway section. A grade-separated greenway connection across Capital Boulevard and NC 98 with 10-foot paved trail was also developed for the Richland Creek Connection, Concept 1 being a pedestrian tunnel option, and Concept 2 being a pedestrian bridge option. Conceptual designs were developed, and then screened based on:

- mobility and safety,
- right-of-way,
- environmental impacts,
- constructability, and
- construction costs.

Based on the feasibility screening and feedback from the Steering Committee, the shoulder section (Concepts 1) for both the Northern and Southern Gaps were selected and are summarized in this Preferred Concepts and Implementation Plan Memo. The Richland Creek Connection Concept 2 (the pedestrian bridge) was also carried forward as the recommended concept. As part of this final documentation, an implementation plan, including policy level work, and recommendations for future studies will be provided, as well as potential funding sources and grant opportunities for the Richland Creek Connection component.

Exhibit 1: Bike and Pedestrian Accommodations- Existing Facilities and Identified Gaps



2 Conceptual Design Recommendations

2.1 Northern Gap

The Northern Gap segment is a 0.4 mile stretch along the northern end of Old Falls of Neuse Road that lacks bike or pedestrian connectivity along the corridor, adjacent to several multi-family residential developments and single-family residential at Wakefield Plantation.

The Northern Gap Preferred Concept proposes a 10' wide multi-use paved path for pedestrians and cyclists. The path is proposed to be parallel to the existing roadway, behind a 24' wide clear zone, measured from the existing edge of travel (**Exhibit 2**). This concept provides more of a buffer from motorized vehicles for bicyclists and pedestrians, and the typical section matches the greenway connections at both ends of the northern gap.

Filling this gap would provide a bicycle/pedestrian connection to an existing greenway along the southern side of Old Falls of Neuse Road from the Garden Hill Drive / Keith Store Road intersection to the NC 98/Durham Road intersection, ultimately connecting to another section of existing greenway.

Exhibit 2: Northern Gap Preferred Concept



2.2 Southern Gap

The Southern gap is a 1.3-mile section along Old Falls of Neuse Road between Falls of Neuse Road at the southern terminus and Wakefield Pines Drive as the northern terminus. Land uses along the corridor include the Ann Louise Wilkerson Nature preserve to the south, Falls Lake Recreation Area, limited single family residential homes and Wakefield High School. Filling this gap would provide connectivity between residential land uses to Wakefield High School.

At its southern end, the Southern Gap Preferred Concept (see **Exhibit 3**) uses a 10' wide bidirectional paved multi-use path which ties into the existing sidewalk at the northeast corner of the Old Falls of Neuse Road & Falls of Neuse Road intersection. The path extends north along the northbound travel lane. The proposed path crosses the River Boat Launch driveway and provides a connection to the Upper Neuse Greenway.

There is access to the Neuse River Greenway via the Upper Neuse Greenway along Old Falls of Neuse Road at Pleasant Union Church Road, which is part of the Mountains-to-Sea Trail. This Mountains-to-Sea Trail is a unique 1,175-mile trail, consisting of footpaths, roads, and state bike paths which extends from the Great Smoky Mountains National Park to the Outer Banks. There is also a parking lot facility off Pleasant Union Church Road just west of the access to Upper Neuse Greenway.

There are some limited pedestrian/bicycle facilities in the area, including sidewalks in the vicinity of Wakefield High School that connect to an existing multi-use path at the northeast corner of Wakefield Pines Drive at Old Falls of Neuse Road. This path ends approximately 500 feet south of the bus parking lot driveway of Wakefield High School. There is a protected sidewalk adjacent to the southbound travel lane on the bridge over Neuse River, with sidewalk continuing along the western side of the Old Falls of Neuse Road and connecting to the Upper Neuse Greenway. The pedestrian path from Falls Lake Dam Road toward Fonville Road is an existing gravel path with moderate elevation changes and is not currently ADA compliant.

Between the River Boat Launch driveway and Fonville Road, a proposed at-grade crossing is used to cross over Old Falls of Neuse Road to the southbound travel lane side and will provide an additional spur to the Neuse River Trail. The path then crosses the entry/exit point of Fonville Road using a 10' wide crosswalk, turns west along the southbound travel lane of Pleasant Union Church Road then extends approximately 175 feet. A retaining wall is proposed between the path and the hill in front of The Bike Guy Shop.

