



Triangle Bicycle & Pedestrian Workshop 2022

Town of Clayton

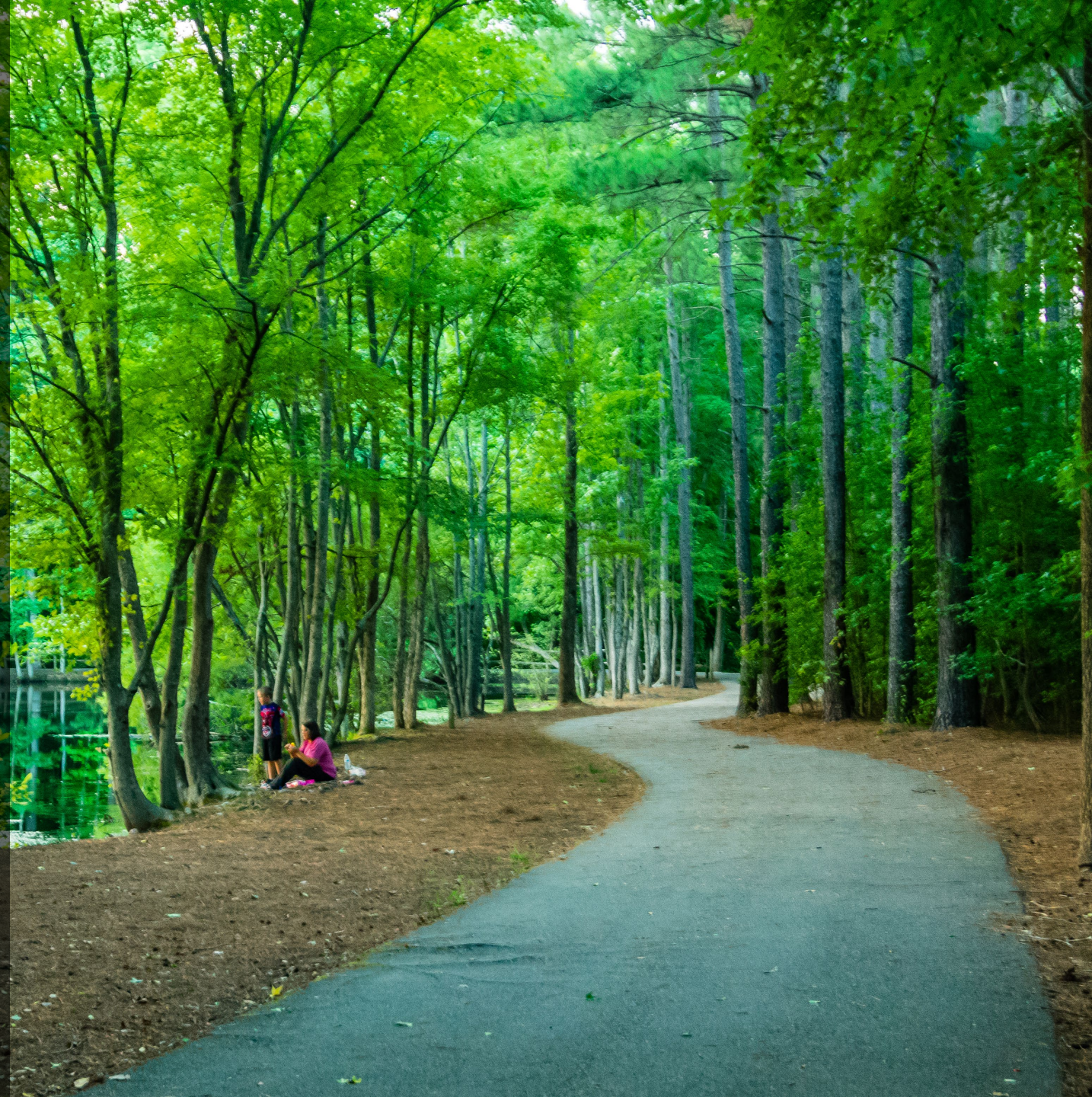


Acknowledgements

Breakfast Underwrite

Cardinal Bikeshare

- Panera
- Sam's Club





Welcome and Town of Clayton Update

Councilmember Porter Casey

City of Raleigh

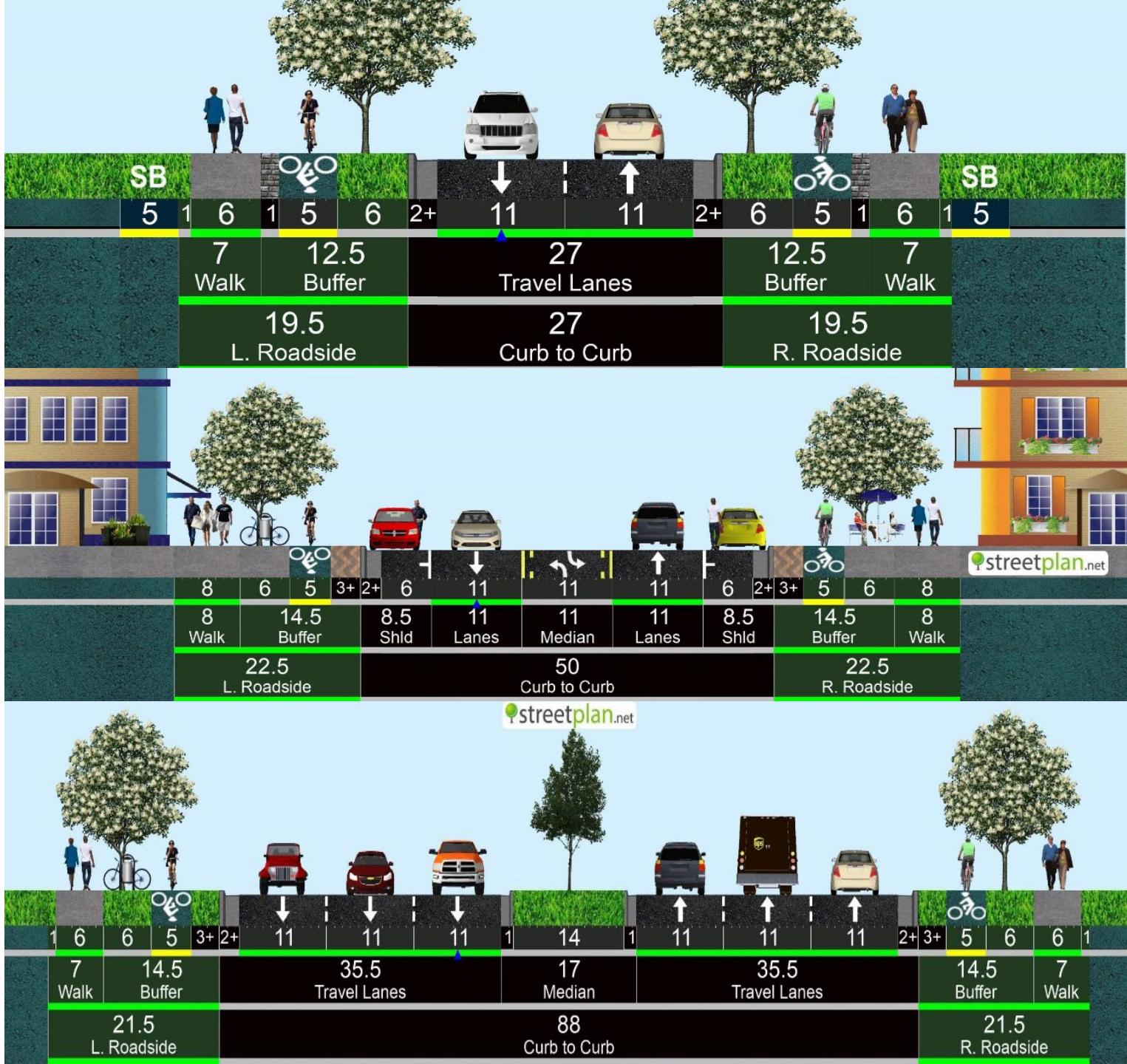
City of Raleigh
Department of Transportation

Bicycle + Pedestrian Update

Triangle Bike + Ped Workshop 2022



Updated S Design Ma



Six Forks



Lake Wheel

- Median + p



Design Alternative 1



Design Alternative 2

Blue Ridge

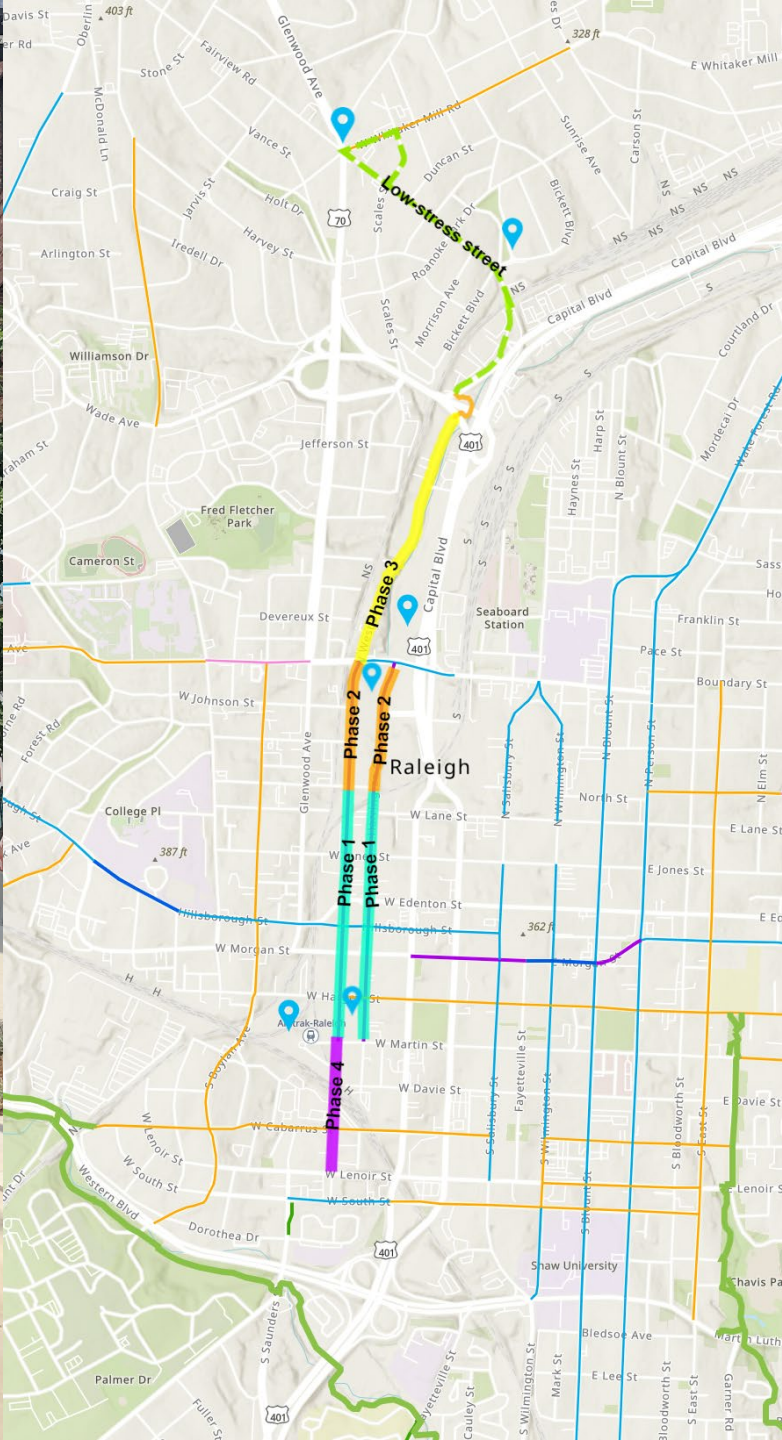


Oberlin Rd

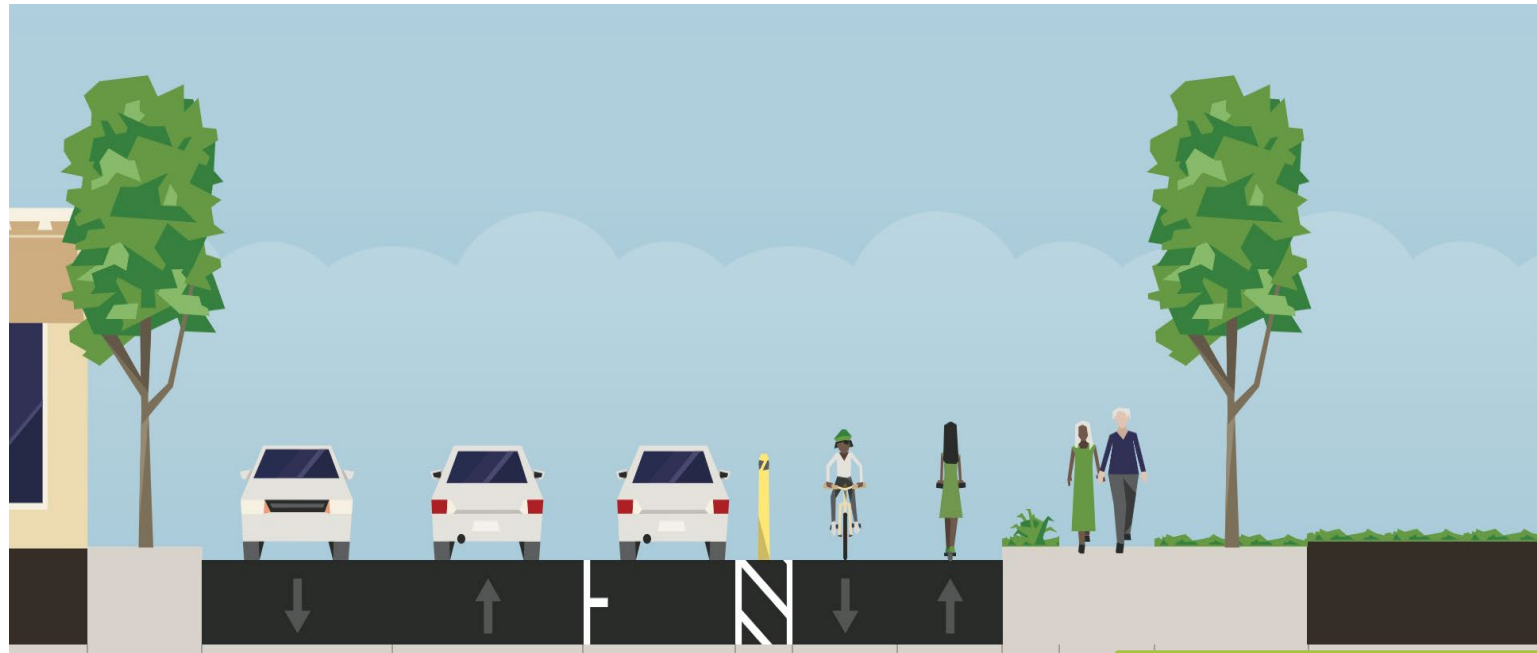


Downtown North-South Greenway Connector

South Greenway



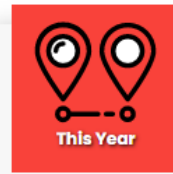
DTNS Greenway Connector – Ph3



Resurfacing With Bike Lanes



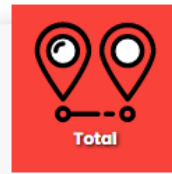
Cardinal Bikeshare



This Year

Distance traveled for
current year

80,023.38 mi



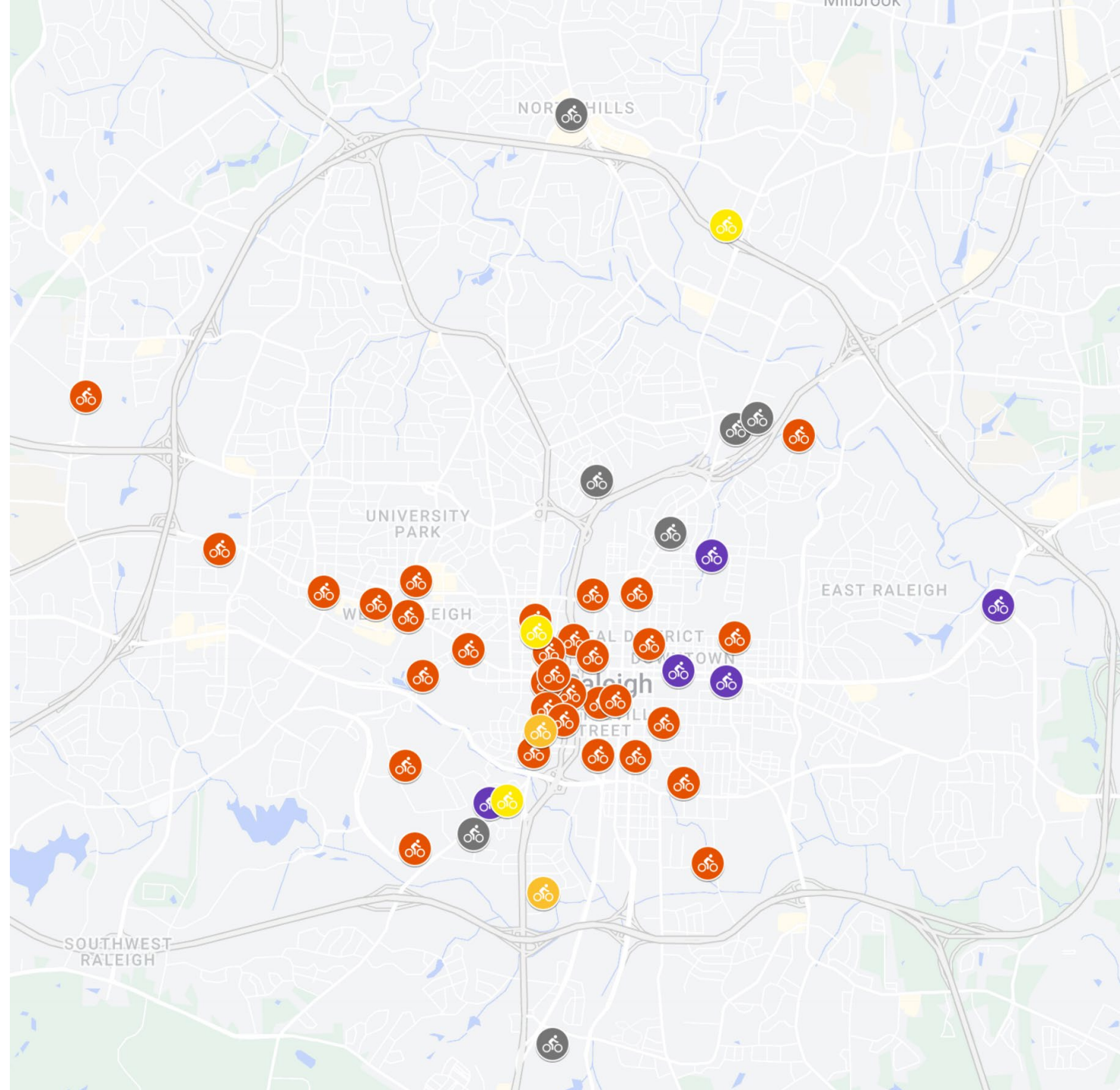
Total

Total distance
traveled since the
beginning

395,659.77 mi



Cardinal Bikeshare Expansion



What on the Horizon?

- Evaluation of sidewalk petition program
 - improve equitable implementation of infrastructure improvements,
 - broaden options,
 - increase eligibility, and
 - reduce barriers to participation
- Bike Plan Update
 - Address inconsistencies caused by text change
- Bus Rapid Transit
 - First/last mile connections
- Bike lane obstruction violations

Thank you!

Questions?

Fontaine Burruss

fontaine.burruss@raleighnc.gov



Raleigh

Town of Morrisville

Town of Morrisville

October 14, 2022

Danielle Kittredge, PhD, AICP
Principal Planner

Current Projects → Future Project

Greenway Trail Counters

- 11 trail counters; installed in 2022
- Access to data dashboard
- Maintenance contract with See Insights
- Data informs greenway trail planning and maintenance



Greenway Trail Counters

Greenway Usage Last Month

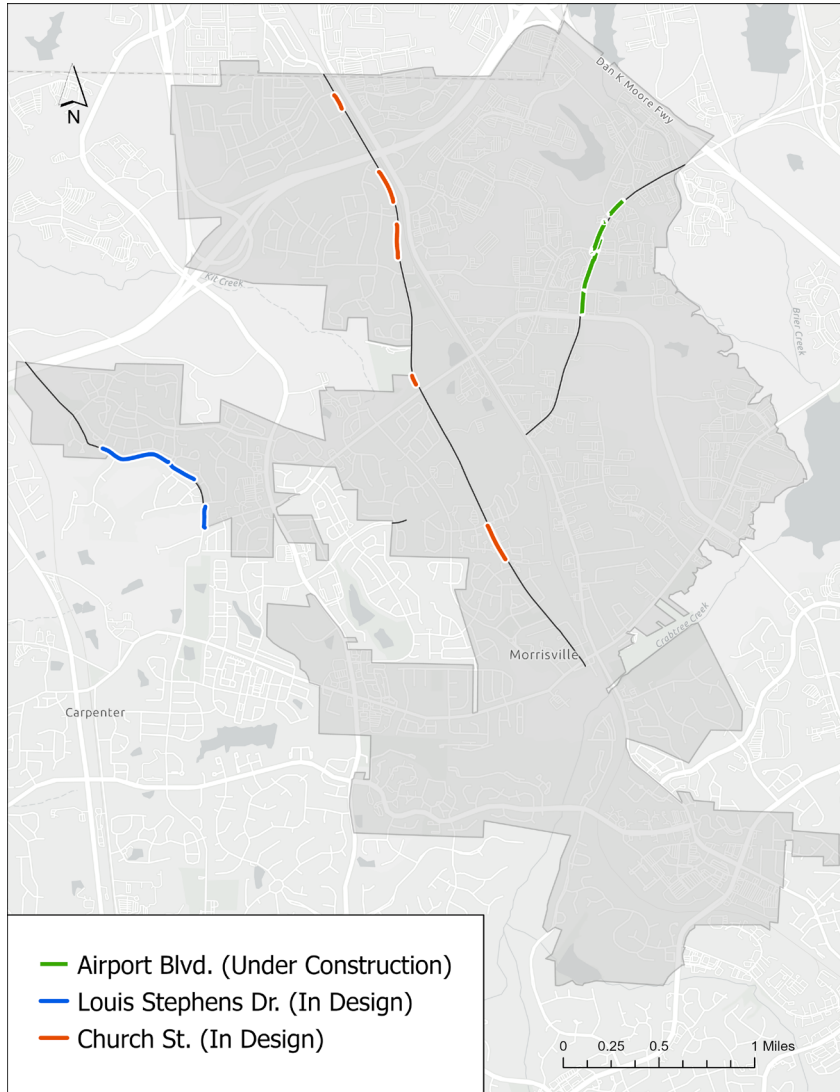
Greenway Usage Last Month

DEVICE NAME	DEVICE NAME	GREENWAY	TOTAL USAGE
Morrisville-Greenway-9	Morrisville-Greenway-9	Shiloh Greenway - Midway	3,076.00
Morrisville-Greenway-11	Morrisville-Greenway-11	Mills Spring Greenway	702.50
Morrisville-Greenway-6	Morrisville-Greenway-6	Indian Creek Trailhead	2,301.50
Morrisville-Greenway-2	Morrisville-Greenway-2	Connectors once completed	3.00
Morrisville-Greenway-10	Morrisville-Greenway-10	Shiloh Greenway - North End	1,598.00
Morrisville-Greenway-4	Morrisville-Greenway-4	Park West Village Greenway	270.50
Morrisville-Greenway-8	Morrisville-Greenway-8	Indian Creek Greenway - North End	1,459.50
Morrisville-Greenway-3	Morrisville-Greenway-3	Crabtree Creek Nature Park	3,824.50
Morrisville-Greenway-7	Morrisville-Greenway-7	Indian Creek Greenway - Midway	0.00

Date	1W-Daily-Max (Morrisville-Greenway-1)	1W-Daily-Max (Morrisville-Greenway-2)	1W-Daily-Max (Morrisville-Greenway-3)	1W-Daily-Max (Morrisville-Greenway-4)	1W-Daily-Max (Morrisville-Greenway-5)	1W-Daily-Max (Morrisville-Greenway-6)	1W-Daily-Max (Morrisville-Greenway-7)	1W-Daily-Max (Morrisville-Greenway-8)	1W-Daily-Max (Morrisville-Greenway-9)	1W-Daily-Max (Morrisville-Greenway-10)	1W-Daily-Max (Morrisville-Greenway-11)
2022-09-30 00:00:00	3004.5	3.0	3824.5	270.5	6033.5	2301.5	None	1459.5	3076.0	1598.0	702.5



Major Sidewalk Gap Projects



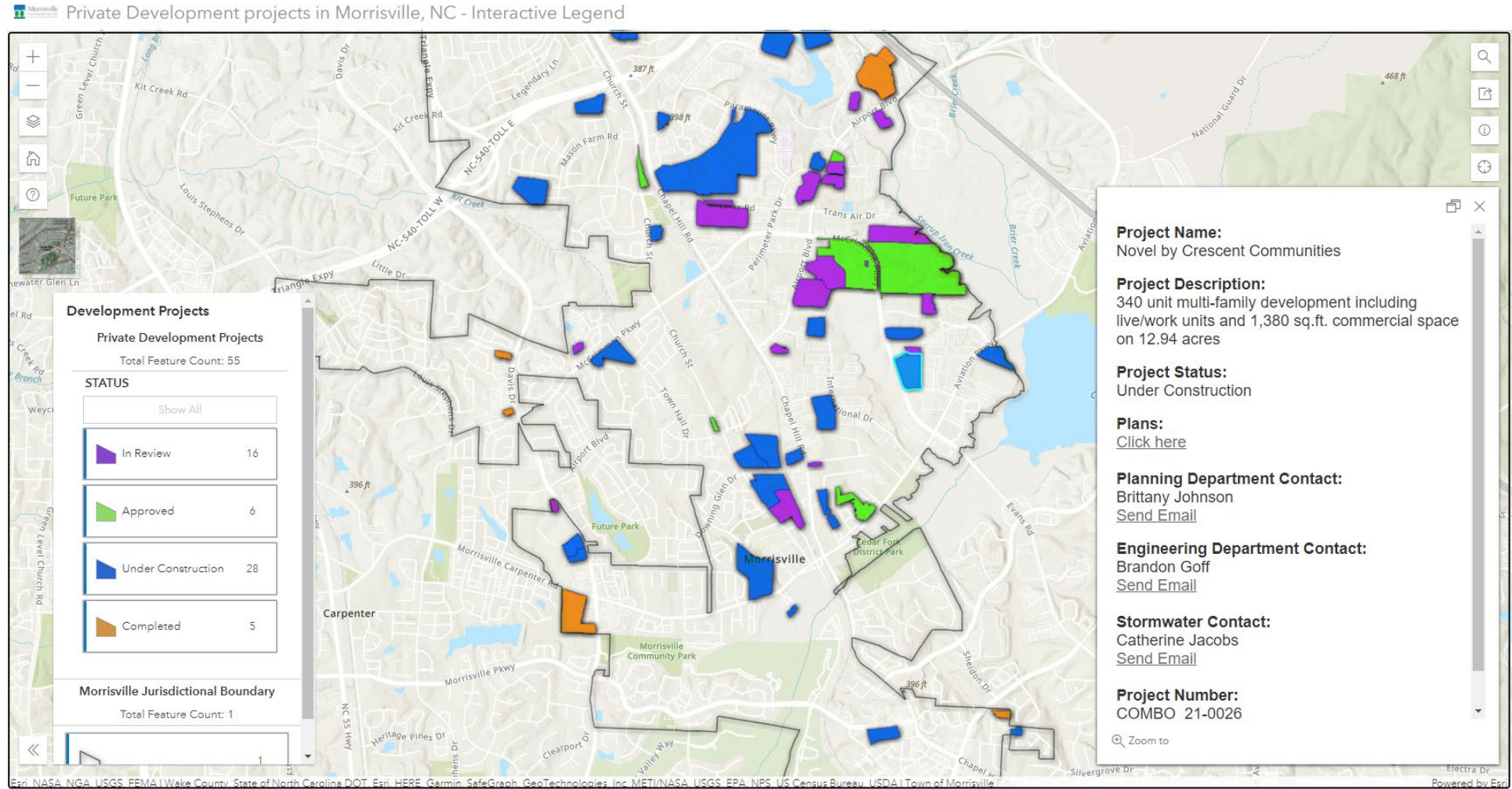
- EB-5814 Airport Blvd. Sidewalk Gaps
- BL-0049 Louis Stephens Dr. Sidewalk Gaps
- EB-5838 Church St. Sidewalk Gaps

Sidewalk gap projects will complete a continuous sidewalk on one or both sides of each roadway.

Capital Investment Program (CIP)

Active Projects	Category	Submitted Cost Estimate	Council Ranking 2021	PRIOR YEARS	FY2023	FY2024	FY2025	FY2026	FY2027	TOTAL
				Cost Escalation Factor	1.05	1.1	1.15	1.2	1.25	
Sidewalk Connectivity Betterment Improvements	Bicycle & Pedestrian	\$ 1,150,000	Active		\$ 1,000,000					\$ 1,000,000
Sidewalk Connectivity Future Service Improvements	Bicycle & Pedestrian	\$ 2,250,000	Active		\$ 260,000	\$ 2,000,000				\$ 2,260,000
Emergency Traffic Pre-emption	Public Safety	\$ 350,000	Active	\$ 350,000					\$ 395,000	\$ 745,000
Fire Station 3 - Harris Mill	Public Safety	\$ 11,800,000	Active	\$ 12,211,244						\$ 12,211,244
Public Safety Radios (New)	Public Safety	\$ 1,608,000	New		\$ 1,608,000					\$ 1,608,000
Cedar Fork Elementary Field	Parks & Recreation	\$ 800,000	15				\$ 920,000			\$ 920,000
Crabtree Creek Nature Park	Parks & Recreation	\$ 5,000,000	Active	\$ 500,000	\$ 4,730,000					\$ 5,230,000
Church Street Park Expansion	Parks & Recreation	\$ 3,750,000	Active	\$ 3,750,000						\$ 3,750,000
Dog Park (without land purchase) (NEW)	Parks & Recreation	\$ 1,000,000	New		\$ 1,000,000					\$ 1,000,000
Future Town Park Land Acquisitions	Parks & Recreation	\$ 12,300,000	Active	\$ 3,284,357		\$ 2,100,000		\$ 6,900,000		\$ 12,284,357
Morrisville Community Park Phase 3	Parks & Recreation	\$ 2,700,000	Active	\$ 2,700,000						\$ 2,700,000
Shiloh Park Improvements (NEW)	Parks & Recreation	\$ 675,000	New	\$ 30,000	\$ 604,000					\$ 634,000
Town Green & Plazas (Updated)	Parks & Recreation	\$ 5,000,000	12			\$ 5,820,000				\$ 5,820,000
Public Works Facility	Public Facility	\$ 21,000,000	Active	\$ 1,300,000				\$ 22,440,000	\$ 1,250,000	\$ 24,990,000
Airport Boulevard Ext Ph I (Town Share)	Transportation	\$ 6,443,500	Active	\$ 1,480,000	\$ 4,717,000					\$ 6,197,000
Intersection Improvements Ph I (Pedestrian)	Transportation	\$ 200,000	Active		\$ 200,000			\$ 1,270,000		\$ 1,470,000
Intersection Improvements Ph II (Current Service Level)	Transportation	\$ 3,100,000	Active			\$ 300,000		\$ 3,360,000		\$ 3,660,000
Intersection Improvements Ph III (Future Service Level Improvements)	Transportation	\$ 1,840,000	Active					\$ 240,000	\$ 2,050,000	\$ 2,290,000

Interactive Development Map



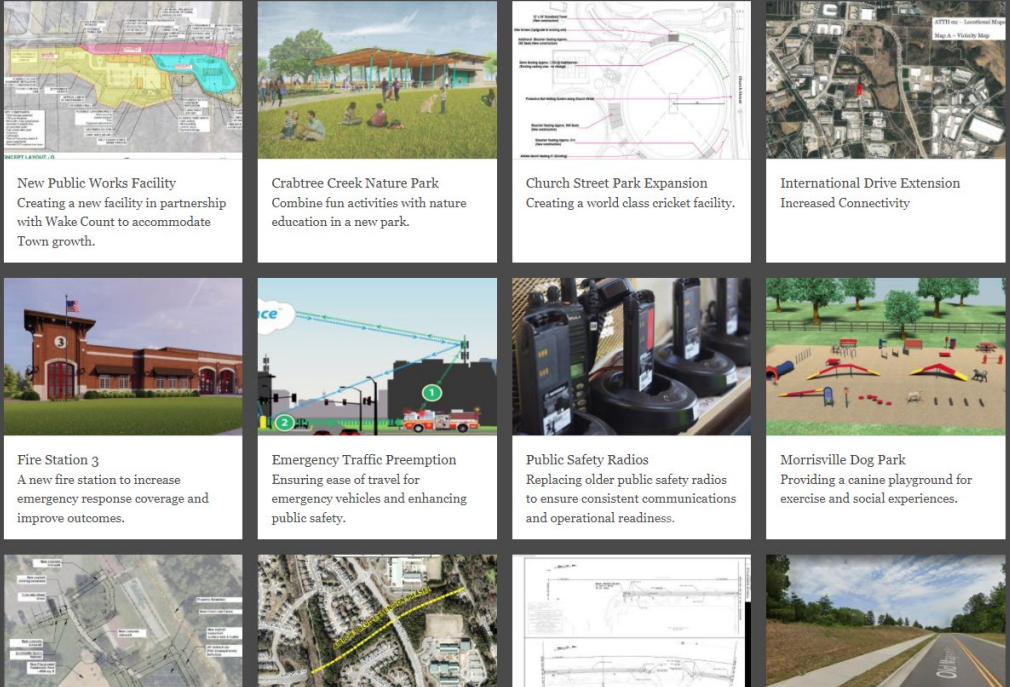
Capital Investment Program (CIP) Map



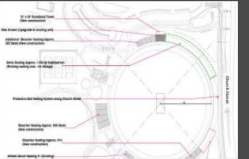







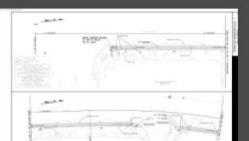

Forthcoming Interactive CIP Map

- Identifies location of each CIP project
- Pop-up box provides brief project details
- Each active project contains a link to an ESRI Story Map
- Consolidates all projects updates to one location
- Public \$\$ investment communication tool

Story Maps

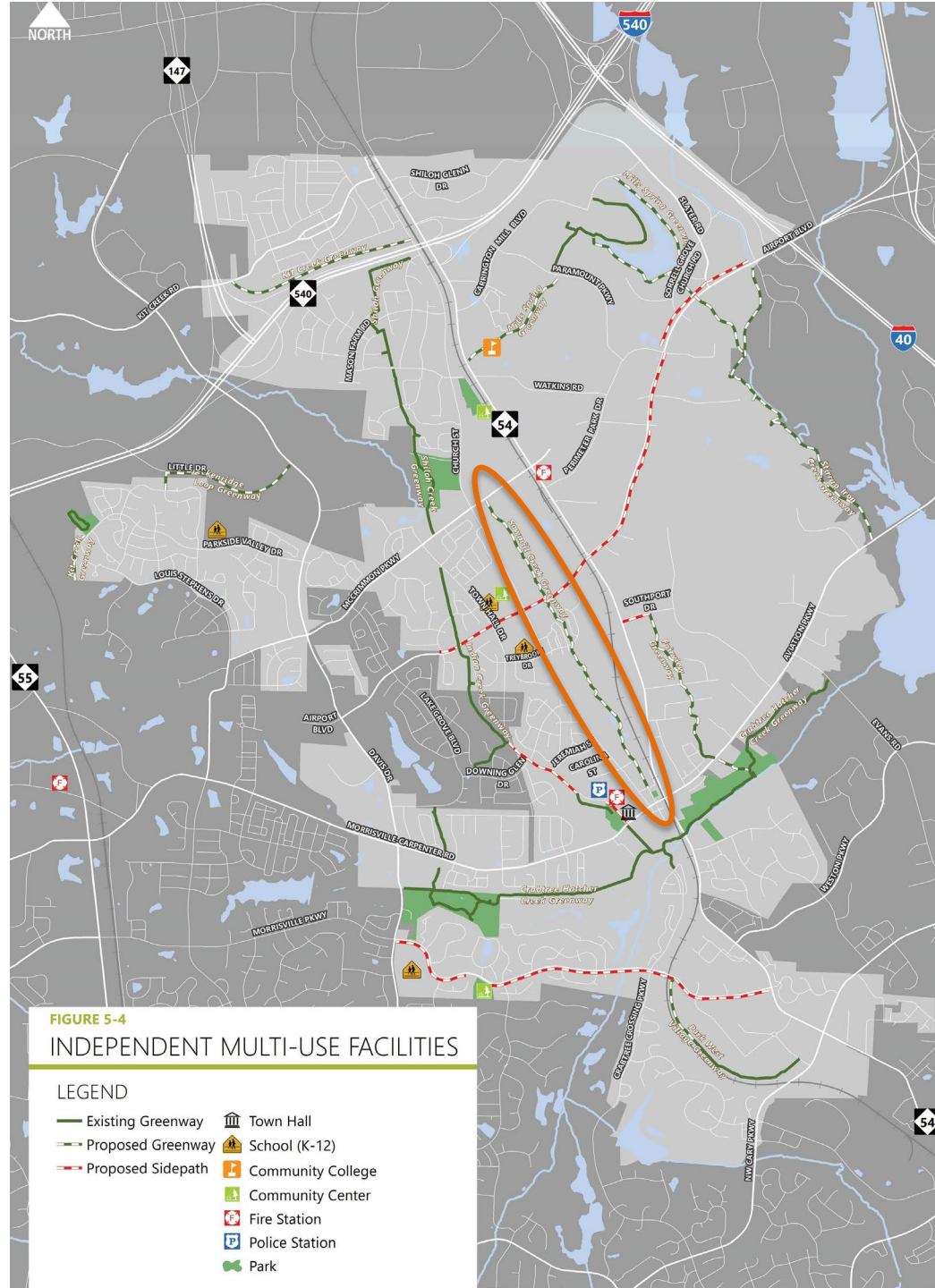
The Story Maps provide detailed information about current capital projects, including a project overview, funding, updates, contact information, and a timeline.



