

KINGS MOUNTAIN

Carolina Thread Trail Corridor Analysis

OCTOBER 2011



CAROLINA
THREAD
TRAIL



LEGEND

- Infrastructure**
 - Interstate
 - Street
 - Railroad
 - Political Boundaries
 - County Boundary
- City Limits**
 - City Limits
 - Parcel Boundary
 - Proposed Trail Alignment
- Parcel Details**
 - Building Footprints
 - Historic District
 - School-Owned Property
- Natural Attributes**
 - 20 Foot Contours
 - Rivers, Creeks & Streams
 - Lake
 - Floodplain

WEST

NORTH

SOUTH

EAST



EXECUTIVE SUMMARY

This report is intended to be a tool to guide the future development of the Carolina Thread Trail through the City of Kings Mountain, connecting the Kings Mountain Gateway Trail to Moss Lake Reservoir. Home to over 11,000 residents, the city is surrounded by the scenic foothills of the Blue Ridge Mountains. Providing connections in this region of Cleveland County would have a lot of appeal for the community and tourists due to its historical significance, natural beauty, and a thriving small downtown.

From the public input process, the community of Kings Mountain voiced their desire for the Carolina Thread Trail to continue to build off of and connect to the existing Kings Mountain Gateway Trail. In addition, the goals included the need to attract tourists, provide convenient and safe routes to schools, offer many shops and restaurants in downtown to those utilizing the trail, and protect and preserve the area's natural beauty and scenic rural character.

This route alters the adopted route (Segment R) in the Cleveland County Carolina Thread Trail Master Plan as there is now a better understanding to coordinate both feasibility and opportunity. The community's preferences were studied in detail. Other routes that were considered during the corridor level planning process are included in the appendix for reference. The final route recommendation and surface treatment is based on community input received during the Open House, team site visits, consultant feasibility analysis, and direction from the Steering Committee.

LOCATED IN CLEVELAND COUNTY

Cleveland County is 469 square miles, has a population over 100,000, and is located between two state parks and one national park. The County's rural and natural beauty, coupled with a diversity of small towns provides a rich experience for residents and visitors. John H. Moss Reservoir is the halfway point between Kings Mountain and Shelby, and offers potential to provide a regional place to enjoy water-based recreation.

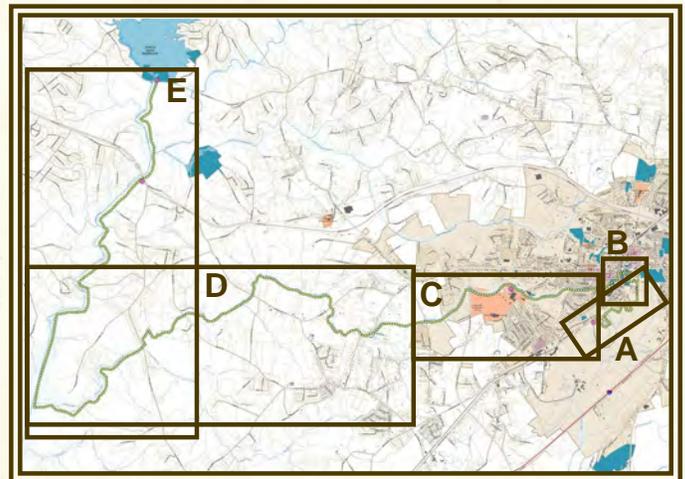
DOWNTOWN KINGS MOUNTAIN

Originally a mining textile town, Kings Mountain was founded in 1874, after the Charlotte-Atlanta Airline Railway laid tracks through the area.

To create and revitalize the downtown as the heart of the community, downtown Kings Mountain has recently seen a lot of community investment. It has become an enticing atmosphere for visitors, residents and businesses. The streets of downtown offer a unique destination along the Carolina Thread Trail. These include specialty shops, a historic theater with regular performances, local restaurants, and a thriving artist scene. In addition, Patriots Park, several historic sites and a museum are also located downtown to create a vibrant and cozy destination.

SEGMENT KEY MAP

- A. Gateway Trail to Gaston/Gold Street
- B. Gaston Street through Downtown to Beason Creek
- C. Beason Creek from Crescent Hill to Crocker Road
- D. Beason Creek from Crocker Road to Buffalo Creek
- E. Buffalo Creek to Moss Lake





EXECUTIVE SUMMARY

KINGS MOUNTAIN GATEWAY TRAIL

Kings Mountain Gateway Trail will provide trail connections to the Kings Mountain National Military Park, Kings Mountain State Park and Crowder's Mountain State Park from a newly constructed trailhead off of Cherokee Street. Currently it provides three miles of trails. This opportunity to connect to two state parks, one national park, and a battlesite that effected national history is one of the ways Kings Mountain is creating a destination to attract visitors from all over. The Virginia Creeper Trail is a close example. Local and non-local visitors spent an estimated \$2.5 million dollars in one year (Virginia Department of Conservation, 2004). The connection between these three parks and a historic small town can be one of the biggest draws to the Carolina Thread Trail as a destination experience.



Kings Mountain Gateway Trail



ACKNOWLEDGEMENTS

FOCUS TEAM MEMBERS

Dennis Patterson
Bill McCarter
Holly Black
Tommy Brooks
Ken Pflieger
Dennis Wells
Johnny Hutchins
O'Kelly Broadway
Gilbert Patrick
Randi Gates
Carl Spangler

STAFF

Steve Killian
Marcie Campbell
Ellis Noell
Mayor Rick Murphrey

LANDDESIGN CONSULTANT TEAM

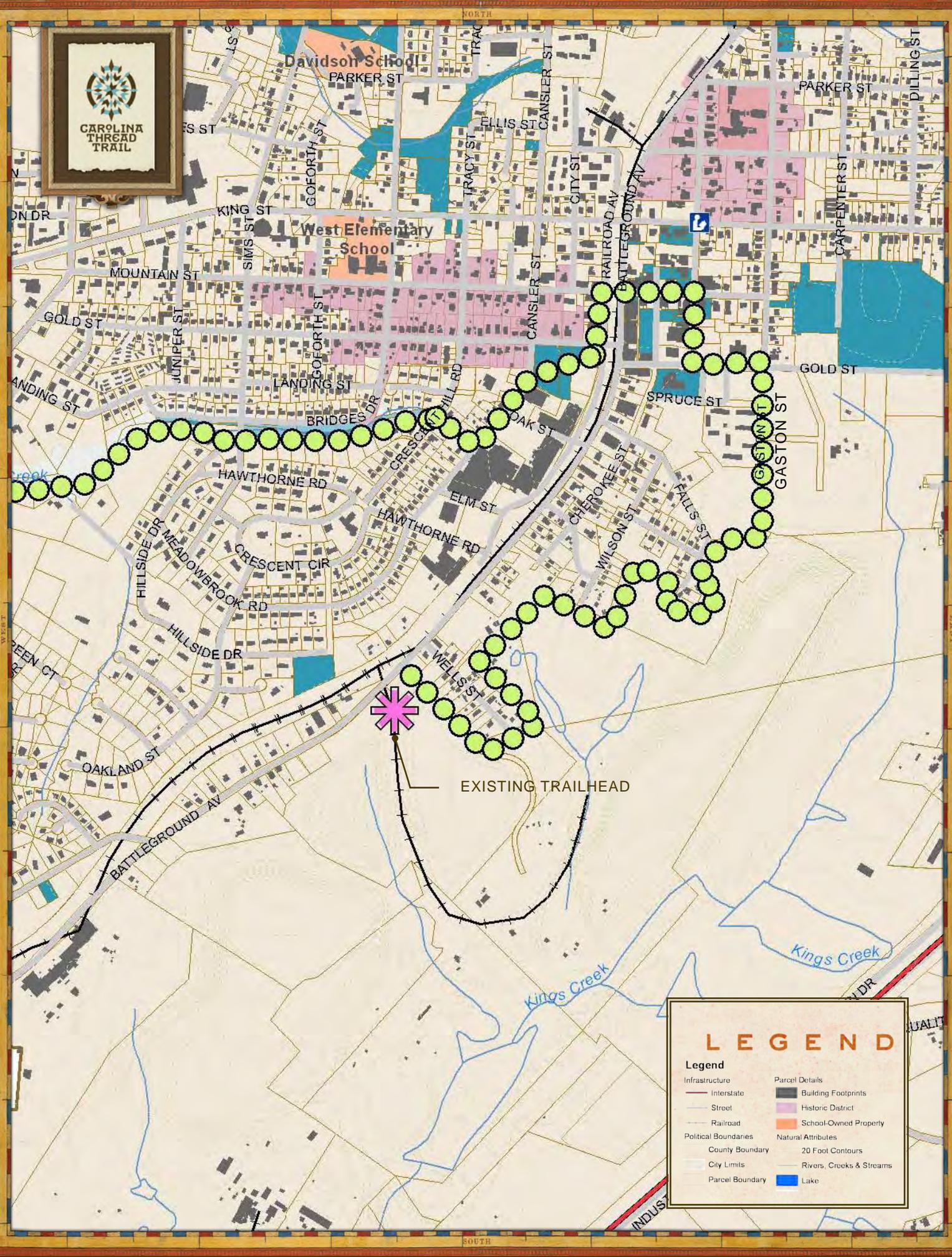
Beth Poovey
Dan Dodd
Aaron Shier
Kate Pearce
Regina Czerr
Julie Klausman

LIAISON TO KINGS MOUNTAIN GATEWAY TRAILS, INC.