2.2.1.1 Historic Properties

Exhibit 3: Southern Gap Preferred Concept



2.3 Richland Creek Connection Concepts

The Richland Creek Connection is a proposed 1.1-mile-long greenway connection along Richland Creek that intersects with US 1 (Capital Boulevard) and is located within the Town of Wake Forest and City of Raleigh jurisdictions. The proposed greenway would follow along Richland Creek to the south and eventually provide a connection with the Neuse River Trail approximately 2.3 miles from its crossing of US 1, and to the north ultimately extending to the Town of Youngsville in Franklin County. The Richland Creek Connection could provide connectivity to the existing Neuse River greenway system, linking residential land uses and the commercial corridor of US 1 and future transit services such as Bus Rapid Transit (BRT).

The Richland Creek Preferred Concept proposes a 6,260-foot long, 10' wide paved bidirectional multi-use path starting at the intersection of Forest Pines Drive at Pawleys Mill Circle and connecting to the future Town of Wake Forest greenway approximately 2,000 feet past NC 98 to the northeast (see **Exhibit 4**). Concept 2 proposes a 225' long pedestrian bridge over US-1. Land use in the area is urbanized, with commercial and residential land uses adjacent to the US 1/NC 98 interchange. NCDOT proposes to widen US 1 as a controlled access facility as part of STIP U-5307, with ROW acquisition anticipated to begin October 2028.

Upon request by the Town of Wake Forest, this concept proposes a 10' wide paved path connection to Blue Bird Lane, in the Caveness Farms Apartment Homes neighborhood. This connection would provide access to the trail surrounding the neighborhood pond south of Blue Bird Lane.

Exhibit 4: Richland Creek Connection Preferred Concept (Bridge)



3 Planning Level Cost Estimates

NCDOT developed the NCDOT Bike/Pedestrian Conceptual Cost Estimate Tool for planning level project cost estimates. Since structural and traffic control work can be exceedingly complicated, the cost estimate tool provides only a rough estimate for these significant costs. Additional adjustments to the tool's outputs were applied to account for costs not captured by the tool and are listed below.

- Southern Preferred concept adds \$125,000 for potential retaining walls in front of The Bike Guy's shop to construction costs.
- Procurement & Agency Management (10% of planning, design, right of way, utilities, and construction) was included in the planning level cost estimate to account for consultant coordination.
- The cost estimate is 2019 Base Year. The resultant cost was multiplied by an inflation factor of 1.13 to develop 2022 base year estimates.

Table 1 summarizes the planning level cost estimates for the Northern, Southern, and Richland Creek preferred concepts. Detailed planning level cost estimates for each preferred concept are provided in **Appendix A**.

Phase	Preferred Concepts		
	Northern Gap	Southern Gap	Richland Creek Connection
Planning & Design	\$230 K	\$640 K	\$680 K
Right of Way	\$85 K	\$280 K	\$375 K
Utilities	\$40 K	\$135 K	\$110 K
Construction	\$1.11 M	\$3.910 M	\$3.435 M
Sub-Total	\$1.47 M	\$4.965 M	\$4.6 M
Procurement & Agency Mgmt.	\$147 K	\$496.5 K	\$460 K
Total (2019 FY\$)	\$1.612 M	\$5.4615 M	\$5.06 M
TOTAL (2022 FY\$)	\$1.82 M	\$6.17 M	\$5.72

4 Potential Funding Sources

Funding opportunities for this project might include incorporating portions of this project in existing roadway projects and acquiring state or federal funds through CAMPO's LAPP, NCDOT funds through STI Law (SPOT), federal and other grant opportunities, and public/private partnerships. The main funding opportunities are described below.

4.1 Existing Highway Projects

There is a window of opportunity to build the pedestrian bridge component of the Richland Creek greenway trail as part of the STIP U-5703C US1/Capital Boulevard Widening project. According to the 2020-2029 NCDOT STIP, U-5703C is currently funded for construction. If the design and environmental phases of the Richland Creek Connection are underway or completed at the time of the re-evaluation,

the pedestrian bridge could be incorporated or the U-5703C project could be constructed in a way not to preclude the pedestrian connection in the future.