 <p>New Public Works Facility Creating a new facility in partnership with Wake Count to accommodate Town growth.</p>	 <p>Crabtree Creek Nature Park Combine fun activities with nature education in a new park.</p>	 <p>Church Street Park Expansion Creating a world class cricket facility.</p>	 <p>International Drive Extension Increased Connectivity</p>
 <p>Fire Station 3 A new fire station to increase emergency response coverage and improve outcomes.</p>	 <p>Emergency Traffic Preemption Ensuring ease of travel for emergency vehicles and enhancing public safety.</p>	 <p>Public Safety Radios Replacing older public safety radios to ensure consistent communications and operational readiness.</p>	 <p>Morrisville Dog Park Providing a canine playground for exercise and social experiences.</p>
			

Saw Mill Creek Greenway

- Identified in the Town's Comprehensive Transportation Plan
- Centrally located
- Approx. 1.6 miles
- About half the land secured



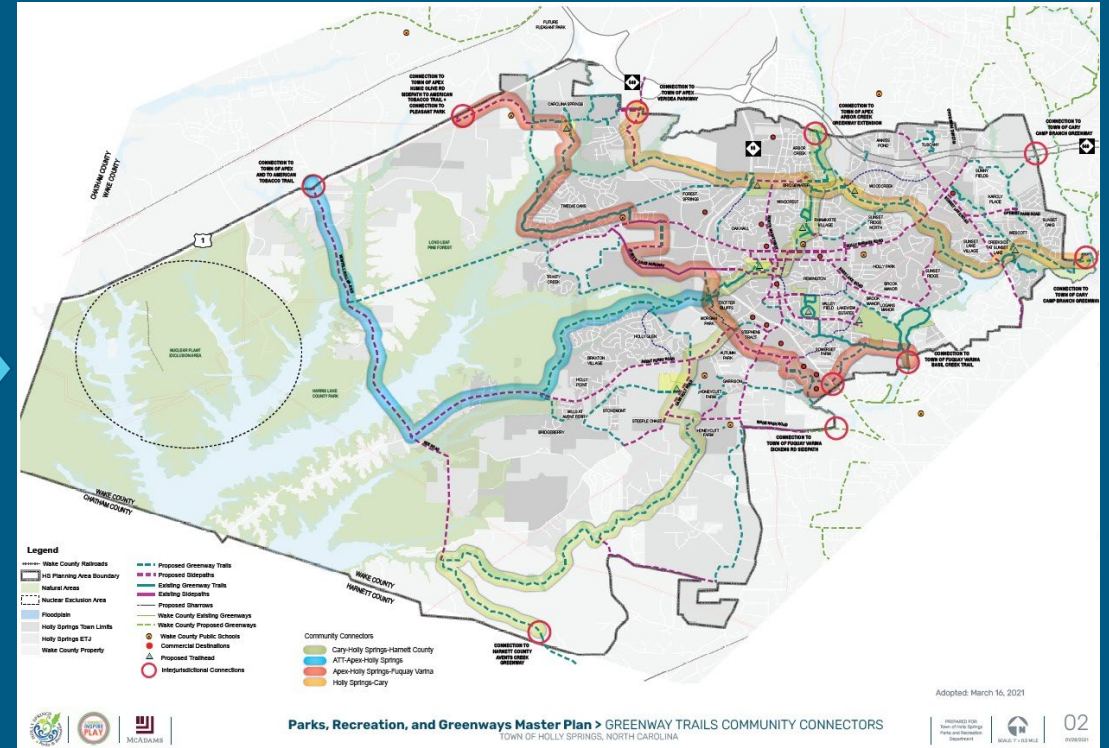
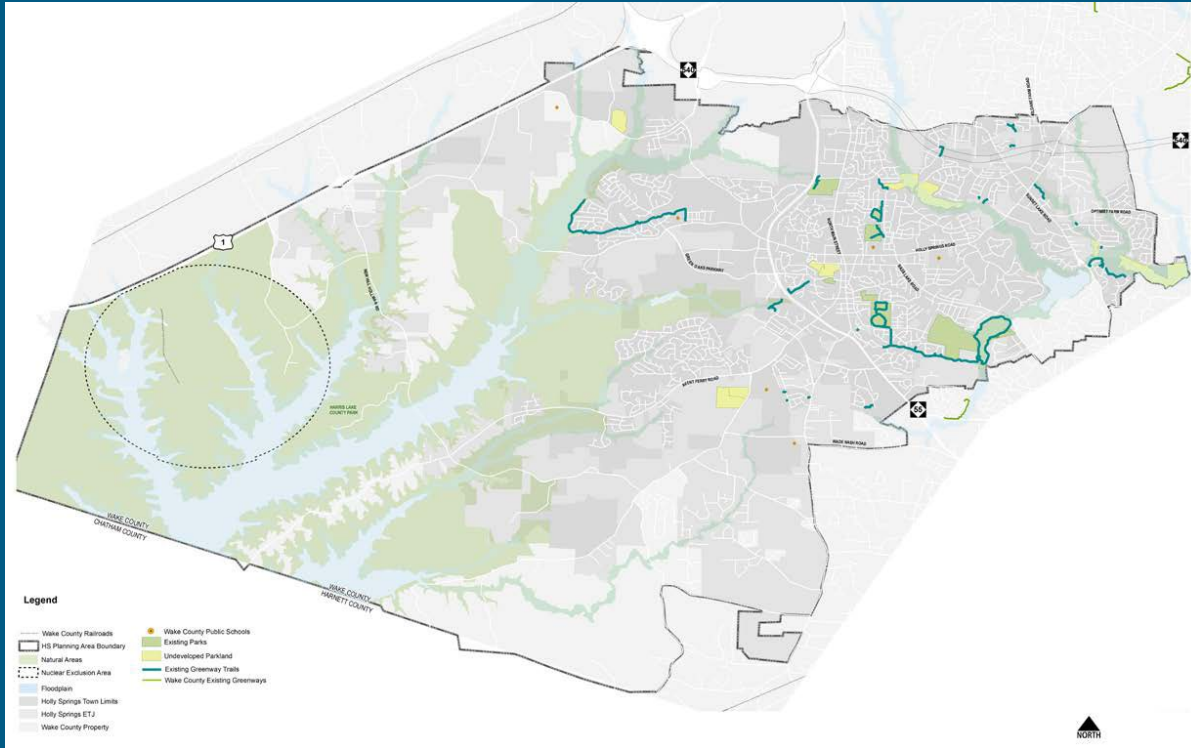
Town of Holly Springs

Greenway Development Update



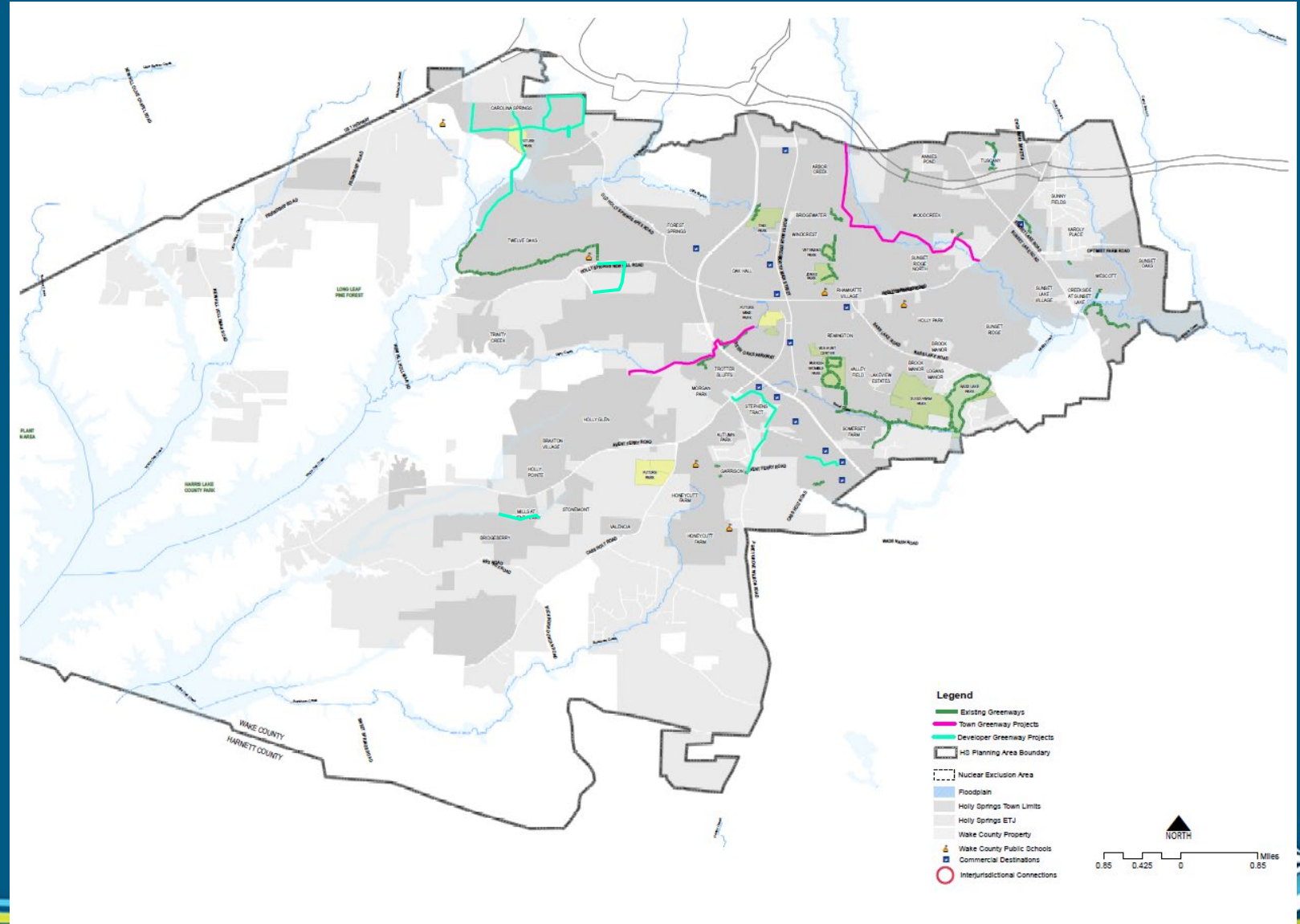
Town of
HOLLY SPRINGS

Long Range Plan



Current Greenway Projects

- Ex. Greenways
12 miles
- Town Built (2 yr)
4.7 miles
- Developer Built
4.9 miles



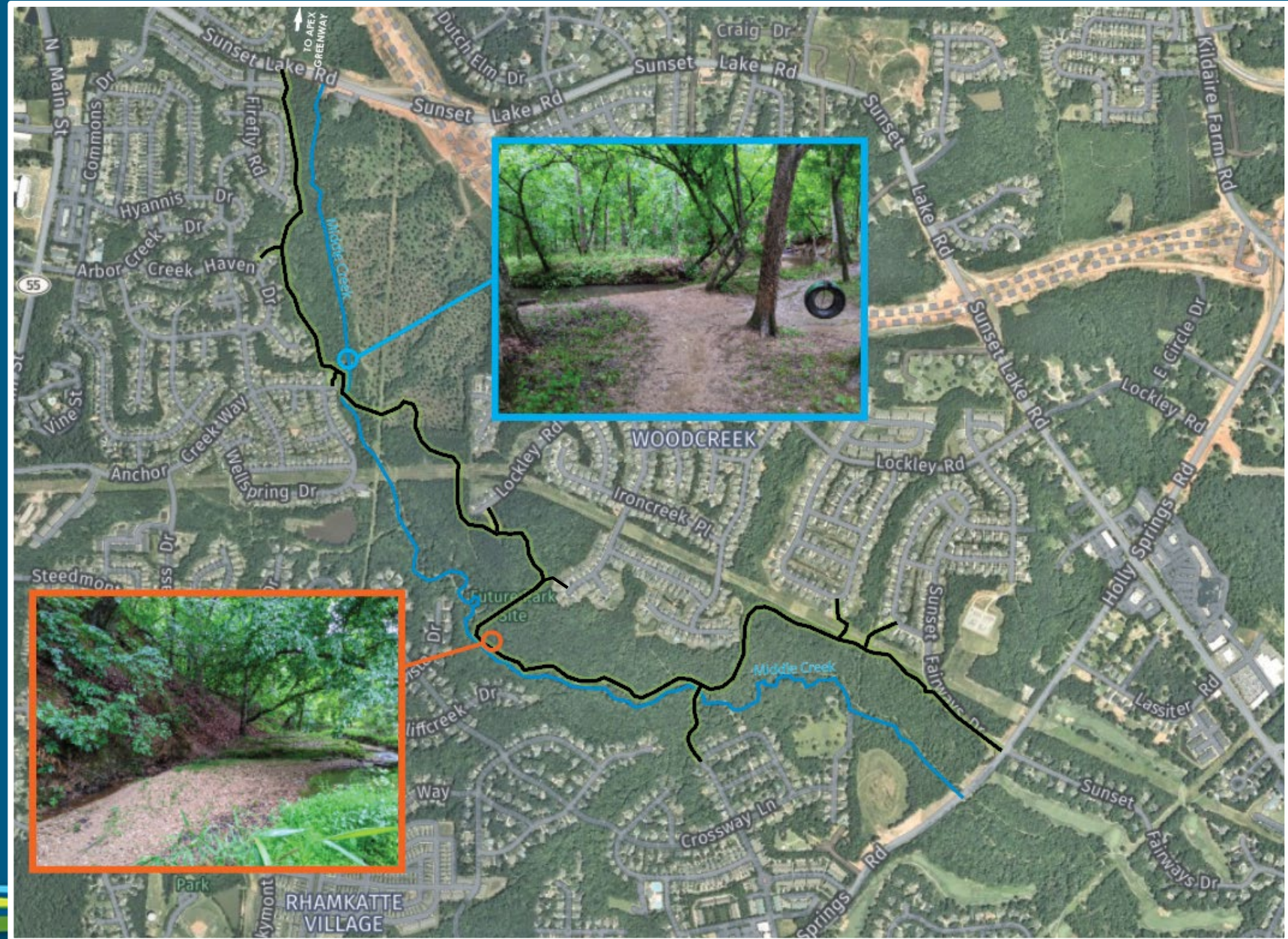
Town Projects: Arbor Creek - Middle Creek Greenway

Status: Permitting

Length: 3 miles

Cost: \$6M

Completion:
Spring 2024



Town Projects: Utley Creek Greenway Phase 1

Status: Under Construction

Length: 0.7 miles

Cost: \$2M

Completion: October 28, 2022



Utley Creek Bridge Crossing



East Entrance to Tunnel



Town Projects: Utley Creek Greenway Phase 2

Status: Planning

Length: 1 mile

Cost: \$2.5 - 3M

Completion: late 2024



Questions



City of Durham



TRANSPORTATION

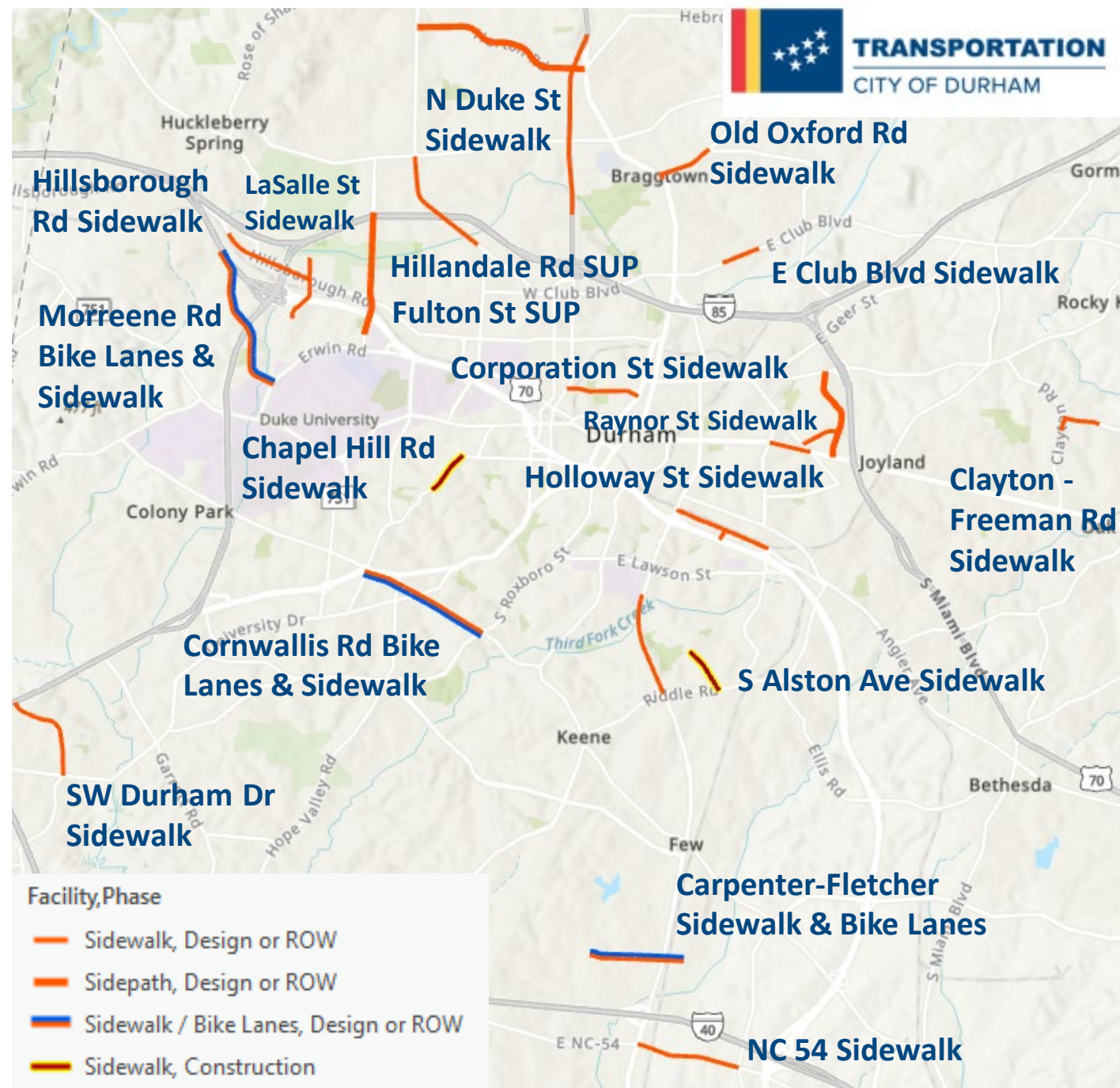
CITY OF DURHAM

City of Durham Bike & Pedestrian Project Update

October 2022

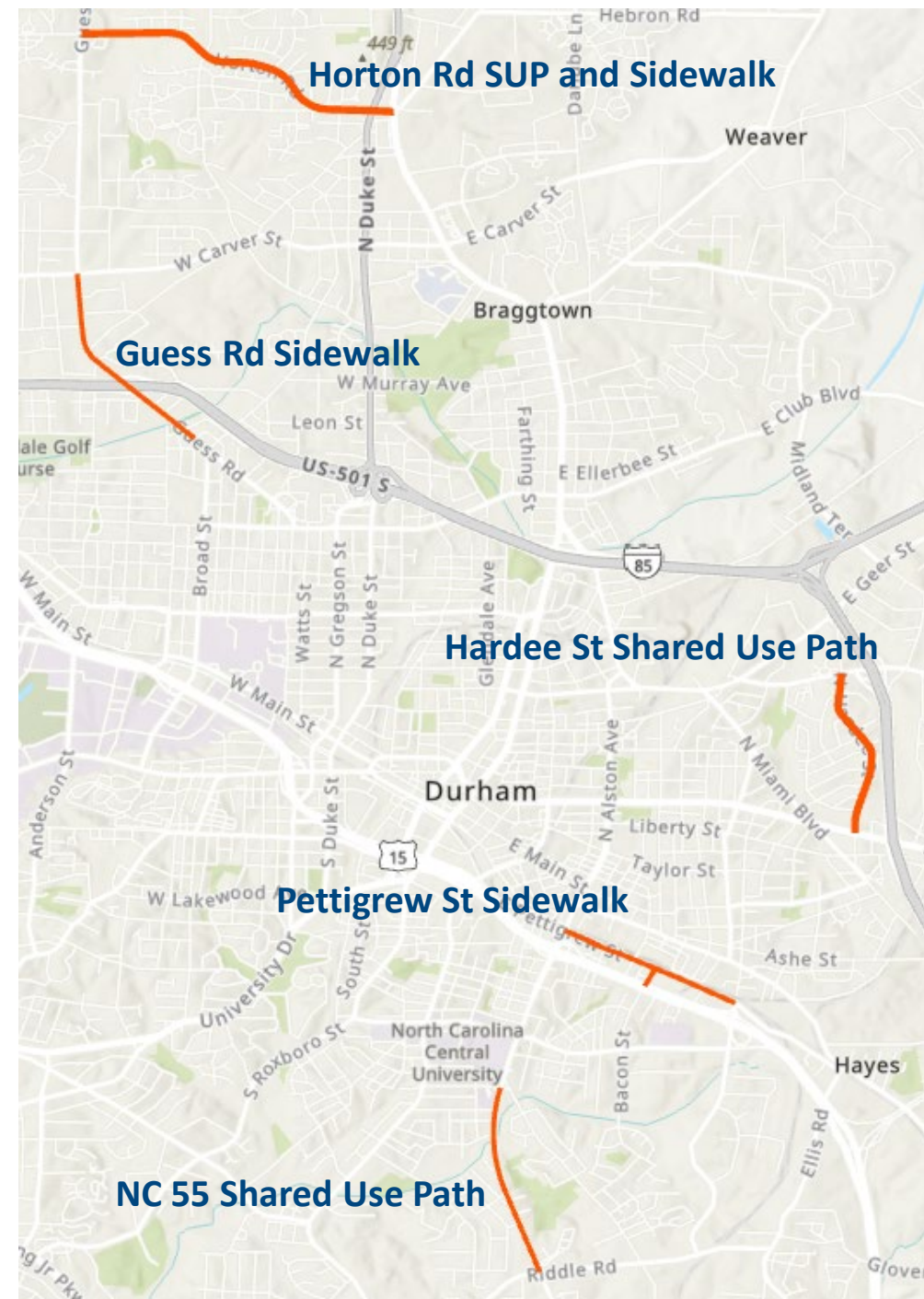
Sidewalk Projects

Facility Name	Phase
Chapel Hill Rd SW Lakewood to Morehead	Construction
Alston Ave SW Capps to Riddle	Pre-Construct.
Carpenter-Fletcher Rd BL & SW S Alston to E Woodcroft	Design
Cornwallis Rd BL and SW Chapel Hill to S Roxboro	Design
Morreene Rd BL and SW Erwin to Neal	ROW
Hillandale Rd Sidepath NC 147 to I-85	ROW
N Duke St SW Murray to Roxboro	ROW
NC 54 SW NC 55 to RTP	ROW
Lasalle St SW Kangaroo to Sprunt	Design
Raynor St SW N Miami to N Hardee	ROW
Clayton Rd / Freeman Rd SW Chandler to Obsidian	ROW
Hillsborough Rd SW Bus Stop to N LaSalle	ROW
Holloway St SW Gary to Guthrie	ROW
Old Oxford Rd SW N Roxboro to Dearborn	ROW
Corporation St SW N Duke to Mangum	ROW
SW Durham Dr SW Durham Chapel Hill to Old Chapel Hill	ROW
Fulton St SUP NC 147 to Pratt St	ROW
E Club Blvd SW Stephenson St to Glenbrook Dr	Design



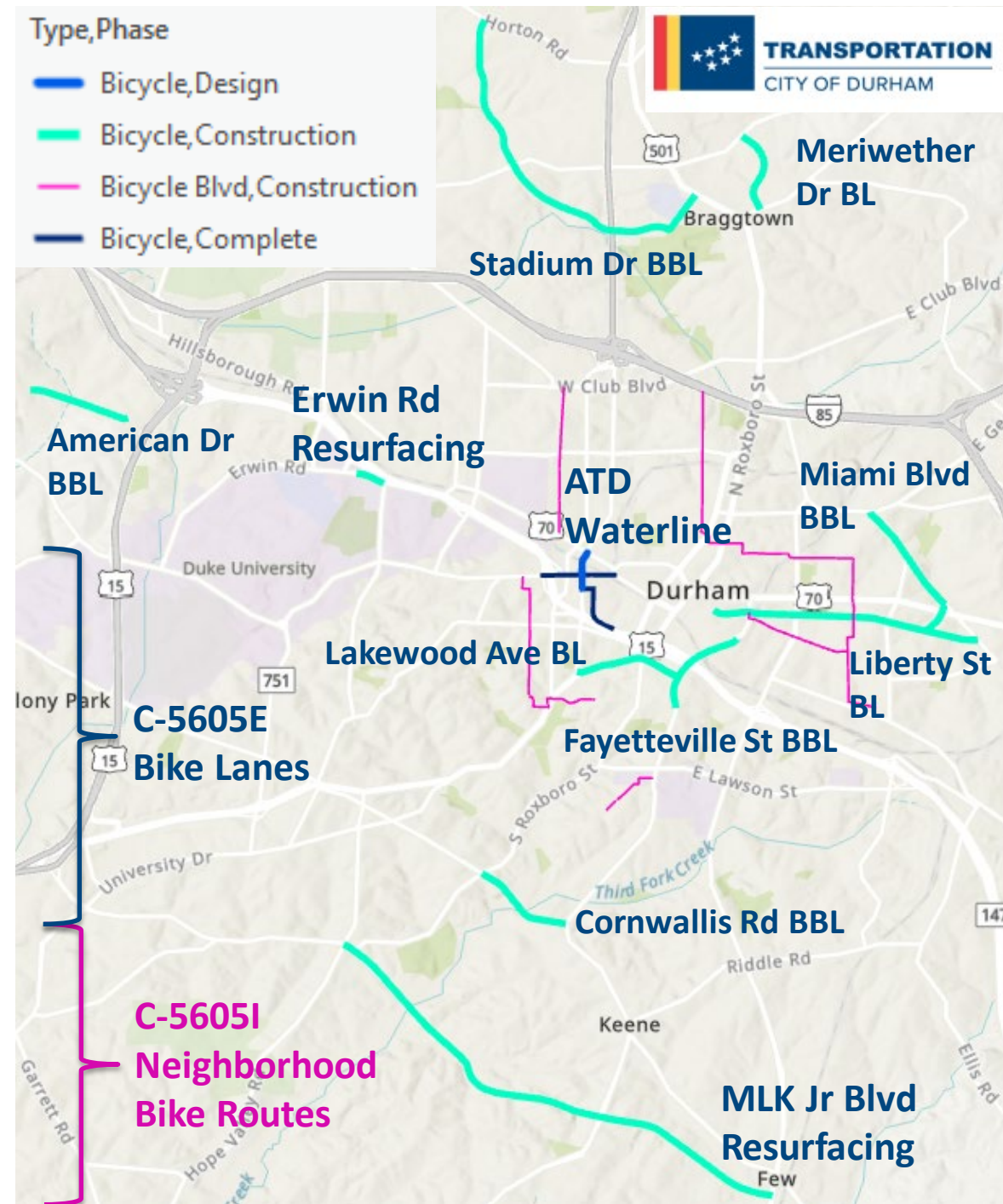
Upcoming Sidewalk / Sidepath Projects

Project ID	TIP	Facility Name	Facility Type	Phase
SW-79		Pettigrew St / Bacon St SW Briggs to Alston	Sidewalk	Design
SW-79		Hardee St SW Cheek to Holloway	Shared Use Path	Design
SW-72	EB-5834	Guess Rd SW Hillcrest Dr to W Carver St	Sidewalk	Pre-Design
	EB-5835	NC 55 SUP Riddle Rd to Cecil St	Shared Use Path	Pre-Design
	BL-0063	Horton SUP and SW Roxboro to Guess	Shared Use Path and Sidewalk	Pre-Design

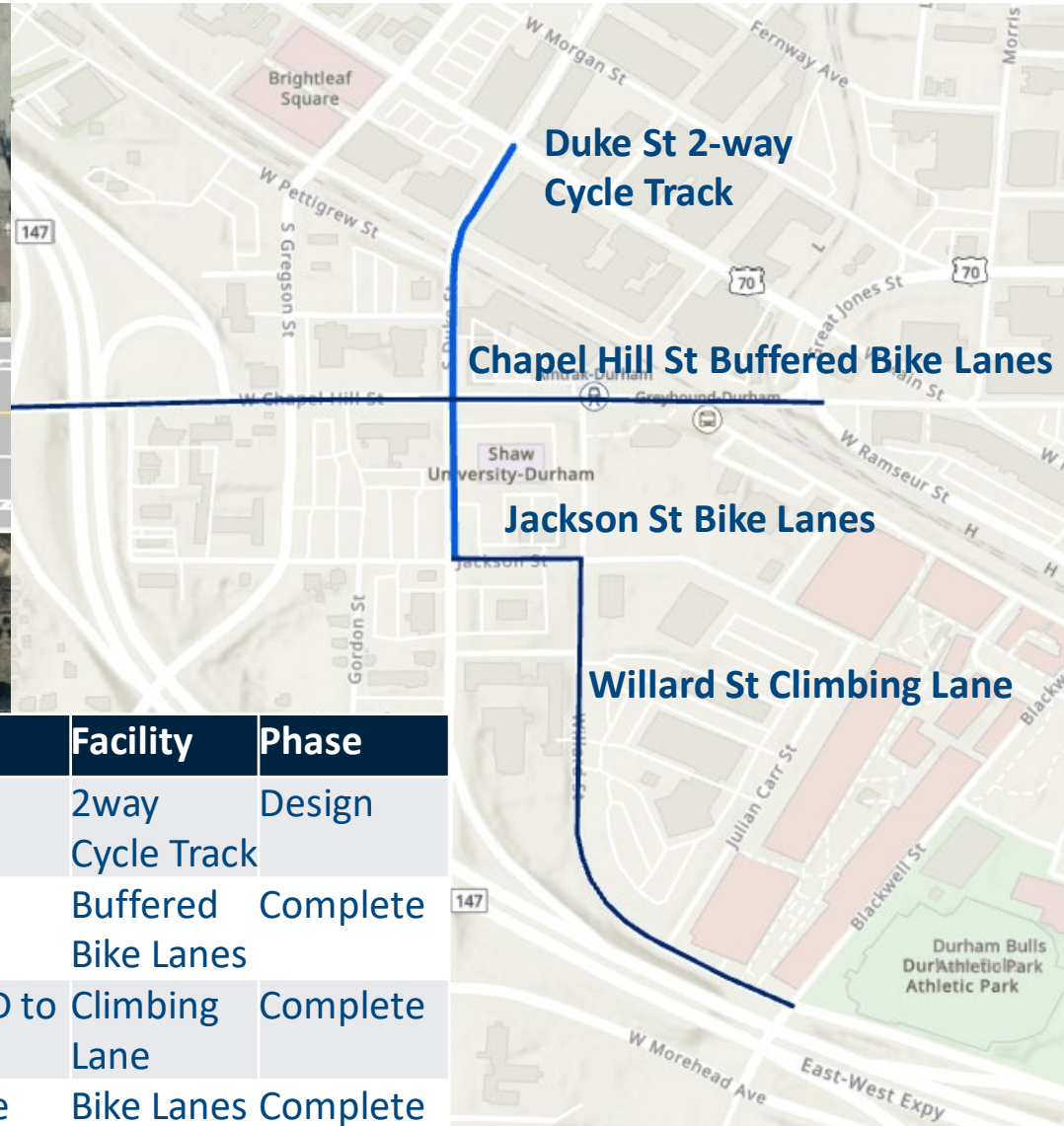
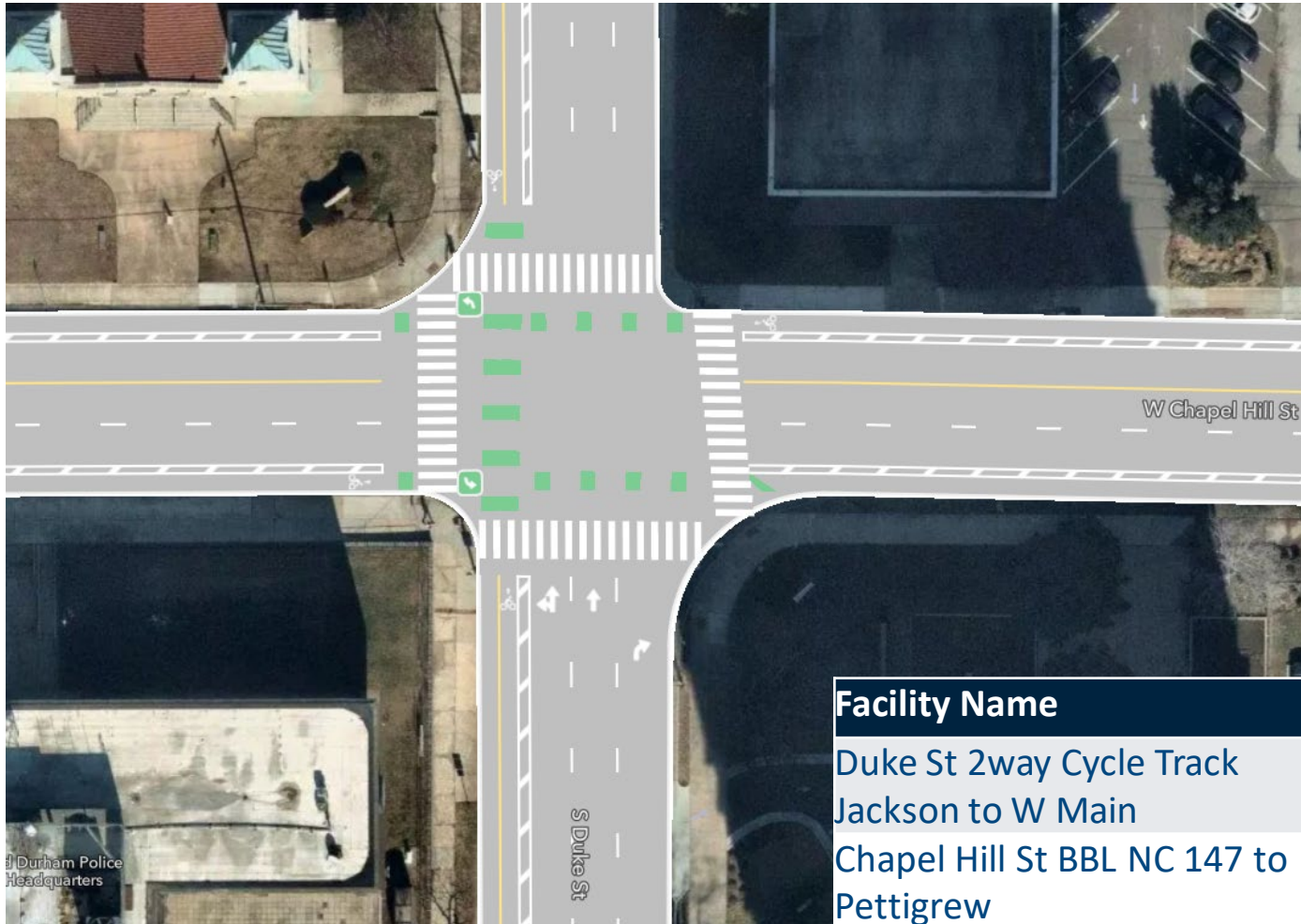


On-Street Bike Projects

Project / TIP	Facility Name	Facility	Phase
ATD Waterline	Duke St 2way Cycle Track Jackson to W Main	2wayCT	Design
ATD Waterline	Chapel Hill St BBL NC 147 to Pettigrew	BBL	Complete
ATD Waterline	Willard St Climbing Lane, ATD to Jackson	CL	Complete
ATD Waterline	Jackson St BL Willard to Duke	BL	Complete
Resurfacing	Erwin Rd BL Anderson to Flowers	BL	Construction
Resurfacing	MLK Jr Blvd BBL NC 55 to Hope Valley	BBL	Construction
C-5605E	American Dr BL Morreene to Constitution	BL	Construction*
C-5605E	E Cornwallis Rd BBL S Roxboro to Fayetteville	BBL	Construction*
C-5605E	E Lakewood Ave BL S Duke to Fayetteville	BL	Construction*
C-5605E	Liberty St BL Dillard to Miami	BL	Construction*
C-5605E	Raynor St BL and SL Liberty to Miami	BL, SL	Construction*
C-5605E	N Miami Blvd BBL and BL Raynor to Geer	BBL, BL	Construction*
C-5605E	Fayetteville St BBL E Umstead to Main	BBL	Construction*
C-5605E	Stadium Dr Olympic Dr BBL Horton to Roxboro	BBL	Construction*
C-5605E	Meriwether Dr BBL Old Oxford to E Carver	BBL	Construction*
C-5605I	Watts St BBlvd Club to Morgan	BBlvd	Construction*
C-5605I	Glendale Ave BBlvd Knox to Corporation	BBlvd	Construction*
C-5605I	Taylor St BBlvd Elizabeth to Gary	BBlvd	Construction*
C-5605I	Corporation St BBlvd Duke to Miami	BBlvd	Construction*
C-5605I	Arnette Ave BBlvd Chapel Hill to University	BBlvd	Construction*
C-5605I	Maple St BBlvd Juniper to Angier	BBlvd	Construction*
C-5605I	Otis St BBlvd ATT to NCCU	BBlvd	Construction*



Restriping with ATD Waterline Project

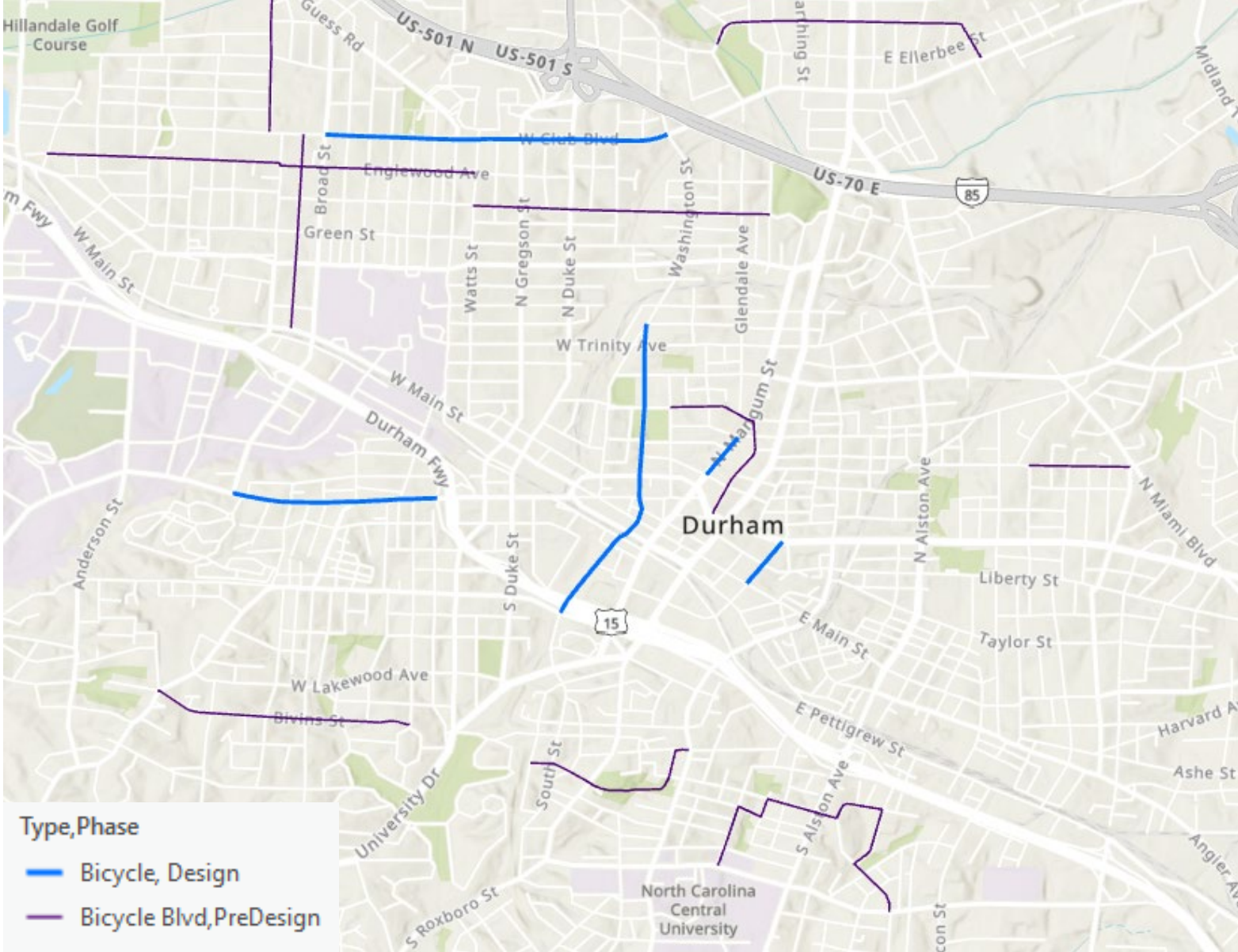


Facility Name	Facility	Phase
Duke St 2way Cycle Track Jackson to W Main	2way Cycle Track	Design
Chapel Hill St BBL NC 147 to Pettigrew	Buffered Bike Lanes	Complete
Willard St Climbing Lane, ATD to Jackson	Climbing Lane	Complete
Jackson St BL Willard to Duke	Bike Lanes	Complete



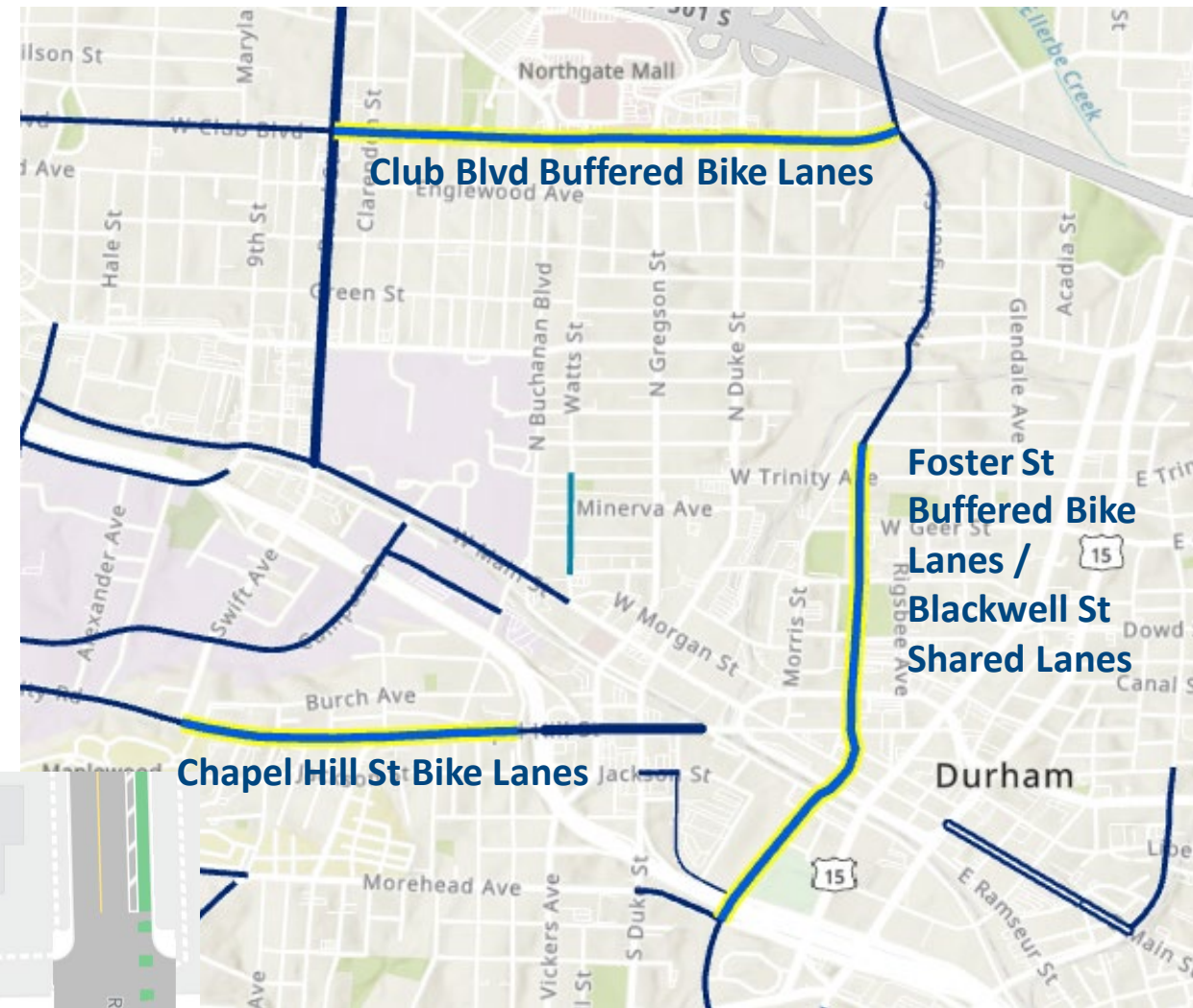
Upcoming On-Street Bike Projects

TIP	Project Name	Facility Type	Phase
BL-0028	Durham Bike Facilities II	Bike Lanes / Buffered Bike Lanes	Pre-Design
BL-0030	Vertical Protection for Bike Lanes	Protected Bike Lanes	Pre-Design
BL-0031	Neighborhood Bike Routes Phase II	Bike Boulevard	Pre-Design
	2023 NCDOT Resurfacing	TBD	Pre-Design