Shirley Brutko



CAROLINA
THREAD
TRAIL



LEGEND

Legend

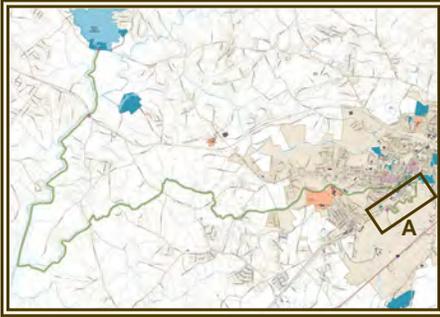
- | | |
|----------------------|--------------------------|
| Infrastructure | Parcel Details |
| Interstate | Building Footprints |
| Street | Historic District |
| Railroad | School-Owned Property |
| Political Boundaries | Natural Attributes |
| County Boundary | 20 Foot Contours |
| City Limits | Rivers, Creeks & Streams |
| Parcel Boundary | Lake |



CORRIDOR SEGMENT A

Gateway Trail to Gaston/Gold Street

VICINITY MAP



Kings Mountain Gateway Trail - photo by Carolina Thread Trail



Martin Marietta Fenceline



Kings Mountain Gateway Trailhead - photo by Carolina Thread Trail

TRAIL BUILDER

City of Kings Mountain

TRAIL FUNDING STRATEGY

Carolina Thread Trail Grant

NC Parks & Recreation- PARTF Grant

NC General Fund-Adopt-a-Trail Grant, Recreational Trails Program Grant

Powell Bill

*NCDOT TE Program

*Eat Smart, Move More NC Community Grants Program

*NC Health & Wellness Trust Fund-Fit Community Program

*Apply to all segments.

SEGMENT FACTS

Length: 4,800 LF/.9 miles

Trail on the Ground: 0 miles

Estimated Stream Crossings: 1

Estimated Road Crossings: 1

Recommended Trail Type: Asphalt

ESTIMATED COSTS

Acquisition: \$63,500

Asphalt Trail: \$360,000

Stream Crossings: \$3,000

Road Crossings: \$1,000

ROUTE DESCRIPTION

Trail would connect to the Kings Mountain Gateway Trail over Quarry Road into the Martin Marietta Quarry. The trail would be on Quarry property but stay outside of their fence line. Utilize existing Kings Mountain Gateway Trail Trailhead.

OPPORTUNITIES AND CHALLENGES

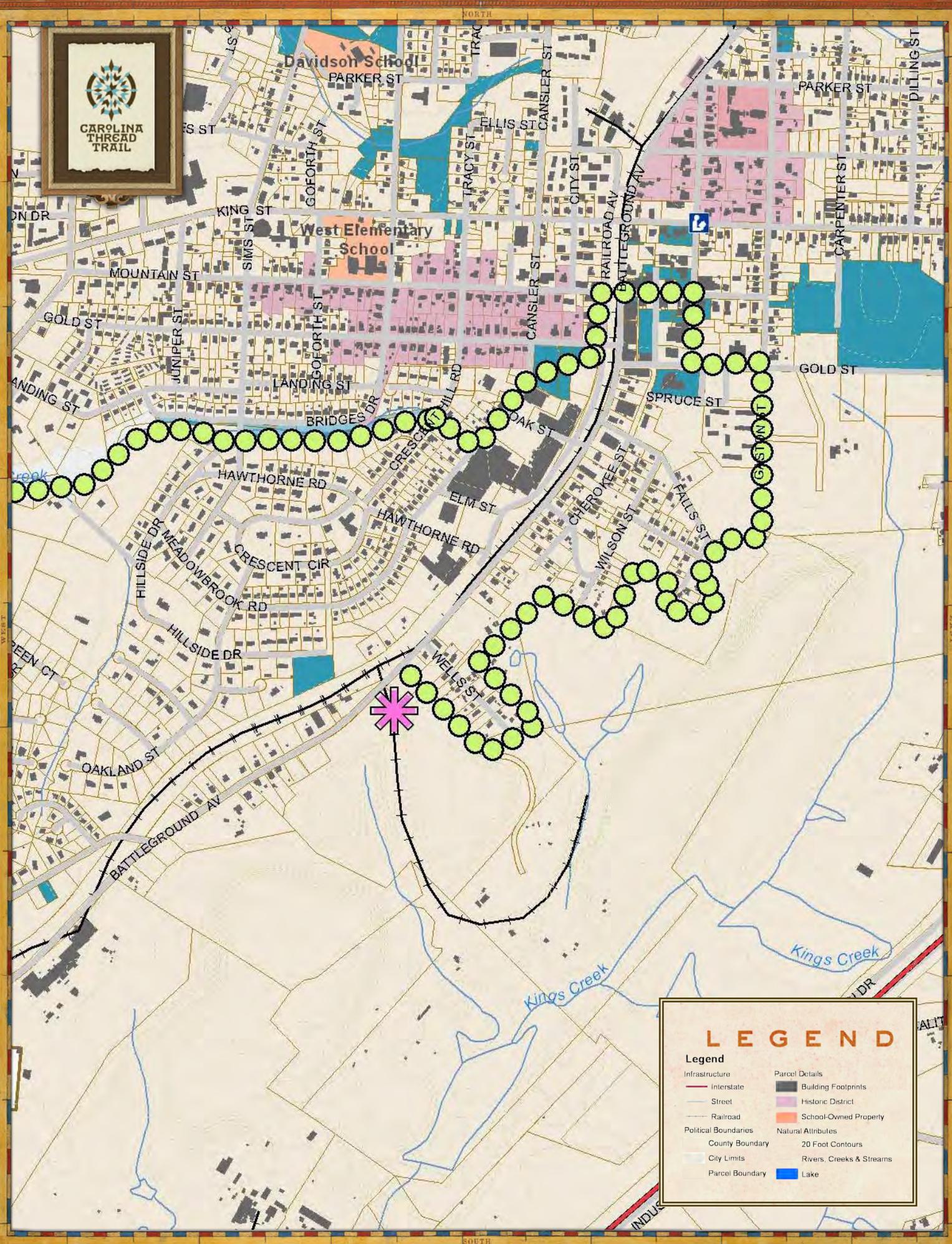
1. This route alleviates issues along Battleground, (ROW and property constraints, railroad, and road crossings). Quarry land values will increase in future as it ceases operation. Route has been discussed with Martin Marietta representatives and works with their phasing plans.
2. Crossing Quarry Road- currently it is still actively used by quarry traffic which could create issues with an at-grade road crossing and cause safety concerns with debris from quarry trucks. This is a short-term challenge, as the phasing in the quarry will soon cease traffic on this road.

OWNERSHIP

See Appendix C for details.



CAROLINA
THREAD
TRAIL



LEGEND

Legend

- | | |
|-----------------------------|---------------------------|
| Infrastructure | Parcel Details |
| Interstate | Building Footprints |
| Street | Historic District |
| Railroad | School-Owned Property |
| Political Boundaries | Natural Attributes |
| County Boundary | 20 Foot Contours |
| City Limits | Rivers, Creeks & Streams |
| Parcel Boundary | Lake |



CORRIDOR SEGMENT B

Gaston Street through Downtown to Beason Creek

VICINITY MAP



Patriots Park



Downtown Kings Mountain

TRAIL BUILDER

City of Kings Mountain

TRAIL FUNDING STRATEGY*

Explore Municipal Funding Tools

Safe Routes to School

Powell Bill

SEGMENT FACTS

Length: 4,500LF/.9 miles

Trail on the Ground: can use existing sidewalk and road until improvements are funded