4.2 CAMPO's Locally Administered Projects Program (LAPP)

CAMPO's LAPP is funded with programmed STBG-DA and NC CMAQ allocations, both funding sources would require a minimum 20% local funding match, and are briefly described below:

The Transportation Alternatives (TA) Set-Aside

The TA Set-Aside from the Surface Transportation Block Grant (STBG) Program provides funding for a variety of smaller-scale transportation projects. The TA program was created and funded through federal transportation legislation. It is administered by the Federal Highway Administration but implemented by the states, therefore the states have flexibility in how the TA program is administered. In particular, the Transportation Alternatives program combines three previously separate sources of transportation funding: Transportation Enhancements, the Recreational Trails Program, and Safe Routes to School.

TA Set-Aside funds are contract authority. TA Set-Aside obligations are reimbursed from the Highway Account of the Highway Trust Fund. TA Set-Aside funds are available for obligation for a period of 3 years after the last day of the fiscal year for which the funds are authorized. This includes funds set aside for the Recreational Trails Program (RTP). Thus, funds are available for obligation for up to 4 years.

CMAQ

Congestion Mitigation and Air Quality Improvement Program (CMAQ) is a Federal-aid program that funds transportation projects/programs to improve air quality and reduce congestion. CMAQ funds must be invested in a state's nonattainment or maintenance areas, on projects that reduce ozone (O₃) precursors - volatile organic compounds (VOCs) and nitrogen oxides (NO_x) - carbon monoxide (CO), or particulate matter (PM_{2.5}) and the applicable precursors from transportation sources.

The project should be included in the MPO's current transportation plan and transportation improvement program (TIP). CMAQ funding in North Carolina can be used for specific bicycle and pedestrian improvements, including:

- Constructing non-recreational bike or pedestrian paths, bike racks, support facilities
- Bike share capital costs (docks, equipment, not operations)
- Outreach related to safe bicycle usage

4.3 NCDOT Strategic Transportation Prioritization (SPOT)

For the Richland Creek Connection to be programmed by NCDOT using state/federal funding, either CAMPO or NCDOT Division 5 would submit on behalf of the Town or City as part of the SPOT 7.0 process. The Town or City would submit the project in the next Open Call for Projects (Summer of 2023), where the project will be ranked by metrics such as safety, accessibility/connectivity, demand/density, and cost effectiveness. The Richland Creek Connection will be competing with other bicycle/pedestrian improvements within the region, under the Division Needs funding category (Winter 2023). If successful, the project will be programmed in the Draft 2026-2035 STIP.

4.4 Other Funding Opportunities

PeopleForBikes Community Grant Program is a discretionary grant program that supports bicycle infrastructure projects and targeted advocacy initiatives that make it easier and safer for people of all ages and abilities to ride. The maximum grant size is \$10K to fund engineering design and construction costs. A summary of additional grant programs and their requirements are listed in **Appendix B**.

5 Policy Level Work

The North Carolina Department of Transportation (NCDOT) recently developed the *Complete Streets Project Evaluation Methodology* that addresses implementation challenges including, but not limited to, inconsistent implementation, lack of standards, policy gaps, limited metrics/data tracking, and training. While the *Complete Streets Policy* requires NCDOT to evaluate all projects for bicycle and pedestrian needs, MPO and municipalities may use this methodology to evaluate and analyze this project and collaborate with NCDOT through the project life cycle of planning, design, construction, and maintenance.

Additional policy documents related to complete streets implementation are listed below:

- Traditional Neighborhood Development Manual (2000).
- Bridge Policy (2000).
- Policy on Street and Driveway Access to North Carolina Highways (2003).
- Exceptions to Maintenance Responsibilities on State Highway System Streets in Municipalities (2003).
- Guidelines for Inclusion of Greenway Accommodation Underneath a Bridge as Part of a NCDOT Project (2015).
- Subdivision Roads: Minimum Construction Standards (2016)

In support of the three North Carolina Vision Zero principles: no loss of life on our roads is acceptable, all road users deserve safe streets, and injury or death is not an inevitable price to pay for mobility, the NC Safe Routes to School program's purpose is to improve the safety of kids walking and bicycling. The Southern Gap preferred concept will benefit school children attending Wakefield High School, Wakefield Middle School, and Wakefield Elementary School.

As part of pedestrian and bicycle safety, the City of Raleigh has been considering the adoption of a "Vision Zero Raleigh" plan with the goal of eliminating transportation fatalities and severe, life-changing injuries. The Wake Forest CTP's safety goal is to work towards Vision Zero as well, focusing on safe bicycle and pedestrian crossings on major roadways.