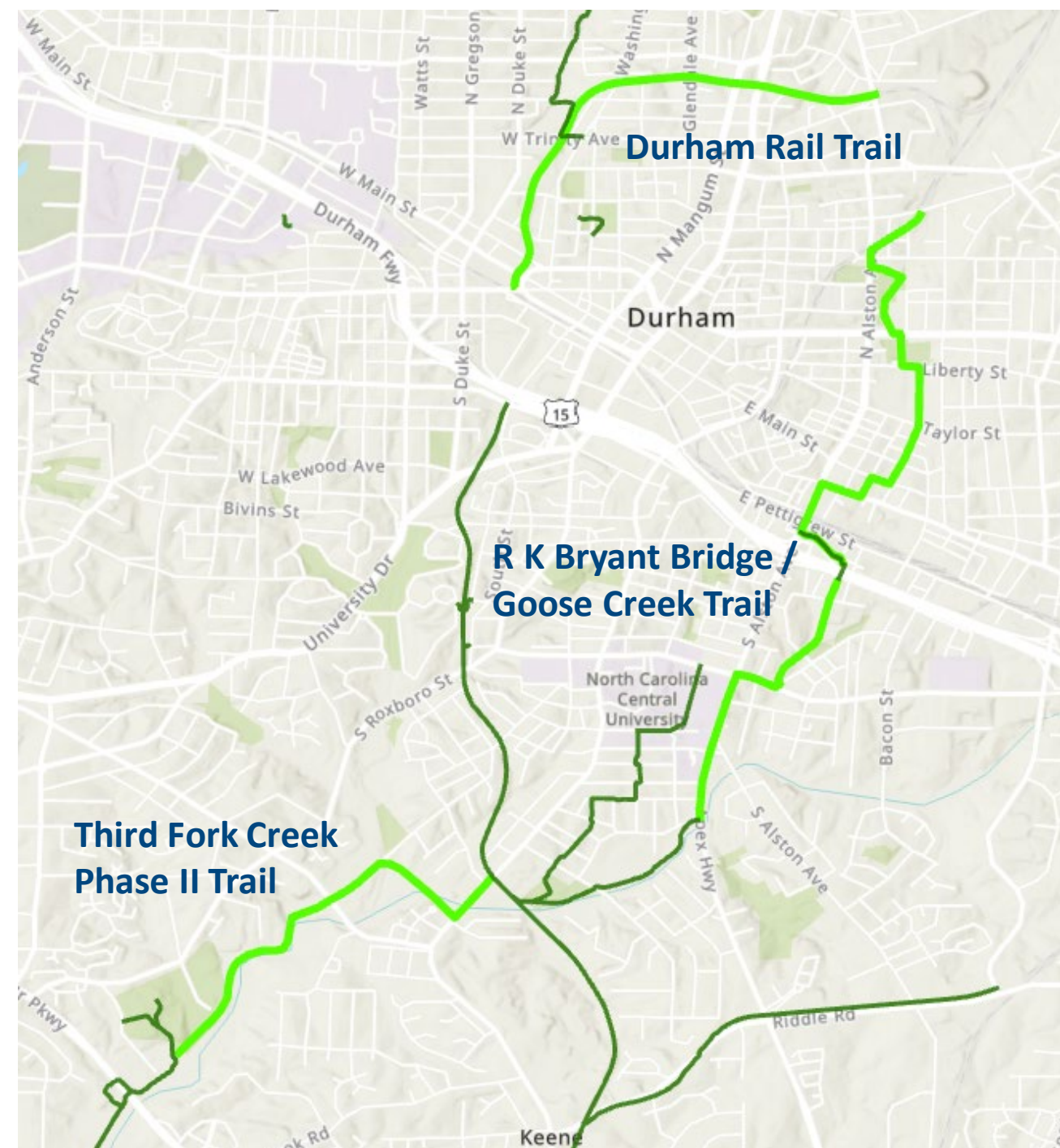
Durham Bike Facilities II (BL-0028)

Facility Name	Facility Type	Phase
Foster St /Corcoran St /Blackwell St BBL and SL ATT to Trinity Ave	Buffered Bike Lane / Shared Lane	Pre-Design
Club Blvd BL / BBL Broad St to Washington St	Buffered Bike Lanes	Pre-Design
Chapel Hill St BL Swift Ave to NC 147	Bike Lanes	Pre-Design

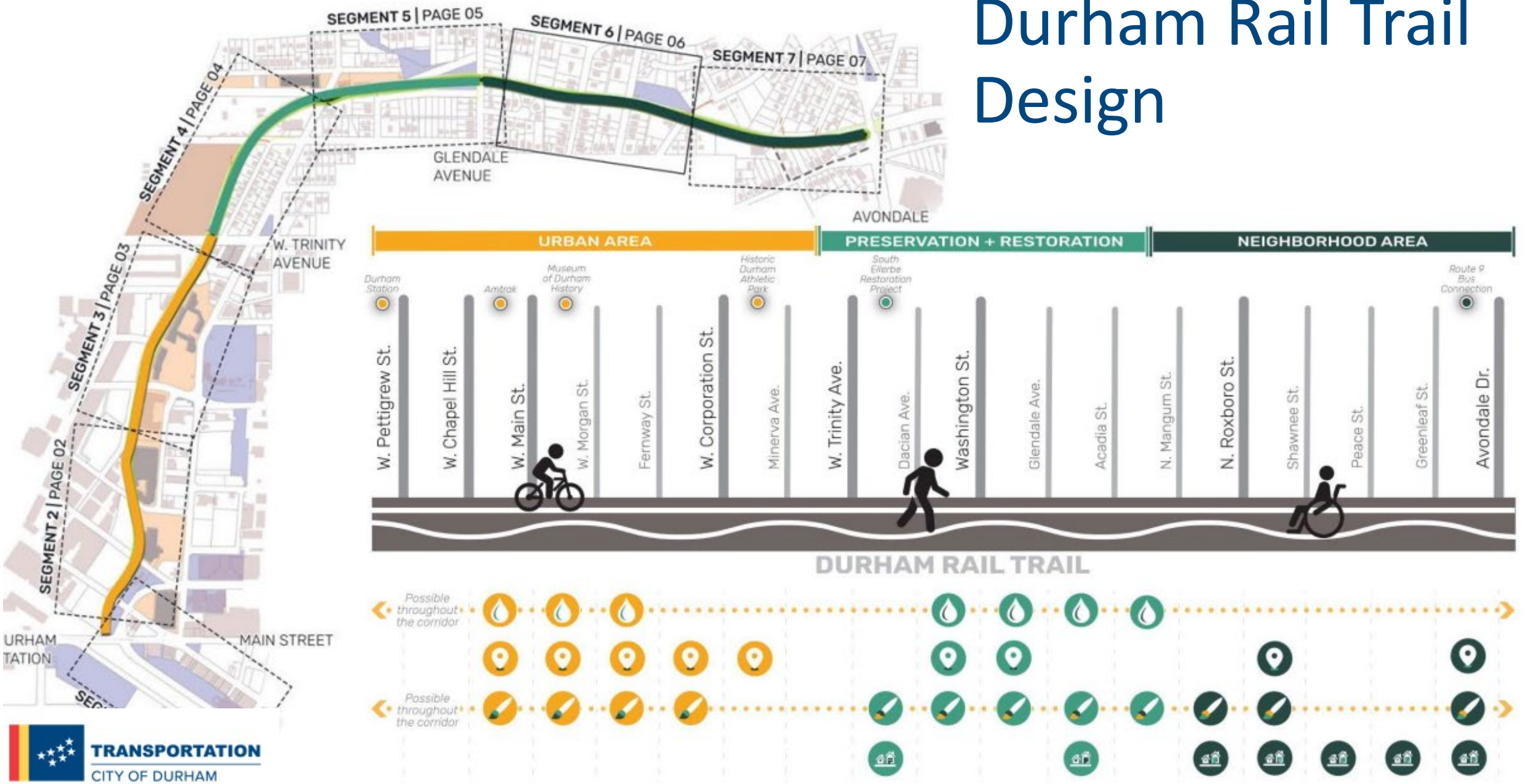


Greenway Projects

TIP	Facility Name	Facility Type	Phase
EB-5720	R. K. Bryant Bridge / Goose Creek Trail, Drew St to Rocky Creek Trail	Greenway	Design
EB-5837	Third Fork Creek Trail, Southern Boundaries Park to ATT	Greenway	Design
EB-5904	Durham Rail Trail E Pettigrew to Avondale	Greenway	Design



Durham Rail Trail Design

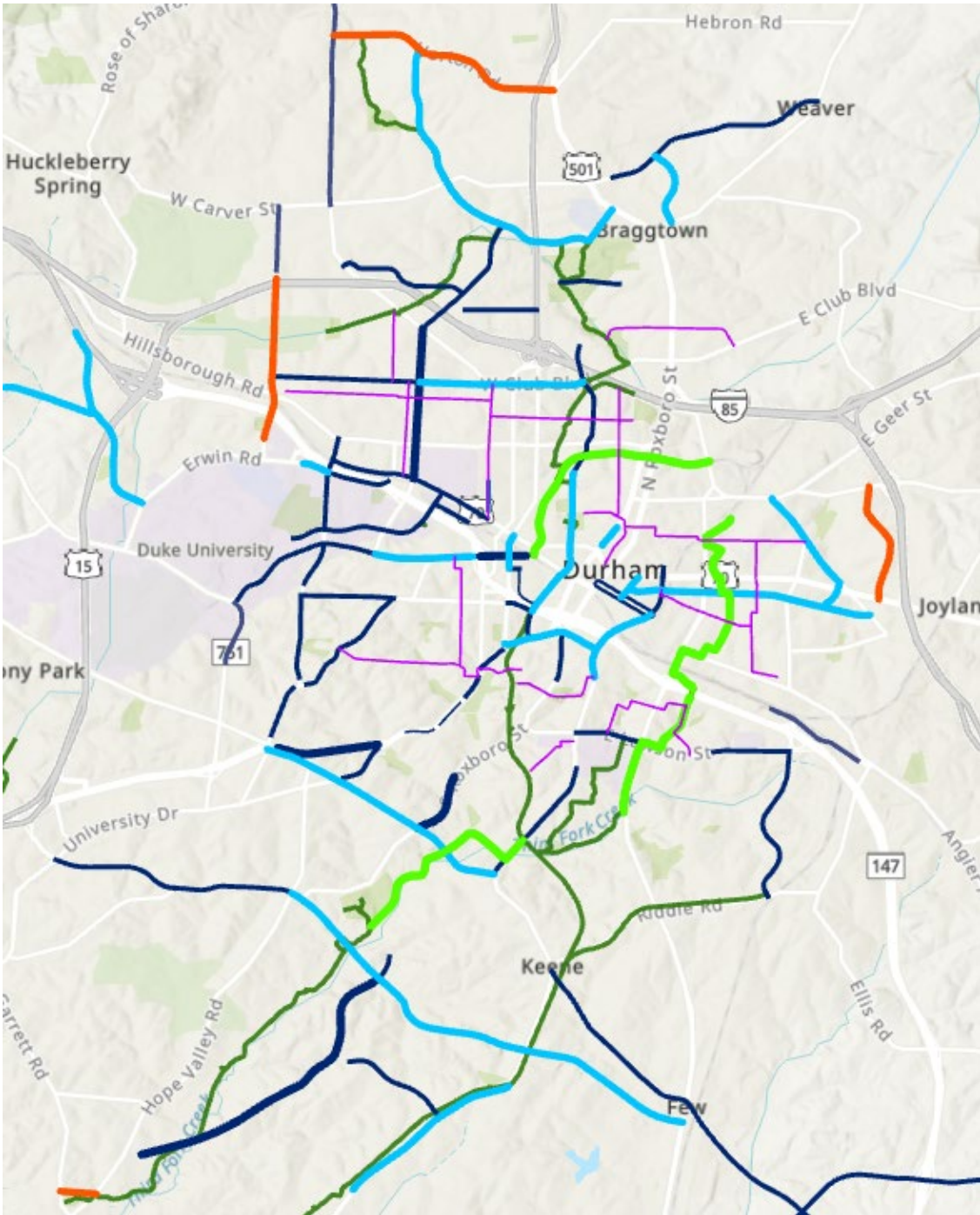


Existing and Future Bike Network

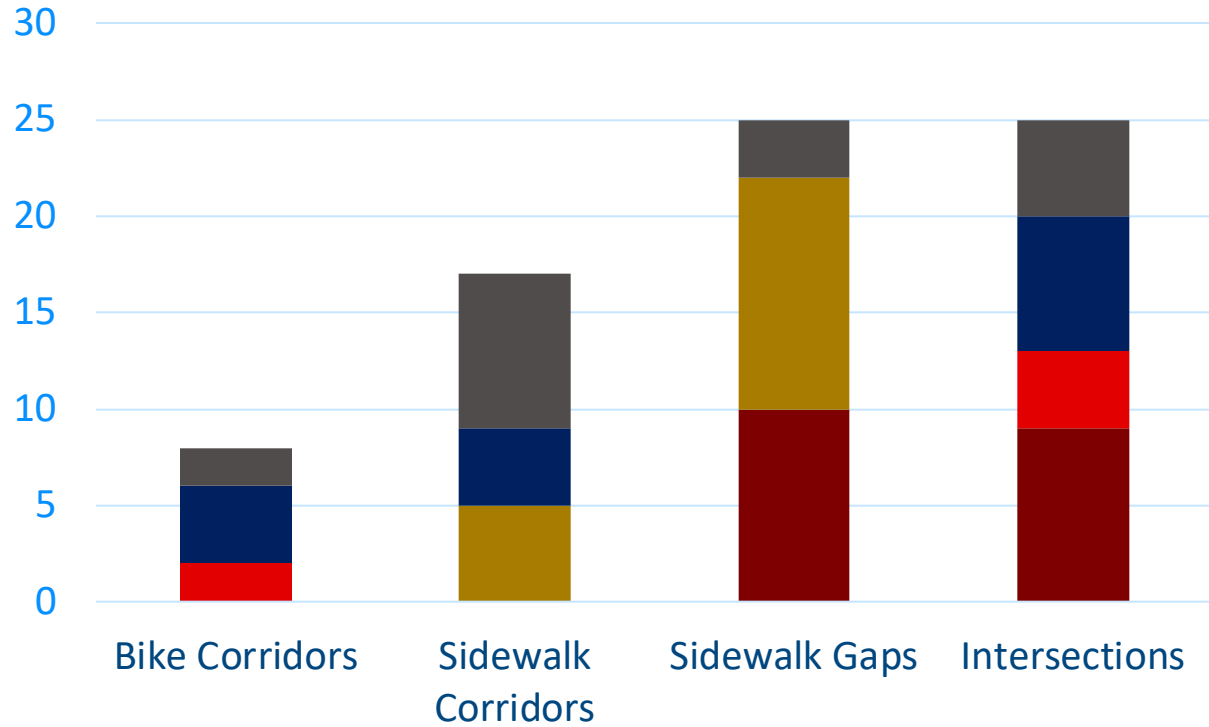


TRANSPORTATION
CITY OF DURHAM

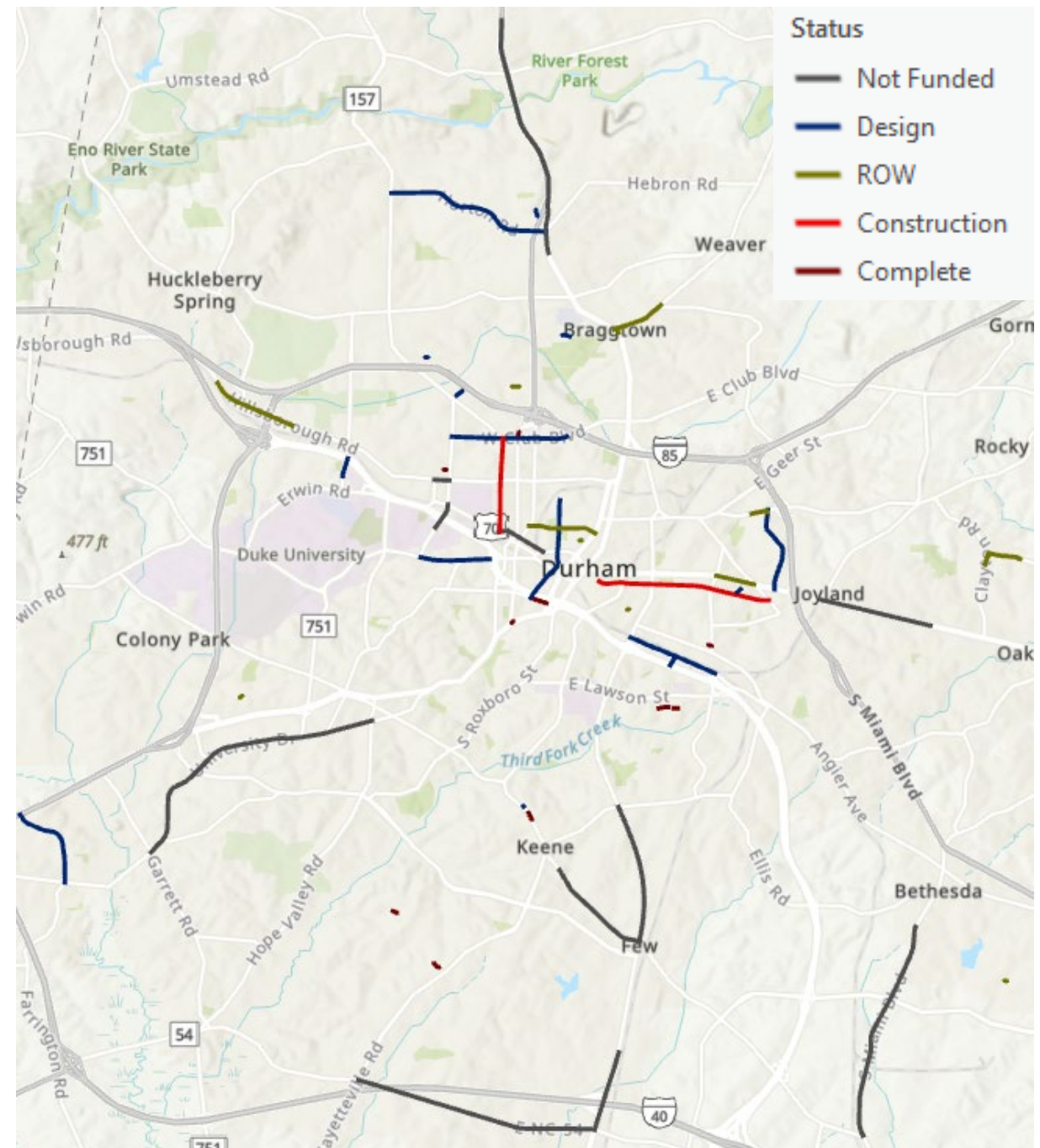
- Future Bike Facility**
- On Street Bike Facility
 - Bike Boulevard
 - Greenway
 - Sidepath
- Existing Bike Facility**
- Bike Lane
 - Bike Lane 1 side
 - Shoulder
 - ContraFlow Bike Lane
 - Buffered Bike Lane
 - Protected Bike Lane
 - Greenway



Bike+Walk Plan Implementation



■ Complete
 ■ Construction
 ■ ROW
 ■ Design
 ■ Not Funded



Bull E-Bikes Program

"I was able to hook up an old bike trailer and am biking with my 2 kids to school! It has been a big hit with my kids and with other kids and parents at school. My 7yr old is biking next to me while my 5yr old rides in the trailer."



Questions?



TRANSPORTATION
CITY OF DURHAM

919.560.4366

DurhamNC.gov

Follow Us @CityofDurhamNC



Town of Chapel Hill

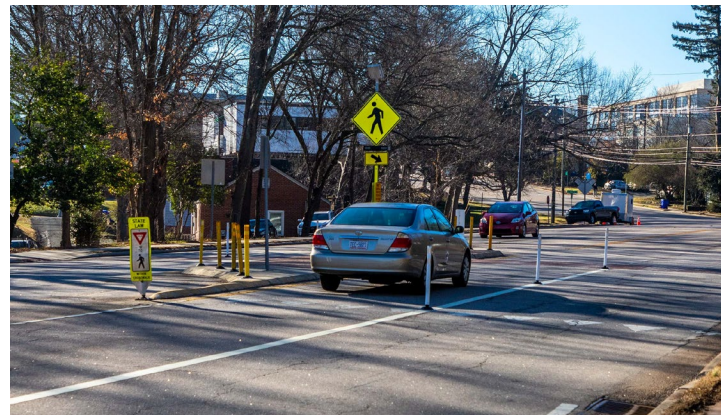


Town of Chapel Hill
10/14/22



COVID Lanes

Vision Zero



“BE IT FURTHER RESOLVED that the safety of all road users shall take priority over vehicular level of service and throughput, and safety of vulnerable road users shall be given top priority in transportation decisions”



Bike Lanes, Bike Lanes



Bike Lanes!



Estes Drive Connectivity





Walking and Rolling

- TDM campaigns
- Bike Days at Public Housing
- Staff/Council bike ride
- Walk/Bike/Roll to School Day



Town of Cary



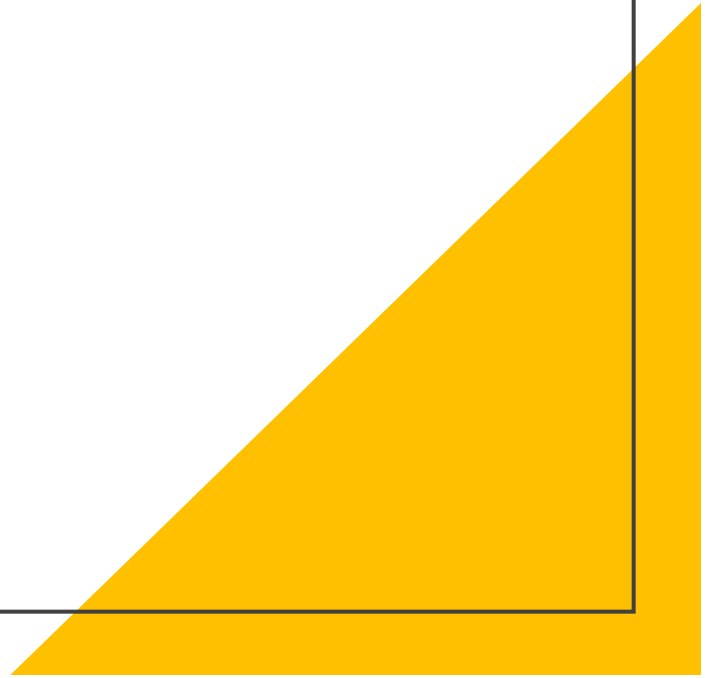
Cary Updates - Triangle Bike and Pedestrian Workshop

October 2022



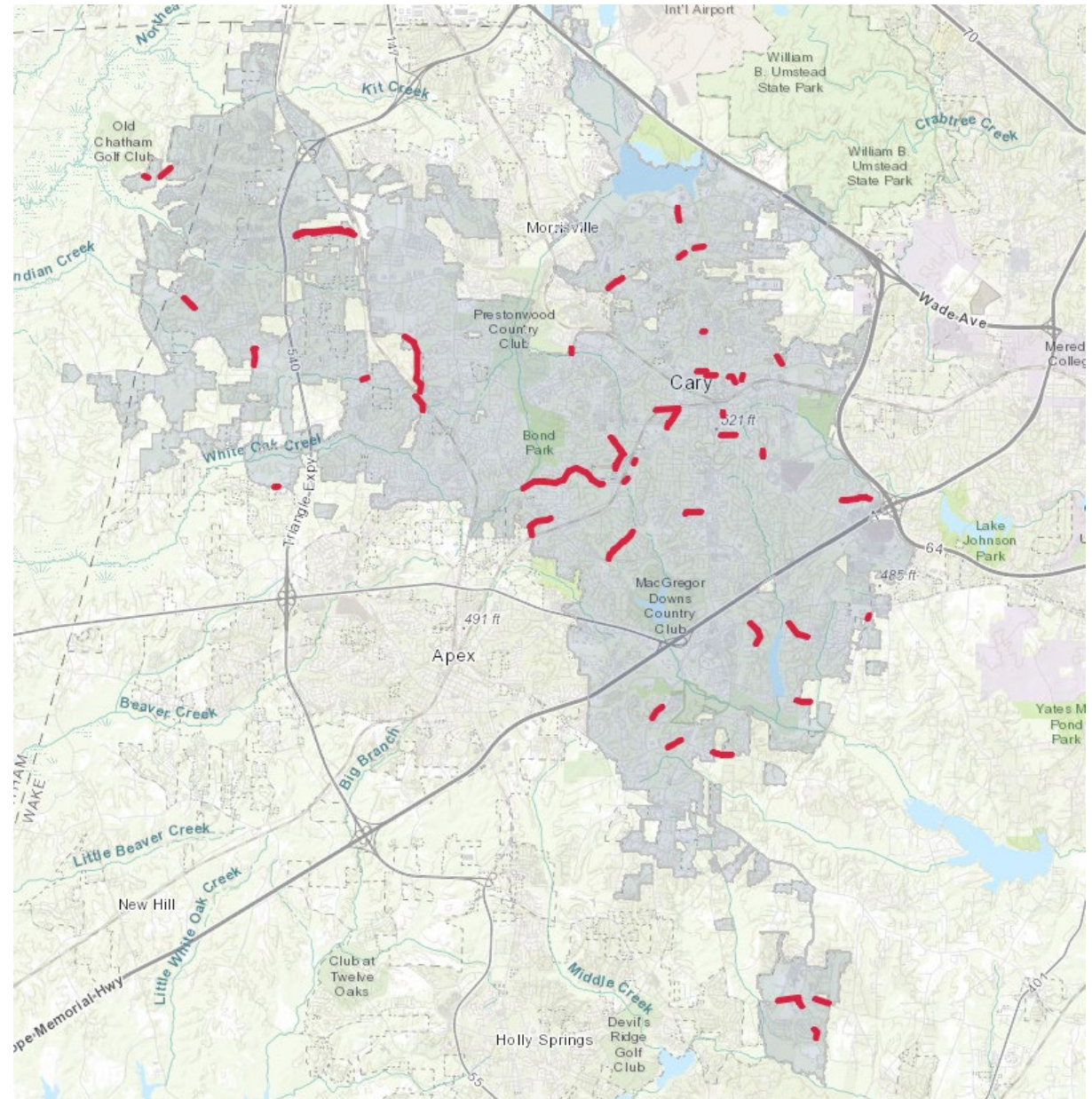
Bike Cary Plan & Greenways Master Plan Updates

Summer/Fall 2022 – Winter/Spring
2024



ARPA Funding: Sidewalks & Street-Side Trails

- Goals:
Improve Safety & Mobility,
Fill Critical Gaps, Connect
Neighborhoods to Activity Centers
- \$12 million
- 14 Sidewalk / Street-Side Trail
Projects Funded



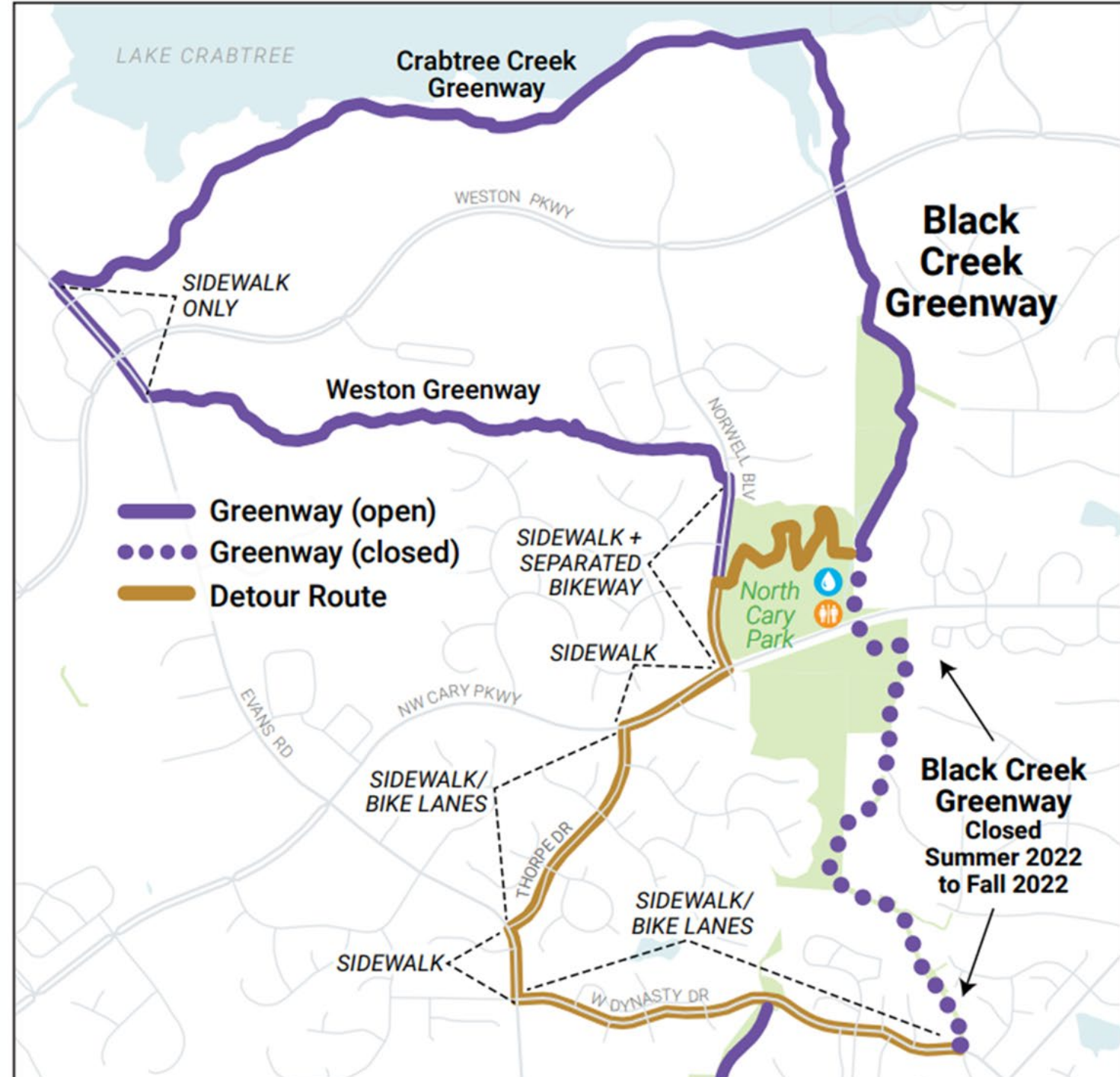


Bikeway Projects



Fenton

Louis Stephens Drive



Cemetery Trail - After



CEMETERY GATE

2" EDGE TO EDGE
CLEARANCE

6" ASPHALT TRAIL WITH
12" FLUSH CURBS

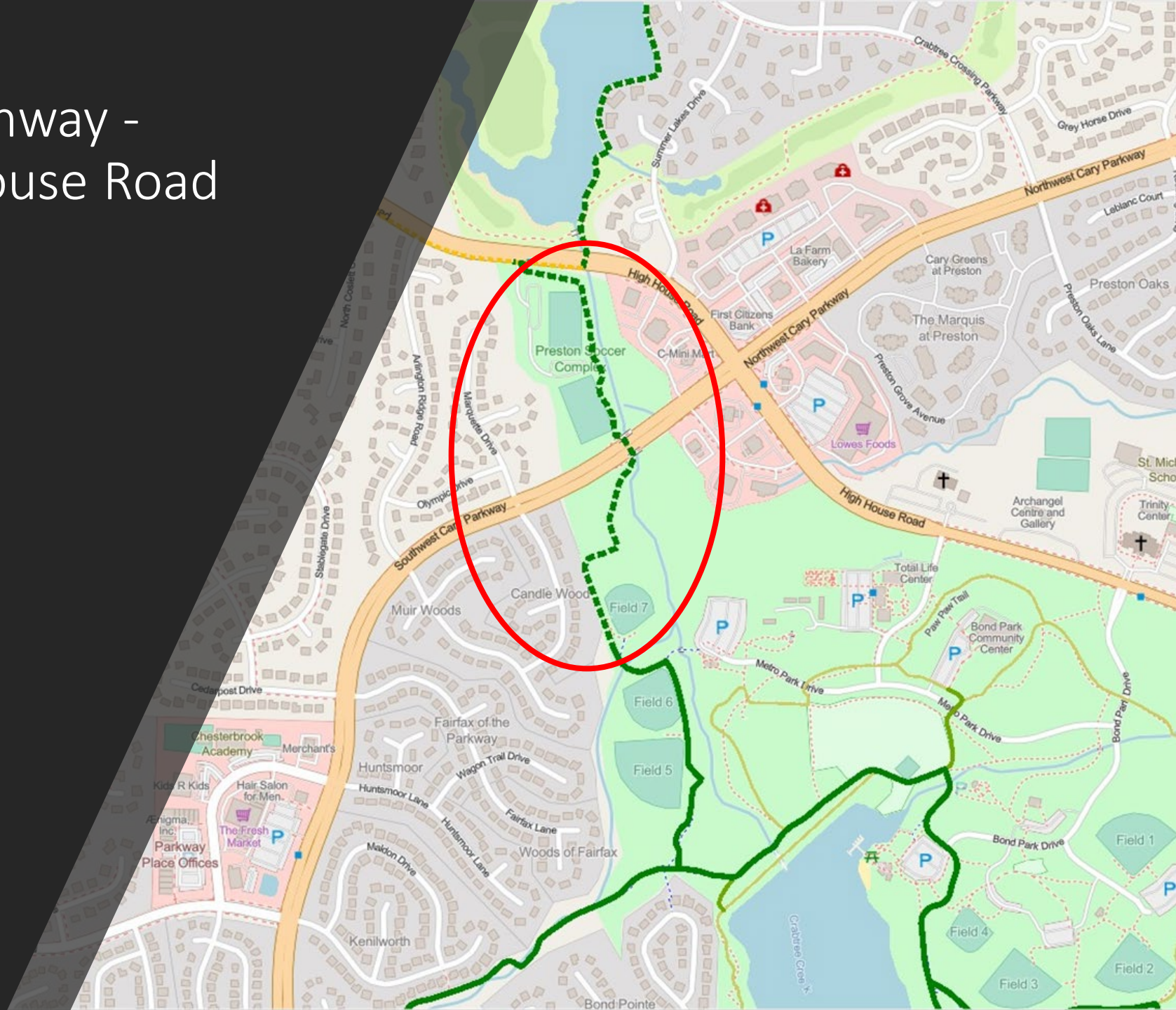
AMERISTAR SCHELON 2 - 4
FLUSH MOUNT FENCE ON
8" CONCRETE CURB

EXTEND BRICK WALK TO
TRAIL EDGE



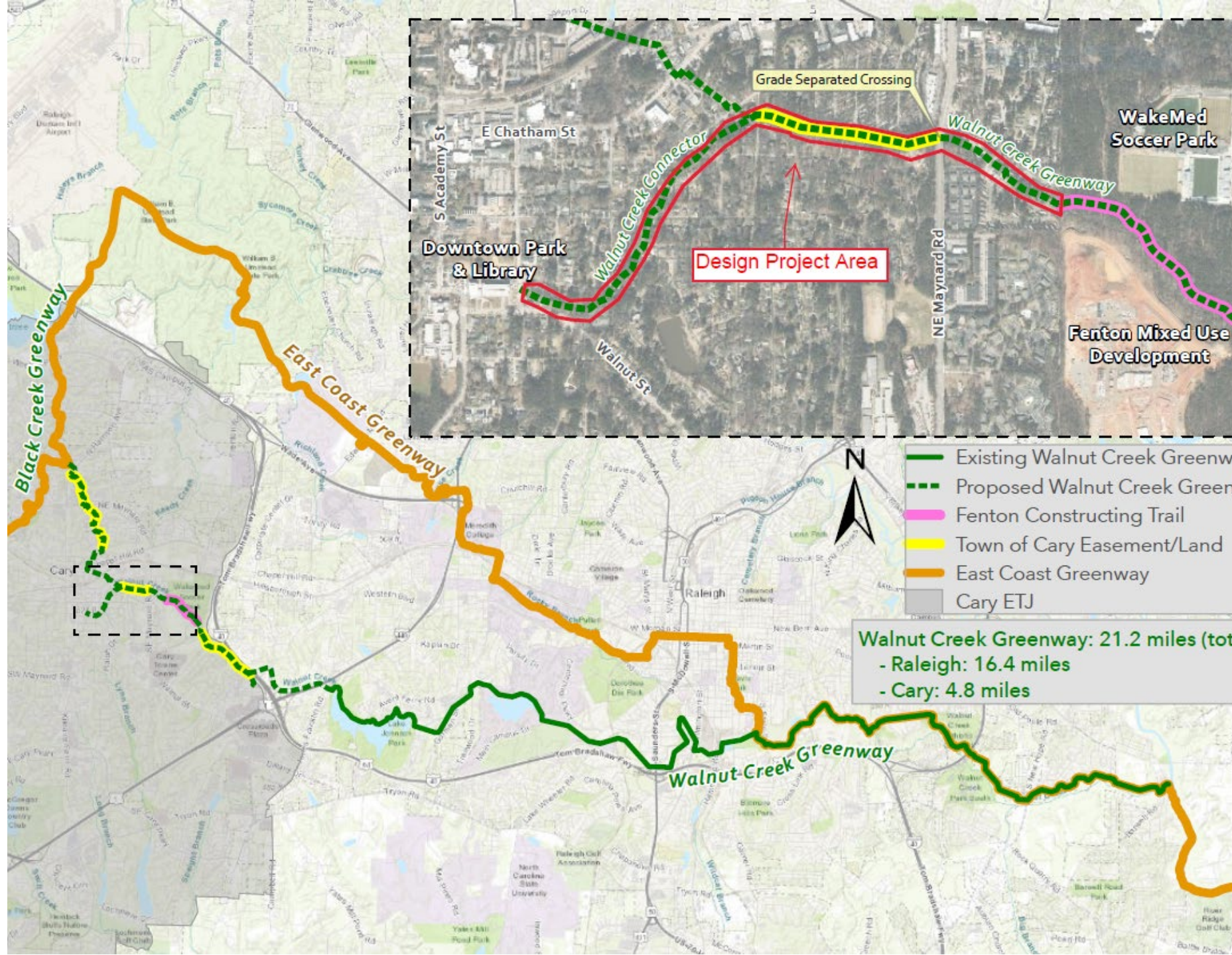
Crabtree Creek Greenway - Bond Park to High House Road

- Under Cary Parkway
- 2,500 feet
- CMAQ Grant = \$1.65 Million
- 75% Design
- Completion Fall 2024



Walnut Creek Greenway

- Conceptual alignment and stormwater evaluation



Cary Community Recreation & Sports Center: Concept





Greenway Bike & Wine

1:30 – 4:30 p.m. | Sunday, October 30 | 019801

Bring your bike & join us for a 10-mile ride from Bond Park out White Oak Creek Greenway. Learn about Cary greenways and the ecological benefits of 500 acres of conservation land along White Oak Creek. After the ride, relax by Bond Lake and enjoy wine tastings, charcuterie, and music. Registration required on myCary.org.