Estimated Stream Crossings: 0

Estimated Road Crossings: 7

Recommended Trail Type: Asphalt/concrete sidewalks in the right of way

ESTIMATED COSTS

Acquisition: \$35,200

Sidewalk & Bike Lanes: \$350,000

ROUTE DESCRIPTION

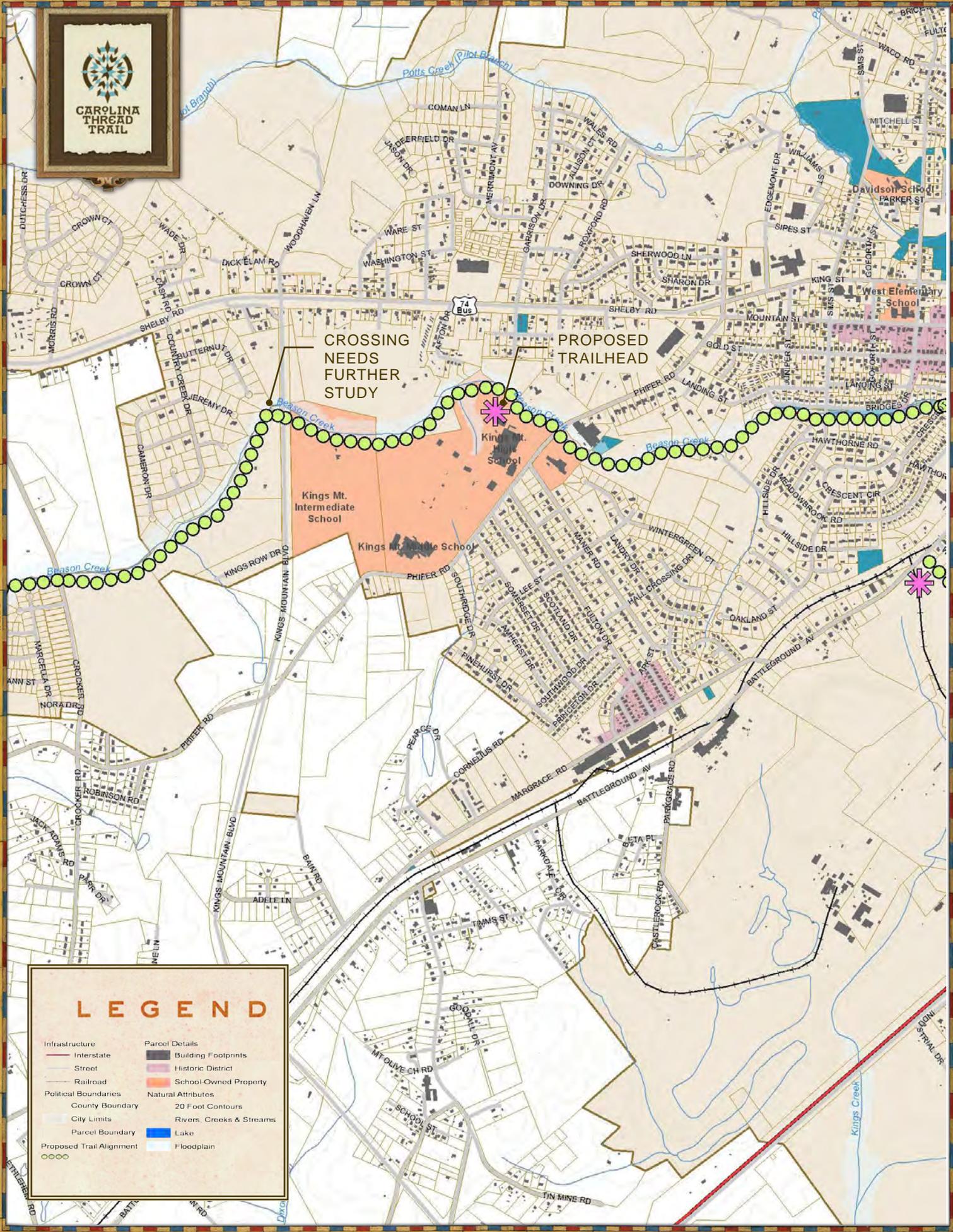
Gaston Street crossing Gold Street to connect to Mountain Street to Battleground back to Gold Street and over to Crescent Hill Road.

OPPORTUNITIES AND CHALLENGES

1. Downtown is positioned to be a major destination for the Carolina Thread Trail. The signalized intersections at Gaston & Gold Street, Mountain & Gaston and Mountain & Battleground provide for ideal intersection crossings.
2. Piggy-backs on City-planned pedestrian improvements and Main Street initiative for streetscape improvements provide an opportunity to incorporate improved pedestrian and bicycle improvements.
3. The streets and sidewalks could all be made more accessible to pedestrians and bikes throughout. High priority streets for trail access improvements include Gaston to Mountain Street, Mountain Street from Gaston to Crescent Hill Road, and Gold Street to Crescent Hill Road.

OWNERSHIP

See Appendix C for details.



CROSSING
NEEDS
FURTHER
STUDY

PROPOSED
TRAILHEAD

LEGEND

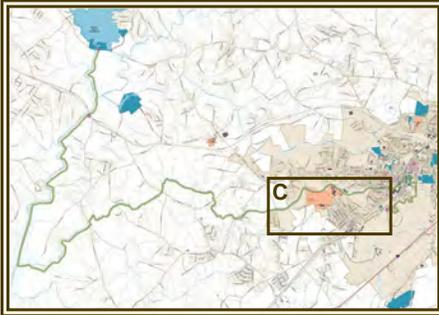
- | | |
|-----------------------------|---------------------------|
| Infrastructure | Parcel Details |
| Interstate | Building Footprints |
| Street | Historic District |
| Railroad | School-Owned Property |
| Political Boundaries | Natural Attributes |
| County Boundary | 20 Foot Contours |
| City Limits | Rivers, Creeks & Streams |
| Parcel Boundary | Lake |
| Proposed Trail Alignment | Floodplain |
| ○○○○ | |



CORRIDOR SEGMENT C

City of Kings Mountain

VICINITY MAP



Hillside Drive- Old road bed



Bridge at Kings Mountain Boulevard



Sanitary Sewer Easement

TRAIL BUILDER

City of Kings Mountain

TRAIL FUNDING STRATEGY*

Carolina Thread Trail Grant

NC Parks & Recreation-PARTF Grant

NC General Fund-Adopt-a-Trail Grant, Recreational Trails Program Grant

Safe Routes to School

Clean Water Management Trust Fund-Planning Grant

SEGMENT FACTS

Length: 14,100 LF/2.7 miles

Trail on the Ground: 0 miles

Estimated Stream Crossings: 2

Estimated Road Crossings: 3

(Sims, Phifer and Kings Mountain)

Recommended Trail Type: Granite/gravel

ESTIMATED COSTS

Acquisition: \$119,000

Granite/Gravel

Screenings: \$493,500

Stream Crossings: \$6,000

ROUTE DESCRIPTION

The route follows Beason Creek along Hillside Drive. There would be a midblock crossing at Sims Street. The route would leave the road bed at Juniper Street and continue on the south side of the creek to a midblock crossing at Phifer and follow along the south side of the creek along the three school properties to Kings Mountain Boulevard. The route stays on the south side of the creek behind the Life Enrichment Adult Daycare to Crocker Road.