Coordination between NCDOT's Traffic Safety Unit, the City of Raleigh, and the Town of Wake Forest will be required as each component of this project progresses. Further analysis of the internal school circulation will be needed during project development for the possible implementation of a mid-block crosswalk south of the Wakefield Pines Drive intersection.

In addition to both the Bicycle Policy & Guidelines and Pedestrian Policy & Guidelines, the NCDOT Roadway Design Manual (RDM) includes policies for bicycle and pedestrian facilities along with design specifications.

6 Local Jurisdictional Responsibility – Richland Creek Connection

The Richland Creek Connection has been identified in CAMPO’s 2050 Metropolitan Transportation Plan (MTP) as part of a regional Bike/Ped corridor. Although listed in their local plans, the City of Raleigh and the Town of Wake Forest should designate the Richland Creek Connection as a priority project in their plans and identify local match funding sources.

The overall project study area contains numerous community points of interest. It fosters walkable and bikeable transportation corridors and connects residential areas to Wakefield High School and the US 1 corridor, which can serve as an alternative mode for commuters. Local plans reinforcing the use of the Richland Creek Connection for more than recreational activities could open federal grant funding opportunities.

Rather than hold off on the implementation of the project until full funding is obtained, which could result in an escalation of overall project costs, the City of Raleigh and the Town of Wake Forest could partner to fund the design and environmental phase then seek funding opportunities for the ROW and construction phases. Having the environmental clearance in hand and a shovel ready design may reduce risk to cost and schedule. It also may make it easier to position for grant funding opportunities for the future phases.

There is a window of opportunity to build the pedestrian bridge component of the Richland Connection greenway Trail as part of the STIP U-5703C US1/Capital Boulevard Widening project. According to the 2020-2029 NCDOT STIP, U-5703C is currently funded for construction. If the project requires a NEPA re-evaluation, the pedestrian bridge connection could be identified as a need through the NCDOT’s Complete Streets Evaluation Process through the NCDOT Integrated Mobility Division, and the bicycle/pedestrian bridge could be incorporated into the U-5703C project subject with a 80% Federal and State / 20% local match. If the design and environmental phases of the Richland Connector are underway or completed at the time of the re-evaluation, the pedestrian bridge could be incorporated or U-5703C could be constructed in a way not to preclude the pedestrian connection in the future. The Town or the City would need to continue to advocate for this greenway connection through NCDOT Division 5 as STIP U-5703C progresses through design.

Implementation Approach and Next Steps – Richland Creek Connection

This study is a needs assessment and alternative feasibility to provide conceptual cost estimates for programming. Next steps for the Richland Creek Connection would include obtaining environmental approval, engineering design and construction. It is likely that a mix of federal and local money would be used, and therefore subject to NEPA, which would require an environmental document. The City of Raleigh and the Town of Wake Forest would work with CAMPO to enter this project into CAMPO’s LAPP, as defined in Section 4.2, then work with NCDOT to program the project in SPOT, as described in Section 4.3.

By applying to the CAMPO LAPP, the local government or NCDOT Division is committing to sponsor the project. The sponsor is responsible for all federal and state reporting requirements, as well as reporting to CAMPO on a regular basis. An interlocal agreement will be required between NCDOT and the local sponsor. Local Sponsors will be required to front all project costs, invoice NCDOT and get reimbursed for the agreed upon federal percentage.

The local sponsor must apply for the SPOT 7.0 Call for Projects and attend applicant training which covers CAMPO's rules and policies pertaining to the CAMPO LAPP as well as NCDOT and FHWA regulations pertaining to the federal funds awarded through the CAMPO LAPP. Once CAMPO's MPO Executive Board awards the projects, additional mandatory training is held for the local government project manager.

There are federal requirements pertaining to the use of federal funding that would need to be followed. For instance, FHWA requires LPA Program Manager oversight to conduct Pre-Construction reviews as needed, as well as a records reviews at 50-75% project completion. FHWA also requires that the sponsor construct the project within 10 years.

Upon obligation of funds for any project phase, the applicant has the obligation year plus two (2) more years to complete the project and expend the funds for that project phase.

Other potential implementation strategies to consider include:

- Leverage opportunities with the Eastern Greenway Foundation or creating a Trail Foundation with an advocate on the CAMPO Board to better position for funding with public/private partnerships, which could sponsor bike/pedestrian amenities along the network and naming rights to sections of the greenway.
- Take advantage of the donation of right of way by the City/Town or private entities. Agreements could be worked out with the local governments to transfer the liability to the trail users to make it more attractive for private partnership opportunities to obtain easements.