\$40/person

Meet at Trailhead Kiosk/Roundabout in Bond Park

www.townofcary.org/greenways

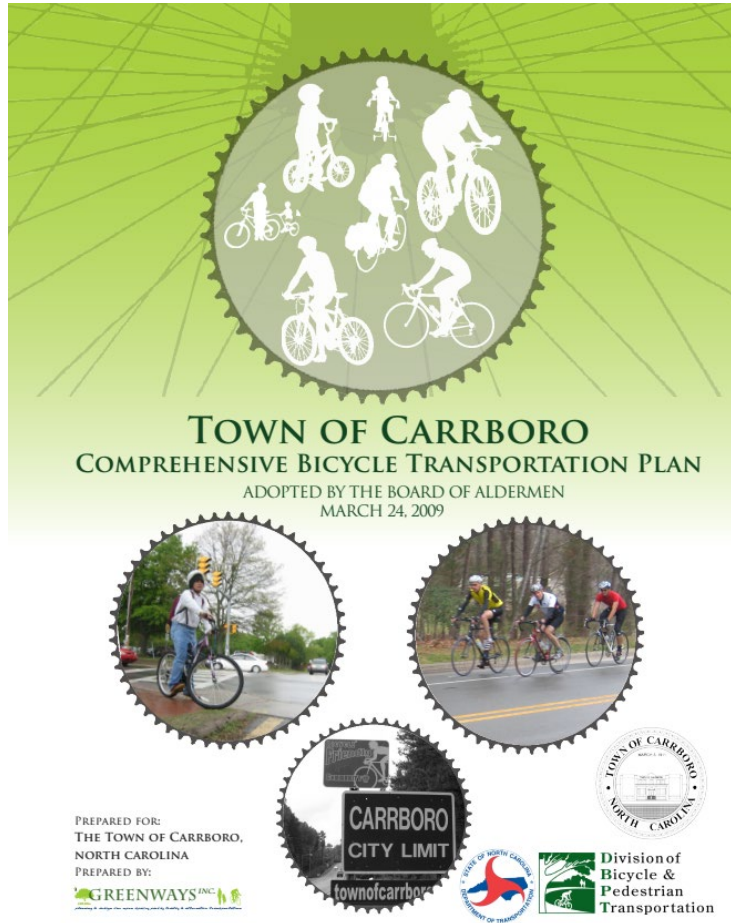
Town of Carrboro



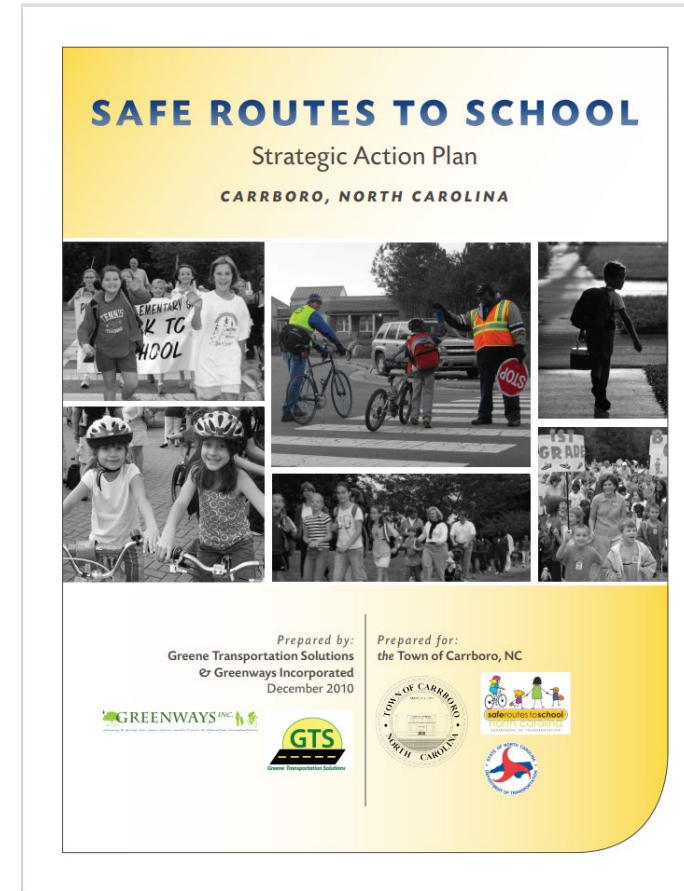
TRIANGLE BICYCLE AND PEDESTRIAN WORKSHOP

October 14, 2022

Triangle Bicycle and Pedestrian Workshop 2019



2009 Comprehensive Bicycle Transportation Plan



2010 Safe Routes to School Strategic Action Plan

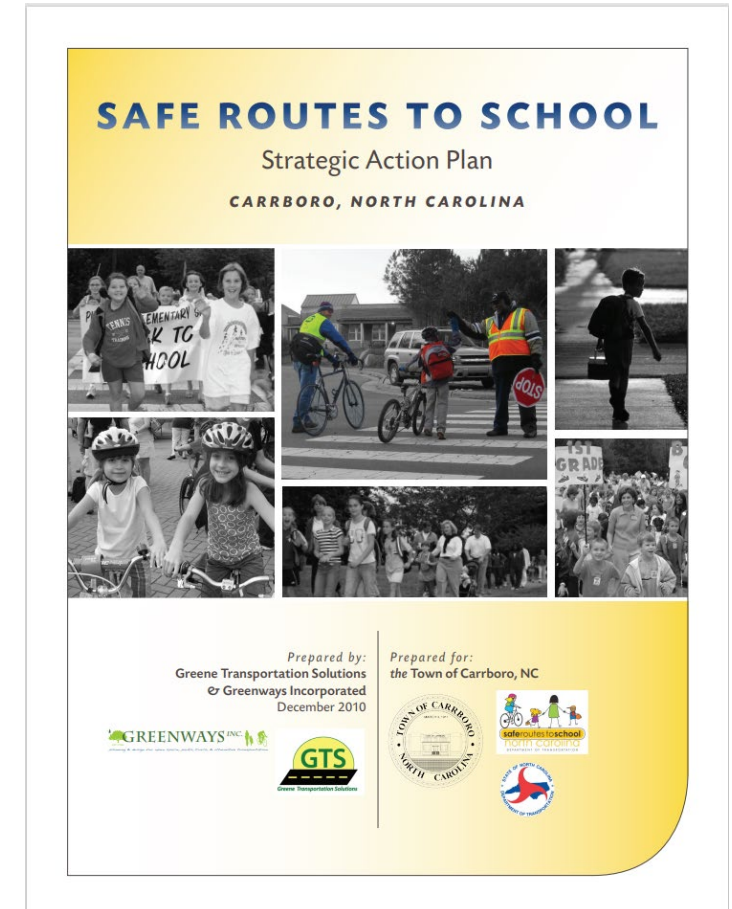
Updates from Carrboro Today



Updated Bike Plan (2020)



New Comprehensive Plan (2022)

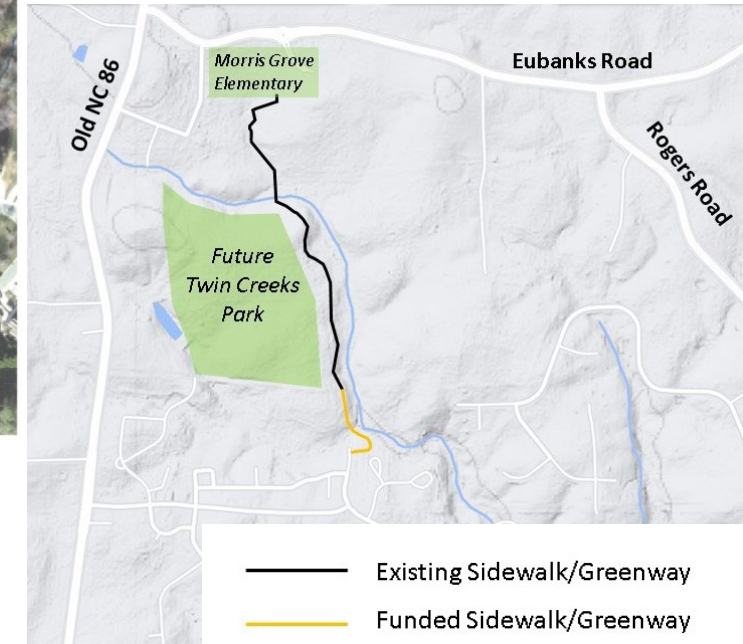


Renewed energy toward SRTS Plan with Restructured Implementation Committee

STIP Projects – Town of Carrboro

Jones Creek Greenway Project

- Part of the Bolin Creek Greenway System
- Connects Lake Hogan Farm Rd to existing Orange County greenway
- Completes off-road infrastructure from LHF to future Twin Creeks Park & Morris Grove Elementary School
- Design at 90-percent & permits under review



STIP Projects – Town of Carrboro, continued

Morgan Creek Greenway – Phase 1

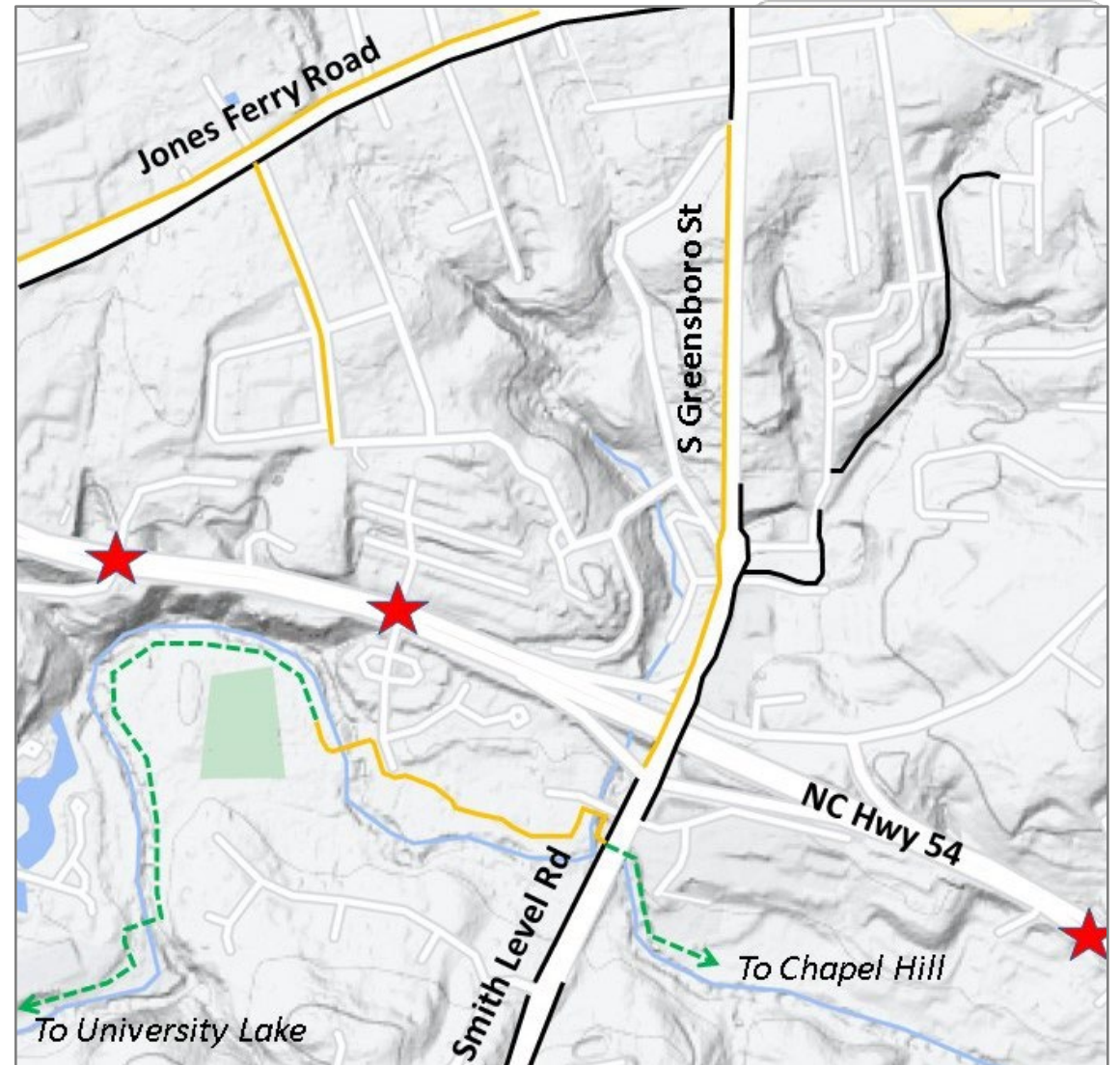
- Advertised in 2019, received high bids
- Modifications underway in preparation for readvertisement.
- Will connect to Chapel Hill system to east, University Lake to south

Signalized Pedestrian Crossings

- Collaboration with Chapel Hill, Chapel Hill Transit & NCDOT to design/construct signalized crossings at 3 locations with high transit use
- Design underway

Sidewalk Projects

- South Greensboro Street – design at 65%
- Connects to Roberson Bikeway
- Future sidewalk projects on Barnes Street & Jones Ferry Road funded



- Existing Sidewalk/Greenway
- Funded Sidewalk/Greenway
- Future Greenway Connectivity
- ★ Planned Signalized Pedestrian Crossing

Resurfacing / Restriping Projects

NCDOT Resurfacing Projects

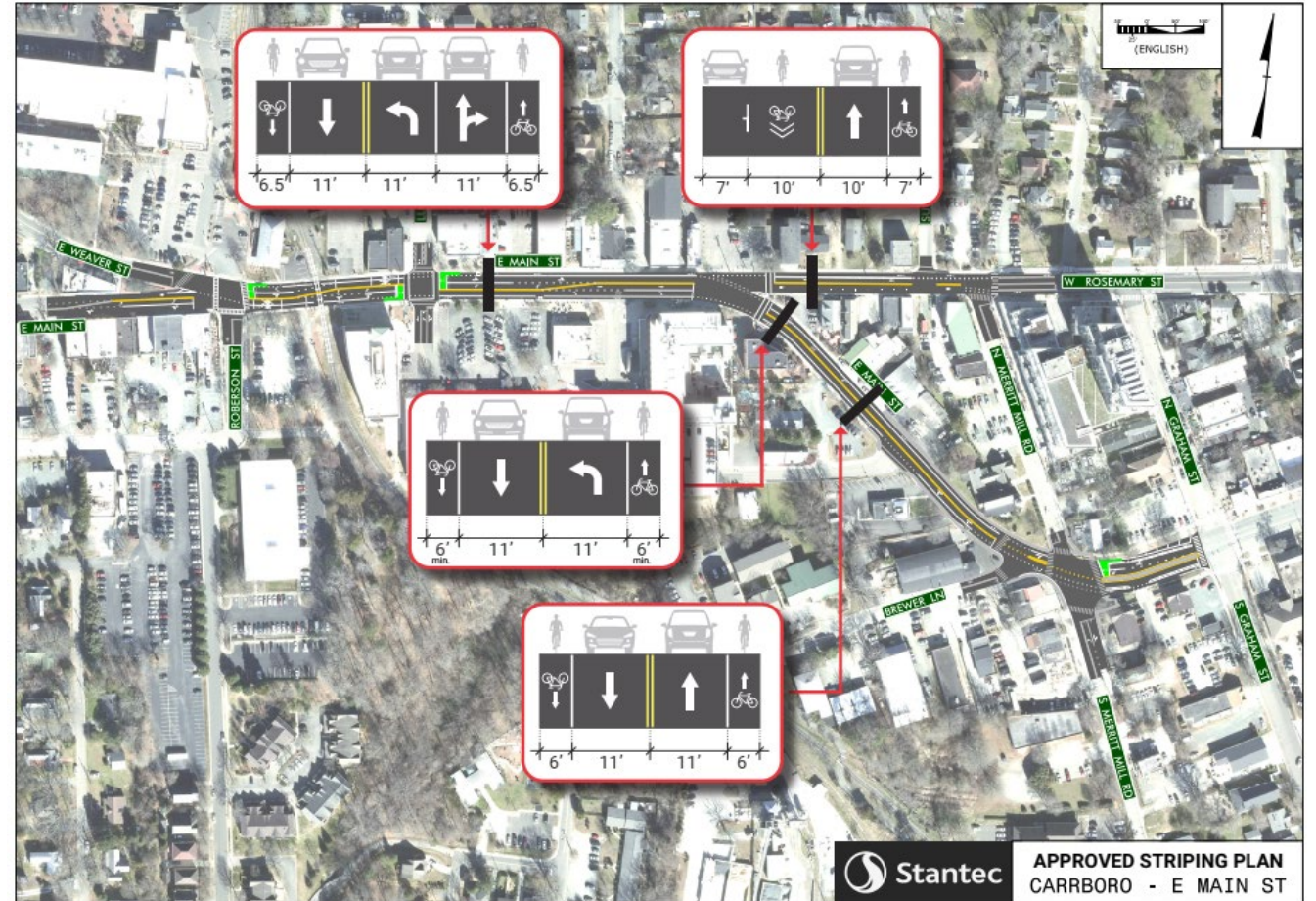
- East Main Street
- Merritt Mill Road (in partnership with Chapel Hill)
- Jones Ferry Road
- North Greensboro Street
 - Bike detector loop project

Town Resurfacing Projects

- Bike Plan pavement markings (sharrows)
- Traffic Calming measures

ADA Projects

- Review/approval/installation of crosswalks at certain locations



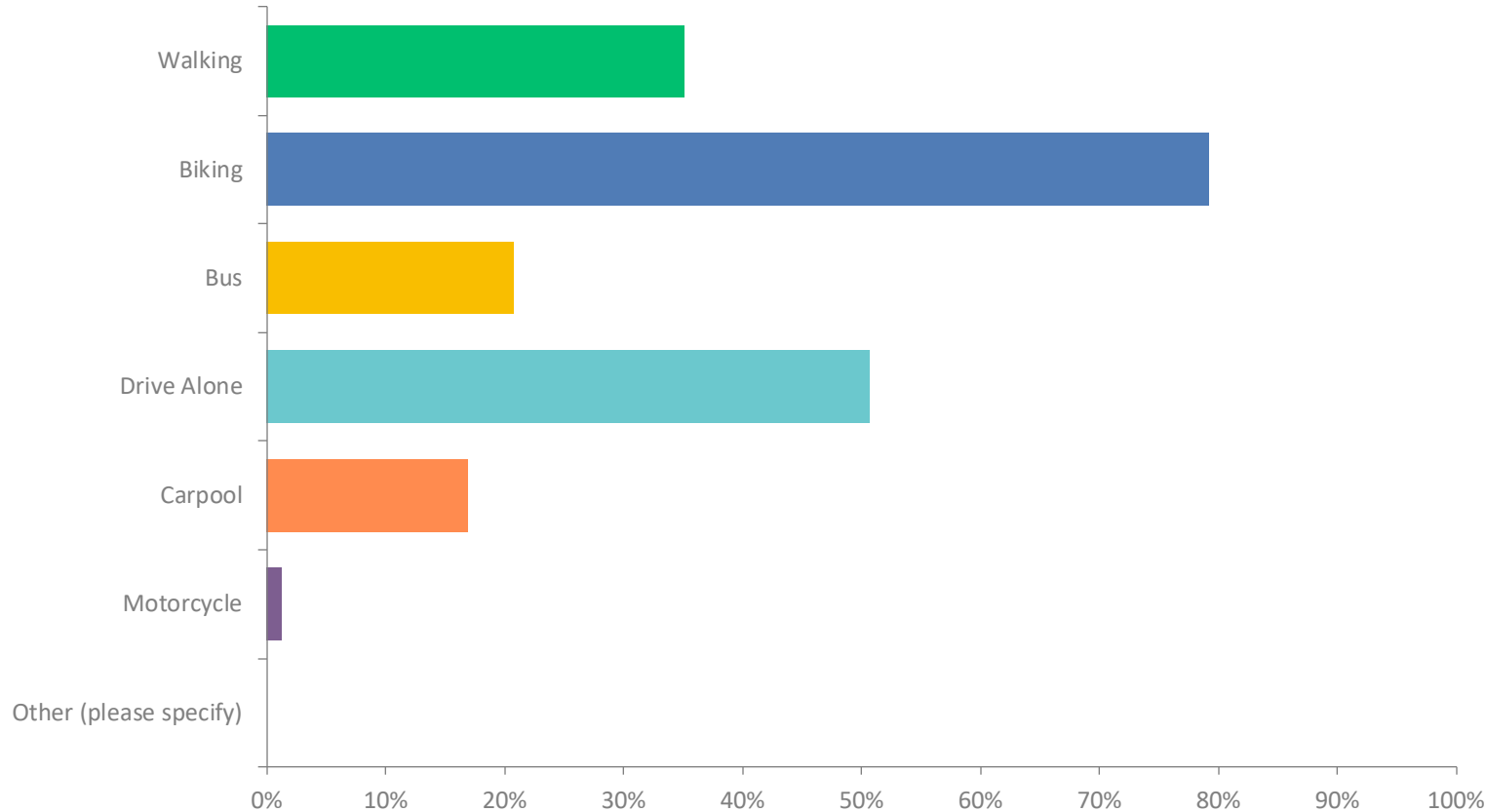
Protected Bike Lane Pilot Project



- Existing buffered bike lane along Jones Ferry Road (owned by NCDOT) ... few driveways
- In response to community interest in improving safety, Town staff requested a pilot project to experiment with flexible delineators through NCDOT's encroachment agreement process
- Allowed the public to experience and comment on this treatment
- Allowed the Public Works Dept. to understand the maintenance requirements

Q2: How do you travel along Jones Ferry Road? (Select all that apply)

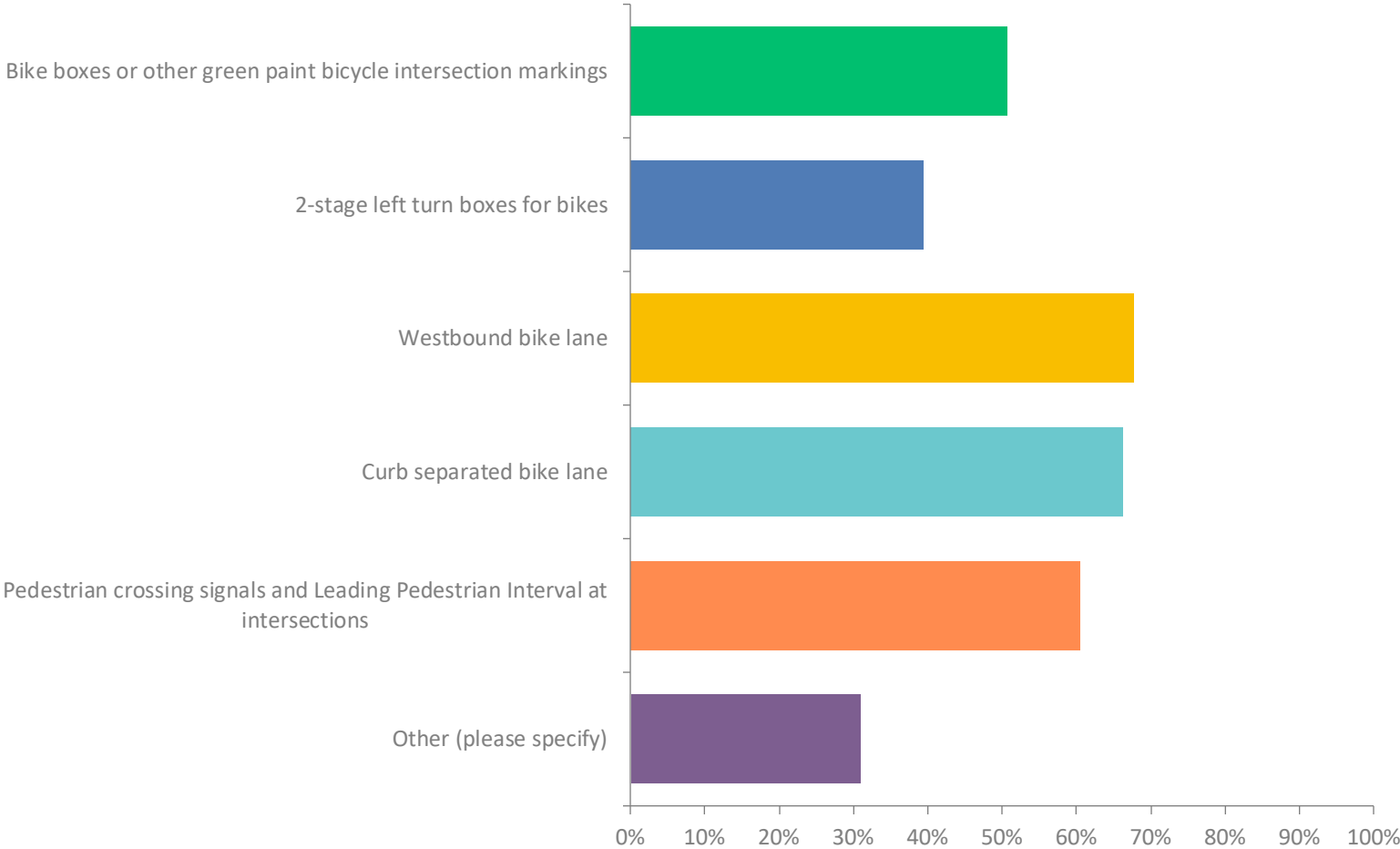
• Answered: 77 Skipped: 0



ANSWER CHOICES	RESPONSES	
Walking	35.06%	27
Biking	79.22%	61
Bus	20.78%	16
Drive Alone	50.65%	39
Carpool	16.88%	13
Motorcycle	1.30%	1
Other (please specify)	0%	0
TOTAL		157

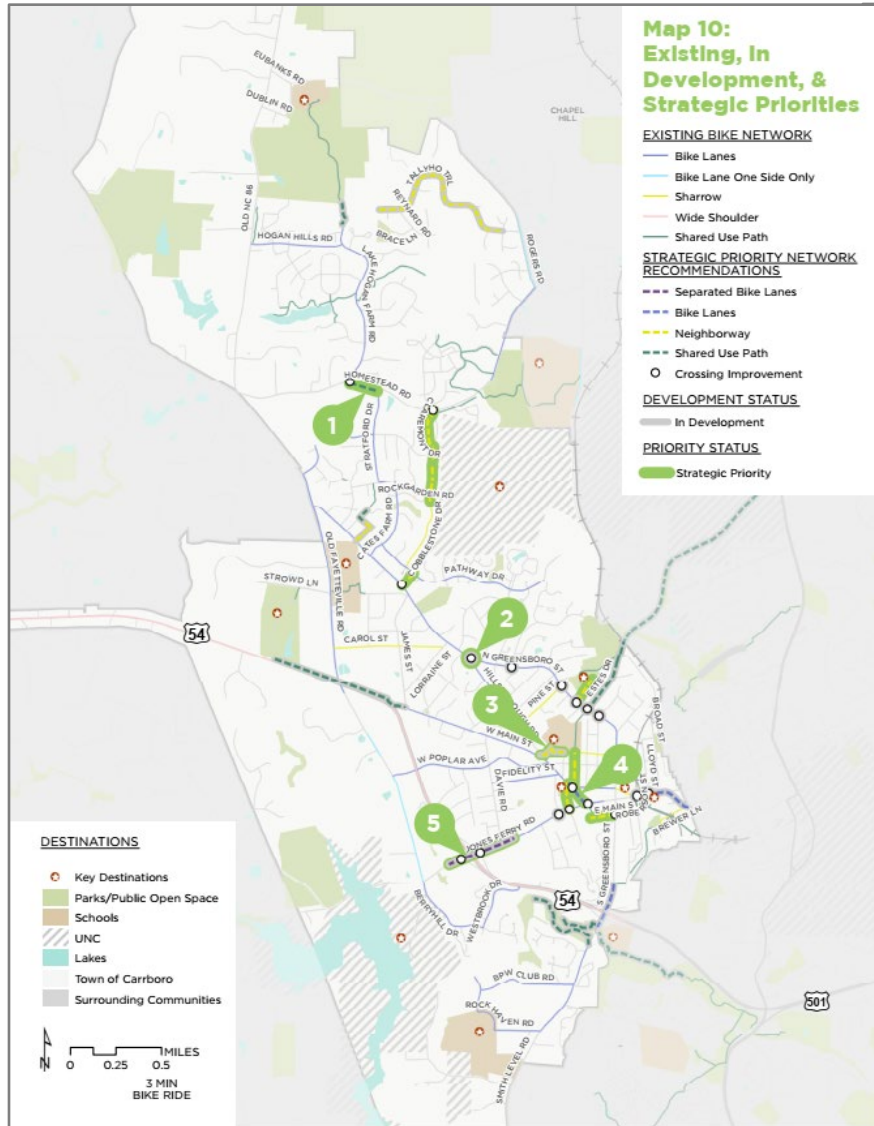
Q9: Are there other improvements you would like to see along this corridor in the future? (select all that apply)

• Answered: 71 Skipped: 6



ANSWER CHOICES	RESPONSES	
Bike boxes or other green paint bicycle intersection markings	50.70%	36
2-stage left turn boxes for bikes	39.44%	28
Westbound bike lane	67.61%	48
Curb separated bike lane	66.20%	47
Pedestrian crossing signals and Leading Pedestrian Interval at intersections	60.56%	43
Other (please specify)	30.99%	22
TOTAL		224

Updated Bike Plan Priority Projects



1 HOMESTEAD RD SIDEPAH LINK pg. 52

This project will connect large residential hubs and fill a gap from north Carrboro to downtown by connecting bike lanes along Lake Hogan Farm Rd and Stratford Dr.



2 HILLSBOROUGH ST AND N GREENSBORO ST INTERSECTION IMPROVEMENTS pg. 54

This is an unsignalized intersection along a critical bike route. Improving the intersection will increase safety and comfort for all users.



3 SHELTON ST CONTRAFLOW BIKE LANE pg. 56

The Shelton St contraflow bike lane will fill an important gap between the Hillsborough St bike lanes and Carrboro Elementary.



4 WEST MAIN ST BIKE LANES & INTERSECTION IMPROVEMENTS pg. 58

Intersection improvements and bike lanes on both sides of the street (filling gaps) will improve bike access to downtown along West Main St.



5 JONES FERRY RD SEPARATED BIKE LANES pg. 62

Separated bike lanes along Jones Ferry Rd will bring much-desired safety benefits to this heavily used commuter corridor.



Status

Funding for part of project: design/construction of RRFB to provide signalize pedestrian crossing at Claremont.

Improved ramps and crosswalks approved and will be installed as part of NCDOT ADA ramp project.

Under design.

Very preliminary scoping of steps to implement.

Consulting with NCDOT on incorporating lane changes/addition of buffered bike lane in segment under NC 54 as part of NCDOT resurfacing.

Transportation & Mobility Strategies Map

The map on the following page provides an overview of current and proposed strategies to improve active transportation (such as walking, biking, etc.) in Carrboro. Details about the priority area/corridors and in-development projects can be found on the following pages. Intersection improvements refer to suggestions for improving pedestrian safety. The details of this map were informed by the 2009 Bike Plan and 2020 Updated Bike Plan as well as community members' feedback on transportation infrastructure changes. This map does not provide an exhaustive list of projects and priorities, which may shift in the future.

A. Estes Dr. (Hillcrest to N. Greensboro): Carrboro has installed a marked crosswalk with two pedestrian hybrid beacons on N Greensboro (need for improvement predates plan)

B. Hillsborough & Old Fayetteville Road: Carrboro has installed a pedestrian refuge island (need for improvement predates plan)

C. Jones Ferry Road (NC-54 to Hillsborough): Bike Improvement (protected bike lanes on Jones Ferry Rd), Safety Improvements to Reduce Speed

D. NC-54 (at Henry Anderson Park): Sidewalk Connectivity, Bike Improvement (connect park to Old Fayetteville with shared use path)

E. S. Greensboro (Carr to Old Pittsboro): Safety Improvements to Reduce Speed (improve signage and connectivity at Carr to access South Green Shops), Pedestrian Safety

F. Greensboro (Estes to Weaver): Safety Improvements to Reduce Speed (traffic calming at Short), Sidewalk Connectivity, Intersection Improvement (Weaver & Greensboro to access Community Center)

G. N. Greensboro (Hillsborough to Estes): Safety Improvements to Reduce Speed, Bike Improvement

H. Hillsborough (N. Greensboro to W. Main/E. Poplar): Bike Improvement, Additional Pedestrian Lighting, Safety Improvements to Reduce Speed

I. Smith Level Road: Bike Improvement, Safety Improvements to Reduce Speed (safe routes to school), Green Stormwater Infrastructure Improvements

J. NC-54 (Main to Jones Ferry): Safer Crosswalks, Traffic Signals at Bus Stops, Additional Pedestrian Lighting, Improved Connectivity to Downtown

K. Hogan Lake Trail: Bike Improvement, Sidewalk Connectivity, Greenway Improvement (protected passive recreation area)

L. Main Street (Downtown Carrboro): Bike Improvement, Intersection Improvement, Improve Wayfinding and Regulatory Signage, Safety Improvements to Reduce Speed, Improve Sidewalk Conditions, consider options for future of rail corridor

M. Homestead Rd. & Old NC 86: Once development occurs, improve bike facilities and extend transit service

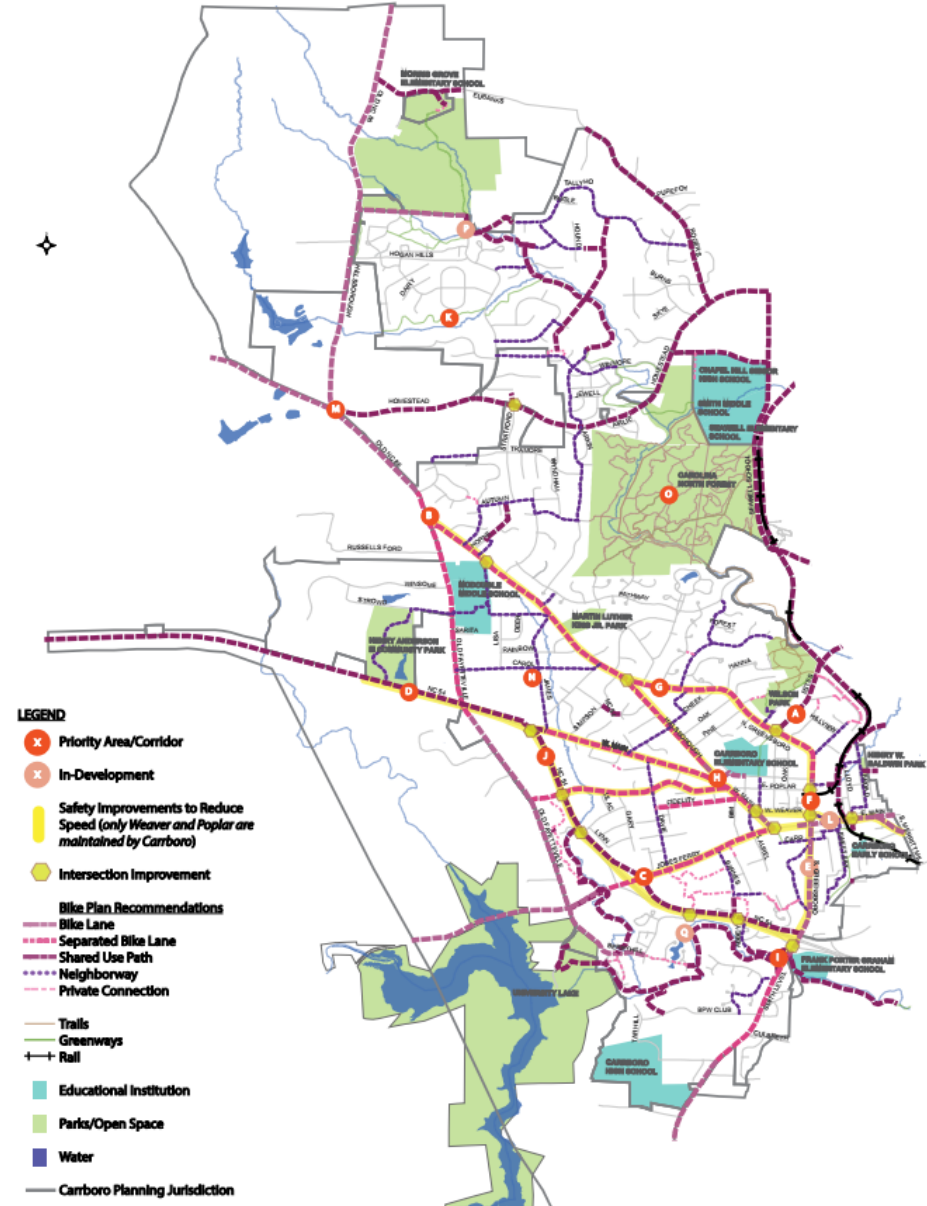
N. Barred Owl Creek: Green Stormwater Infrastructure Improvements & Residential Assistance

O. Carolina North Forest: Continue Initiatives to Improve Access and Travel (not Carrboro property)

P. Jones Creek Greenway: Continue Initiatives to Improve Greenway Access and Travel

Q. Morgan Creek Greenway: Continue Initiatives to Improve Greenway Access and Travel (pedestrian bridge to cross Morgan Creek)

Transportation & Mobility Strategies Map





Questions?