OPPORTUNITIES AND CHALLENGES

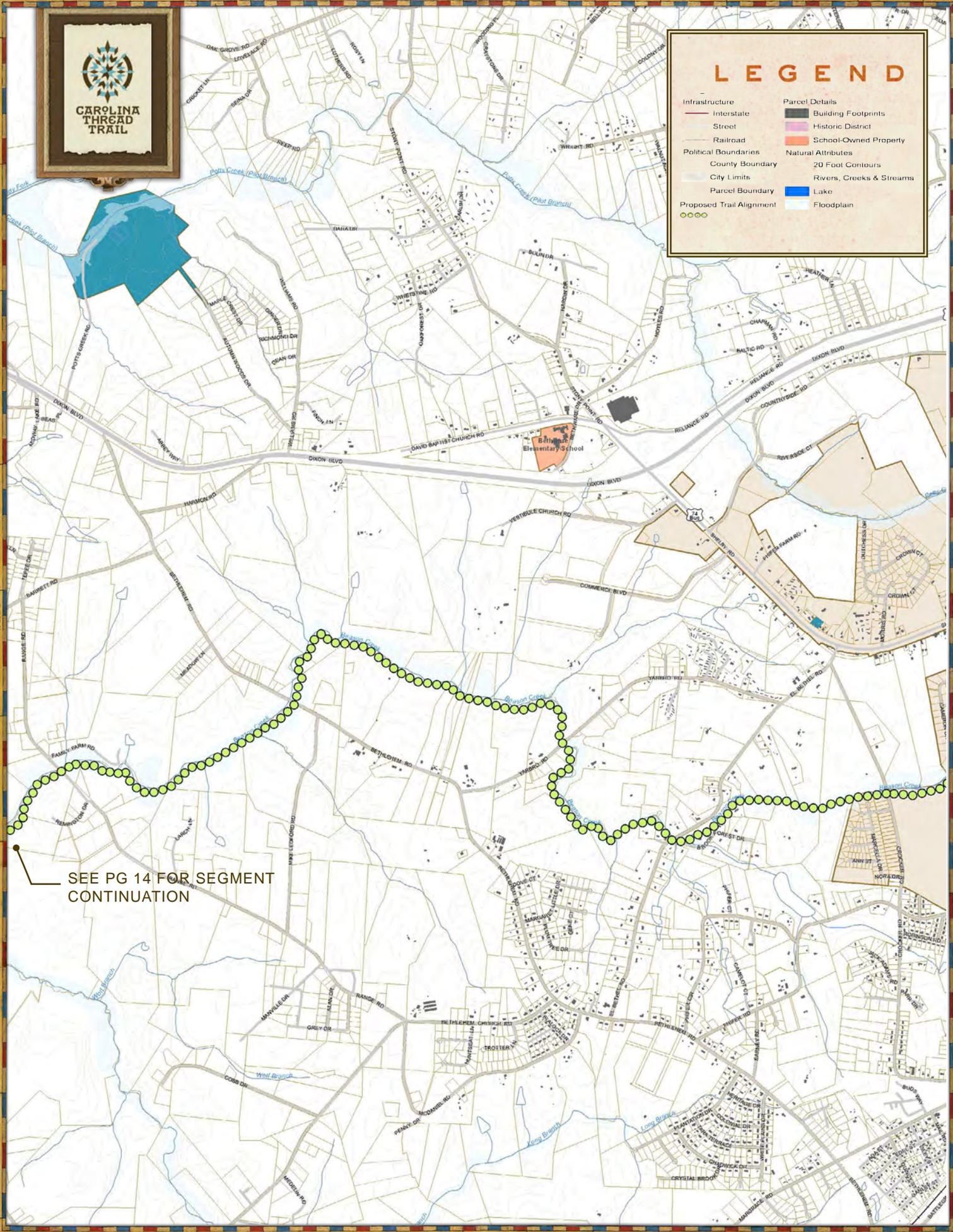
1. Partnerships with the Division of Water Quality for stream protection. Provides protection for the floodplain.
2. Challenges include the crossing at Kings Mountain Boulevard where the speed limit is 55 mph with no signalized intersection. A future signalized intersection at the bus entrance should be explored. Routing under the road, though preferred, seems unlikely.
3. Trail would need to be designed to accommodate flooding issues, which may dictate a different surface material than granite screenings/gravel.

OWNERSHIP See Appendix C for details.



LEGEND

Infrastructure	Building Footprints
Street	Historic District
Railroad	School-Owned Property
Political Boundaries	Natural Attributes
County Boundary	20 Foot Contours
City Limits	Rivers, Creeks & Streams
Parcel Boundary	Lake
Proposed Trail Alignment	Floodplain



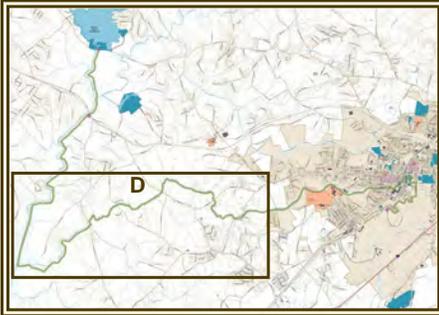
SEE PG 14 FOR SEGMENT CONTINUATION



CORRIDOR SEGMENT D

Beason Creek from Crocker Road to Buffalo Creek

VICINITY MAP



Beason Creek



Bridge at El Bethel Road



Rural character and typical bridge

TRAIL BUILDER

Cleveland County

TRAIL FUNDING STRATEGY*

Carolina Thread Trail Grant

NC Parks & Recreation- PARTF Grant

NC General Fund-Adopt-a-Trail Grant, Recreational Trails Program Grant

Clean Water Management Trust Fund-Planning Grant

SEGMENT FACTS

Length: 35,700 LF/6.8 miles

Trail on the Ground: 0 miles

Estimated Stream Crossings: 8

Estimated Road Crossings: 6

Recommended Trail Type: Granite screenings/gravel

ESTIMATED COSTS

Acquisition: \$458,300

Granite/gravel Screenings: \$1,249,500

(or) Asphalt Trail: \$2,720,000

Stream Crossings: \$24,000

Road Crossings: \$6,000

ROUTE DESCRIPTION

The proposed trail would be located along the riparian corridor of Beason Creek. It would follow the south side of Beason Creek crossing under El Bethel, Yarboro, Bethelhem, Range, and Long Branch Roads to connect to the east side of Buffalo Creek.

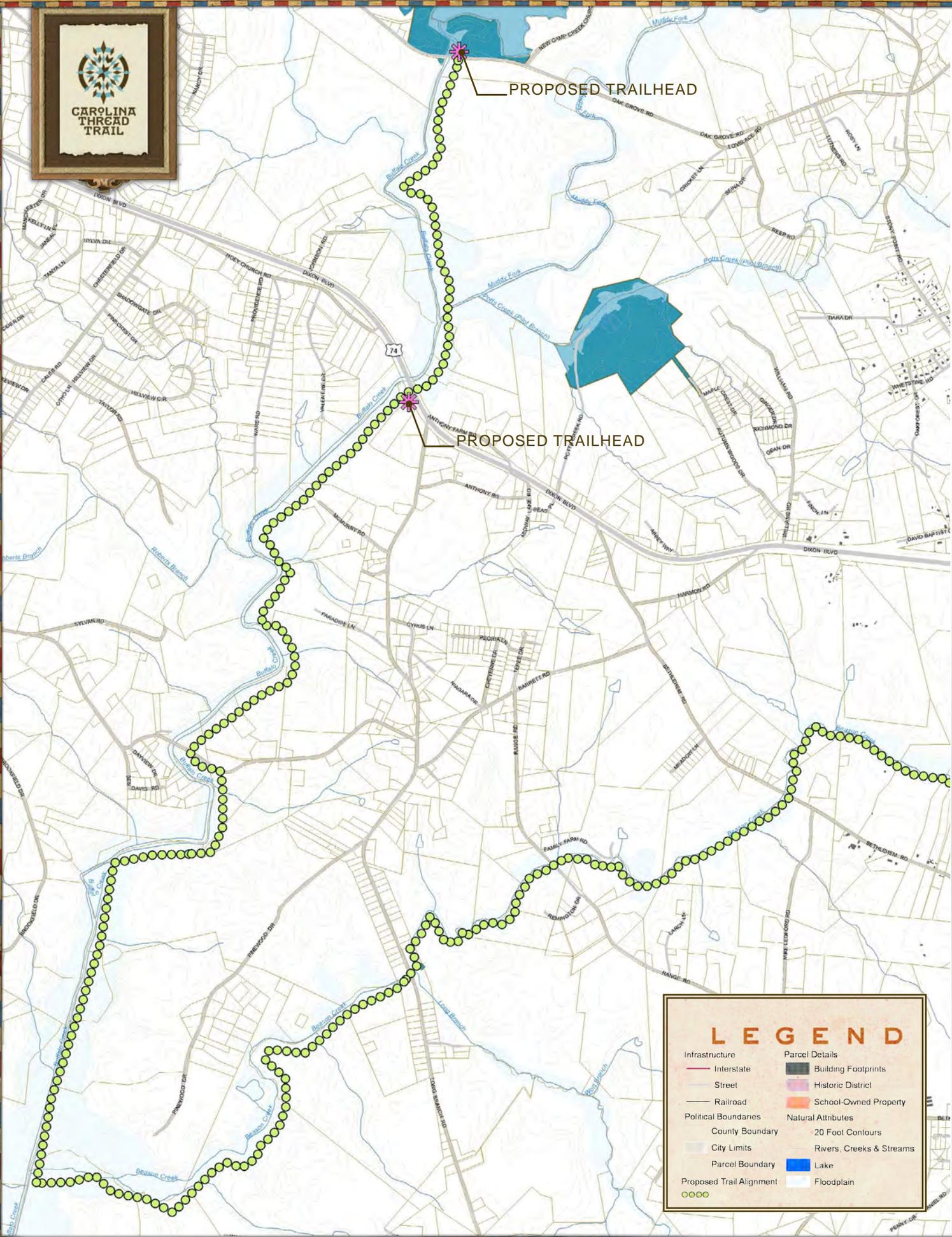
OPPORTUNITIES AND CHALLENGES

1. This route is very scenic and has high aesthetic and contextual appeal.
2. It would help protect the natural function of the floodplain corridor.
3. There could be opportunities for partnerships with Division of Water Quality for stream protection and opportunities for Clean Water Management Trust funding.
4. There are challenging and numerous road and stream crossings, but all appear feasible.
5. Trail would need to be designed to accommodate flooding issues, which could rule out the community preference for a granite screenings/gravel surface.

OWNERSHIP

See Appendix C for details.