7 References

NCDOT Bike/Ped Cost Estimate Tool

[NEW BikePed Cost Estimation Tool - All Documents \(ncdot.gov\)](#)

Existing Conditions Technical Memorandum - Final
STV Inc (July 2022)

Feasibility Analysis Technical Memorandum - Final
STV Inc (August 2022)

APPENDIX A

Northern Gap Preferred Concept (Shoulder Section) – Cost Estimate Inputs

SIT 2: Off-Road/Separated Linear Bicycle Facility Start Over

Project Name: CAMPO-Northern Gap alt 1 

SPOT ID:

Project Type: Shared-Use Path, Multi-Use Path, Rail-Trail, or Sidepath

1	Total Project Length	<input type="text" value="2,315"/>	feet
2	Proposed Facility Width (Default is 10 feet) ⁽ⁱ⁾	<input type="text" value="10"/>	feet
3	Project Located on Both Sides of the Road ⁽ⁱ⁾	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
4	County	<input type="text" value="Wake"/>	
5	City	<input type="text" value="Raleigh"/>	
6	Surrounding Development Type ⁽ⁱ⁾	<input type="text" value="Suburban"/>	
7	Registered Historic District	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
8	Existing Curb & Gutter within Project Area	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
9	Number of Stream Crossings ⁽ⁱ⁾	<input type="text" value="0"/>	
10	Percentage of ROW Area Needed ⁽ⁱ⁾	<input type="text" value="Large (25%-60%)"/>	
11	Impact to Active Railroad Track or Railroad ROW	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
12	Roadways Intersected ⁽ⁱ⁾		
	Interstate	<input type="text" value="0"/>	
	Freeway	<input type="text" value="0"/>	
	Major Arterial	<input type="text" value="1"/>	
	Arterial	<input type="text" value="0"/>	
	Major Collector	<input type="text" value="0"/>	
	Collector	<input type="text" value="0"/>	
	Local Road	<input type="text" value="1"/>	
	Total	2	
13	Signalized Intersections Crossed (Number within Total Roadways Intersected) ⁽ⁱ⁾	<input type="text" value="1"/>	
14	Number of Existing Bridges ⁽ⁱ⁾		
	Interstate	<input type="text" value="0"/>	
	Freeway	<input type="text" value="0"/>	
	Major Arterial	<input type="text" value="0"/>	
	Arterial	<input type="text" value="0"/>	
	Major Collector	<input type="text" value="0"/>	
	Collector	<input type="text" value="0"/>	
	Local Road	<input type="text" value="0"/>	
	Small Stream	<input type="text" value="0"/>	
	Medium Stream	<input type="text" value="0"/>	
	Large Stream	<input type="text" value="0"/>	
	Railroad	<input type="text" value="0"/>	
	Total	0	
15	Submitted by	<input type="text" value="STV"/>	Date: 6/3/2022


Northern Gap Preferred Concept Cost Estimate Summary Output

Cost Estimate Summary		
Total	\$	1,465,000
Design	\$	230,000
ROW	\$	85,000
Utilities	\$	40,000
Construction	\$	1,110,000

Northern Gap Preferred Concept Overall Planning Estimate:

Initial Costs:	\$1,465,000
Procurement & Agency Management (10% Initial Costs):	<u>\$146,500</u>
Total (2019 FY\$)	\$1,611,500
Total (2022 FY\$)	\$1,820,995

Southern Gap Dam Connection and Neuse River Greenway Connection – Cost Estimate Inputs

SIT 1: Grade-Separated Bicycle Facility
Start Over


Project Name: CAMPO-Southern Gap alt 1 and 2 SIT 1

SPOT ID:

Project Type: New Bicycle/Pedestrian Bridge Structure Length: 0 feet

- 1 Total Project Length: feet
- 2 Proposed Facility Width (Default is 10 feet): feet
- 3 Project Located on Both Sides of the Road: YES NO
- 4 County:
- 5 City:
- 6 Surrounding Development Type:
- 7 Registered Historic District: YES NO
- 8 Existing Curb & Gutter within Project Area: YES NO
- 9 Number of Stream Crossings:
- 10 Percentage of ROW Area Needed:
- 11 Impact to Active Railroad Track or Railroad ROW: YES NO