Contact

Tina Moon, Planning Administrator

cmoon@carrboro.nc



Walk/Bike to School Day - October 12, 2022

Carrboro Elementary School students

Town of Apex



Pedestrian and Bicycle Initiatives

2022 Updates – Progress and Emerging Needs

Overview

- Safe routes to school
- 2021 Streets & Sidewalks bond
- Recently completed projects
- Project efforts underway
- Vision Zero Action Plan
- Bikeshare

SRTS Need Evaluation & Expanding the Toolbox

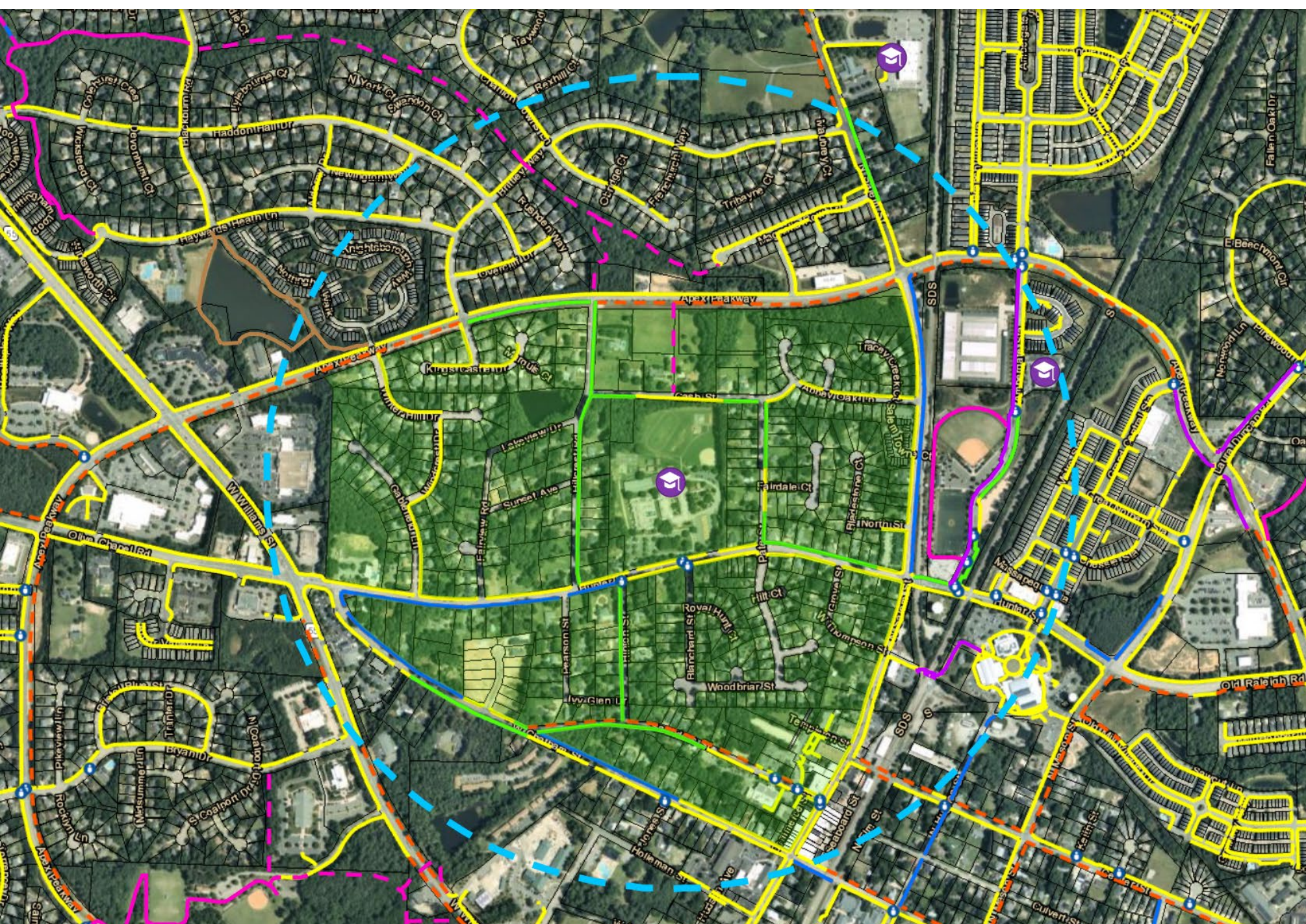
Background

- Planning staff began SRTS initiative in Summer 2018
- Interviewed principals in 2018
- Utilized SRTS interviews and analysis to inform Capital Improvement Plan requests



Second Round of Principal Meetings

- 16 follow-up meetings in August 2021-January 2022
 - Summarize previous conversation
 - Share Town's approach to addressing SRTS needs through Capital Improvement Plan and potential bond
 - Share status updates on identified needs
 - Gain insight into current conditions
 - Identify current pedestrian and bicycle infrastructure needs



Legend ⏪ ✖

- Existing Side Path
 - Existing Side Path
- Existing Greenway
 - Existing Greenway
- Proposed Greenway
 - · - Proposed Greenway
- Existing Nature Trail
 - Existing Nature Trail
- Baucom Elementary: 1/2-Mile Buffer
 - ↗
- Baucom Elementary: No Transport Zone
 - ▭
- Mid-Block and Unsignalized Crosswalks
 - Mid-Block and Unsignalized Crosswalks
 -
- Existing Sidewalk
 - Existing Sidewalk
 -
- Funded Pedestrian Facility
 - Funded Pedestrian Facility
 -
- Recommended School Pedestrian Facility
 - Recommended School Pedestrian Facility
 -
- Sidewalk and Side Path Needs
 - Sidewalk and Side Path Needs
 -

Expanded Interactive Map Features

- Includes all sidewalk and side path gaps along thoroughfares and collectors in addition to the safe routes to school needs
- Includes updated ROW and construction cost estimates based on recently completed projects

Streets & Sidewalks Bond

Streets & Sidewalks Bond

- Approved in Fall 2021
- Includes \$6M for safe routes to school projects
- SRTS funding timeline:
 - \$1M in FY21-22
 - \$5M in FY25-26
 - Reserve \$2M for new schools and emerging needs

Recently Completed Projects

Apex Middle

- LAPP U-5530 AC
- James St to Downtown
- Sidewalk, crosswalks, pedestrian signals, pedestrian flashing beacons



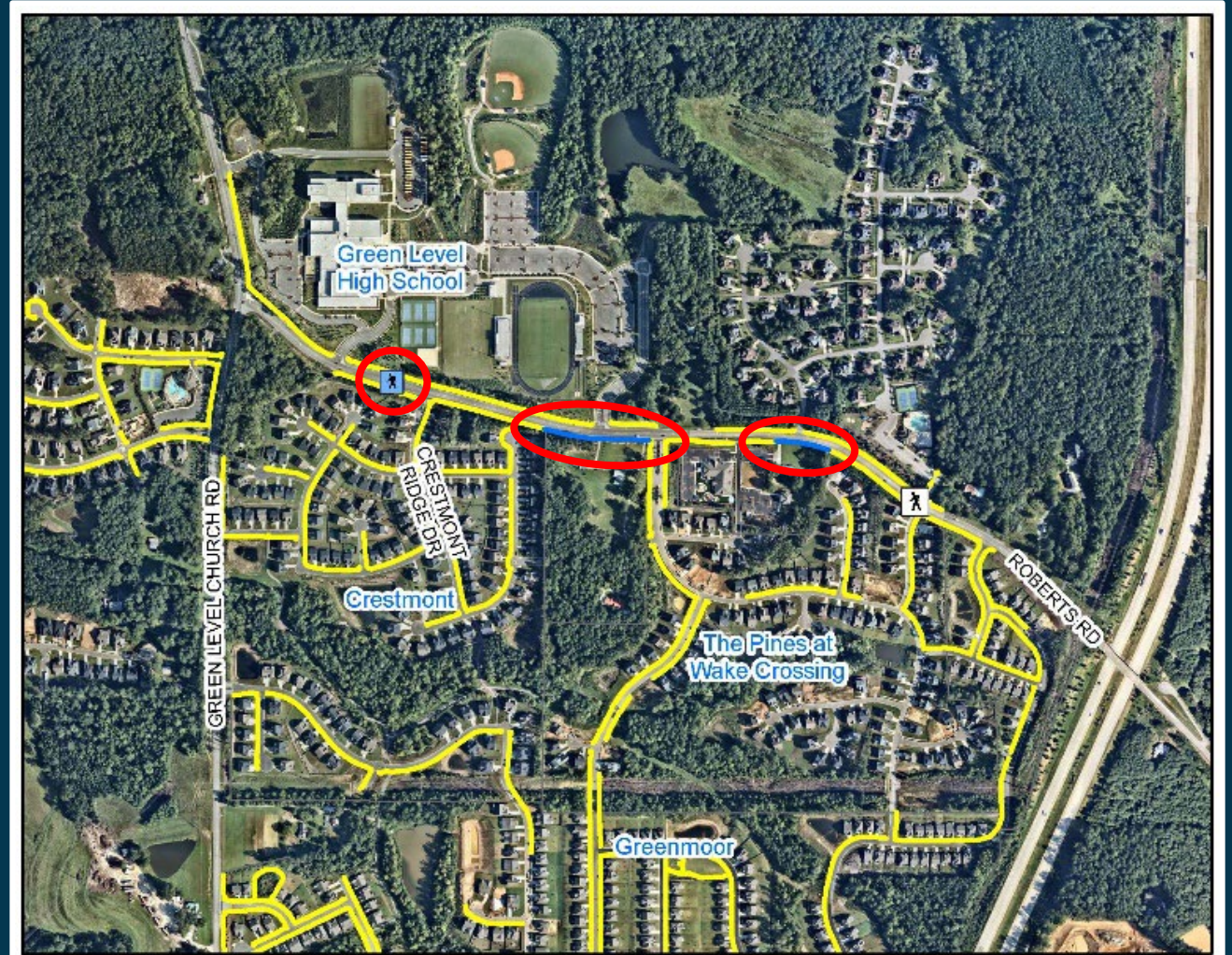
Laurel Park Elementary

- LAPP project EB-6019
- Restriped Laura Duncan Road to utilize the full pavement width
- Striped bike lane
- Installed flashing beacons at the crosswalk



Green Level High

- Sidewalk, side path, and crosswalk with flashing beacons installed
- Completes pedestrian connection from south of Roberts Road



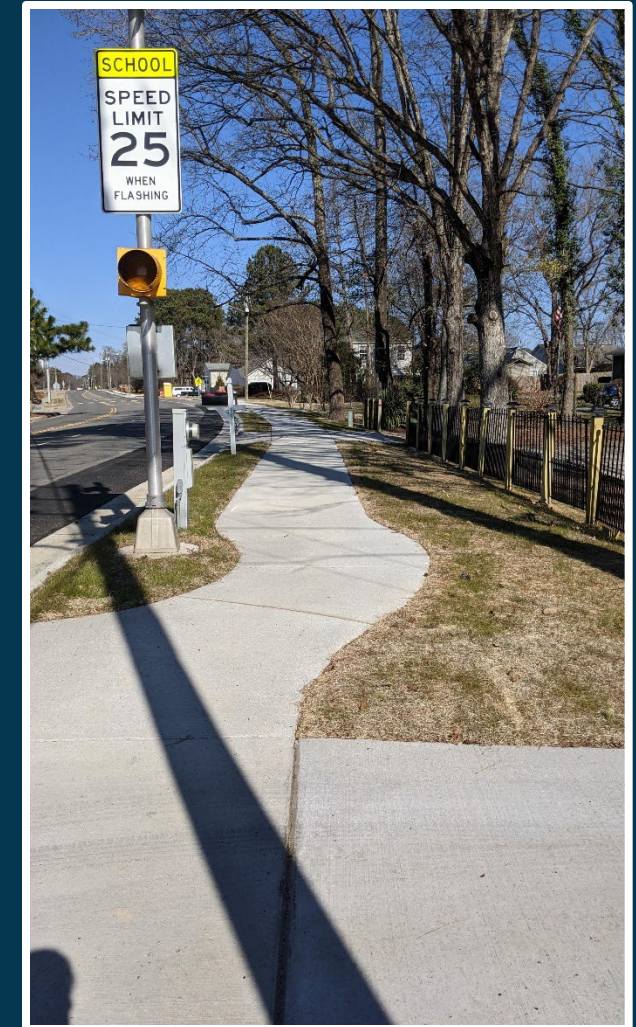
Scotts Ridge Elementary

- LAPP project C-5604AA
- Completed pedestrian connections to school and Kelly Road Park



Apex Elementary

- Many students walk to West Haven Apartments
- Crossing guard at Sparta Lane
- No crossing guard at mid-block crosswalk



Project Efforts Underway

Town of Apex Pedestrian Projects

October 2022

More information on funded pedestrian projects is available at:



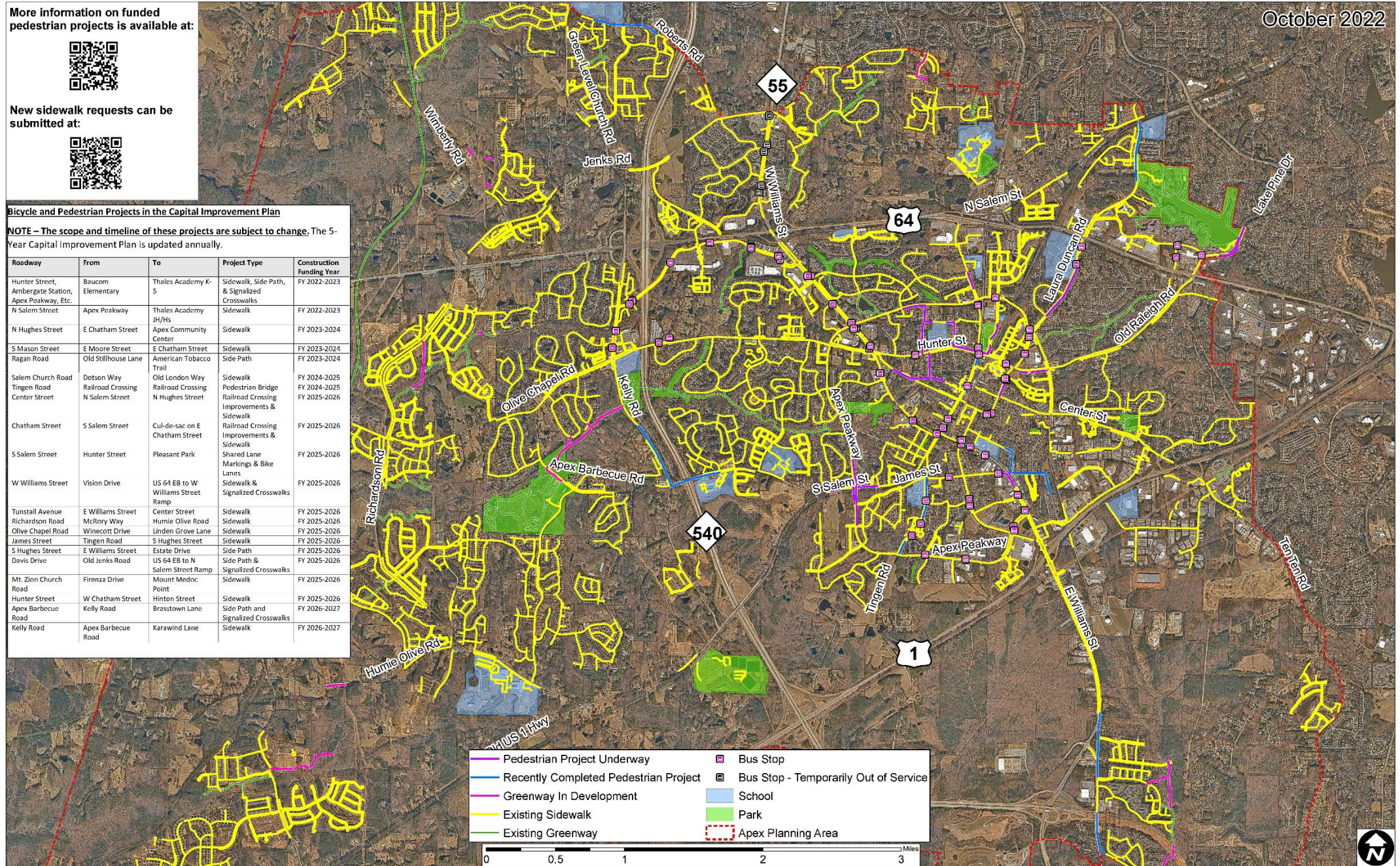
New sidewalk requests can be submitted at:



Bicycle and Pedestrian Projects in the Capital Improvement Plan

NOTE – The scope and timeline of these projects are subject to change. The 5-Year Capital Improvement Plan is updated annually.

Roadway	From	To	Project Type	Construction Funding Year
Hunter Street, Ambergate Station, Apex Peakway, Etc.	Baucorn Elementary	Thales Academy K-5	Sidewalk, Side Path, & Signalized Crosswalks	FY 2022-2023
N Salem Street	Apex Peakway	Thales Academy JH/HS	Sidewalk	FY 2022-2023
N Hughes Street	E Chatham Street	Apex Community Center	Sidewalk	FY 2023-2024
S Mason Street	E Moore Street	E Chatham Street	Sidewalk	FY 2023-2024
Ragan Road	Old Stillhouse Lane	American Tobacco Trail	Side Path	FY 2023-2024
Salem Church Road	Dotson Way	Old London Way	Sidewalk	FY 2024-2025
Tingen Road	Railroad Crossing	Railroad Crossing	Pedestrian Bridge	FY 2024-2025
Center Street	N Salem Street	N Hughes Street	Railroad Crossing Improvements & Sidewalk	FY 2025-2026
Chatham Street	S Salem Street	Cul-de-sac on E Chatham Street	Railroad Crossing Improvements & Sidewalk	FY 2025-2026
S Salem Street	Hunter Street	Pleasant Park	Shared Lane Markings & Bike Lanes	FY 2025-2026
W Williams Street	Vision Drive	US 64 EB to W Williams Street Ramp	Sidewalk & Signalized Crosswalks	FY 2025-2026
Tunstall Avenue	E Williams Street	Center Street	Sidewalk	FY 2025-2026
Richardson Road	McRory Way	Humie Olive Road	Sidewalk	FY 2025-2026
Olive Chapel Road	Winecott Drive	Linden Grove Lane	Sidewalk	FY 2025-2026
James Street	Tingen Road	S Hughes Street	Sidewalk	FY 2025-2026
S Hughes Street	E Williams Street	Estate Drive	Side Path	FY 2025-2026
Devis Drive	Old Jenks Road	US 64 EB to N Salem Street Ramp	Side Path & Signalized Crosswalks	FY 2025-2026
Mt. Zion Church Road	Firenza Drive	Mount Medoc Point	Sidewalk	FY 2025-2026
Hunter Street	W Chatham Street	Hinton Street	Sidewalk	FY 2025-2026
Apex Barbecue Road	Kelly Road	Brassstown Lane	Side Path and Signalized Crosswalks	FY 2026-2027
Kelly Road	Apex Barbecue Road	Karawind Lane	Sidewalk	FY 2026-2027

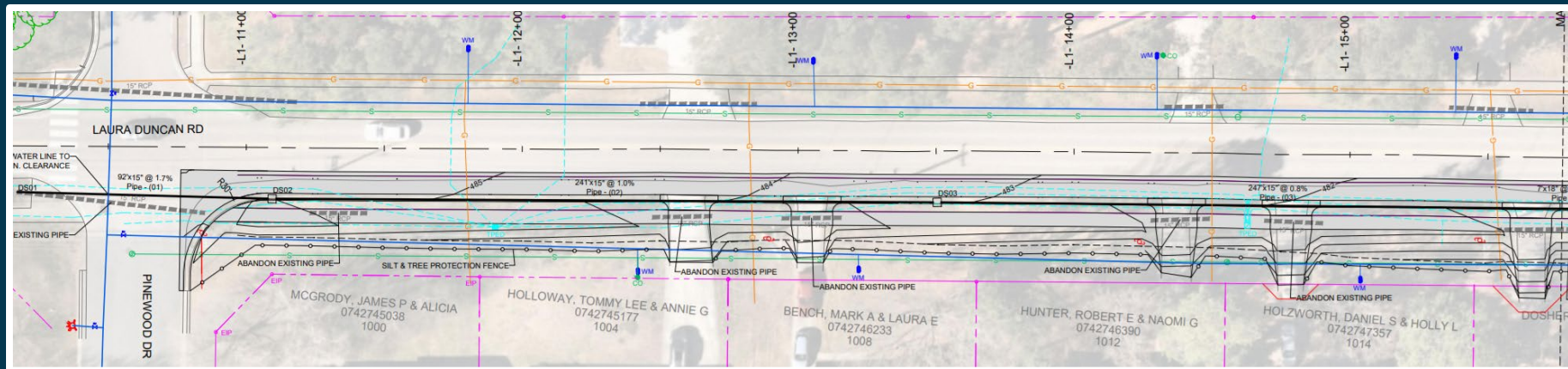
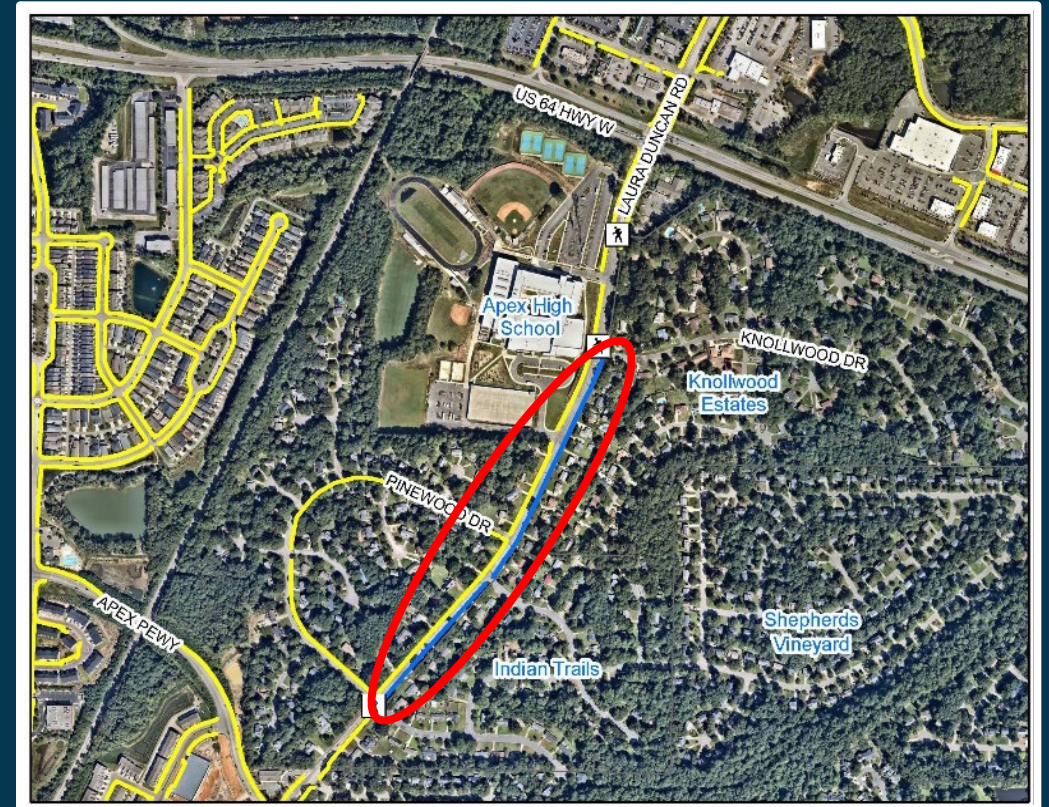


Pedestrian Project Underway	Bus Stop
Recently Completed Pedestrian Project	Bus Stop - Temporarily Out of Service
Greenway In Development	School
Existing Sidewalk	Park
Existing Greenway	Apex Planning Area



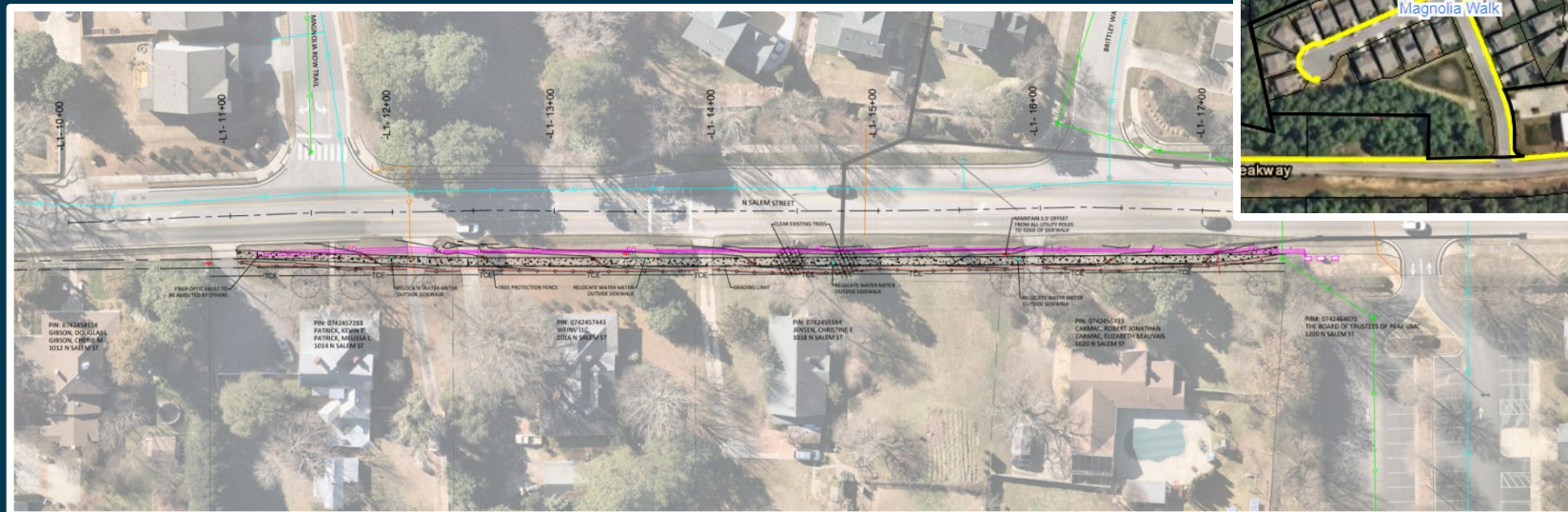
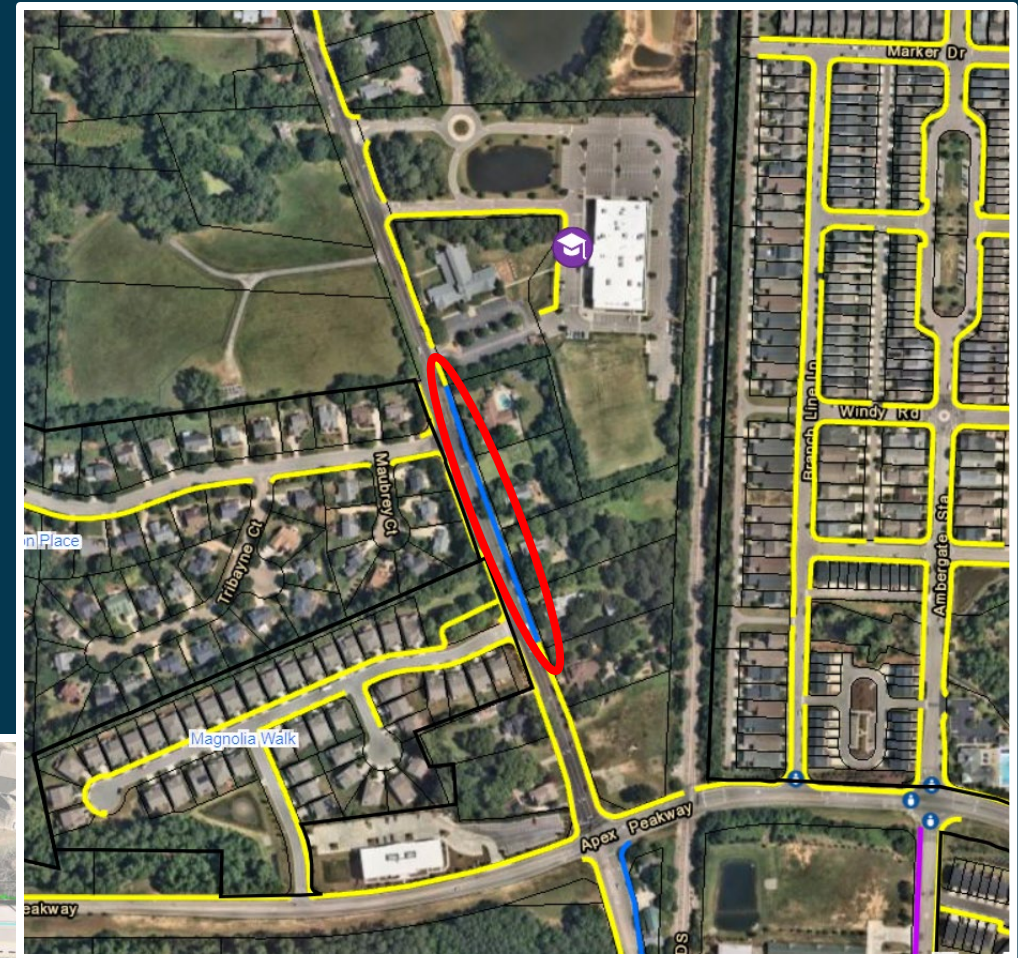
Apex High

- ROW acquisition in progress
- Multiple pedestrian crashes on Laura Duncan Road
- Complete sidewalk gap on east side
- Encourage crossing at marked crosswalks



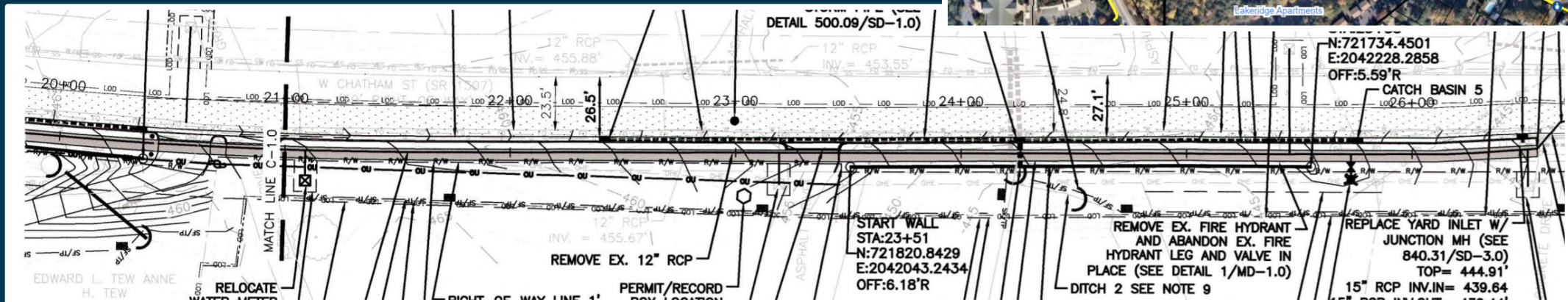
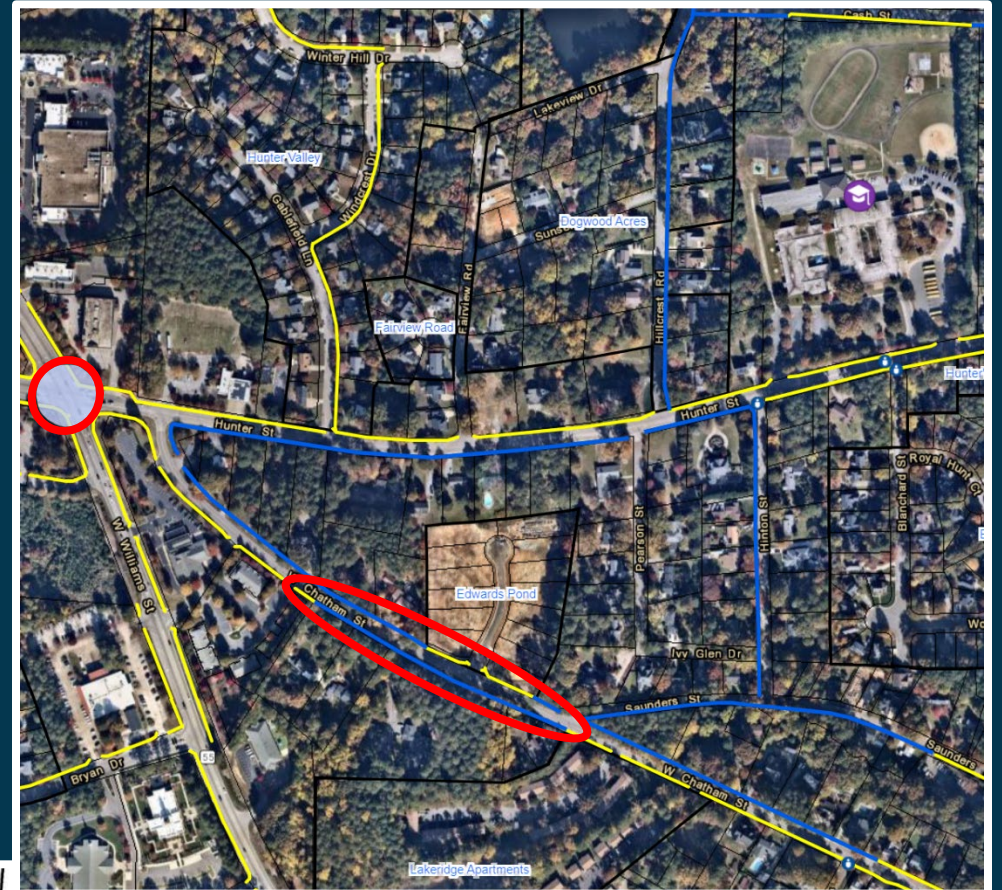
Thales Academy JH/HS

- Right-of-way acquisition underway
- Heavily travelled route



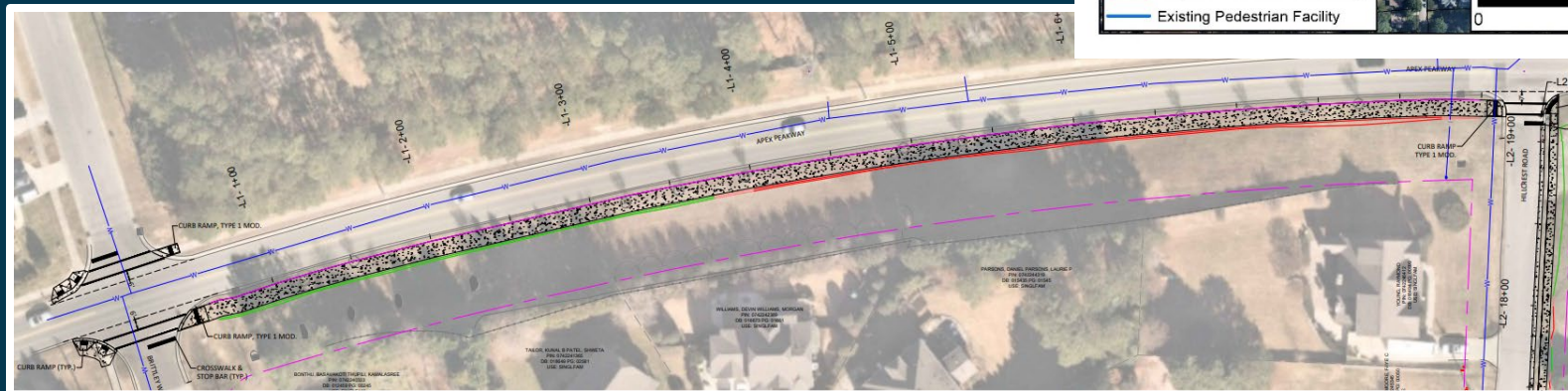
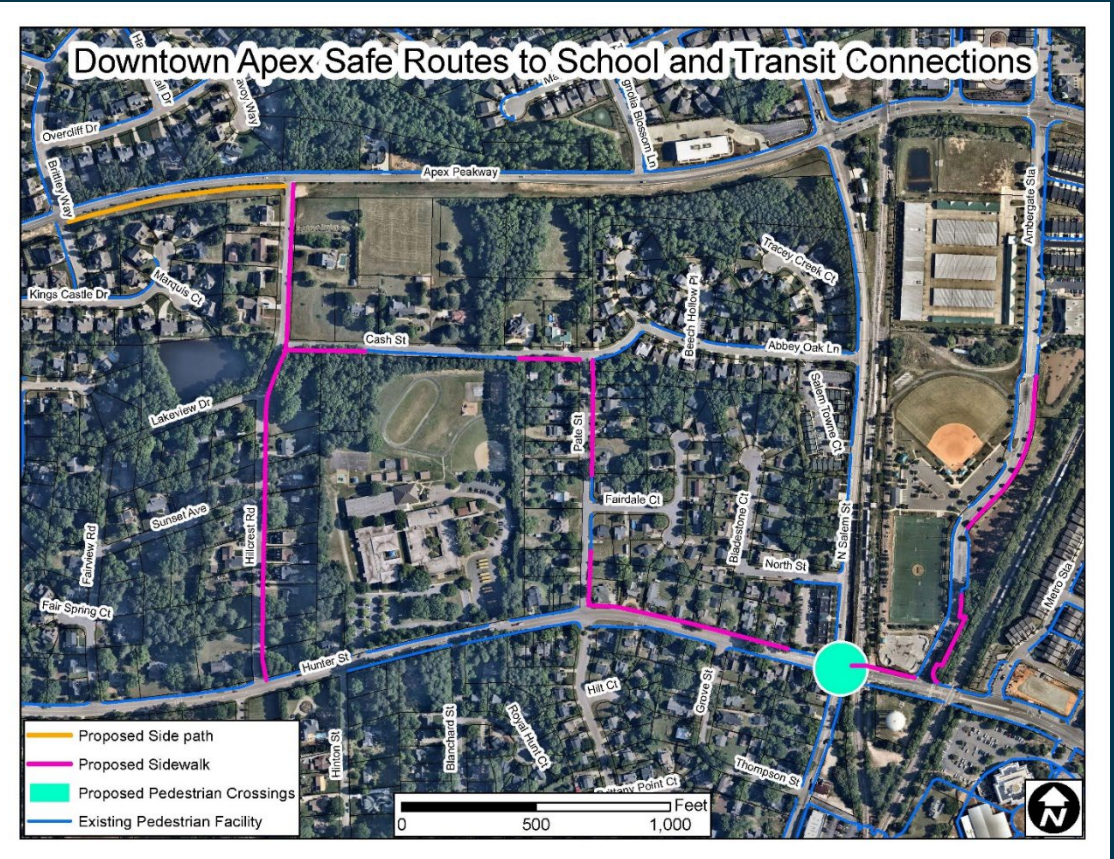
Baucom Elementary

- LAPP project EB-6046
- ROW acquisition in progress
- Combined with Chatham Street waterline replacement



Baucom Elementary and Thales Academy K-5

- LAPP project BL-0047
- Design is under review
- Transit access and SRTS project



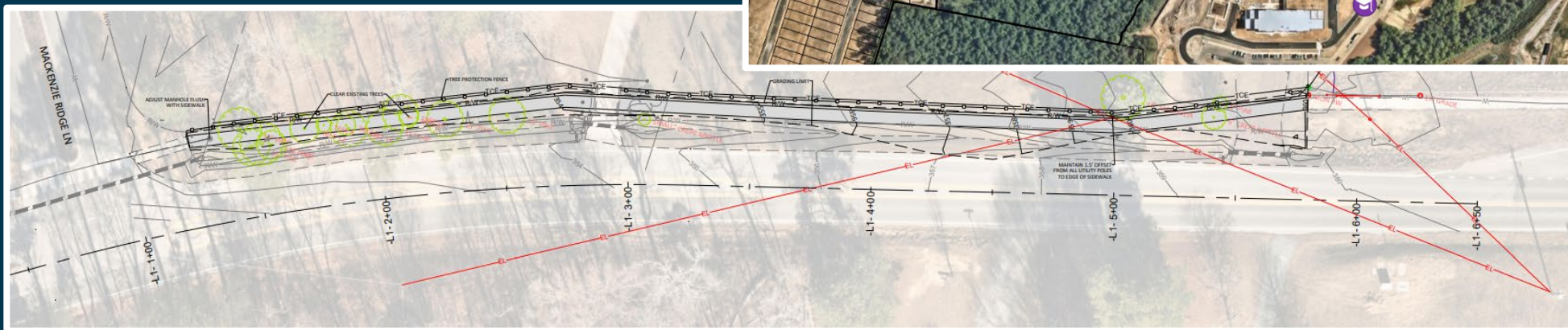
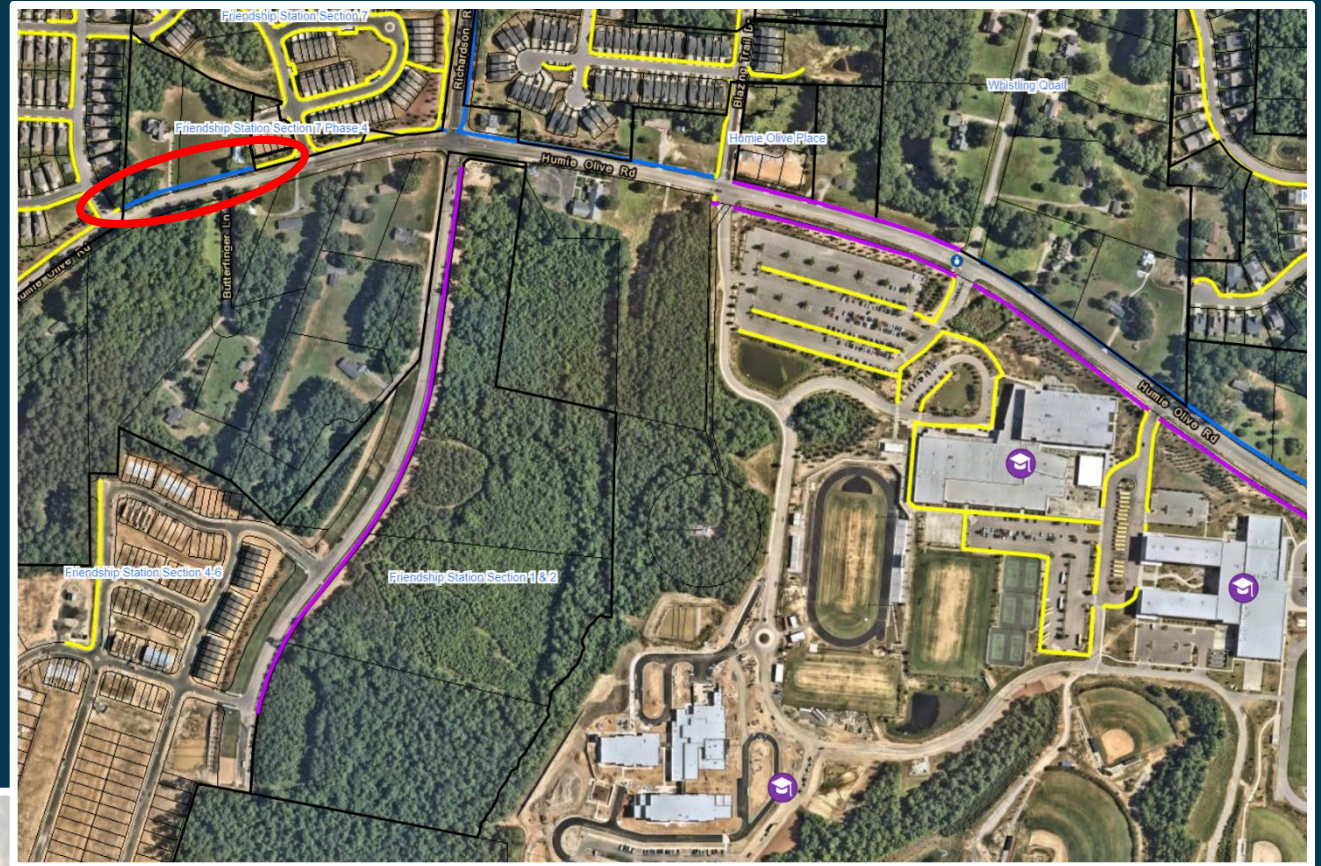
Baucom Elementary

- Preliminary design complete
- Completes direct connection from Lake Ridge Apartments to school
- Improves access to GoApex Route 1



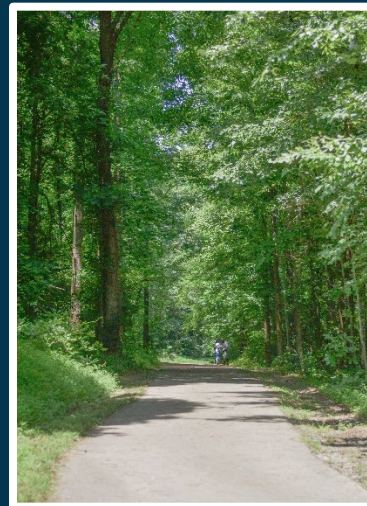
Apex Friendship Schools

- Construction Drawings under review
- A portion of a larger connection to the school campus
- Remaining gap will be filled by developer

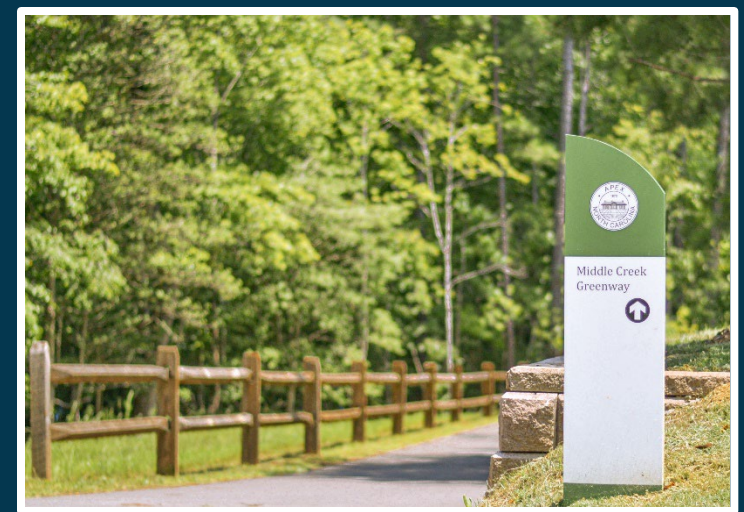
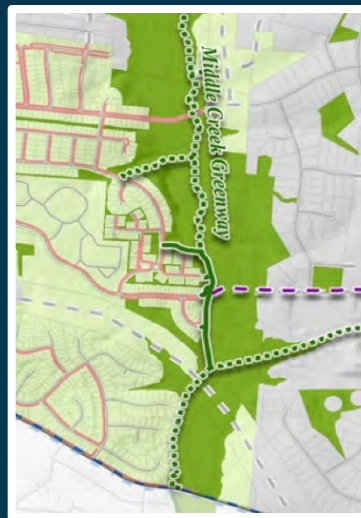


Greenways In Development

- Beaver Creek
- Middle Creek
- Apex West



BEAVER CREEK GREENWAY



Vision Zero Action Plan

Plan Development & Implementation

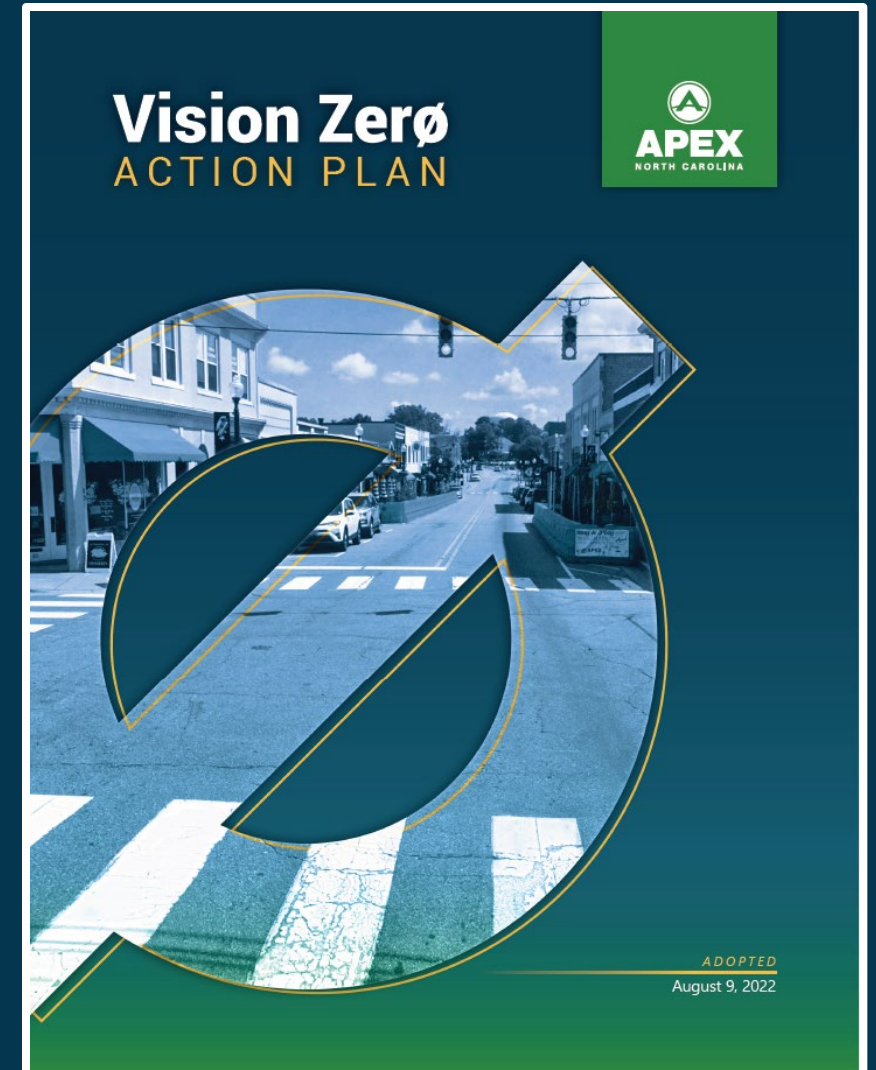
- Interdepartmental Task Force:
 - Administration
 - Planning
 - Police
 - Public Works & Transportation
- Informed a SS4A grant application

FIVE "E" APPROACH

Engineering Education Encouragement Enforcement Evaluation

GOALS

- 1 Promote a culture of traffic safety that prioritizes equity and inclusion.
- 2 Address collisions through infrastructure investments.
- 3 Enhance Town policies, processes, and evaluation to incorporate Vision Zero tenets.
- 4 Create and leverage partnerships to improve traffic safety and awareness.