NORTH



SOUTH

LEGEND

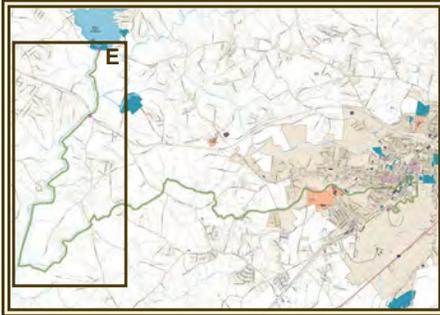
Infrastructure	Parcel Details
Interstate	Building Footprints
Street	Historic District
Railroad	School-Owned Property
Political Boundaries	Natural Attributes
County Boundary	20 Foot Contours
City Limits	Rivers, Creeks & Streams
Parcel Boundary	Lake
Proposed Trail Alignment	Floodplain



CORRIDOR SEGMENT E

Buffalo Creek to Moss Lake

VICINITY MAP



The Buffalo Creek



Picnic Area at Satterfield's site



Highway 74 Bridge

TRAIL BUILDER

Cleveland County

TRAIL FUNDING STRATEGY*

Carolina Thread Trail Grant

NC Parks & Recreation-PARTF Grant

NC General Fund-Adopt-a-Trail Grant, Recreational Trails Program Grant

Clean Water Management Trust Fund-Planning Grant

SEGMENT FACTS

Length: 28,000 LF/5.3 miles

Trail on the Ground: 0 miles

Estimated Stream Crossings: 6

Estimated Road Crossings: 2

Recommended Trail Type:

Natural Surface

ESTIMATED COSTS

Acquisition: \$327,500

Natural Trail: \$280,000

Stream Crossings: \$25,000

Road Crossings: \$25,000

Trailhead Improvements: \$40,000

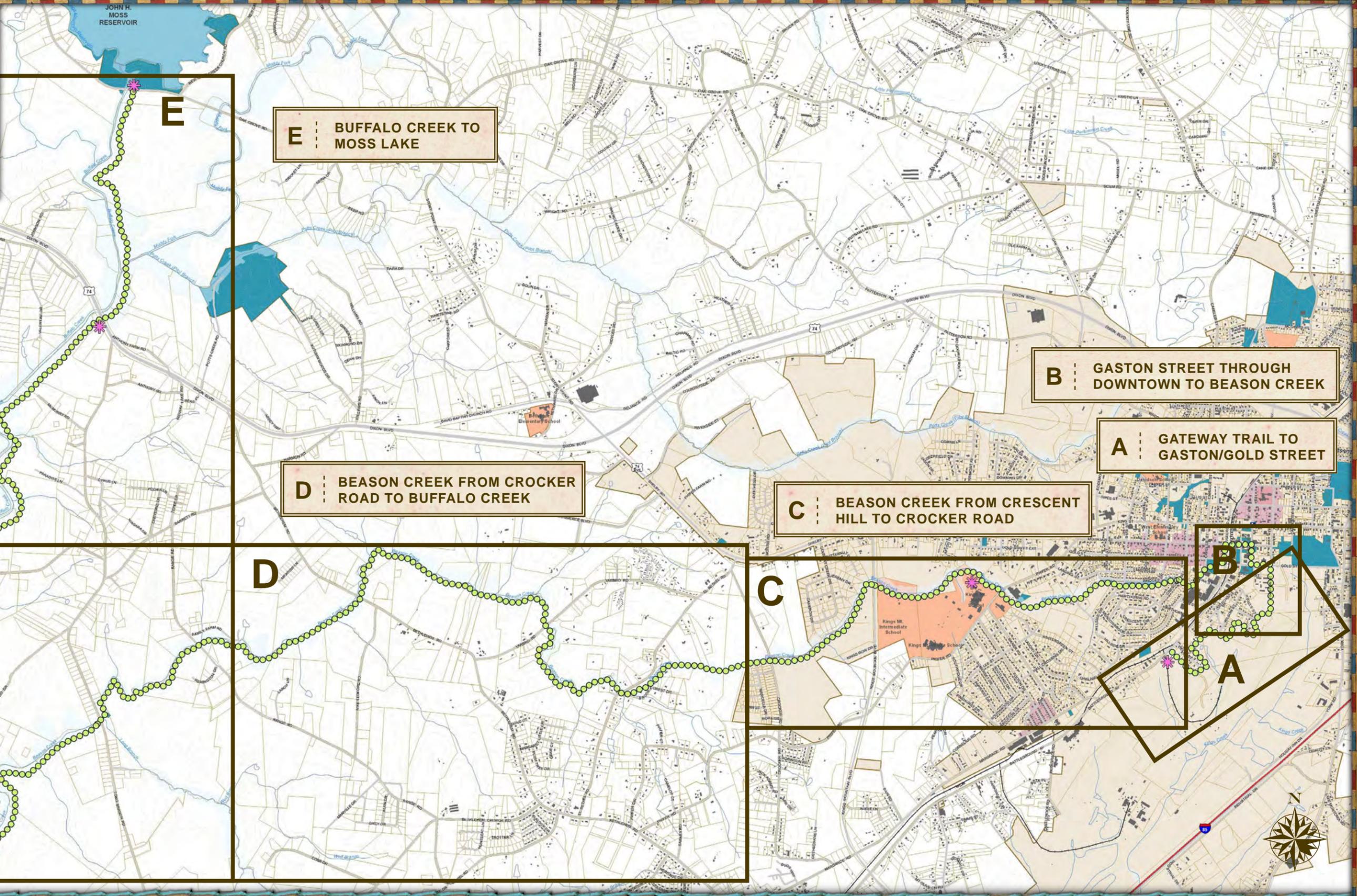
ROUTE DESCRIPTION

Mapped alignment follows an adopted trail corridor. When development occurs in the large parcels, the trail alignment should be integrated within the community to provide a scenic, safe and interesting experience for the adjacent residents and traveling users.

OPPORTUNITIES AND CHALLENGES

1. This route provides a unique opportunity to pass under a Highway 74 with plenty of room. Satterfield's (or future development) provides a nice opportunity for creek side dining and future trailhead amenities.
2. This route provides for a very scenic trail experience and has a high aesthetic appeal and provides protection for the floodplain corridor.
3. There could be possibilities for partnerships with Division of Water Quality for stream protection.
4. Although this is the most scenic route through the rural and natural landscape, safest and most feasible with the Highway 74 barrier, it is quite long and uphill to Moss Lake, not taking the most direct route from Kings Mountain to Moss Lake.

OWNERSHIP See Appendix C for details.



E : BUFFALO CREEK TO MOSS LAKE

B : GASTON STREET THROUGH DOWNTOWN TO BEASON CREEK

A : GATEWAY TRAIL TO GASTON/GOLD STREET

D : BEASON CREEK FROM CROCKER ROAD TO BUFFALO CREEK

C : BEASON CREEK FROM CRESCENT HILL TO CROCKER ROAD

CORRIDOR SEGMENT KEY MAP



4



6



3



1 TICKET

PINK ALIGNMENT WOODHAVEN LANE TO POTTS CREEK

ROUTE DESCRIPTION

Woodhaven Lane to Shelby Road/74B, continue north to cross over Potts Creek to connect to Hickman Drive. Connect to Patterson Road to cross over Highway 74 to connect to Reliance Road to Potts Creek.

Recommended Trail Type: Road sections either bike lanes with sidewalk or multiuse asphalt trail. Off road sections either asphalt trail, or natural surface.

Estimated Length:	7,100 linear feet (1.4 miles)
Trail on the Ground:	0
Estimated Stream Crossings:	5
Road Crossings:	3
Estimated Cost:	Bike Lanes/sidewalk= \$238,000 Road Crossings/Intersections= \$3000 Stream Crossings= \$29,000 Natural = \$140,000 / Asphalt = \$1,068,000
Ownership:	30