- 12 Roadways Intersected

Interstate	<input type="text" value="0"/>
Freeway	<input type="text" value="0"/>
Major Arterial	<input type="text" value="0"/>
Arterial	<input type="text" value="0"/>
Major Collector	<input type="text" value="0"/>
Collector	<input type="text" value="0"/>
Local Road	<input type="text" value="0"/>
Total	0
- 13 Signalized Intersections Crossed
(Number within Total Roadways Intersected):

- 14 Number of Existing Bridges

Interstate	<input type="text" value="0"/>
Freeway	<input type="text" value="0"/>
Major Arterial	<input type="text" value="0"/>
Arterial	<input type="text" value="0"/>
Major Collector	<input type="text" value="0"/>
Collector	<input type="text" value="0"/>
Local Road	<input type="text" value="0"/>
Small Stream	<input type="text" value="0"/>
Medium Stream	<input type="text" value="0"/>
Large Stream	<input type="text" value="0"/>
Railroad	<input type="text" value="0"/>
Total	0

Submitted by: Date: 6/13/2022


Generate Cost
Clear

Cost Estimate Summary

Total	\$	570,000
Design	\$	105,000
ROW	\$	40,000
Utilities	\$	20,000
Construction	\$	405,000

Southern Gap Preferred Concept (Shoulder Section) – Cost Estimate Inputs

SIT 2: Off-Road/Separated Linear Bicycle Facility Start Over

Project Name: CAMPO-Southern Gap alt 2 SIT 2 

SPOT ID:

Project Type: Shared-Use Path, Multi-Use Path, Rail-Trail, or Sidepath

1 Total Project Length: feet

2 Proposed Facility Width (Default is 10 feet) ⁽ⁱ⁾: feet

3 Project Located on Both Sides of the Road ⁽ⁱ⁾: YES NO

4 County:

5 City:

6 Surrounding Development Type ⁽ⁱ⁾:

7 Registered Historic District: YES NO

8 Existing Curb & Gutter within Project Area: YES NO

9 Number of Stream Crossings ⁽ⁱ⁾:

10 Percentage of ROW Area Needed ⁽ⁱ⁾:

11 Impact to Active Railroad Track or Railroad ROW: YES NO

12 Roadways Intersected ⁽ⁱ⁾

Interstate	<input type="text" value="0"/>
Freeway	<input type="text" value="0"/>
Major Arterial	<input type="text" value="0"/>
Arterial	<input type="text" value="0"/>
Major Collector	<input type="text" value="2"/>
Collector	<input type="text" value="0"/>
Local Road	<input type="text" value="1"/>
Total	3

13 Signalized Intersections Crossed (Number within Total Roadways Intersected) ⁽ⁱ⁾:

14 Number of Existing Bridges ⁽ⁱ⁾

Interstate	<input type="text" value="0"/>
Freeway	<input type="text" value="0"/>
Major Arterial	<input type="text" value="0"/>
Arterial	<input type="text" value="0"/>
Major Collector	<input type="text" value="0"/>
Collector	<input type="text" value="0"/>
Local Road	<input type="text" value="0"/>
Small Stream	<input type="text" value="0"/>
Medium Stream	<input type="text" value="0"/>
Large Stream	<input type="text" value="1"/>
Railroad	<input type="text" value="0"/>
Total	1

15 Submitted by: Date: 6/13/2022


Cost Estimate Summary		
Total	\$	4,270,000
Design	\$	535,000
ROW	\$	240,000
Utilities	\$	115,000
Construction	\$	3,380,000

Southern Gap Preferred Concept Overall Planning Estimate:

Initial Costs:	\$570,000
	\$4,270,000
Retaining Wall	\$125,000
Procurement & Agency Management (10% Initial Costs):	<u>\$496,500</u>
Total (2019 FY\$)	\$5,461,000
Total (2022 FY\$)	\$6,170,930

Richland Creek Connection Concept 2 (Bridge)

SIT 1: Grade-Separated Bicycle Facility Start Over

Project Name: CAMPO-Richland Creek alt 2 

SPOT ID:

Project Type: New Bicycle/Pedestrian Bridge Structure Length: 225 feet

1 Total Project Length: feet

2 Proposed Facility Width (Default is 10 feet) ⁽ⁱ⁾: feet

3 Project Located on Both Sides of the Road ⁽ⁱ⁾: YES NO

4 County:

5 City:

6 Surrounding Development Type ⁽ⁱ⁾:

7 Registered Historic District: YES NO

8 Existing Curb & Gutter within Project Area: YES NO

9 Number of Stream Crossings ⁽ⁱ⁾:

10 Percentage of ROW Area Needed ⁽ⁱ⁾:

11 Impact to Active Railroad Track or Railroad ROW: YES NO

12 Roadways Intersected ⁽ⁱ⁾

Interstate	<input type="text" value="0"/>
Freeway	<input type="text" value="1"/>
Major Arterial	<input type="text" value="0"/>
Arterial	<input type="text" value="0"/>
Major Collector	<input type="text" value="0"/>
Collector	<input type="text" value="0"/>
Local Road	<input type="text" value="1"/>
Total	2

13 Signalized Intersections Crossed (Number within Total Roadways Intersected) ⁽ⁱ⁾:

14 Number of Existing Bridges ⁽ⁱ⁾

Interstate	<input type="text" value="0"/>
Freeway	<input type="text" value="0"/>
Major Arterial	<input type="text" value="0"/>
Arterial	<input type="text" value="0"/>
Major Collector	<input type="text" value="0"/>
Collector	<input type="text" value="0"/>
Local Road	<input type="text" value="0"/>
Small Stream	<input type="text" value="0"/>
Medium Stream	<input type="text" value="0"/>
Large Stream	<input type="text" value="0"/>
Railroad	<input type="text" value="0"/>
Total	0

15 Submitted by: Date: 6/3/2022

Cost Estimate Summary		
Total	\$	4,600,000
Design	\$	680,000
ROW	\$	375,000
Utilities	\$	110,000
Construction	\$	3,435,000

Richland Creek Preferred Concept Overall Planning Estimate:

Initial Costs:	\$4,600,000
Procurement & Agency Management (10% Initial Costs):	<u>\$460,000</u>
Total (2019 FY\$)	\$5,060,000
Total (2022 FY\$)	\$5,717,800

APPENDIX B

**CAMPO – Bike Network Gap Hot Spot Study
Potential Funding Opportunities**

Grant Program	Grant Source and Type	Funding Agency	Description	Usage
Transportation Alternatives (TA) Set-Aside (Sub-programs: Complete Streets, Recreational Trail Program, Safe Routes to School)	Federal / Formula	USDOT, US FHWA	The Transportation Alternatives (TA) Set-Aside from the Surface Transportation Block Grant (STBG) Program provides funding for a variety of generally smaller-scale transportation projects such as pedestrian and bicycle facilities; construction of turnouts, overlooks, and viewing areas; community improvements such as historic preservation and vegetation management; environmental mitigation related to stormwater and habitat connectivity; recreational trails; safe routes to school projects; and vulnerable road user safety assessments. No dedicated Safe Routes to School (SRTS) funding, but SRTS projects broadly eligible under STBG and TA Set-Aside. Newly expanded to K-12 (previously K-8 only).	<ul style="list-style-type: none"> • Planning • Design/Construction • Environmental • Land Acquisition (ROW)
Recreational Trails Program (RTP)	Federal / Discretionary	USDOT, US FHWA	The North Carolina Trails Program administers the Recreational Trails Program (RTP), which provides federal grants for trail creation and maintenance. The RTP is a \$1.5-million federal grant program designed to help states provide and maintain recreational trails for both motorized and non-motorized recreational trail use. The program is administered by the U.S. Department of Transportation's Federal Highway Administration. Projects may include construction of a new trail, maintenance and repair of existing trails, land acquisitions, purchase of trail tools and planning, legal, environmental, and permitting costs (up to 10 percent of grant amount).	<ul style="list-style-type: none"> • Design/Construction • Maintenance • Land Acquisition • Planning • Environmental
Congestion Mitigation & Air Quality (CMAQ)	Federal / Formula	USDOT, US FHWA	Congestion Mitigation & Air Quality (CMAQ) is a Federal program that funds transportation projects and programs in air quality nonattainment and maintenance areas to help achieve and maintain national standards for air quality pollutants. In North Carolina, NCDOT serves as the administrator for this program. Funding is apportioned to North Carolina based on the population in non-attainment and maintenance areas of the state and the severity of air quality problem. NC's allocation of CMAQ funding is split in three pots available for funding: statewide CMAQ, regional CMAQ, and subregional CMAQ.	<ul style="list-style-type: none"> • Planning • Design/Construction • Right-of-way • Transit Operation • Transit Implementation • Non-Transit Implementation