Pedestrian & Bicycle Actionable Strategies

- Expand Pedestrian Needs Inventory to incorporate:
 - Latest ped/bike crash data
 - Safe routes to transit
- Coordinate with WCPSS to:
 - Evaluate ped/bike needs
 - Provide ped/bike routes
 - Address transportation safety concerns







Bikeshare

Bikeshare: Purpose & RFI

- Potential pilot program during downtown parking lot reconstruction
- Request for Information:
 - Roles & responsibilities
 - Costs
 - Bikes and bike station
 - Data reporting
 - Customer service
 - Marketing

Thank you!

Senior Long Range Planner
Jenna Shouse
jenna.shouse@apexnc.org
(919) 372-7509

Questions & Answers



Break

Ten Minutes



YEAR OF THE TRAIL

2023 ★ NC



GREAT TRAILS STATE COALITION



THE GREAT TRAILS STATE COALITION



Image by Piedmont Fat Tire Society



Image by Piedmont Legacy Trails



Image by NC State Parks



Image by NCDOT

WHO WE ARE

- A broad, diverse coalition committed to bringing the benefits of trails to all of North Carolina – nonprofits/local government/industry partners
- All trail types: Hike / Bike / Walk / Run / Paddle / Ride
- All 100 Counties
- State agency partners



NORTH CAROLINA IS THE GREAT TRAILS STATE



Good Roads State

- ✓ Vision
- ✓ Community Demand
- ✓ State Leadership
- ✓ Commitment
- ✓ Funding



Great Trails State

- ✓ Vision
- ✓ Community Demand
- State Leadership
- Commitment
- Funding



WHY TRAILS

- Free to users
- Improved health and well being
- Create positive economic impact, especially for rural communities
- Safety from vehicular traffic
- Protect valuable natural resources





THE BIG BOLD VISION

- Secure sustained state funding for trails
- Brand North Carolina as “The Great Trails State”

WHY

- Historically, NC has had very little direct state investment in trails and greenways





INDUSTRY



NON-PROFITS



MUNICIPALITIES

29 NON PROFIT MEMBERS



THE CONSERVATION FUND



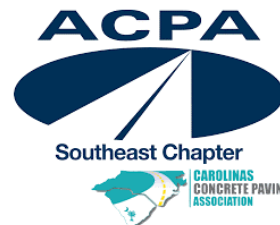
AARP



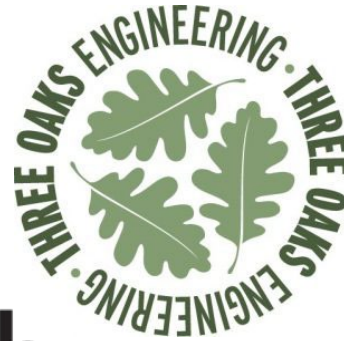
FOOTHILLS CONSERVANCY OF NORTH CAROLINA



RIVERLINK



15 INDUSTRY PARTNERS



LOCAL GOVERNMENT MEMBERS



Goal: Build the Cities, Towns and Counties for Trails Working Group

2021 LONG SESSION SUCCESS

- 2023 Year of the Trail Designation
- Budget funding – first time ever specifically for authorized State Trails
 - \$29.15 M for the Complete the Trails Fund
 - Non-State Trails not eligible for funding



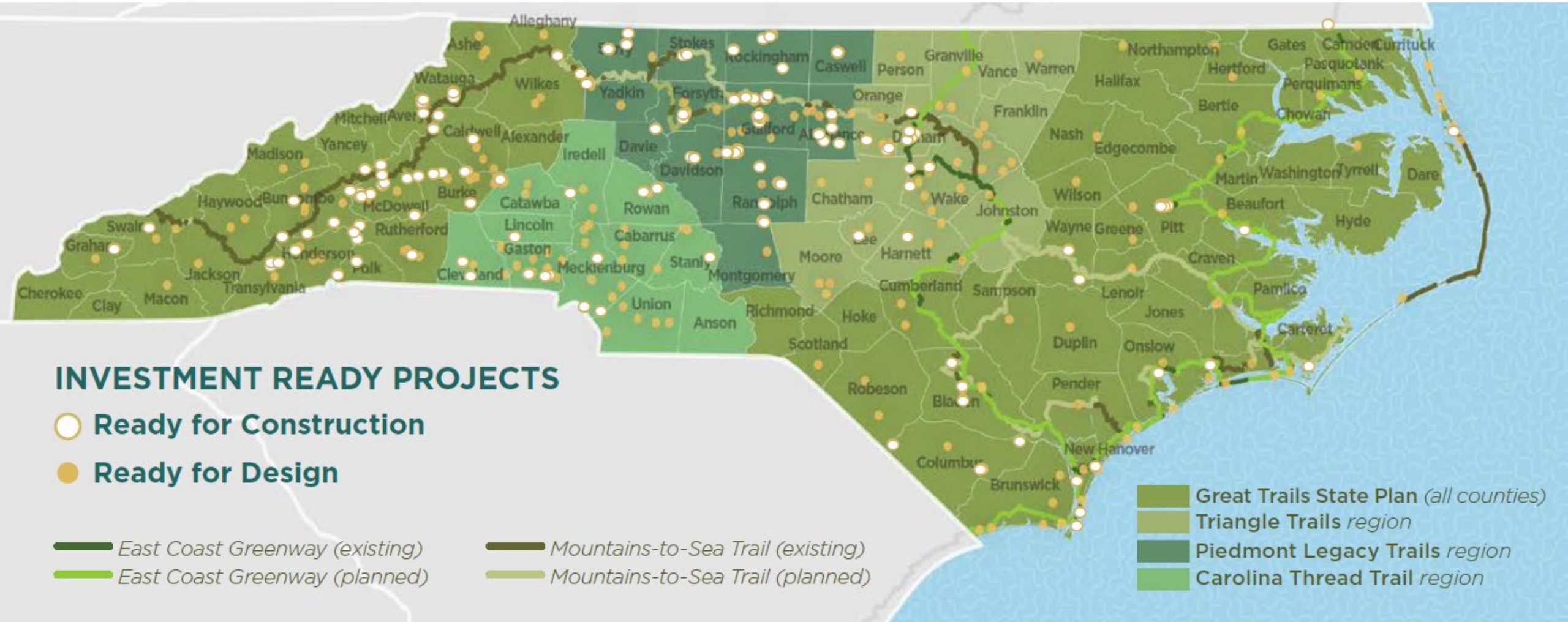
North Carolina State Trails





INVESTMENT READY

Communities have invested in planning and identified trail projects in all 100 counties.

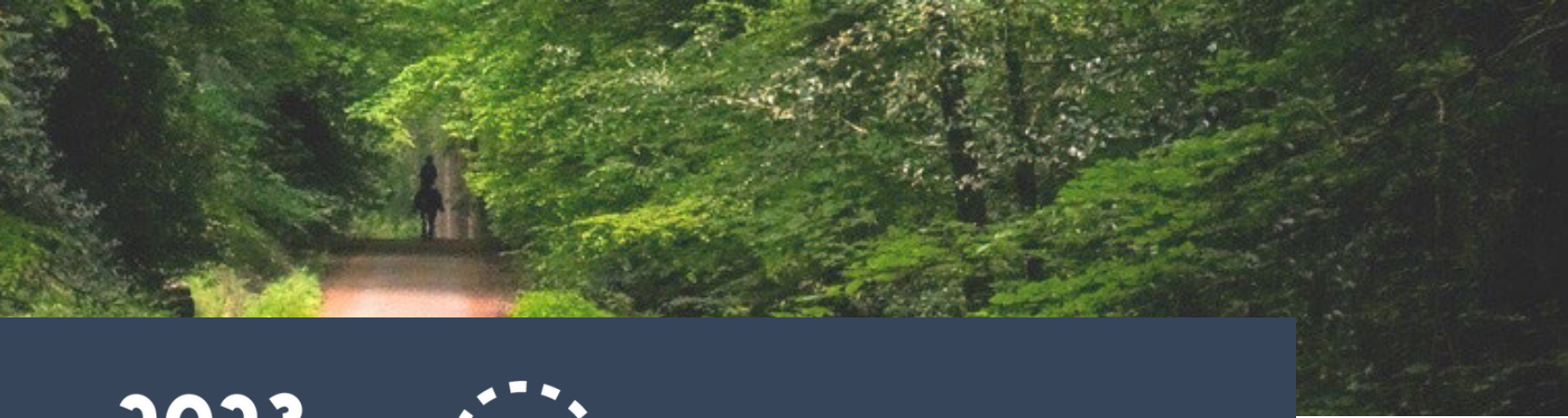


2023 LONG SESSION

- Establish the **Great Trails State Fund** – to fund all types of trails, paved and unpaved
 - \$50M
- Form a **Trails Caucus**
- Invite legislators to **Year of the Trail events**

IMAGE BY NC STATE PARKS





2023
YEAR OF THE TRAIL



FROM THE EVERYDAY TO THE EPIC





HIKE • WALK • RUN • RIDE • PADDLE

The Year of the Trail celebrates trails all across North Carolina.



<https://vimeo.com/759615521/7ab702f59c>

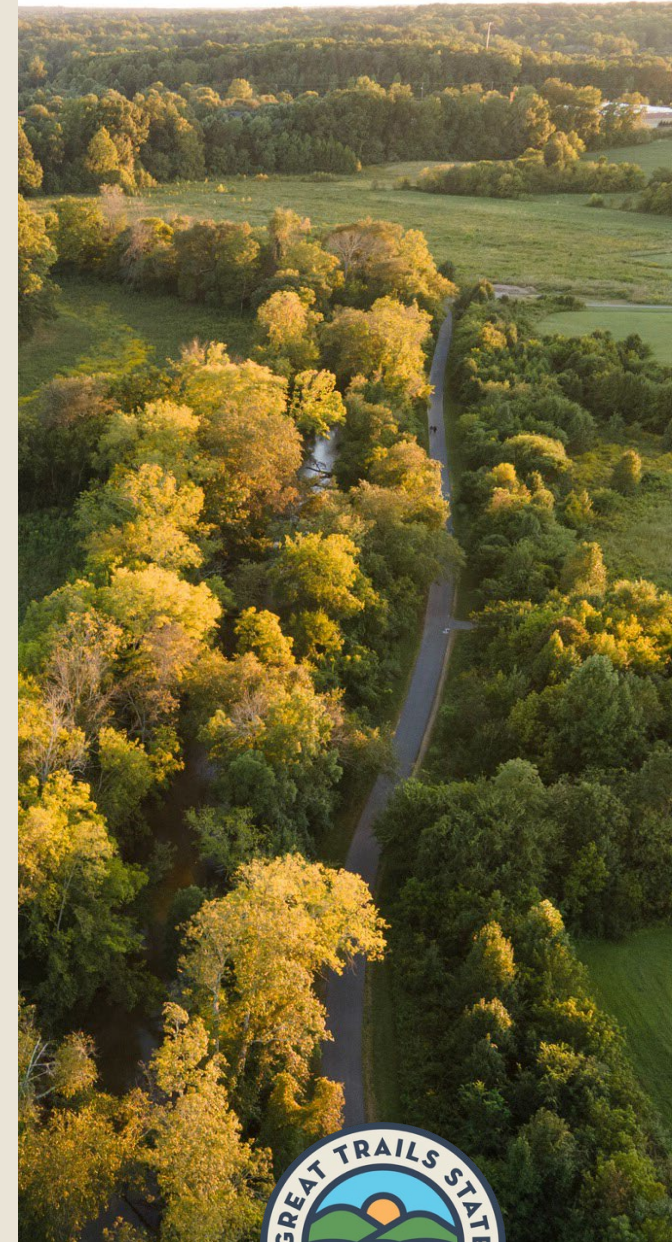


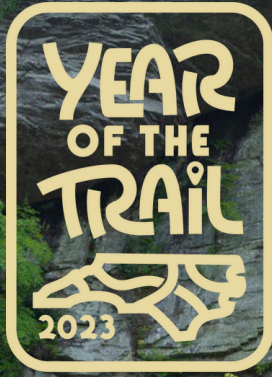


YEAR OF THE TRAIL IS BIG NEWS FOR NORTH CAROLINA!

Highlights:

- Host events in all 100 counties
- Inspire people of all ages, abilities and backgrounds to try trails
- Create new trail users
- Boost outdoor recreation tourism across the state
- Promote safe and responsible use of trails

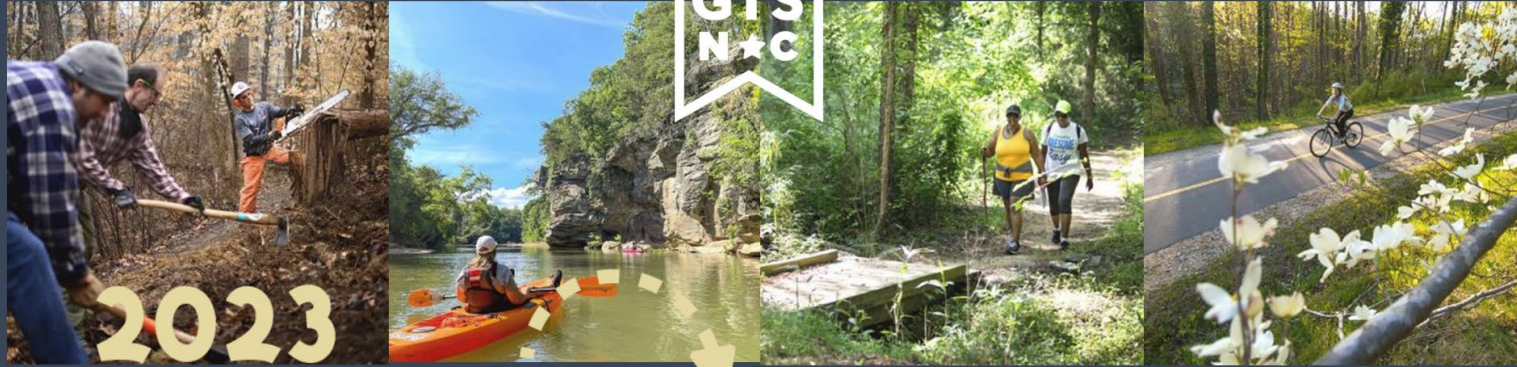




THE CAMPAIGN

- Events in all 100 counties
- Focus on diversity and inclusion
- Website/Social media
- Local tool kits for communities with Year of the Trail assets
- Advertising - outdoor, radio, print media
- Call for Artists program
- Merchandise
- PBS NC Partnership – 30-minute documentary titled “Ten to Try” and 10 short trail profiles
- Speaking at conferences
- Measurement and reporting





YEAR OF THE TRAIL

Join us!

ALL CITIES, TOWNS AND COUNTIES

October 20 or 25

Virtual Info Session 12pm-1pm

TOOL KITS



1. Introductory Information

- YOTT Toolkit Fact Sheet
- YOTT Brochure
- Logos, Assets & Brand Usage Guide

2. All About Trails

- Trail Asset Analysis Worksheet

3. Trail User Guides

- Trail Day Planning Checklist
- Leave No Trace (Outdoor NC)

4. How to Host a YOTT Event

- Templates - Event Planning, Volunteer Recognition, Banners, Invitation/Save the Date Postcard, Event Flier, Event Evaluation & Reporting Form

5. Community Engagement Strategies

Communicating trails benefits and ideas and tools for advocating for trails in your community.

- Finished Social Media Assets - Monthly Content Calendars, Canva Templates, Trail Awareness Flier, Utility Bill Insert, YOTT Postcards, Editorial templates, Trail story ideas

6. Trail Support beyond 2023

- *How to stay engaged with trails in NC and your community and how to become part of the Great Trails State Coalition.*



Income

	CASH	IN-KIND
GOVERNMENT CONTRIBUTION		
NC State Parks	\$350,000	
Visit NC	\$100,000	
NC DNCR	\$50,000	
US Department of Commerce	\$40,000	
SUBTOTAL	\$540,000	
CORPORATE CONTRIBUTION		
NC Electric Cooperatives	\$10,000	\$15,000
Duke Energy	\$5,000	
Destination by Design		\$50,000
McAdams		\$30,720
SUBTOTAL	\$15,000	
NON-PROFIT CONTRIBUTION		
Rails to Trails Conservancy	\$1,000	
SECU Foundation	\$225,000	
SUBTOTAL	\$226,000	
TOTAL	\$781,000	\$95,720

Expenses

ADMINISTRATION	\$185,000
MARKETING SERVICES	\$350,000
Branding, Toolkits, social media management, marketing plan, PR services	
EVENTS	\$40,000
NC Museum of Art, Regional Events	
PAID ADVERTISING	\$280,000
Radio, Outdoor Advertising, Print	
OUTREACH & EDUCATION	\$300,000
PBS NC Partnership, Artist Program, Conferences, printing, merchandise	
TOTAL	\$1,155,000
NEED TO RAISE:	\$319,000

2023
YEAR OF THE TRAIL

SPONSORS



SECU Foundation

PEOPLE HELPING PEOPLE®



PLANNING | ENGINEERING | COMMUNICATIONS



Join the Great Trails State movement!

- Become a member of the Great Trails State Coalition
- Hold Year of the Trail event(s)
- Become a sponsor of Year of the Trail
- Contact info@greattrailsnc.com



**GREAT
TRAILS
STATE**
COALITION

BUILDING THE GREAT TRAILS STATE





YEAR OF THE TRAIL

Join us!

ALL CITIES, TOWNS AND COUNTIES

October 20 or 25

Virtual Info Session 12pm-1pm

Contact info@greattrailsnc.com



GET IN TOUCH

www.greattrailsnc.com

www.greattrailsstatecoalition.org

EMAIL ADDRESS

info@greattrailsnc.com



NCDOT Integrated Mobility Division



NORTH CAROLINA
Department of Transportation



NCDOT's Integrated Mobility Division (IMD) – **Updates**

Joe Furstenberg
Statewide Planning & Programming Manager

October 14, 2022



Integrated Mobility Division
N.C. DEPARTMENT OF TRANSPORTATION

IMD GOALS



Increase Access

Eliminate transportation barriers and ensure all North Carolinians have equal access to opportunities and services.



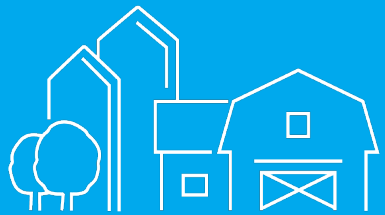
Enhance Quality of Life

Offer a convenient network of multimodal choices to enhance the quality of life for North Carolinians.



Ensure Safety

Ensure all road users can travel safely by building complete streets and proactively correcting areas susceptible to crashes involving vulnerable road users.



MISSION

Provide leadership for safe, affordable, and innovative multimodal transportation throughout North Carolina

Some Current Planning and Innovation Initiatives



Visioning Workshops

7 workshops across the state
(including one in Raleigh on Sept. 23)

Prepares agencies to leverage IIJA funding and provides resources for visioning, prioritizing goals, and ongoing support for implementation



Multimodal Planning Grants

244 grants + \$7.5M

January 2023 – next grant call

Develops comprehensive bicycle plans and pedestrian plans with an added transit component



Feasibility Studies

\$2.5M available

November 2023 – grant call

Complements planning studies and supports local governments in the implementation of projects



Microtransit

150% ridership increase

Feasibility Studies / Research / Grants

Assesses the feasibility of introducing microtransit to complement or replace fixed-route and demand response services throughout the state



MaaS Feasibility Study

Mobility as a Service (MaaS)

Seamlessly plan-book-pay for travel across all modes

Assesses the availability and feasibility of MaaS services for a statewide platform



Regional Transit Plans

Upper Coastal Plain + High Country + Land of Sky RPO

Fall 2022 Pilot Projects

Promotes coordinated regional planning across agency boundaries, consolidating requirements for state and federal funding programs



CASSI

Connected Autonomous Shuttle Supporting Innovation (CASSI)

Evolving to include more vehicle types and use cases including testing and integrating autonomous vehicles in fleets to provide safe, reliable, and useful transit service



Bike Helmet Initiative

19,900 Helmets + 256 Organizations

January 2023 – next grant call

Distributes helmets to underprivileged children by government and non-government agencies since 2007



Complete Streets Implementation Update

Implementation Challenges

Key challenges with implementation of the Policy include:

- Inconsistent implementation across NCDOT's 14 Divisions
- Lack of standards and need to streamline
- Policy gaps in key areas (e.g. maintenance, reducing impacts)
- Limited metrics, data, and tracking
- Need for enhanced training





Goals of New Implementation Guidance



Standardize and streamline process of identifying needs, selecting the appropriate facility type, and estimating added impacts to the project.



Better integrate Complete Streets evaluation into project development.



Provide flexibility and support discussions with local partners when determining need and choosing an appropriate facility type.

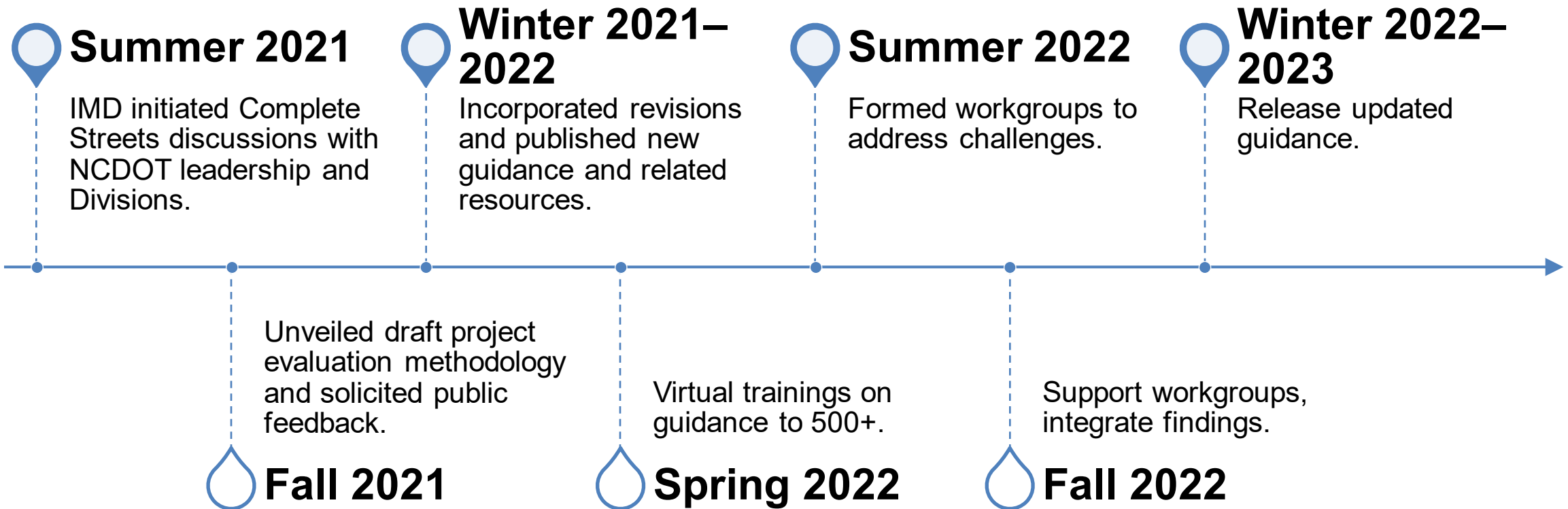


Create mechanisms to track project costs and evaluate project benefits.



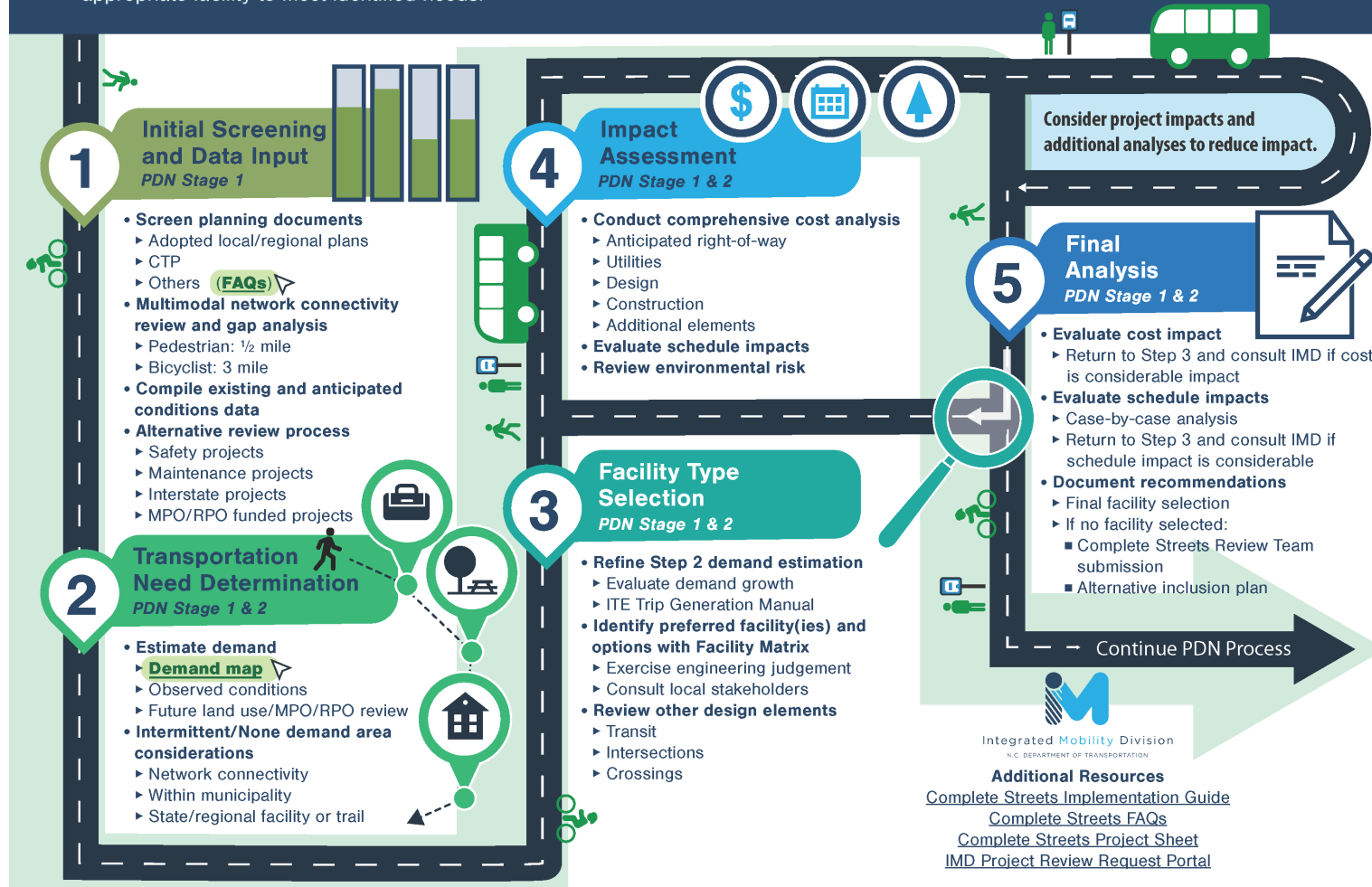
Improve clarity for internal and external partners on implementation pathways.

Development Timeline



Complete Streets Evaluation Methodology

The **Complete Streets Project Evaluation Methodology process** serves as guidance to aid in the evaluation of highway projects for Complete Streets elements. This guidance is intended to support Project Leads and Managers throughout the PDN stages, beginning with all five steps in PDN Stage 1 and select steps revisited in PDN Stage 2. Project Leads and Managers should supplement this process with local conversations, detailed analysis of conditions, and engineering judgement to design the appropriate facility to meet identified needs.



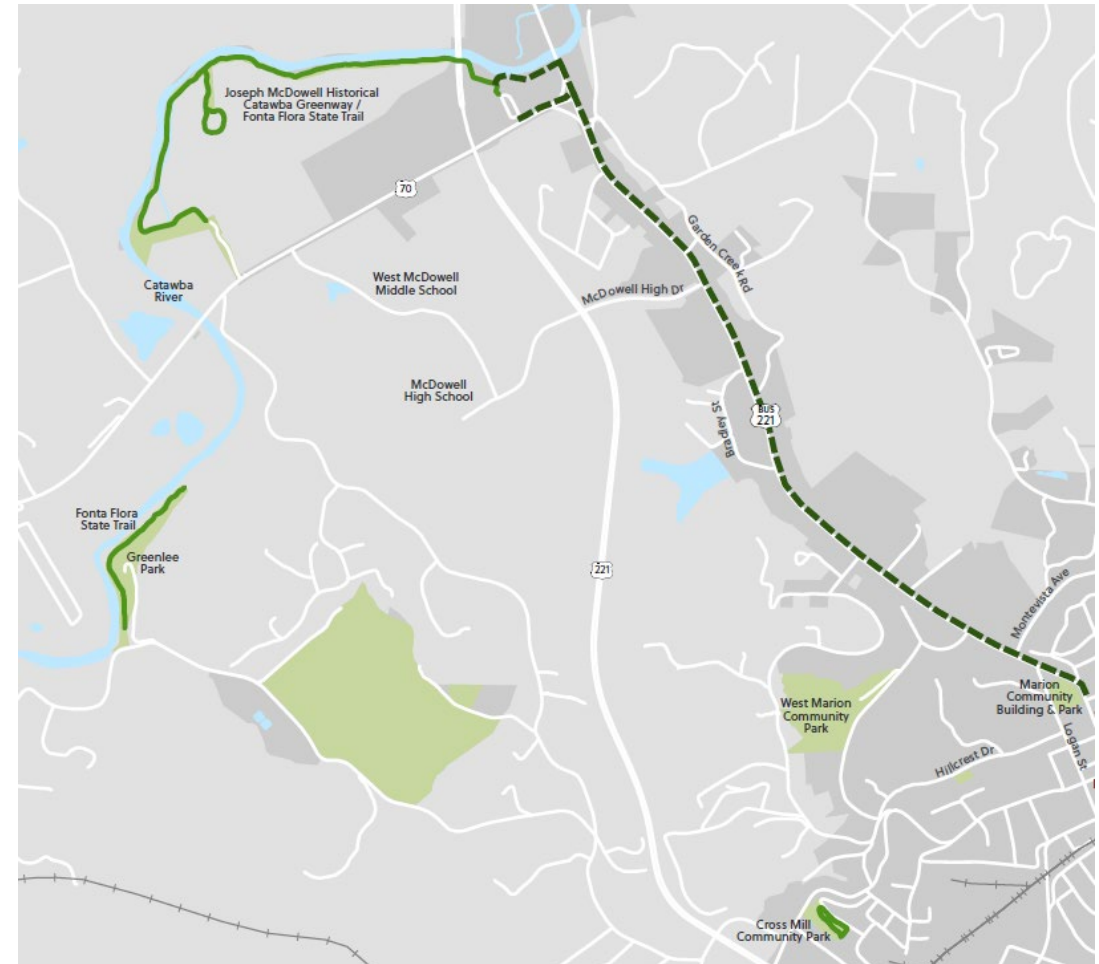
Complete Streets Implementation Update

Ongoing Implementation Work

- **Project Delivery** – ongoing workgroup for PDN updates, have made initial recommendations for updates reflected in most recent version of the PDN document.
- **CTP** – ongoing collaboration with TPD partners, have met every two weeks since March and will be finalizing recommendations in coming weeks.
- **Maintenance** – first workgroup held in July, several deliverables and more research is ongoing, second workgroup TBD for Fall '22.
- **Cost** – first workgroup held in July, several deliverables and more research is ongoing, second workgroup tentatively scheduled for first week of September '22.

Feasibility Studies Grant Program

- Feasibility Studies template and pilot projects
 - City of Marion Sidepath
 - Middle Fork Greenway
- Feasibility Studies grant program
 - \$2M – Paved Trails Feasibility Studies
 - \$0.5M – Sidewalk/Sidepath Projects
 - Grant Call estimated in **November 2022**



CITY OF MARION N. MAIN ST SIDEPATH
FEASIBILITY STUDY

Interim Design Safety Project (Tactical Urbanism)

- FHWA STIC project
- Interim design countermeasures to be evaluated - protected intersections, curb extensions and median refuge islands
- Coordination with Highway Divisions and Municipalities (some preliminary locations in Durham and Raleigh)
- Materials and Installation
- Evaluation/Data Collection

CURB EXTENSION



Curb extensions reduce vehicle turning speeds, shorten crossing distances for pedestrians, and increase space for those waiting to cross.

MEDIAN REFUGE ISLAND



Median refuge islands reduce crossing distances and provide protected space in the center of the roadway for pedestrians and bicyclists.

PROTECTED INTERSECTION

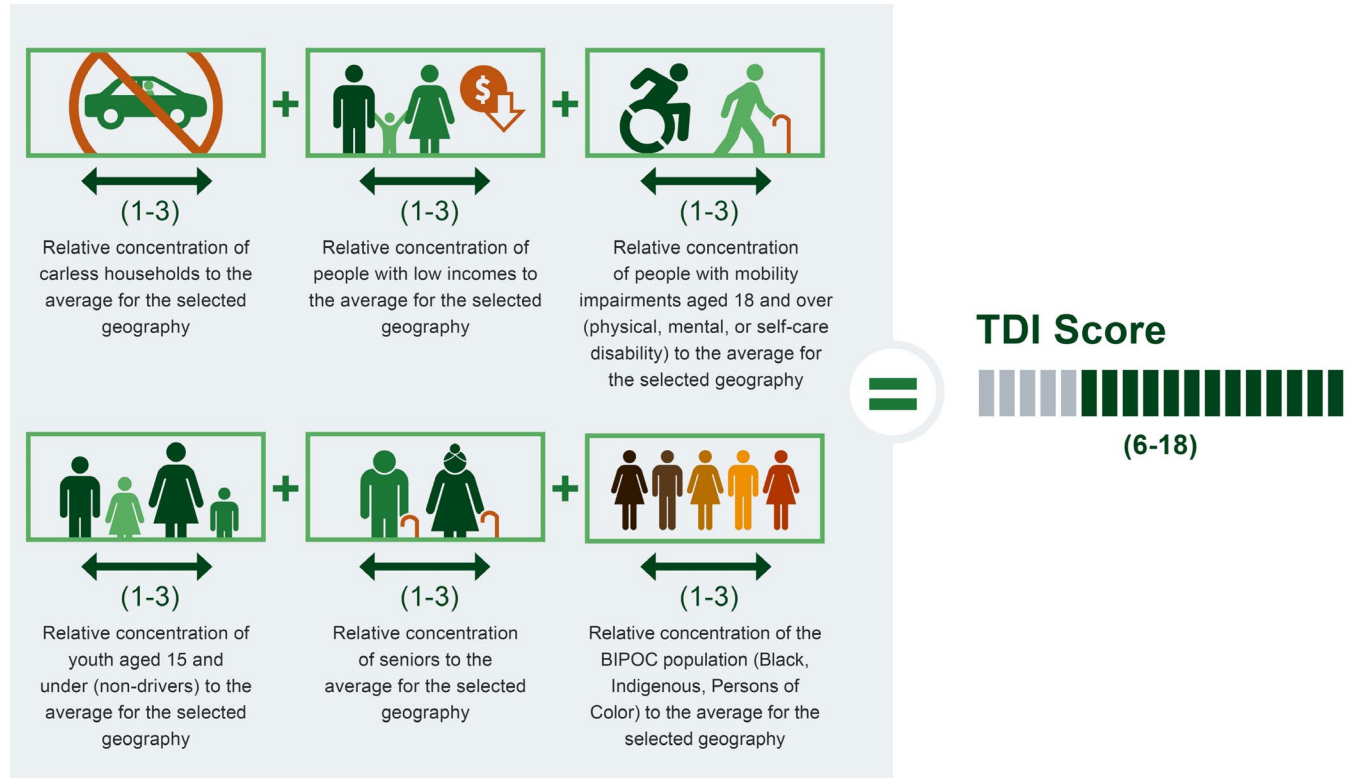


Protected intersections reduce vehicle turning speeds, improve sight lines, and provide people on bicycles advanced queuing to travel through an intersection.