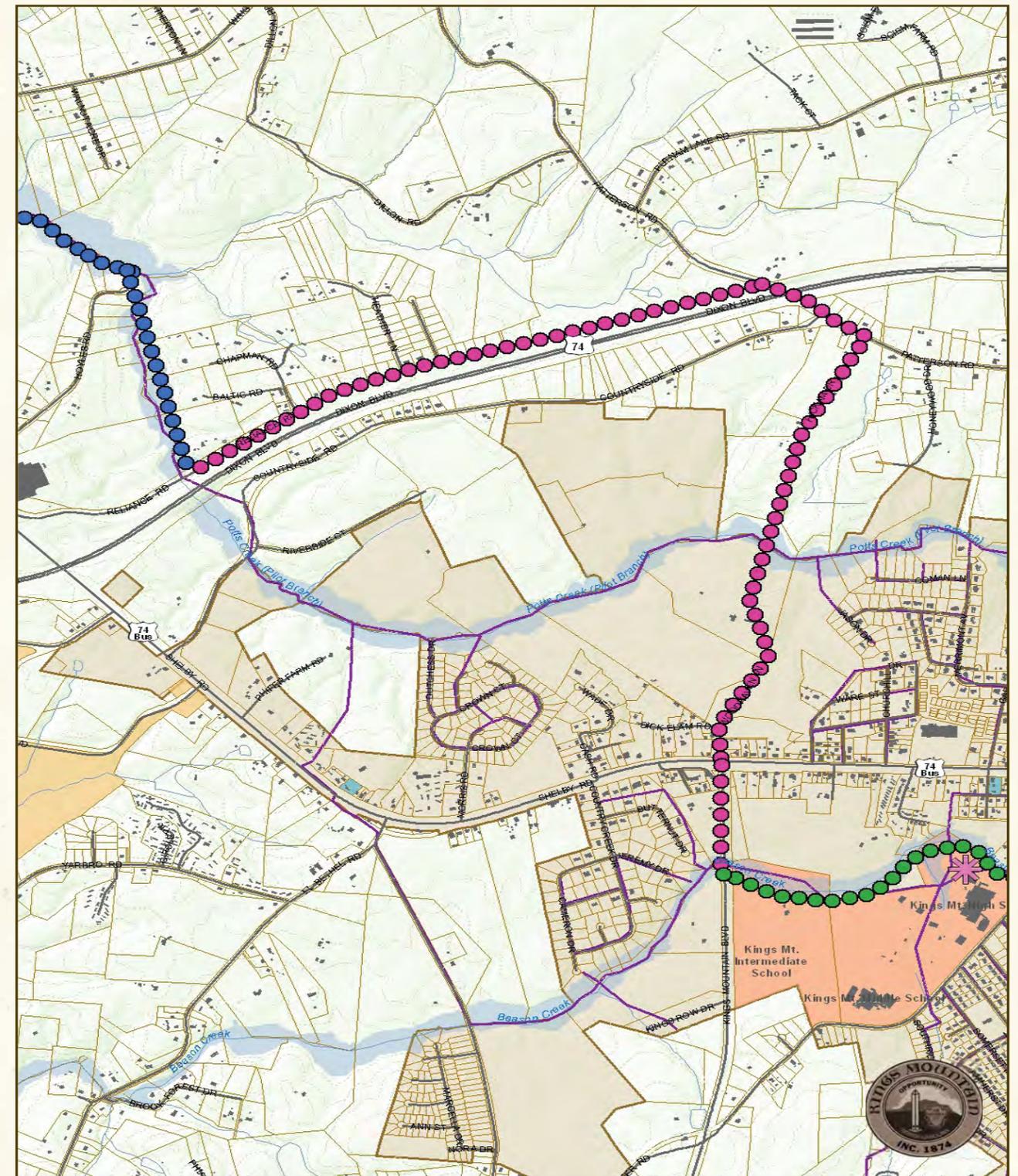
OPPORTUNITIES:

Use Patterson Road Bridge to cross over Highway 74.

Piggy-back on Kings Mountain Boulevard proposed improvements.

CHALLENGES:

Navigation amongst roads and road crossings.





BLUE ALIGNMENT CROCKER ROAD TO POTTS CREEK

ROUTE DESCRIPTION

Crocker Road to El Bethel to Shelby/74B to Countryside to South side of Potts Creek, under Highway 74 through box culvert. Follow Potts Creek sewer easement south side, or stay on Potts Creek corridor. Cross Stoney Point Road. Cross Muddy Branch to east side of Buffalo Creek.

Recommended Trail Type: Crocker Road & Shelby/74B: Multi use trail beside road or bike lanes.

Potts Creek: asphalt trail or natural surface

Estimated Length: 35,100 linear feet (6.6 miles)

Trail on the Ground: 0

Estimated Stream Crossings: 4

Road Crossings: 6

Estimated Cost: Bike Lanes/sidewalk=

\$406,000

Road Crossings/

Intersections= \$123,000

Stream Crossings= \$36,000

Natural = \$300,000 /

Asphalt = \$2,240,000

Ownership: 47

OPPORTUNITIES:

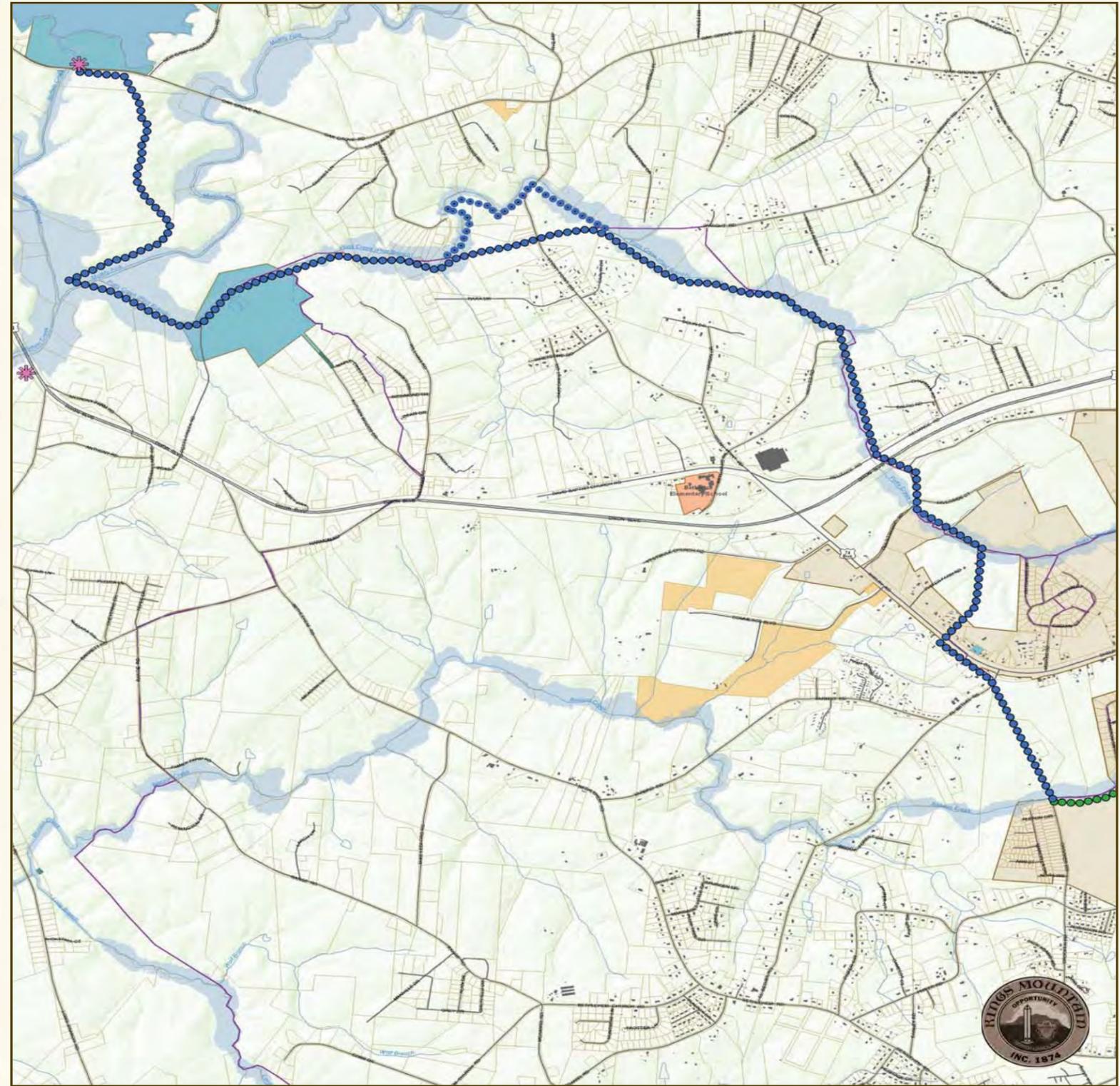
Signalized intersection at Shelby/74B and El Bethel Road.

Utilize sewer easements majority of route.

Sewer easement from Shelby/74B to Potts Creek minimizes trail on busy 74B.

CHALLENGES:

Box culvert at 74 - permitting questionable. Too long to feel comfortable.





4



5



4



2 TICKETS

PURPLE ALIGNMENT MOSS LAKE ATV TRAILS



ROUTE DESCRIPTION

Follow trails blazed by ATV users between Muddy Fork and Buffalo Creek.