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			<p>Subregional CMAQ funds are locally administered and awarded at the MPO/RPO level to projects within eligible counties. The local project sponsor is responsible for providing the required match and meeting federal funding requirements. This category accounts for 60% of the total North Carolina CMAQ apportionment.</p>	
Carbon Reduction Program	Federal / Formula	USDOT, US FHWA	<p>The BIL establishes the Carbon Reduction Program (CRP), which provides funds for projects designed to reduce transportation emissions, defined as carbon dioxide (CO2) emissions from on-road highway sources.</p> <p>CRP funds may be obligated for projects that support the reduction of transportation emissions, including, but not limited to– [except as noted, § 11403; 23 U.S.C. 175(c)(1)] a project described in 23 U.S.C. 149(b)(4) to establish or operate a traffic monitoring, management, and control facility or program, including advanced truck stop electrification systems; a public transportation project eligible under 23 U.S.C. 142; a transportation alternative (as defined under the Moving Ahead for Progress under the 21st Century Act [23 U.S.C. 101(a)(29), as in effect on July 5, 2012]), including, but not limited to, the construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation; a project described in 23 U.S.C. 503(c)(4)(E) for advanced transportation and congestion management technologies; deployment of infrastructure-based intelligent transportation systems capital improvements and the installation of vehicle-to-infrastructure communications equipment; a project to replace street lighting and traffic control devices with energy-efficient alternatives; development of a carbon reduction strategy developed by a State per requirements in 23 U.S.C. 175(d); a project or strategy designed to support congestion pricing, shifting transportation demand to nonpeak hours or other transportation modes, increasing vehicle occupancy rates, or otherwise reducing demand for roads, including electronic toll collection, and travel demand management strategies and programs; efforts to reduce the environmental and community impacts of freight movement; a project that supports deployment of alternative fuel vehicles; a project described in 23 U.S.C. 149(b)(8) for a diesel engine retrofit;</p> <p>certain types of projects to improve traffic flow that are eligible under the CMAQ</p>	<ul style="list-style-type: none"> • Planning • Design/Construction

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			<p>program, and that do not involve construction of new capacity; [§ 11403; 23 U.S.C. 149(b)(5); and 175(c)(1)(L)]</p> <p>a project that reduces transportation emissions at port facilities, including through the advancement of port electrification; and any other STBG-eligible project, if the Secretary certifies that the State has demonstrated a reduction in transportation emissions, as estimated on a per capita and per unit of economic output basis. (Note: FHWA will issue guidance on how the Secretary will make such certifications.) [§ 11403; 23 U.S.C. 133(b) and 175(c)(2)]</p>	
<p>Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program</p>	<p>Federal / Discretionary</p>	<p>USDOT</p>	<p>Awarded on a competitive basis for investments in surface transportation infrastructure that will have a significant local or regional impact.</p> <p>Eligible projects for RAISE grants are:</p> <p><u>Capital</u> projects including but not limited to: highway, bridge, or other road projects eligible under title 23, United States Code; public transportation projects eligible under chapter 53 of title 49, United States Code; passenger and freight rail transportation projects;</p> <p>port infrastructure investments (including inland port infrastructure and land ports of entry); the surface transportation components of an airport project eligible for assistance under part B of subtitle VII (see FAQ # 10 for details); intermodal projects; a project to replace or rehabilitate a culvert or prevent stormwater runoff for the purpose of improving habitat for aquatic species while advancing the goals of the RAISE program; and projects investing in surface transportation facilities that are located on Tribal land and for which title or maintenance responsibility is vested in the Federal Government; and</p> <p>any other surface transportation infrastructure project that the Secretary considers to be necessary to advance the goals of the program).</p> <p><u>Planning</u> projects which include planning, preparation, or design (for example- environmental analysis, feasibility studies, and other pre-construction activities) of eligible surface transportation capital projects.</p>	<ul style="list-style-type: none"> • Planning • Design/Construction • Environmental

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<p>PeopleForBikes Community Grant Program</p>	<p>NGO / Discretionary</p>	<p>PeopleForBikes</p>	<p>The PeopleForBikes Community Grant Program supports bicycle infrastructure projects and targeted advocacy initiatives that make it easier and safer for people of all ages and abilities to ride.</p> <p>PeopleForBikes will fund engineering and design work, construction costs including materials, labor and equipment rental and reasonable volunteer support costs. For advocacy projects, we will fund staffing that is related to accomplishing the goals of the initiative.</p>	<ul style="list-style-type: none"> • Design/Construction