Transportation Disadvantage Index (TDI) Tool

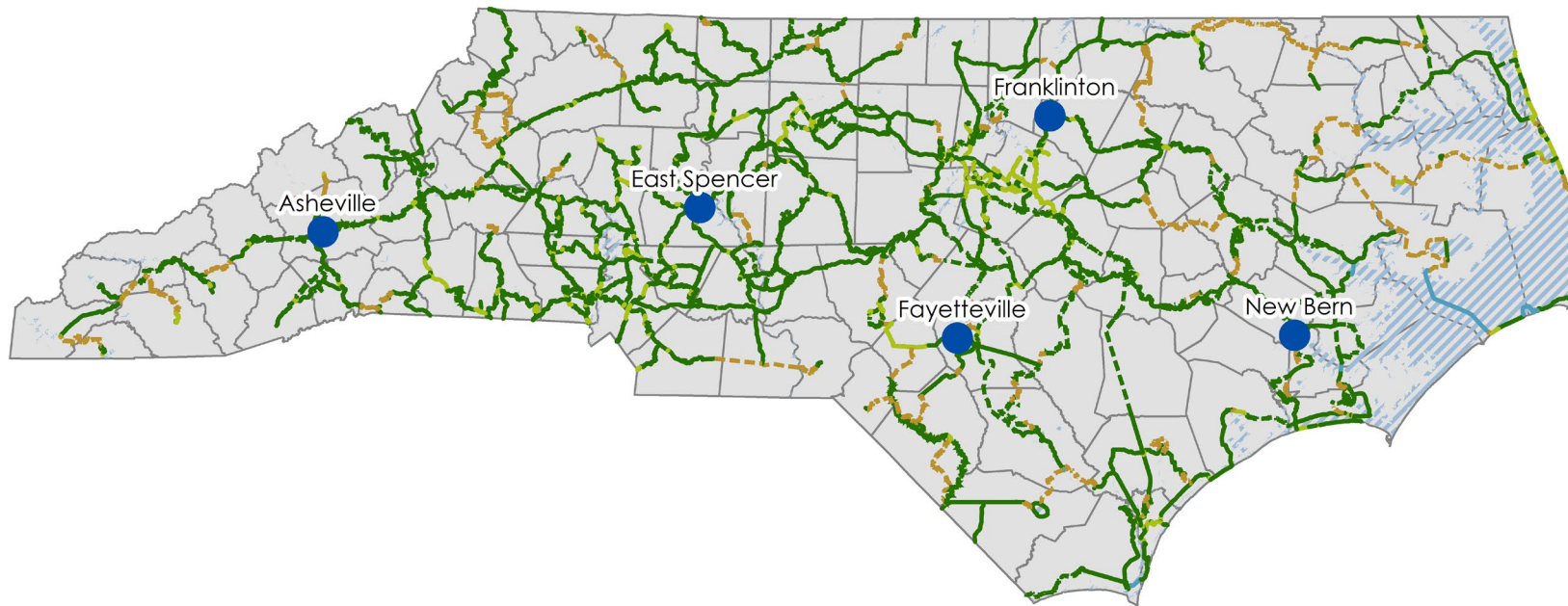
- Six indicators to generate a Block Group score based on variance from the geographic mean.
 - Vehicle ownership
 - Income
 - Disabilities
 - Age: Youth
 - Age: Seniors
 - BIPOC

Higher score = greater level of transportation disadvantage.



[Link for Tool \(TDI and Environmental Justice\) – ESRI StoryMap](#)

Great Trails State Plan: Further Analysis



TRAIL SEGMENT PRIORITIZATION: EQUITY FOCUS (2022)

- List of GTS spine routes connecting to top tiers of NCDOT's Transportation Disadvantage Index (TDI)¹

Draft List of 120 Trail Segments

- Narrow TDI list by overall connectivity and most functional segments (trails that could serve local communities independent of overall network)

Draft List of 23 Trail Segments

- High-level analysis of overall constructibility based on right-of-way, local interest, and local/regional steps taken in support of segments to-date
- Broad geographic distribution across NC

5 Priority Trails for Equity Focus

- Establish local project contacts
- Locally driven project extents
- Develop Draft Project Cut-Sheets
- Finalize and Present Project Cutsheets

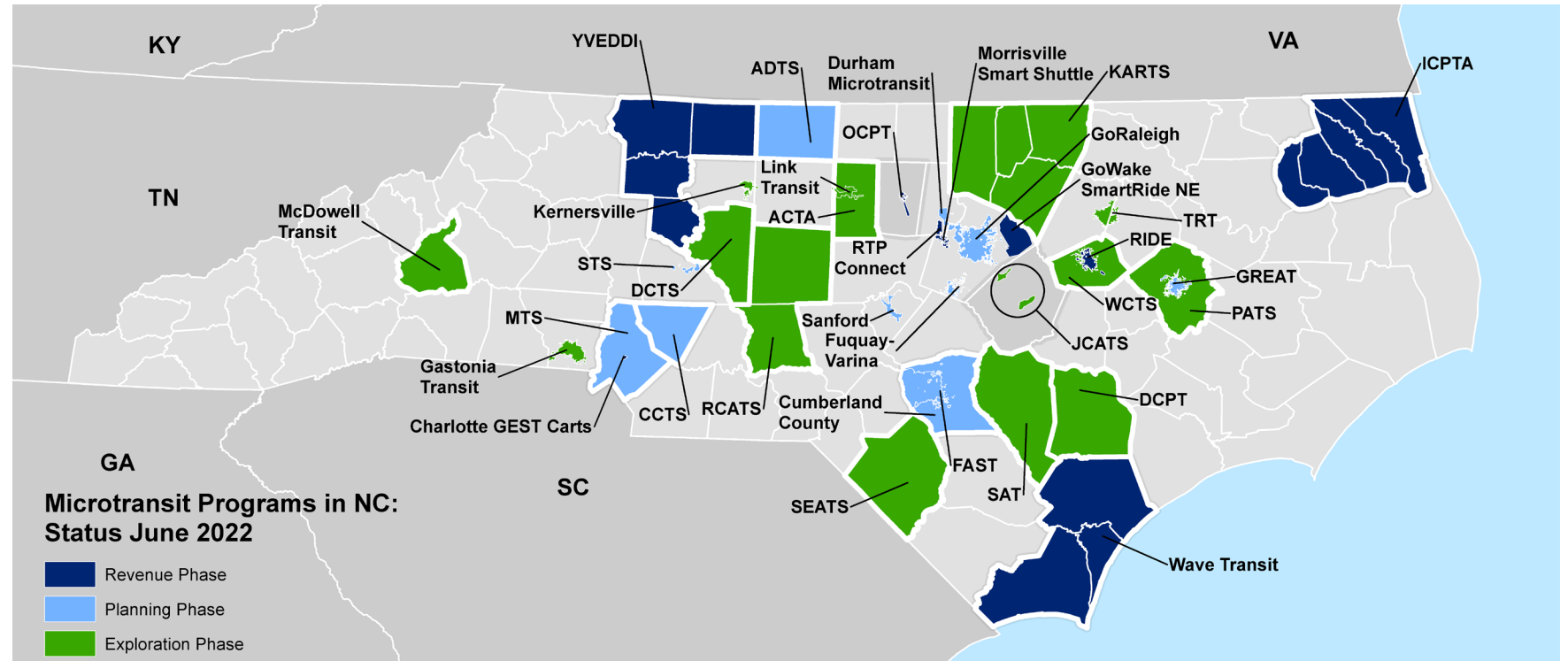
Next Steps

State Bike Routes Update



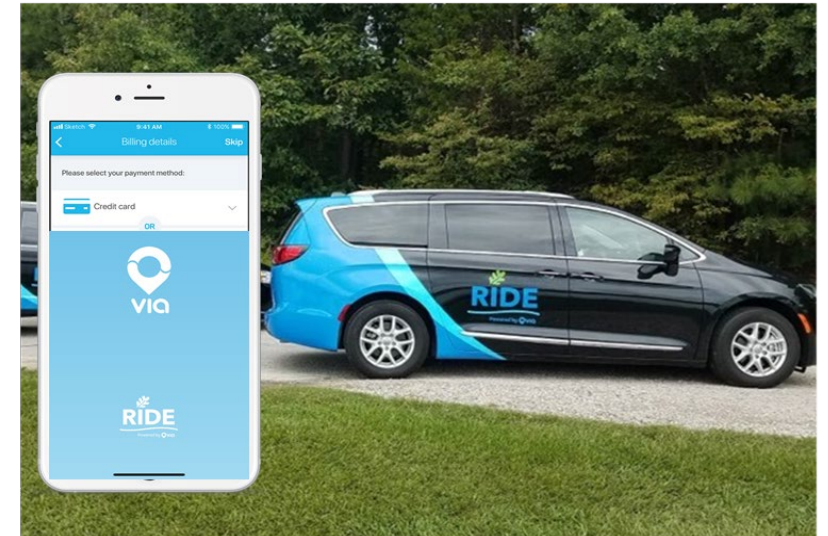
North Carolina's Expanding Use of Microtransit

IMD Feasibility Studies Grant Program expected to launch in early 2023



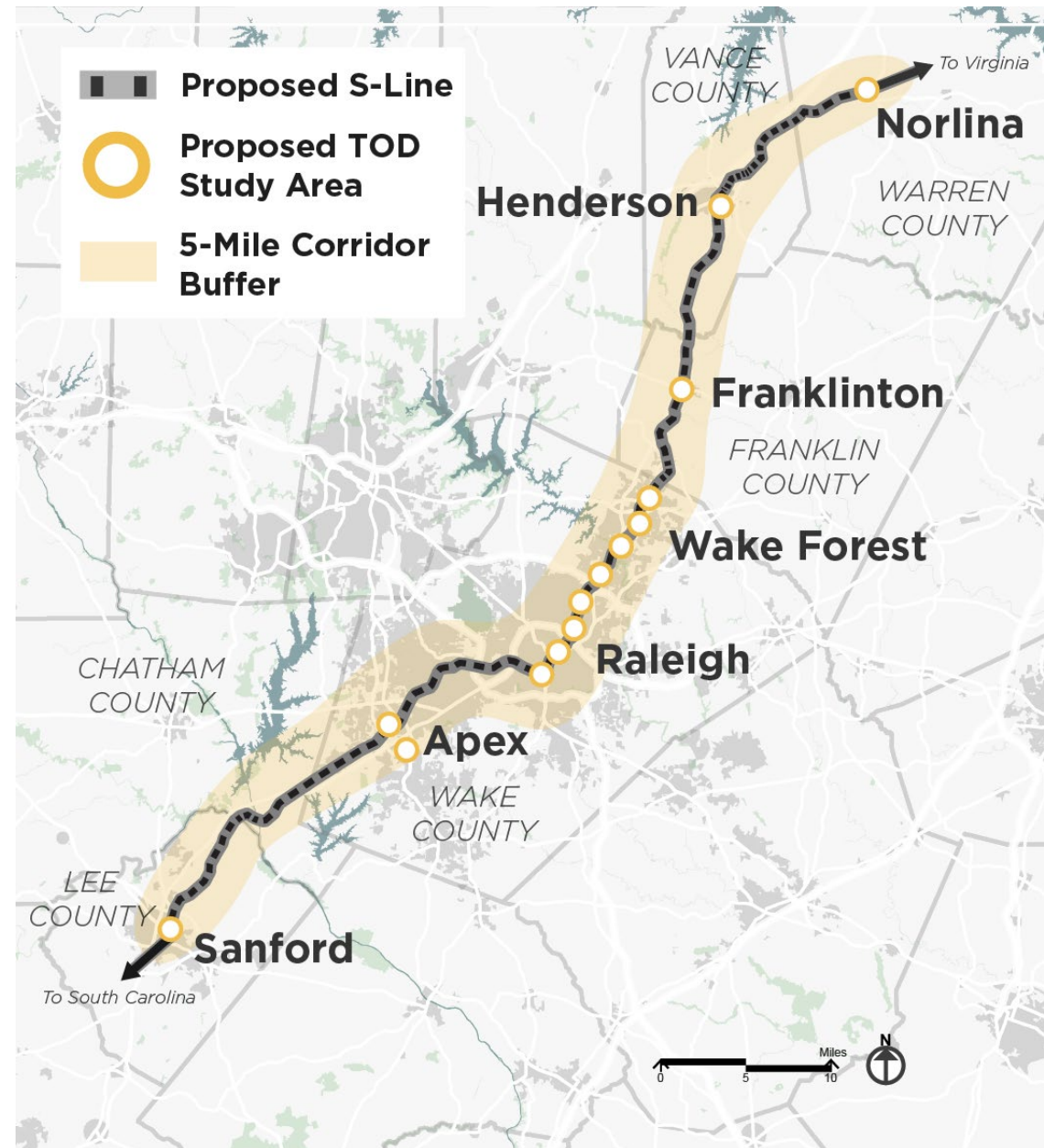
On-Demand Microtransit

- Similar to rideshare services like Uber or Lyft but subsidized and provided as a form of public transportation.
- 15-minute average wait time after requesting a ride.
- First pilot launched in September 2020 and has been highly successful, doubling transit ridership in Wilson, even amid the pandemic.
- NCDOT has worked with numerous communities on additional deployments, feasibility studies, and plans.



S-Line TOD Planning Study

- \$900,000 FTA Transit Oriented Development Planning Grant awarded in 2020
- 7 communities and NCDOT provided funding match
- Study includes TOD readiness assessment, urban design concept development, public input, and recommendations for each community.
- RAISE Grant Awarded in August – Mobility Hub Planning
- Final round of community engagement to occur in early December





Completed Projects (2020-2021)

Deployment 1:

NCDOT Transportation Summit
Raleigh Convention Center



Dates: Jan 8-9, 2020
Ridership: around 300
Length: 2,000 feet
Speed: 7-8 mph

Available for attendees

Deployment 2:

NCSU Centennial
Campus



Dates: Jan 21-Feb 25, 2020
Ridership: 260
Length: 0.8 mi
Speed: 10 mph

Open to public

Deployment 3:

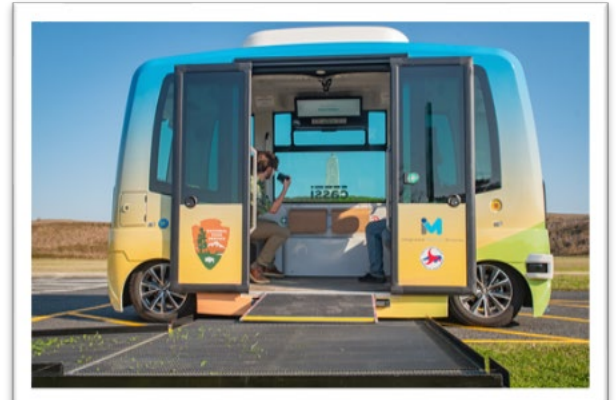
Wright Brothers National
Memorial

First autonomous shuttle deployment at a National Parks site



Dates: Apr 20-Jul 16, 2021
Ridership: 3,335
Length: 1.2 mi
Speed: 10-12 mph

Open to public

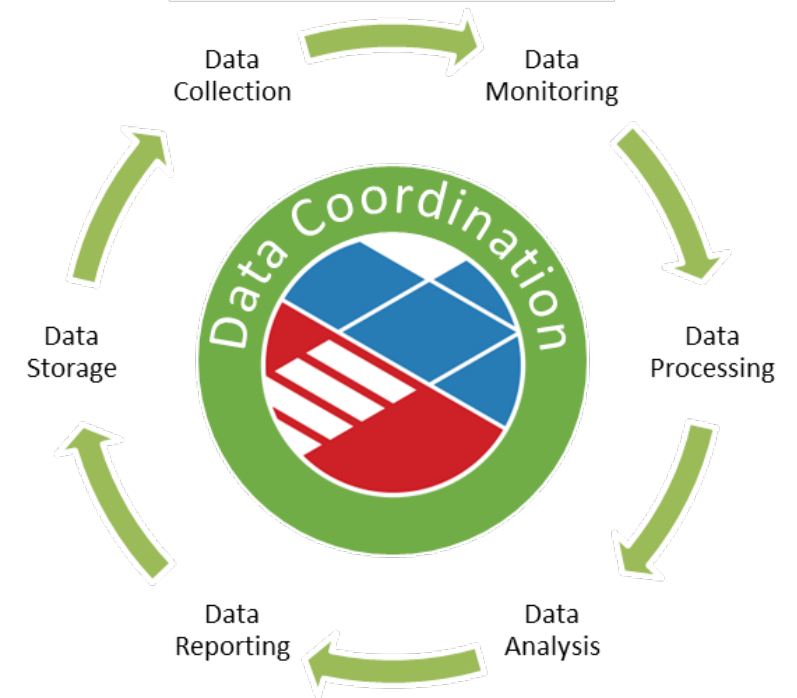
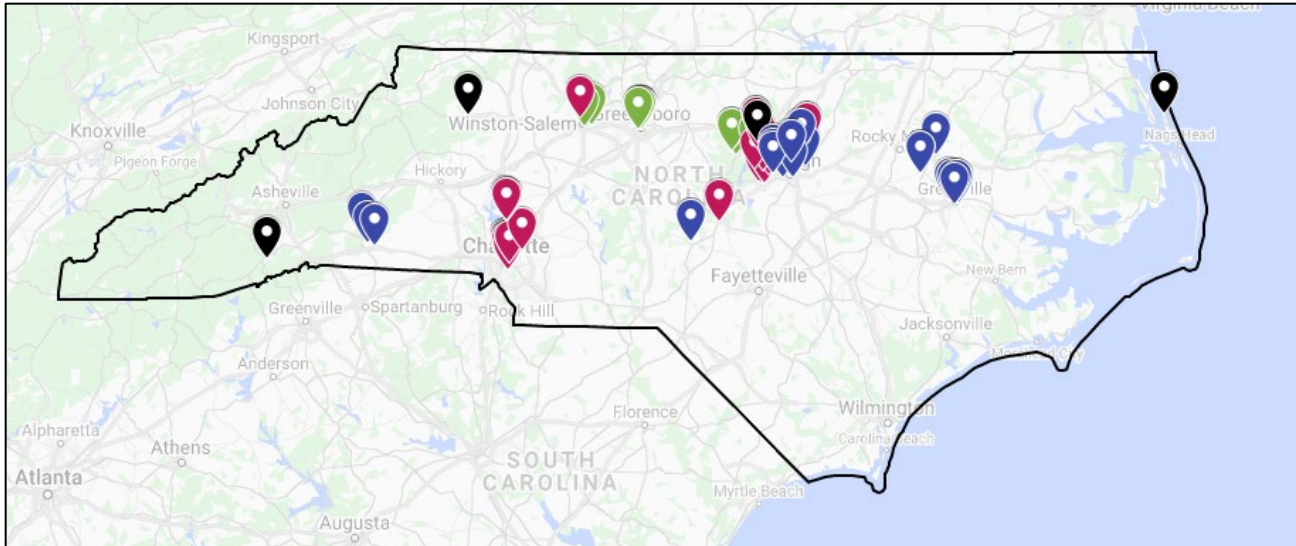


What's next?



New vehicle types and use cases with a focus on **safe, reliable, and useful transit service**

North Carolina Non-Motorized Volume Data Program (NC NMVDP)



Screenline Counting Locations by Mode and Facility Type (NC NMVDP Phase 1 & 2)

	Sidewalk	Shared use path (greenways and trails)
Pedestrian Screenline Counting Locations (44 total)	64% (28)	36% (16)
Bicycle Screenline Counting Locations (42 total)	62% (26)	38% (16)

Phase 1 & 2 Agencies

- Winston-Salem
- Greensboro
- DCHC MPO
- *Durham*
- *Brevard*
- *North Wilkesboro*
- *Duck*
- Charlotte
- Davidson
- Sanford
- CAMPO

Access the quarterly and annual data reports from the NC NMVDP

go.ncsu.edu/nmvdpr

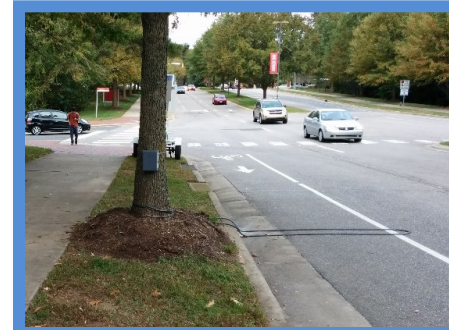


North Carolina Non-Motorized Volume Data Program (NC NMVDP)

What's next?



- 2G/3G Sunset & 4G Upgrades to Eco-Counters
- Partnership with NCDOT Transportation Mobility & Safety
- Investigation of Short-Duration Count (SDC) Support





Integrated Mobility Division

N.C. DEPARTMENT OF TRANSPORTATION

Thank you!

Joe Furstenberg
Statewide Planning & Programming Manager
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919-707-2603

TRIANGLE TRAILS INITIATIVE

Triangle Trails Initiative

Fall 2022 Update



The Triangle Trails Initiative is a program of the East Coast Greenway Alliance. This work is funded by the AJ Fletcher Foundation, Research Triangle Park Foundation, VisitRaleigh, Martin Marietta, Affordable Communities, LLC, UNC Health, WakeMed and Duke Raleigh Hospital



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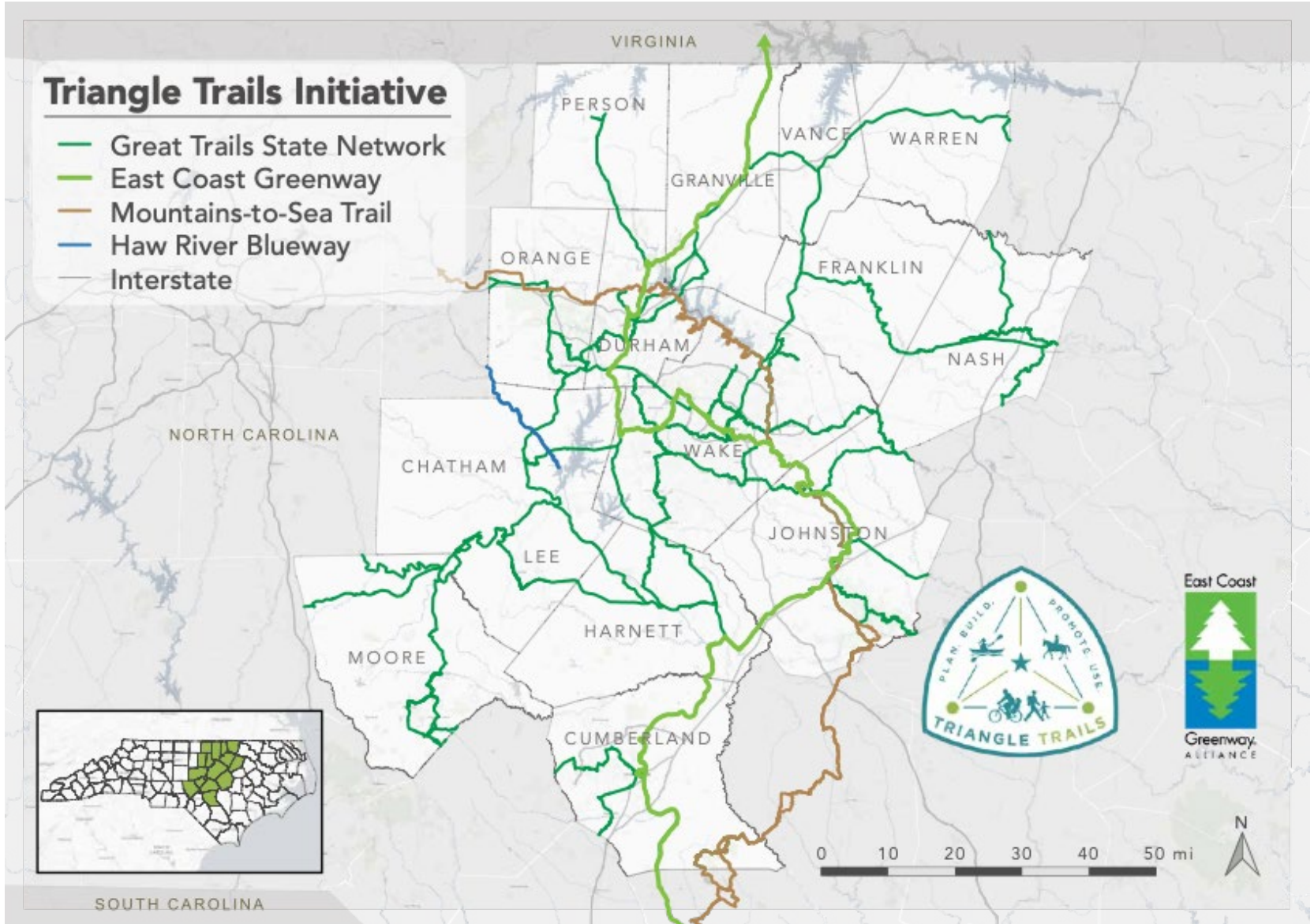


About Triangle Trails



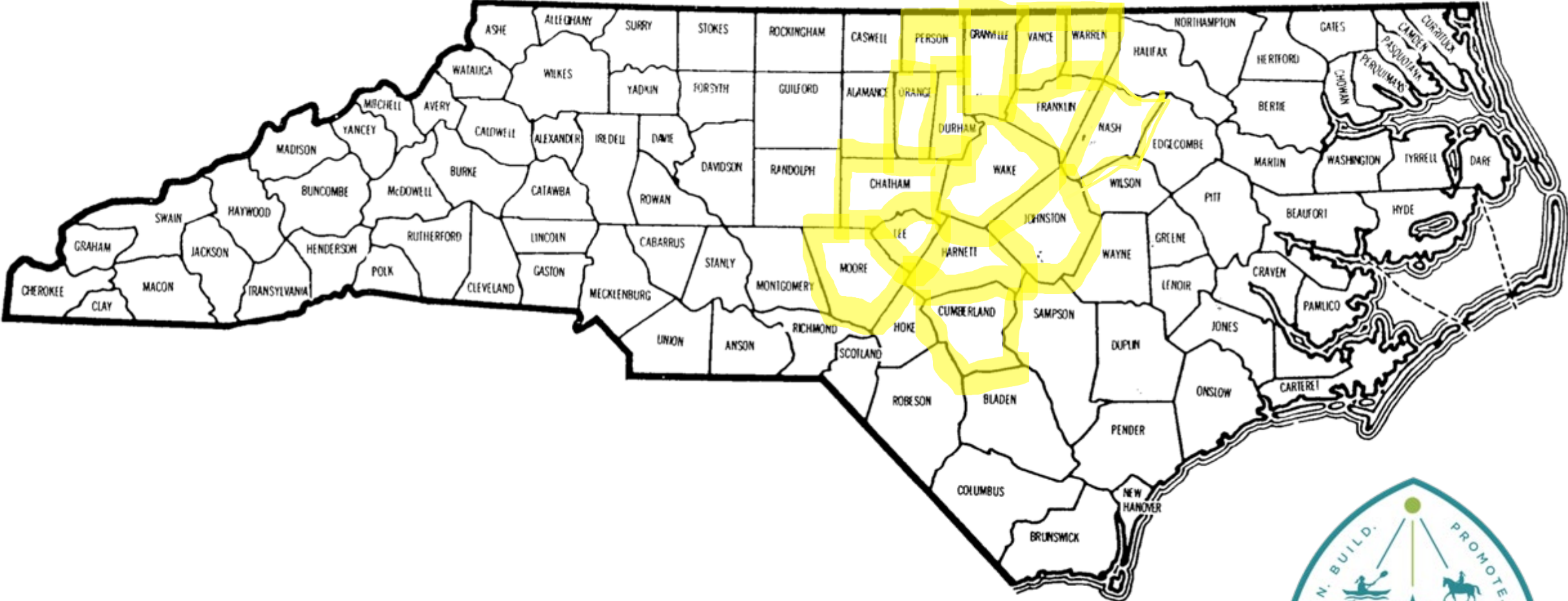
Triangle Trails Initiative

- Great Trails State Network
- East Coast Greenway
- Mountains-to-Sea Trail
- Haw River Blueway
- Interstate



SOUTH CAROLINA

Triangle Trails Initiative



Andrew Meeker, NC Coordinator, ECGA



Technical Assistance Update



Harnett County Greenway Efforts



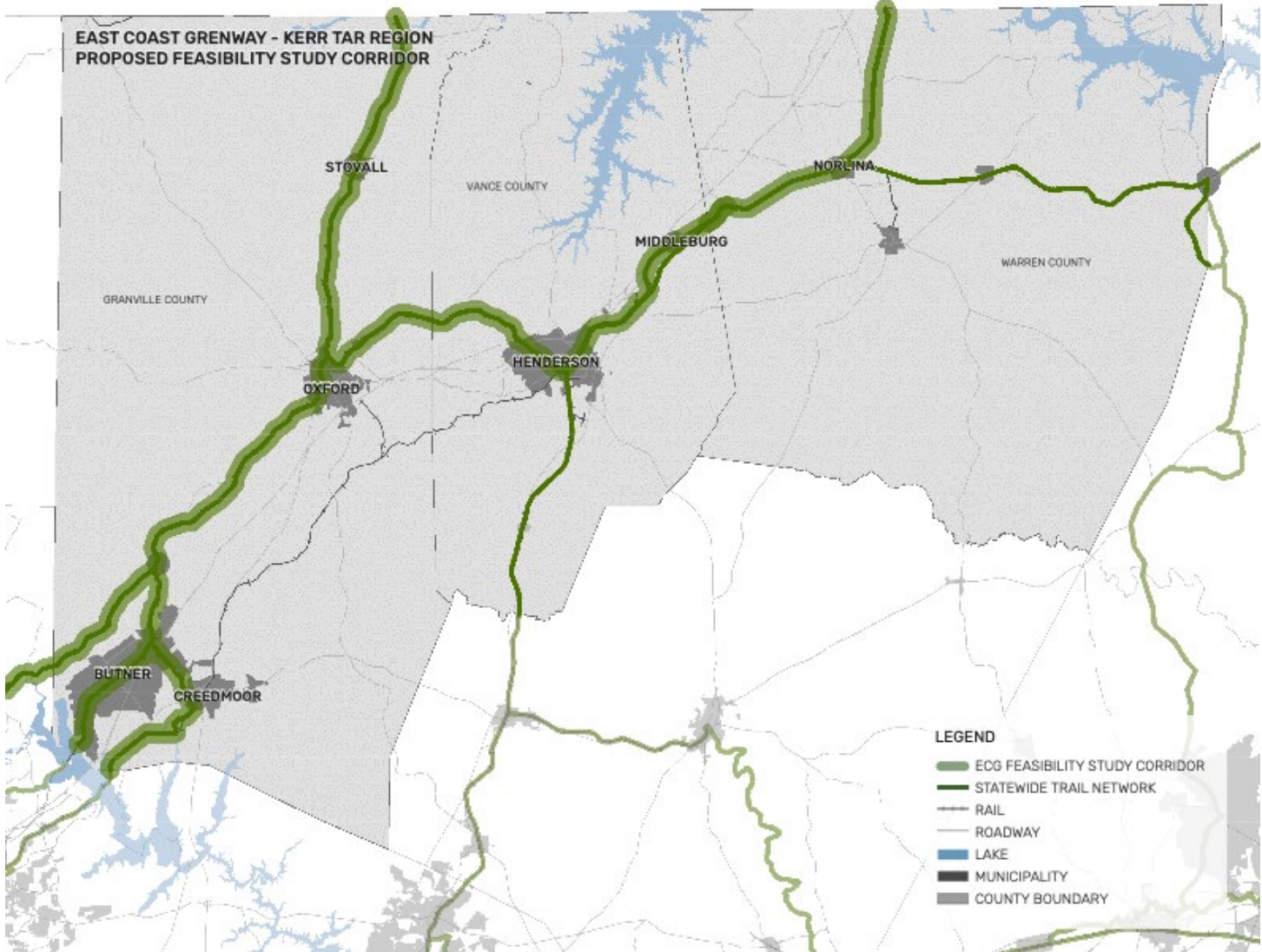
Raven Rock State Park to Lillington Greenway





Town of Coats, N.C.

Letter of Support for Kerr-Tar COG - RAISE

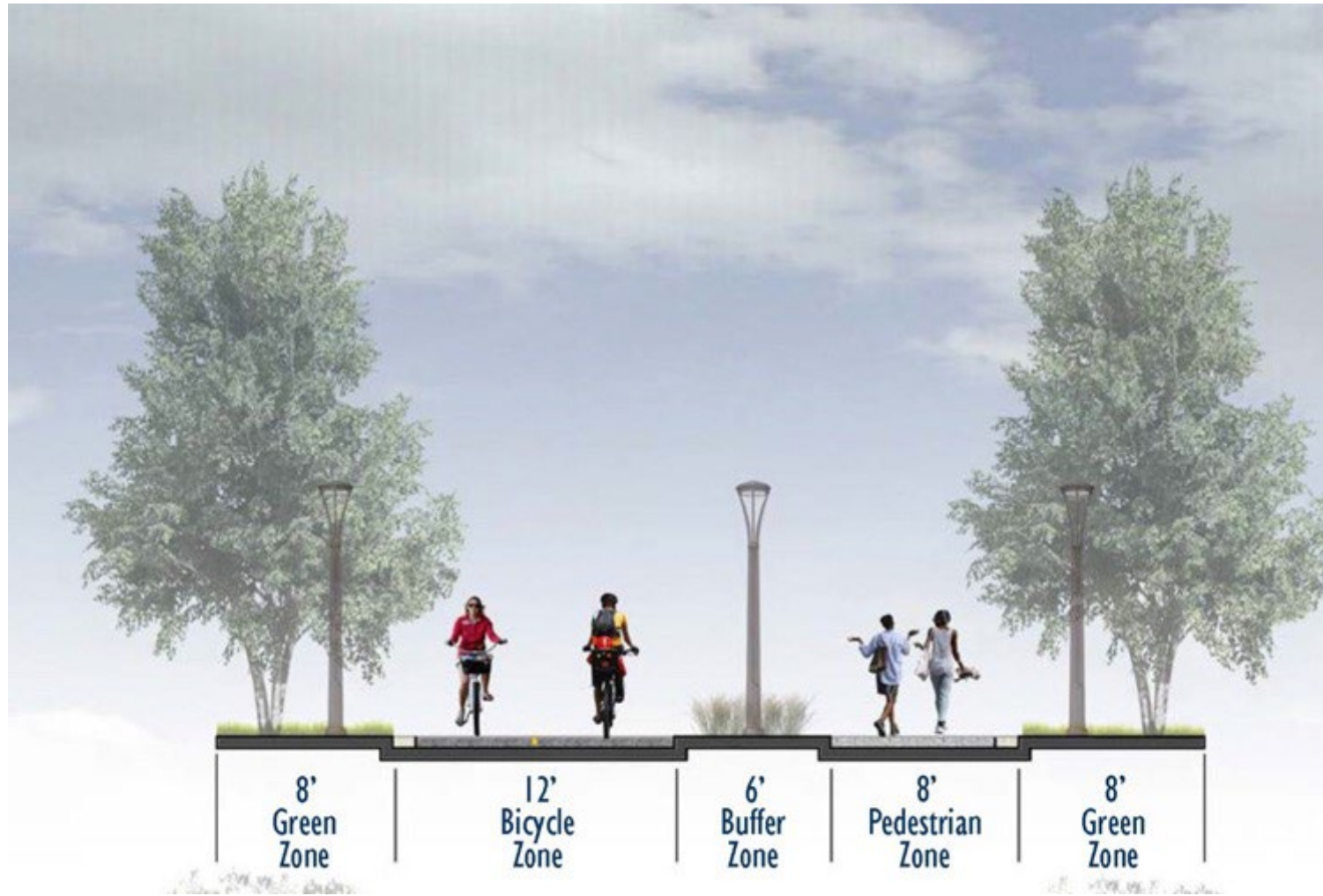


RAISE GRANTS

Rebuilding American Infrastructure
with Sustainability and Equity



Durham Beltline – RAISE Grant Recipient





Three Rivers Rail-Trail Greenway Corridor



Three Rivers Rail-Trail Greenway Corridor



A RAILROAD RENAISSANCE

THE BIRTH, DECLINE AND NEW POSSIBILITIES FOR THE DURHAM-LYNCHBURG RAILROAD CORRIDOR

RISE OF DURHAM-LYNCHBURG LINE

Southern reconstruction following the Civil War brought with it a flood of interest in the growth of rail transport and transit in the American South (DCA). The Confederate states, devastated by five long years of war, were in dire need of raw materials for industrial growth, and the railroads, spurred by a nationwide building boom, were ripe and ready to supply them. During the period between 1871-1900, approximately 870,000 miles of track were laid (Casper) across the nation, spurred on by federal support for the first transcontinental railway. In North Carolina during this period, tracks went down at a prodigious pace, doubling from 1500 to 3000 miles statewide during the decade between 1885-1891 (Ira). The late nineteenth century was the time of King Tobacco in Durham, NC, and the curing warehouses and cigarette factories struggled to keep up with demand. Southern Virginia was the regional epicenter of tobacco production at the time, but a railroad to transport Virginia leaf to Durham factories did not exist. Out of this need in 1891 was born the Durham-Lynchburg Railroad, a partnership between three existing rail companies (announced) to conglomerate and construct the 115 miles of tracks and twenty stations that would link the two cities. Once-daily train transport of both freight and passengers on a weekly-rural route through second growth forests and farmland dotted by rural stations. An auspicious first year in passenger and freight traffic (Ira) was followed by the closing of 13 of the original stations within 30 months. Freight and reduced passenger traffic continued for another thirty years, until the rise of the automobile and the Great Depression signaled an ominous turning point for American railroads. (Ira)

DURHAM-LYNCHBURG DECLINE

North Carolina reached it's railroad peak in 1920, when the state boasted over 5600 miles of tracks. (Ira) Initially, government regulations put in place in the early twentieth century to limit the power of railroad companies at their peak actually discouraged the innovation that might have saved them. As a result, track traffic began to creep into the market for smaller trucks. World War II and the continued rise of the automobile eventually caused a marked decline in passenger rail traffic and a pronounced shift in the trajectory of American rail tracks as tracks began to be torn up as railway companies folded. For the Durham-Lynchburg line, this decline began much earlier. Only two years after it's inception, the D-L trains only made passenger stops at two North Carolina stations, Durham and Ragsdale. Freight traffic continued until 1998 when the line was purchased by Norfolk Southern Railroad Corporation (NS). All rail traffic ceased south of Ragsdale at that time, with the only remaining traffic south from Lynchburg being the delivery of coal to the Hyatt Lake Power Plant near Ragsdale, NC. (Ira)

DURHAM LYNCHBURG RAILROAD

RAIL-TRAIL EVOLUTION

By the 1960's, the American railroad system was in free-fall. Thousands of miles of tracks were being abandoned every year as air, sea and truck transport began to push rail to the economic fringe. The US government was faced with a no longer viable—the loss of a transit network representing hundreds of thousands of miles of gently graded rail corridors (Kapp). The response was an aggressive push towards "rail banking" to preserve for potential future historic materials, some grand symbols of a nation's vision for connectivity. The National Trails System Act of 1968 permitted a rail corridor conversion program that began with historic rail to trail conversions such as the Wisconsin Iron and Pulp and the Gray-Spar to Trail in Wisconsin. From that modest 250 mile beginning, the network of rail-trail systems across the U.S. has grown to over 22,000 miles of trail corridors, breaking new links into the nineteenth-century efforts to connect a growing nation.

GROWTH OF TRIANGLE RAIL-TRAILS

The Research Triangle area of North Carolina has witnessed the development of hundreds of miles of new bike-pedestrian corridors over the last forty years. One of the most notable rail-trail conversion projects during that time is the American Tobacco Trail (Covington) built in the footprint of the abandoned Durham and South Carolina Railroad (DSCR). Similar to the Durham-Lynchburg Railroad, the DSCR initially proposed as a track bed bringing supplies and raw materials to the burgeoning tobacco industry in Durham. Eventually extending 40 miles to Durham, NC, (It never made it to Lynchburg). The DSCR brought together all goods and various raw materials to the growing city of Durham during its rapid growth in the early 20th century. Like most rail corridors in the latter half of the 20th century, the DSCR slowly fell out of use, and was eventually closed in 1982, mirroring the demise of Durham's once-great tobacco industry. In 1987, the Durham City Council passed a resolution stating that all abandoned rail corridors city-wide, including the DSCR, would be incorporated into a city-wide greenway master plan, (Casper) giving birth to the American Tobacco Trail idea. Since that time, over 22 miles of the DSCR have been converted into a contiguous trail spanning Durham, Wake and Chatham counties, giving triangle residents a unique rail-to-trail experience and a core route in the southeast's East Coast Greenway, a proposed 3000 mile trail network from Maine to Florida.

DURHAM-LYNCHBURG RENAISSANCE

The recent announcement that the city of Durham has approved the conversion of the "Duke Spur" a two-mile rail corridor that once connected Duke Family Tobacco factories to the Durham-Lynchburg Railroad, into the Durham-Raleigh rail trail (City of Durham) has given life to the possibility of converting the unused Durham-Lynchburg corridor between Durham and Ragsdale into a new forty-mile rail-trail. This vacant gap meanders through the northern Durham neighborhoods of Old North Durham and Braggton before entering rural Durham County. It crosses the Eric Snow and the Albemarle in Sea Trail at Penny's Bend Nature Preserve before entering the Little River Watershed long abandoned near the "Soybean Corporate Park" It passes near Historic Stagville Plantation and the Horton Grove Nature Preserve before passing through the rural towns of Bahama and Ragsdale, eventually ending in Bahama, the current terminus of the functional portion of the Durham-Lynchburg Railroad. Instead of being a conceptual strip of former rail-trail conversion of this abandoned line could add forty scenic miles to the triangle's rail-trail network, connecting citizens to green space, historical sites, rural landscape and our rich regional transit history.