Recommended Trail Type: Multi-use asphalt trail, or natural surface

Estimated Length: 7,100 linear feet (1.4 miles)

Trail on the Ground: 0

Estimated Stream Crossings: 0

Road Crossings: 0

Estimated Cost: Natural = \$28,000 / Asphalt = \$450,000

Ownership: 4

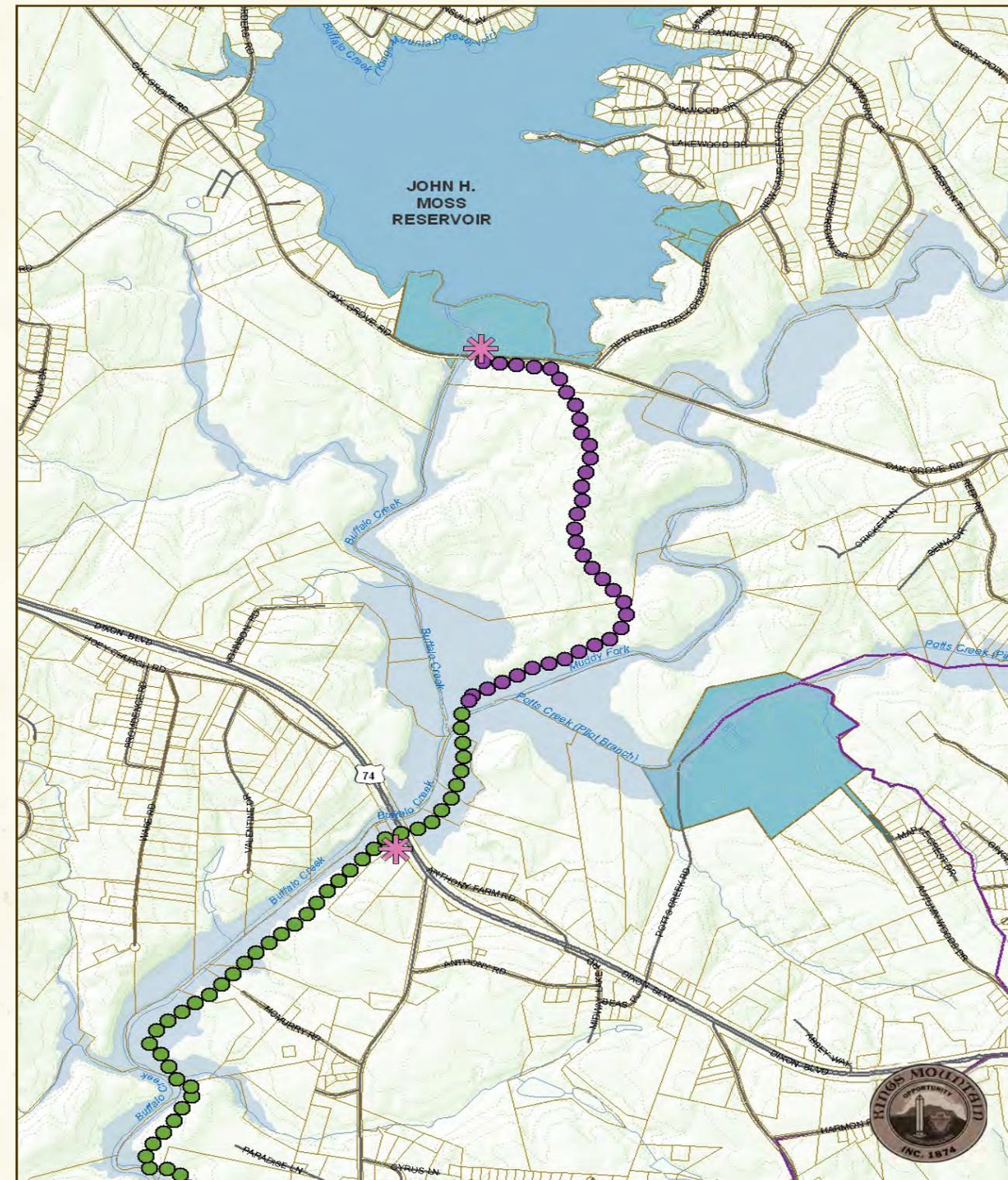
OPPORTUNITIES:

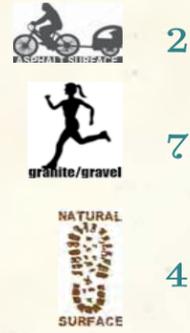
Trail already blazed- cost efficient.

CHALLENGES:

Property ownership.

Less aesthetically appealing away from riparian corridor.





0 TICKETS

ORANGE ALIGNMENT BEASON TO BUFFALO OVERLAND CONNECTOR

ROUTE DESCRIPTION

Trail from Beason Creek connect west to Buffalo Creek with a midblock crossing of Pinewood Drive (dead end street).

Recommended Trail Type: Multi-use asphalt trail, or natural surface

Estimated Length: 4,600 linear feet (.9 miles)

Trail on the Ground: 0

Estimated Stream Crossings: 1 (Beason Creek)

Road Crossings: 1 (Pinewood Drive)

Estimated Cost: Natural = \$46,000 / Asphalt = \$345,000

Ownership: 2

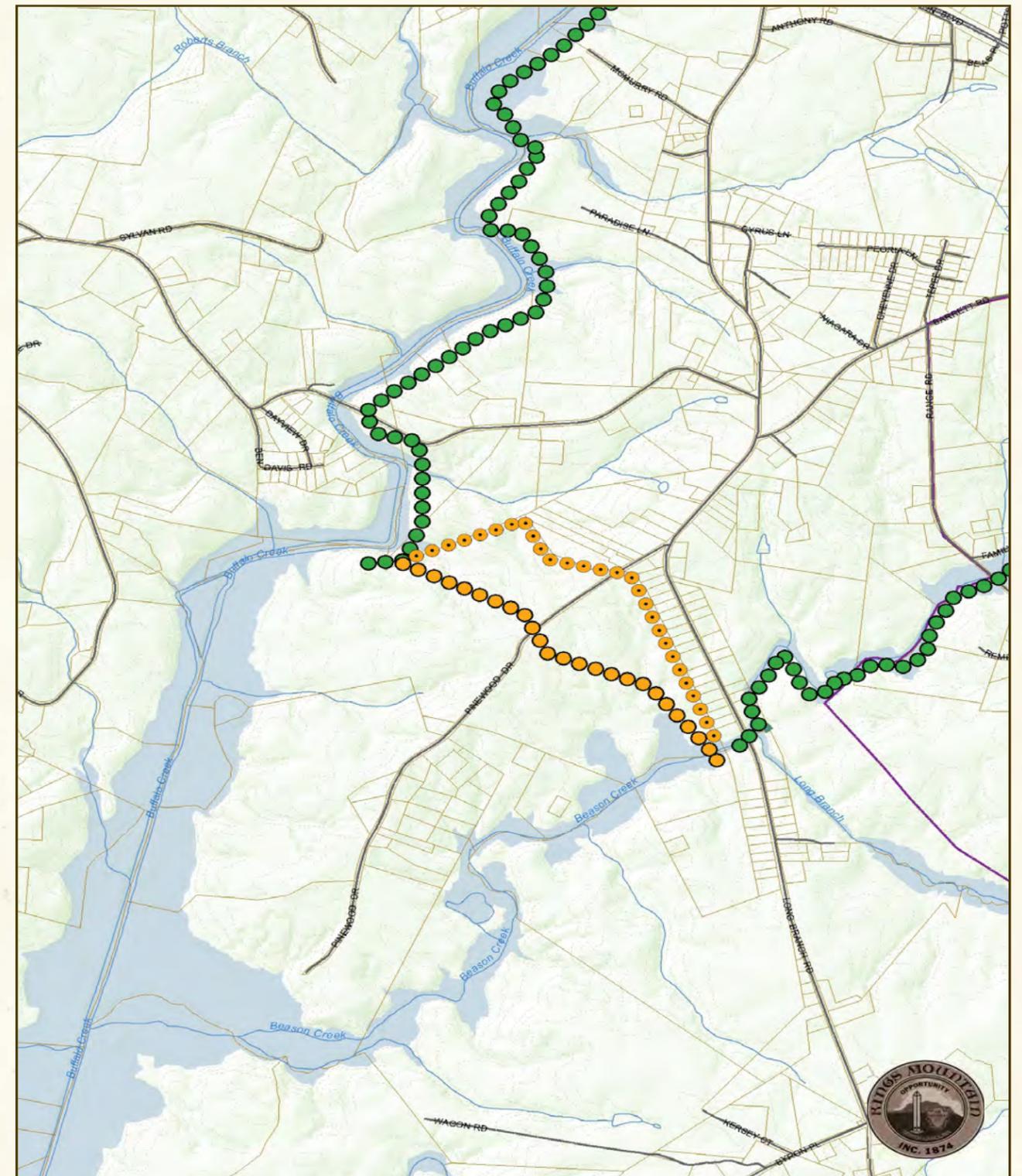
OPPORTUNITIES:

Shorten the Beason Buffalo connection.

If opportunity exists would provide a good alternate for travel to and from Moss Lake to Kings Mountain.

CHALLENGES:

Road crossing





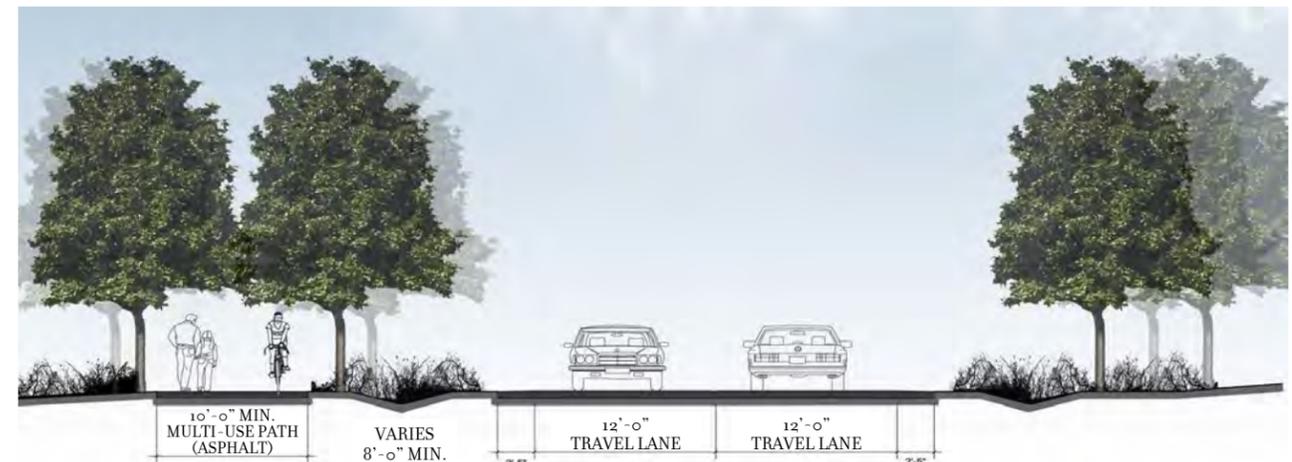
TYPICAL CROSS SECTIONS



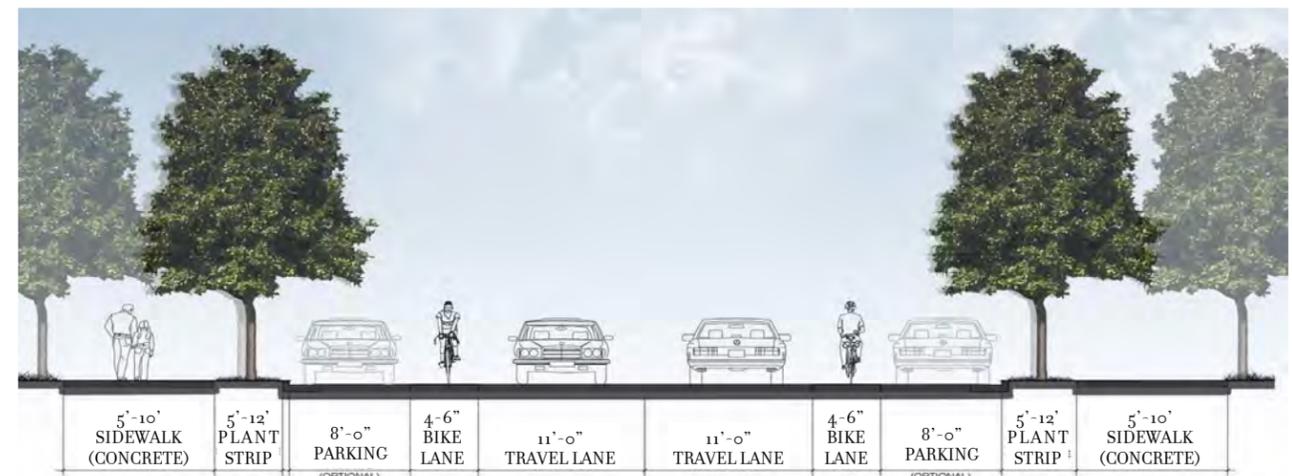
ASPHALT SURFACE NATURAL SETTING



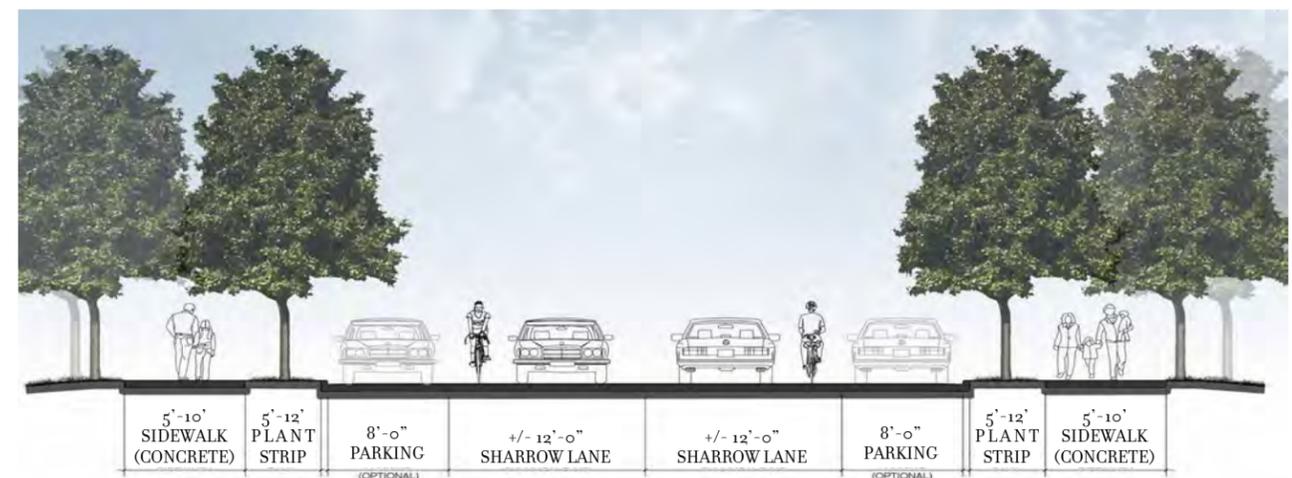
NATURAL SURFACE TRAIL



MULTI-USE PATH ALONG RURAL ROADWAY



BIKE LANE IN DOWNTOWN AREA



SHARROW IN DOWNTOWN AREA



APPENDIX C

Ownership

OWNERSHIP SEGMENT A

Name	Parcel	Easement Estimate
Chemtall Foote Corp	47963	\$5,800
Raymond Gettys	47389	\$13,500
Martin Marietta Materials	46803	\$11,300
Martin Marietta Materials	46703	\$30,000
WK Mauney	45689	\$4,700

Easement estimates are based on the following assumptions:
\$3000/acre for floodplain
\$5000/acre for upland
100 foot easement from the edge of the water body

OWNERSHIP SEGMENT B

Name	Parcel	Easement Estimate
King Mtn City Community Dev't	45494, 45490, 45483	\$7,600
Mauney Hosiery Mills	46114, 46003	\$4,400
City of Kings Mtn	45941	\$11,500
Henry Neisler	46008	\$11,500
Sylvia Neisler	46935	\$3,400
Charles Neisler	46420	\$4,400

OWNERSHIP SEGMENT C

Name	Parcel	Easement Estimate
Bennet Brick & Tile Company	46230	\$9,000
Kings Mtn District School	46276, 45576, 45985	\$63,100
Life Enrichment of Cleveland County	46018	\$17,500
MPB Development Co, Inc.	47065	\$16,200
MAG Land Development, LLC	47685	\$13,200

OWNERSHIP SEGMENT D

Name	Parcel	Easement Estimate
George GoForth	46376	\$16,200
Thomas Tindall	47944	\$10,100
Mildred Caldwell	47417	\$6,300
Arthur Pasini	48160	\$1,800
Arthur Pasini	48163	\$4,700
Donald Cunningham	48324	\$5,700
Jeffery McNeely	48430	\$3,500
Jane Copenhaver	48305	\$2,000
Jane Blanton	48112	\$4,700
Mark Jenkins	47517	\$7,400
John Randle	47580	\$9,200





APPENDIX C
Ownership

OWNERSHIP SEGMENT E (CONTINUED)

Alan Jons	42221	\$20,800
Samuel Williams	41369	\$22,300
Samuel Williams	40989	\$4,500
Asphalt Paving of Shelby	38743	\$32,900
Robert E. Lee	38611	\$4,100
Robert E. Lee	38313	\$4,300
Adelaide Craver	37862	\$9,400
Adelaide Craver	35788	\$19,000
Adelaide Craver	33702	\$47,300
Adelaide Craver	33280	\$4,100