Trail Oriented Design

Oaks & Spokes: Trail Oriented Design

CHUCK FLINK

EXECUTIVE DIRECTOR
TRIANGLE TRAILS
INITIATIVE



SPENCER FINCH

PRINCIPAL
ALTA PLANNING &
DESIGN



NICK NEPTUNE

ASSOCIATE DIRECTOR
WAKEUP WAKE COUNTY
BOARD CHAIR - OAKS & SPO



JONATHAN FREEZE

DIRECTOR OF MARKETING
COMMUNICATIONS
GREATER RALEIGH CVB



JACKIE TURNER

PRINCIPAL
JACKIE TURNER
CONSULTING



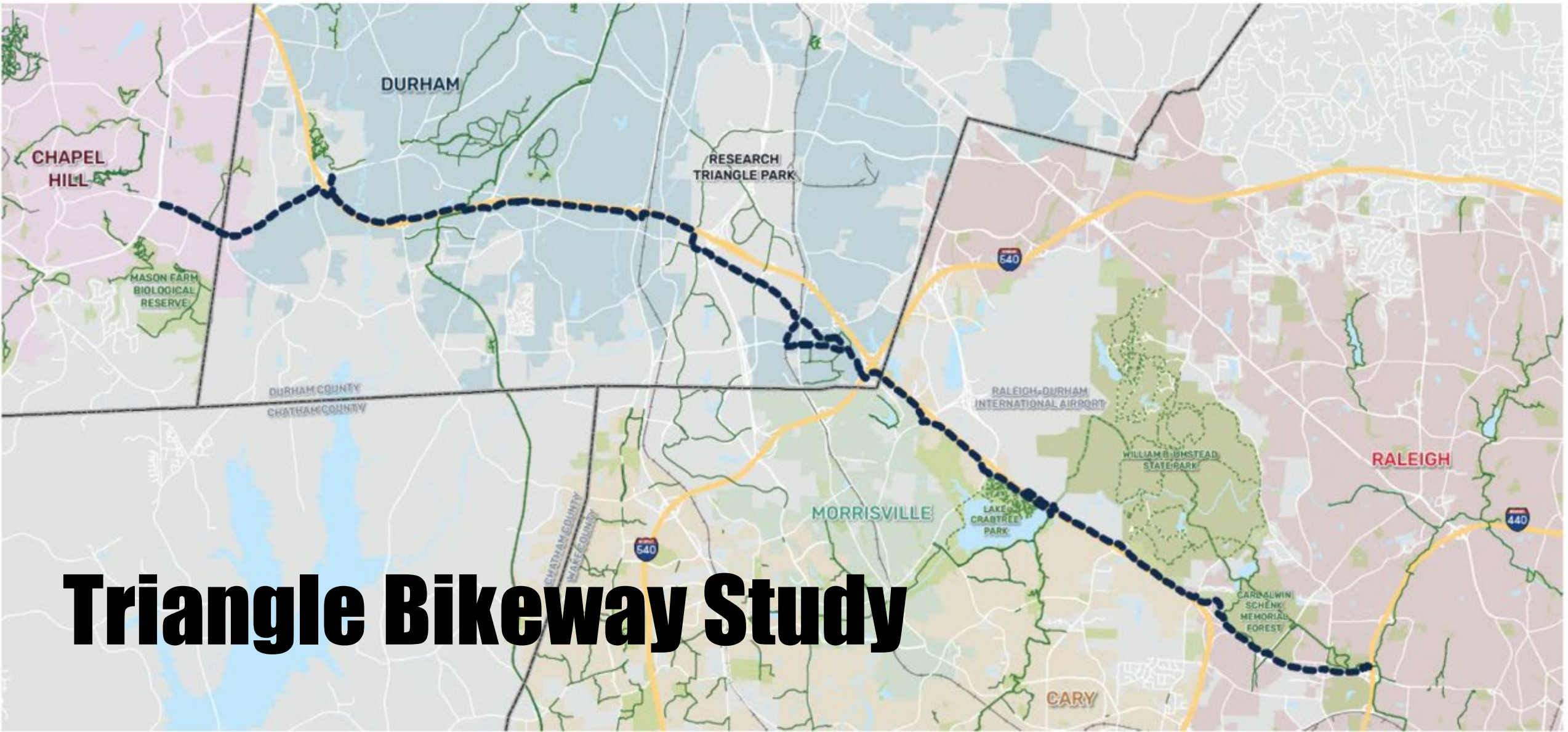
LISA SCHIFFBAUER

CAPITAL PROJECTS
SENIOR SUPERVISOR
RALEIGH PARKS + REC



Oaks & Spokes: Trail Oriented Design





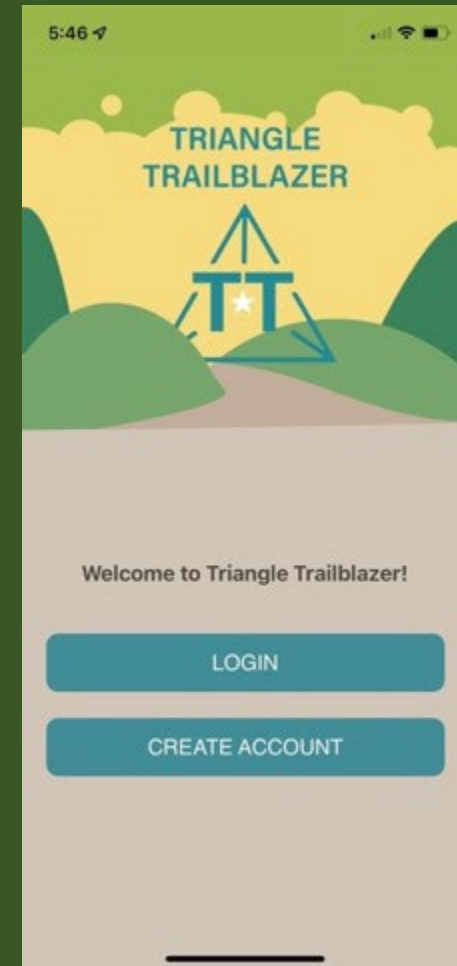
Triangle Bikeway Study

Triangle Trailblazer Program



Triangle Trailblazer Program

- Working with App developer John Ange Kernodle



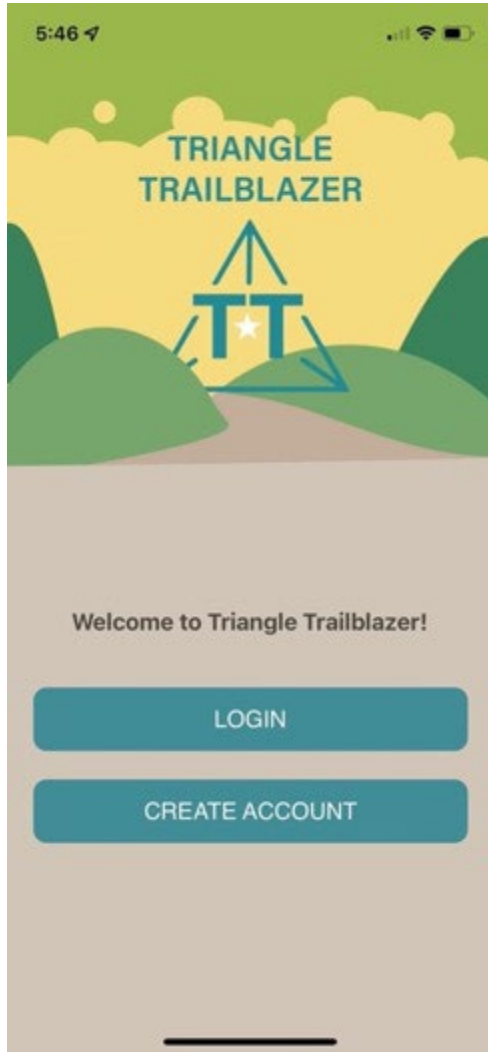
Buffalo Creek Greenway, Smithfield





Downtown Smithfield

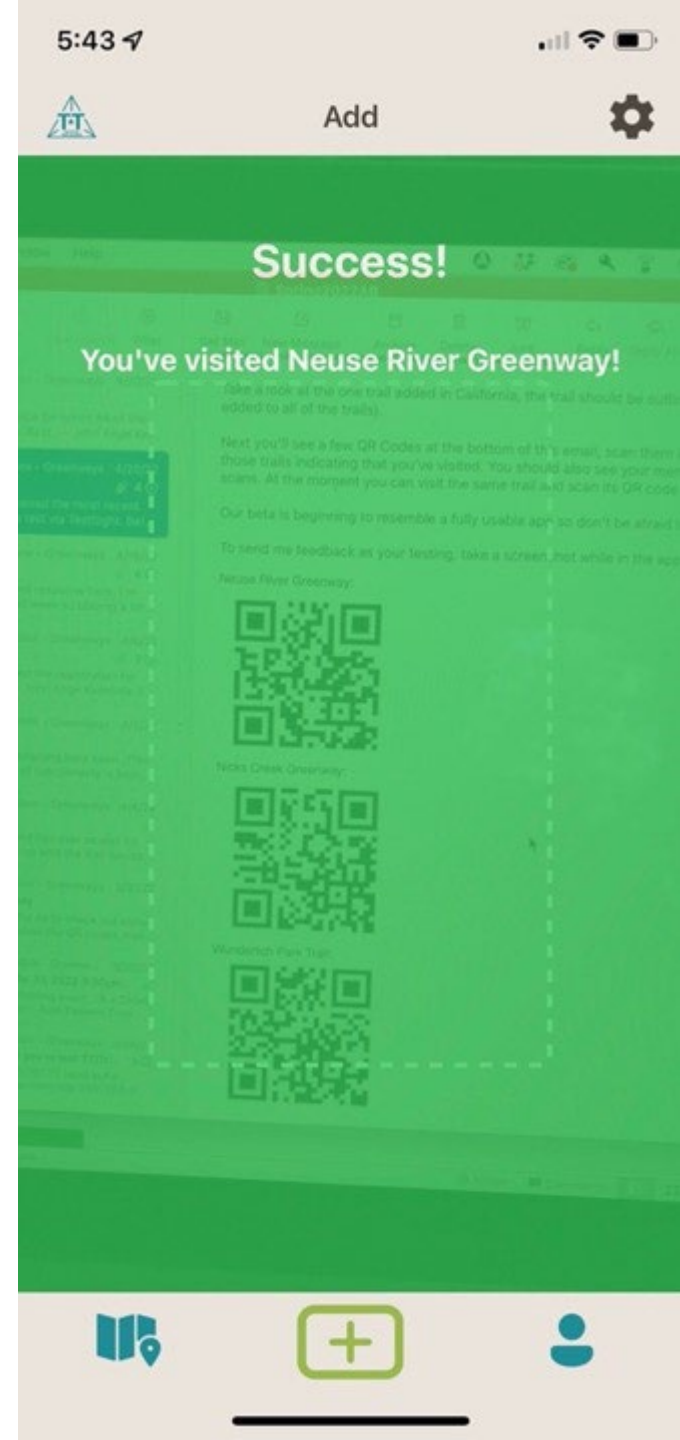
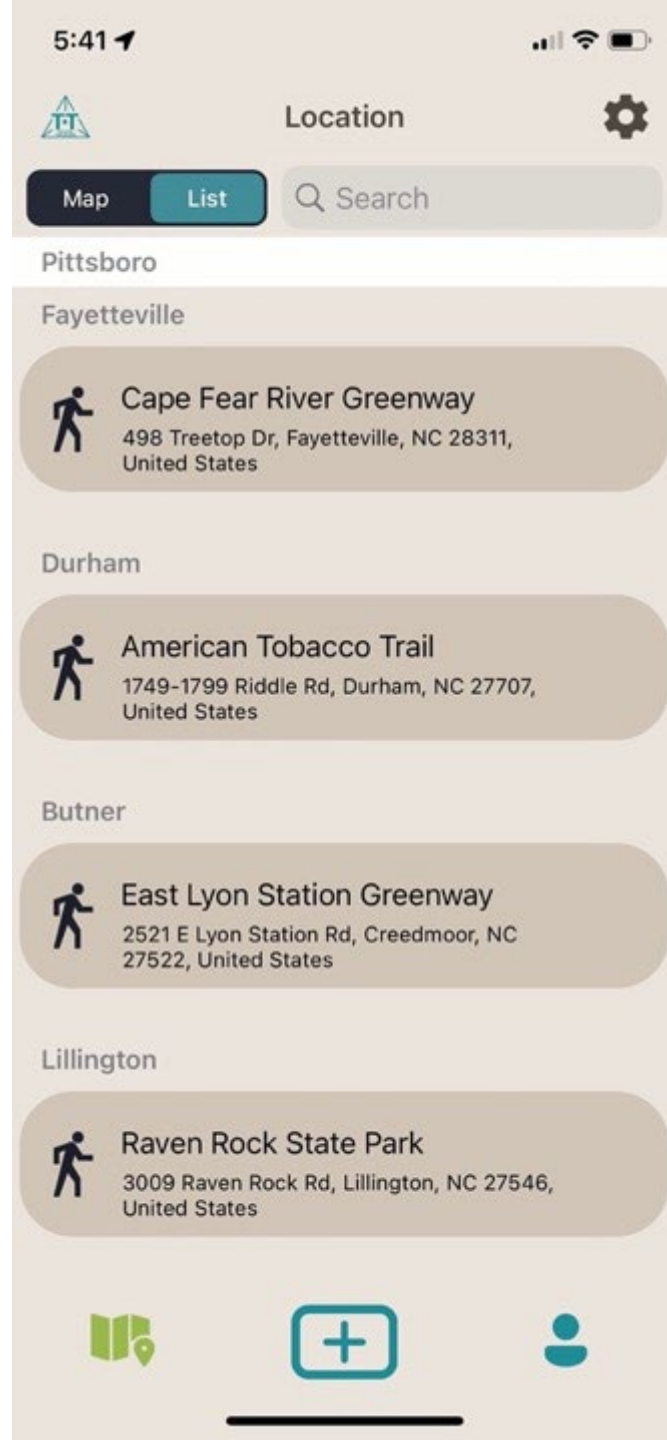
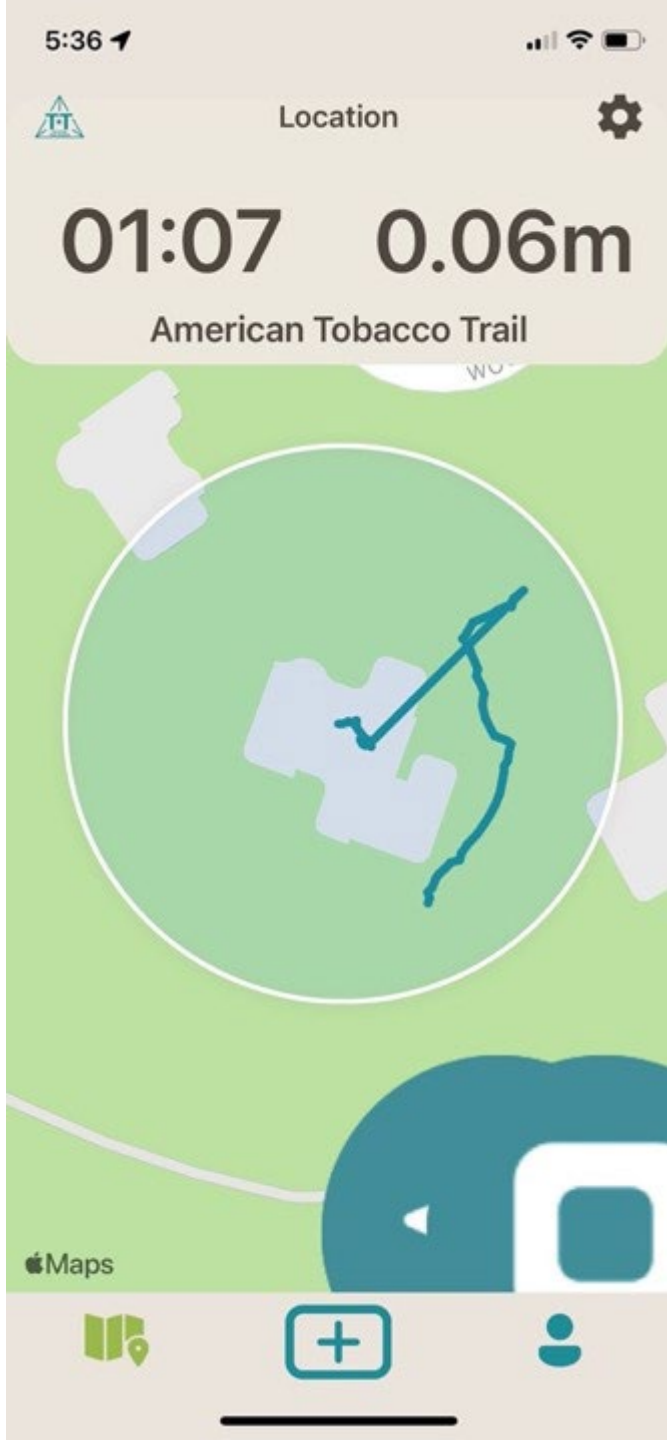
Beta Testing

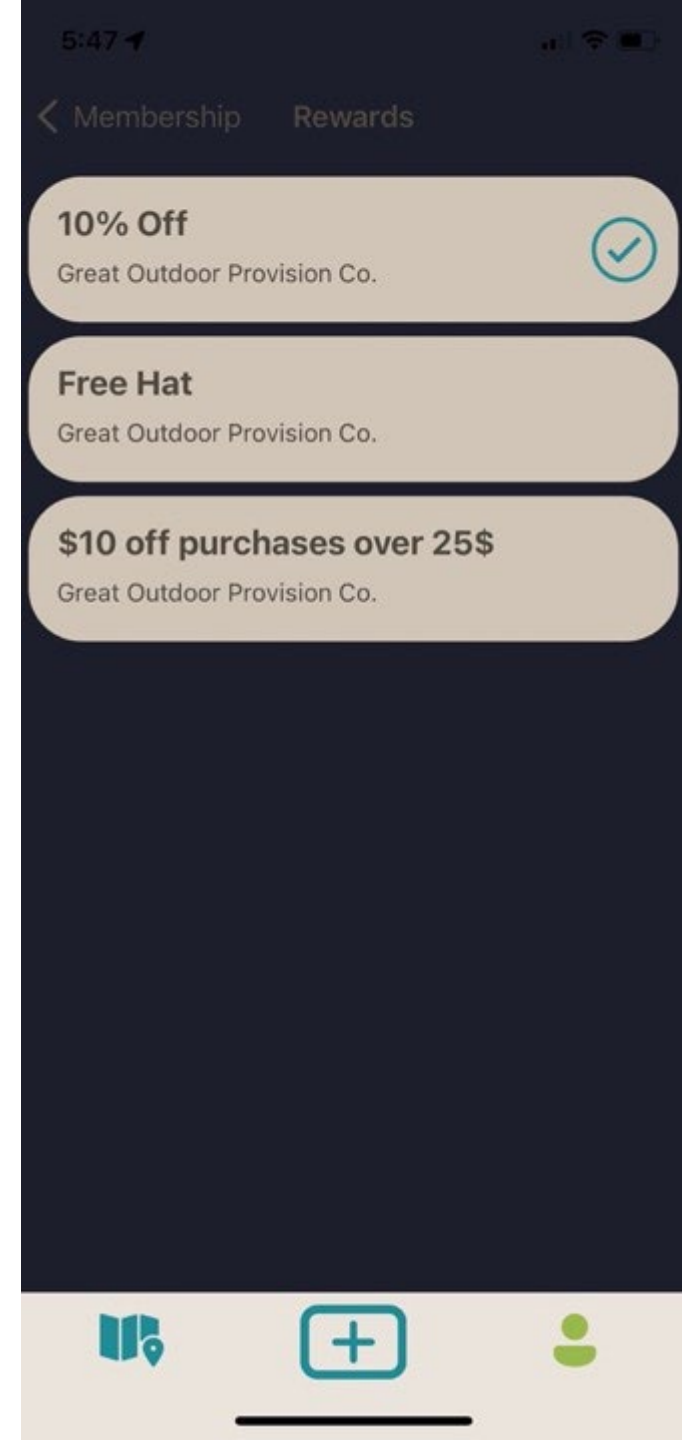
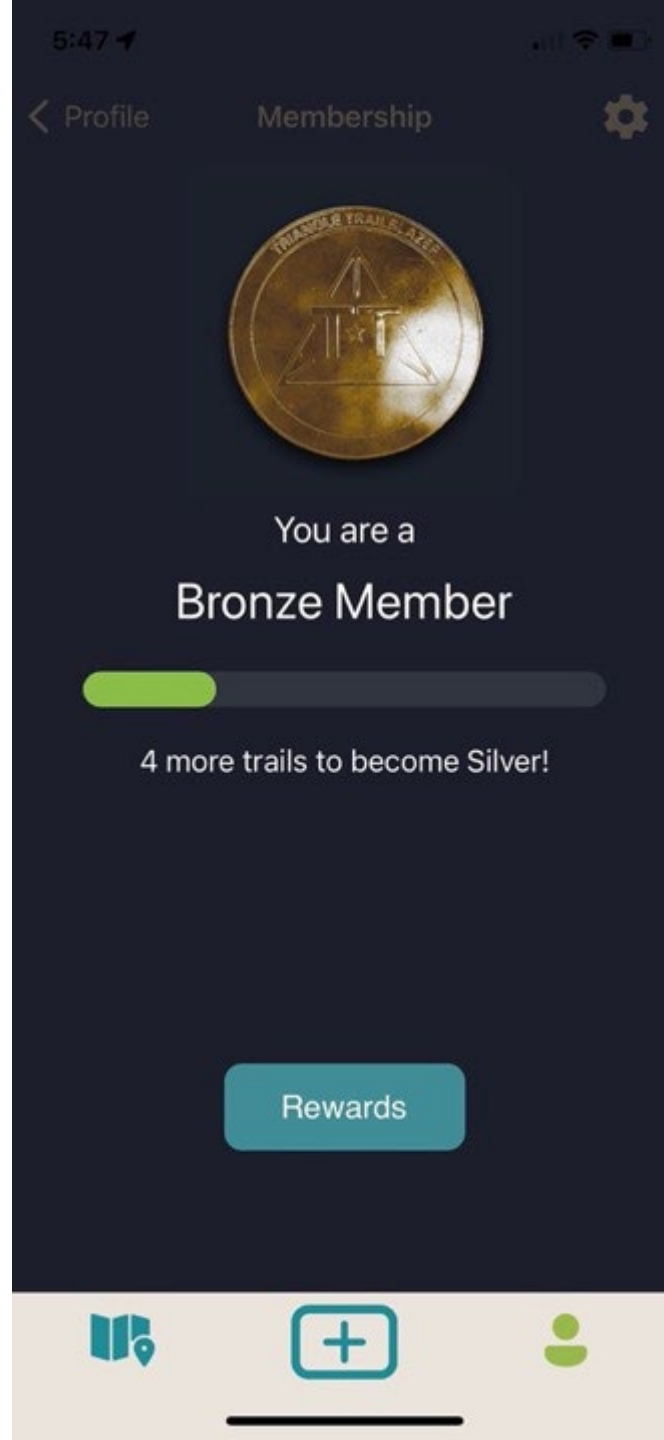
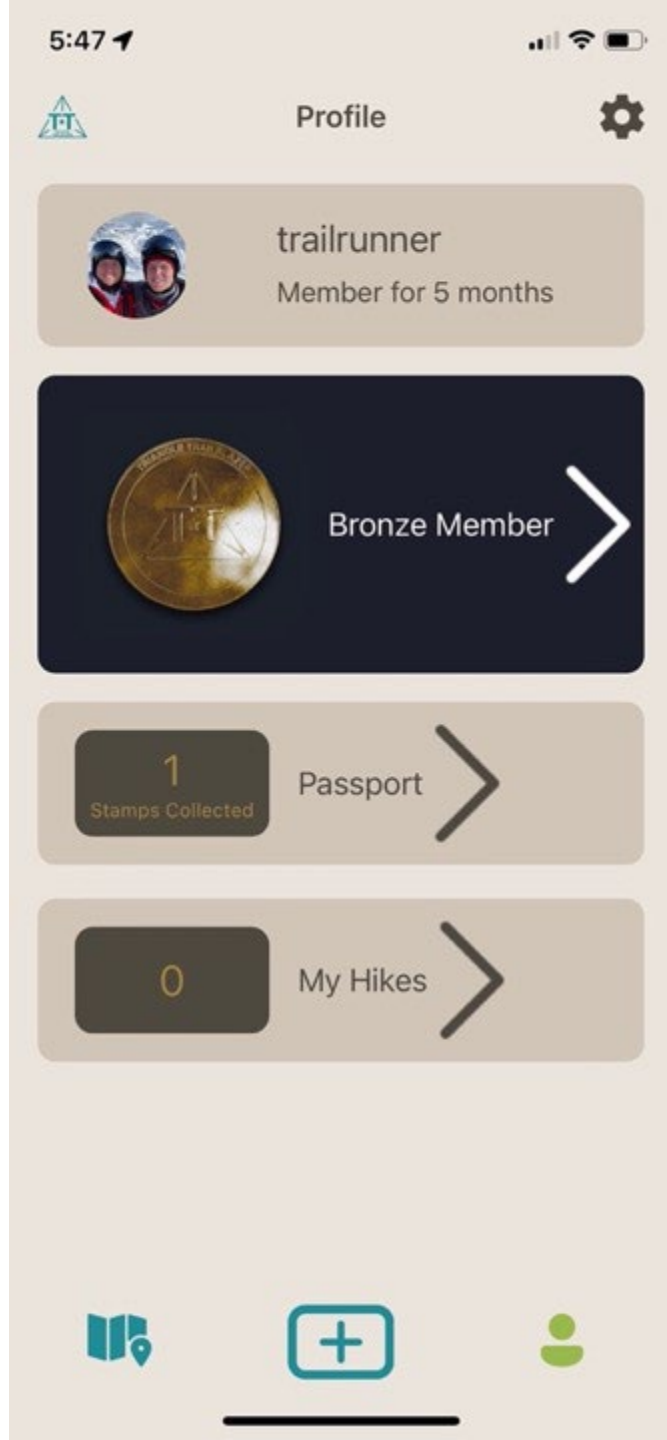


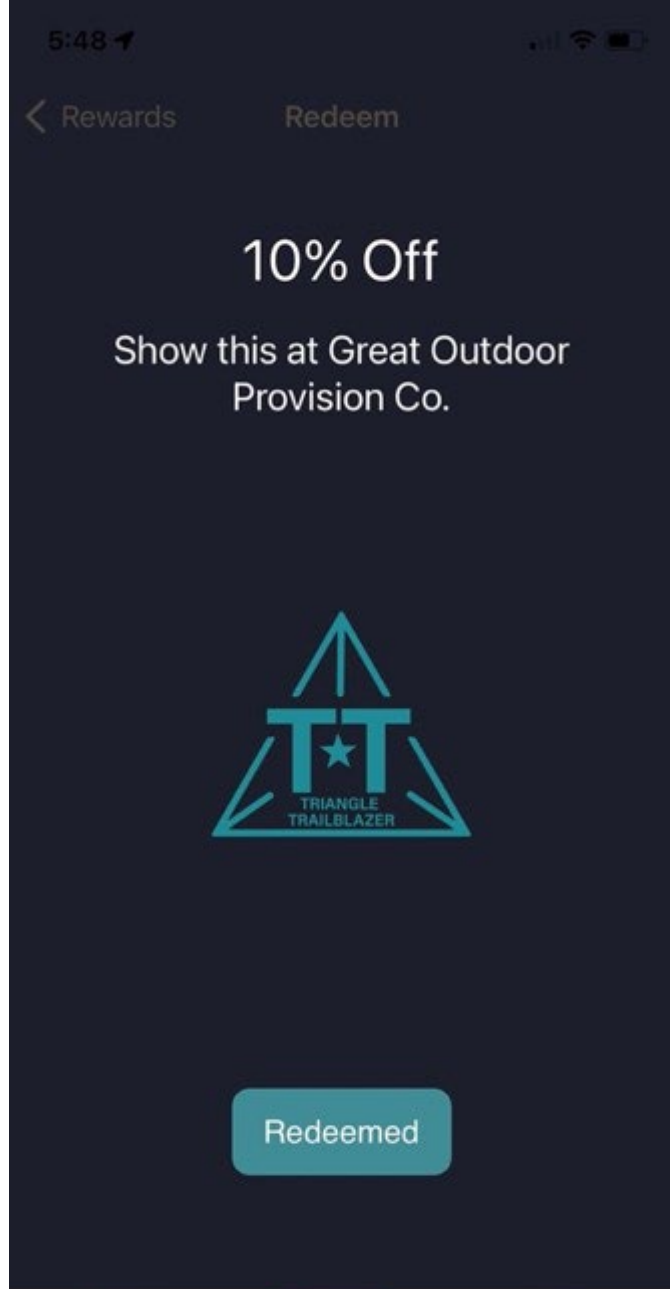
TTITrailBlazers
By JohnAnge Kernodle for iOS.

[View in TestFlight](#)

To test this app, you must have [TestFlight](#) installed on your iOS device running 13.0 or later, Mac using macOS 12.0 or later, or Apple TV using tvOS 13.0 or later.







GREAT OUTDOOR PROVISION CO.



Triangle Trails Work Program



2022 Work Program



- **Operations**

- Advisory Board Meetings – Spring, Summer, Fall
- Technical Committee Meetings – Fall
- County Commissioners/Managers - Fall
- Update the TTI Regional Greenway Map

- **Outreach and Advocacy**

- Work with County government partners to support their greenway efforts – technical assistance
- Partner with Great Trails State Coalition to advocate for funding

2022 Work Program



- **Branding and Promotion**

- Roll out the Triangle Trailblazer app – Spring 2022
- Roll out our new Web site - communications

- **Events and Programs**

- Work with TTI Partners to co-sponsor events and programs that promote the regional greenway system
- Partner with Great Trails State on hosting a 2023 statewide conference
- Partner with American Trails to host the international trails symposium 2024/2025

Summer Meeting of Triangle Trails Advisory Board

- Business Meeting + Social
- Location: Cantina 18, Raleigh, NC



Questions/Discussion



The Triangle Trails Initiative is a program of the East Coast Greenway Alliance. This work is funded by the AJ Fletcher Foundation, Research Triangle Park Foundation, VisitRaleigh, Martin Marietta, UNC Health, Wells Fargo, WakeMed & Mike Conlon, Affordable Communities

Triangle Safe Routes to Schools Update

- Wake County
- Town of Garner
- Durham

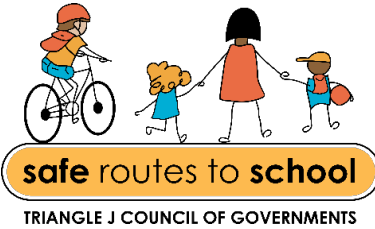
Safe Routes to School Wake County

Jennifer Delcourt, Safe Routes to School Coordinator



Wake County Health & Human Services

New website: www.wakegov.com/saferoutestoschool



Triangle J Council of Governments (TJCOG) SRTS Program Highlights and Accomplishments

Multifaceted Outreach Efforts

- New program logo to strengthen messaging and outreach
- Quarterly Themes/Campaigns
- Quarterly Newsletter (>50 schools)
- Webpage/Social Media (~100,000 users)



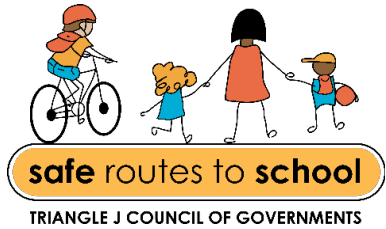
ir a la escuela mantiene a los niños
felices, sanos y enfocados.



Integrating Diversity and Equity

- Developed online interactive equity indicator [maps](#)
- Spanish versions of all outreach materials

Triangle J Council of Governments (TJCOG) SRTS Program Highlights and Accomplishments



> 100 kids engaged at Traffic Gardens:

- Vision Zero event in Apex - June 2022 (*Largest pop-up traffic garden in NC/possibly USA*)
- Earth Day Festival in Durham - May 2022



- Regional Art Contest “Sketch Your Way to School”
- Bike-ped safety social media messaging toolkit
- Walk & Bike to School events

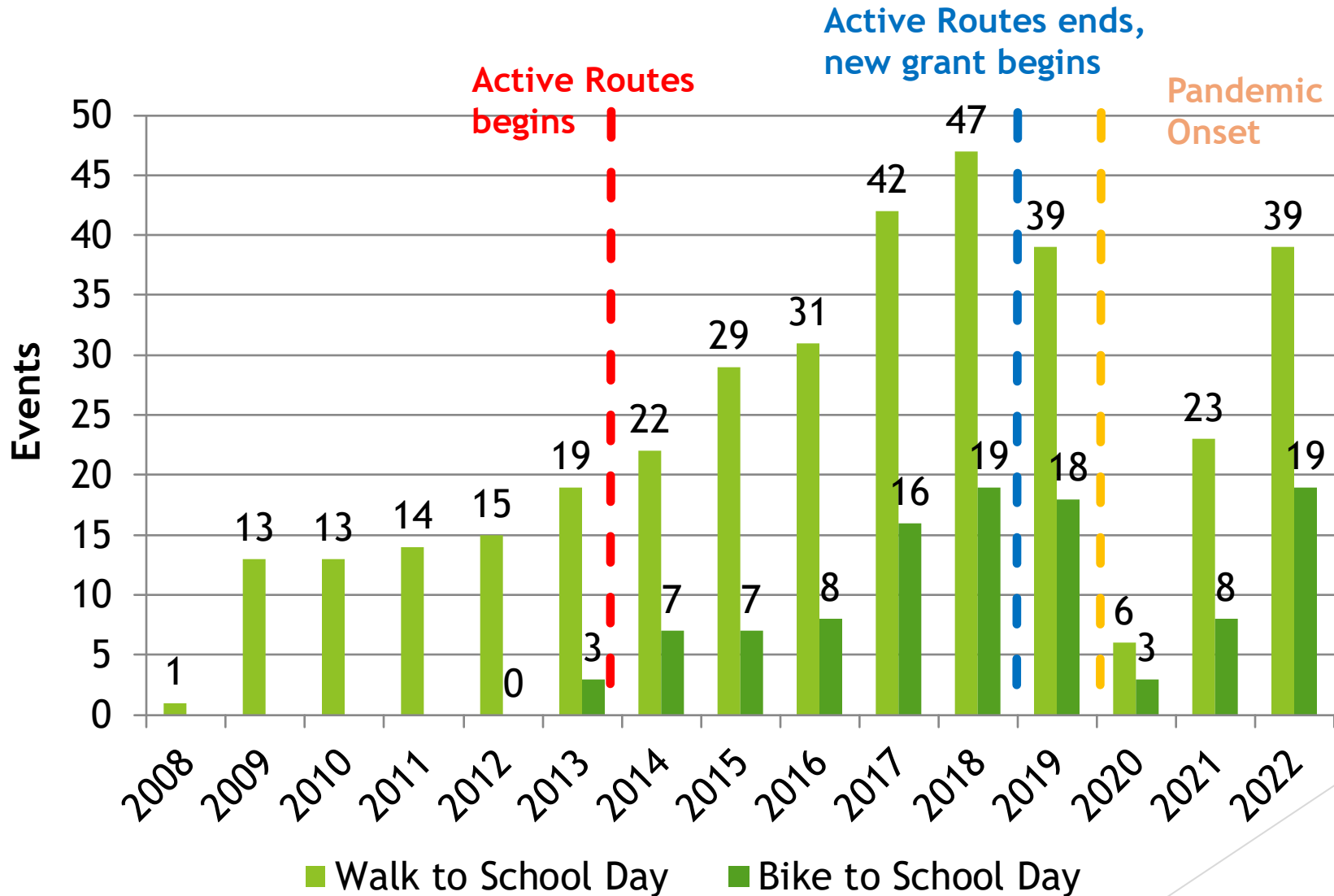
Program Contact: Shuchi Gupta - sgupta@tjco.org



Walk Bike & Roll to School Day Events

- ▶ Celebrate active travel!
- ▶ Encourage physical activity
- ▶ Build community + relationships
- ▶ Raise awareness
- ▶ Teach safety
- ▶ Highlight opportunities + barriers
- ▶ Trial run for families

Walk & Bike to School Day Participation Among WCPSS Schools



Data Collection Project with WCPSS

- ▶ MOA signed between WCPSS + CAMPO
- ▶ Survey sent to every single WCPSS school in June 2022 with about 50% response rate
- ▶ Next survey: November 2022
- ▶ Goals:
 1. Understand where walking and rolling to school is happening
 2. Identify barriers to walking and rolling to school
 3. Identify opportunities to increase walking and rolling to school, such as expanding no-transport zones





Pop-Up Traffic Gardens

- Different from bike rodeos
- Focus is on traffic safety skills
- Experiential learning through play

Local Expert: Mary-Jo Gellenbeck

Partnership with City of Raleigh to develop two kits for community partner to use.

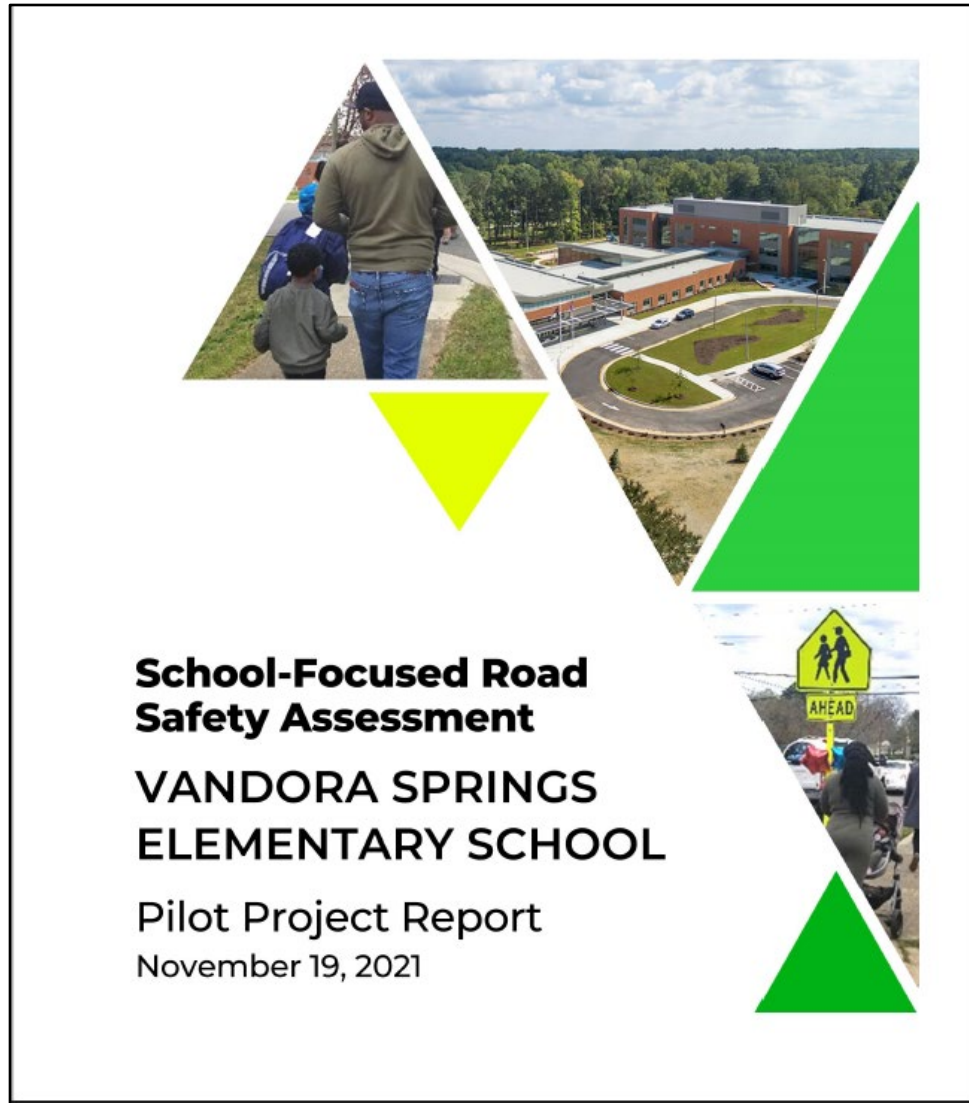
Check out our video at
www.wakegov.com/saferoutestoschool



School-Focused Road Safety Assessment

► Partners:

1. Vandora Springs Elementary School
2. Town of Garner
3. Safe Routes to School Wake County
4. Capital Area Metropolitan Planning Organization
5. NCDOT Traffic Safety Unit



Report available at www.wakegov.com/saferoutestoschool

Future & Funding

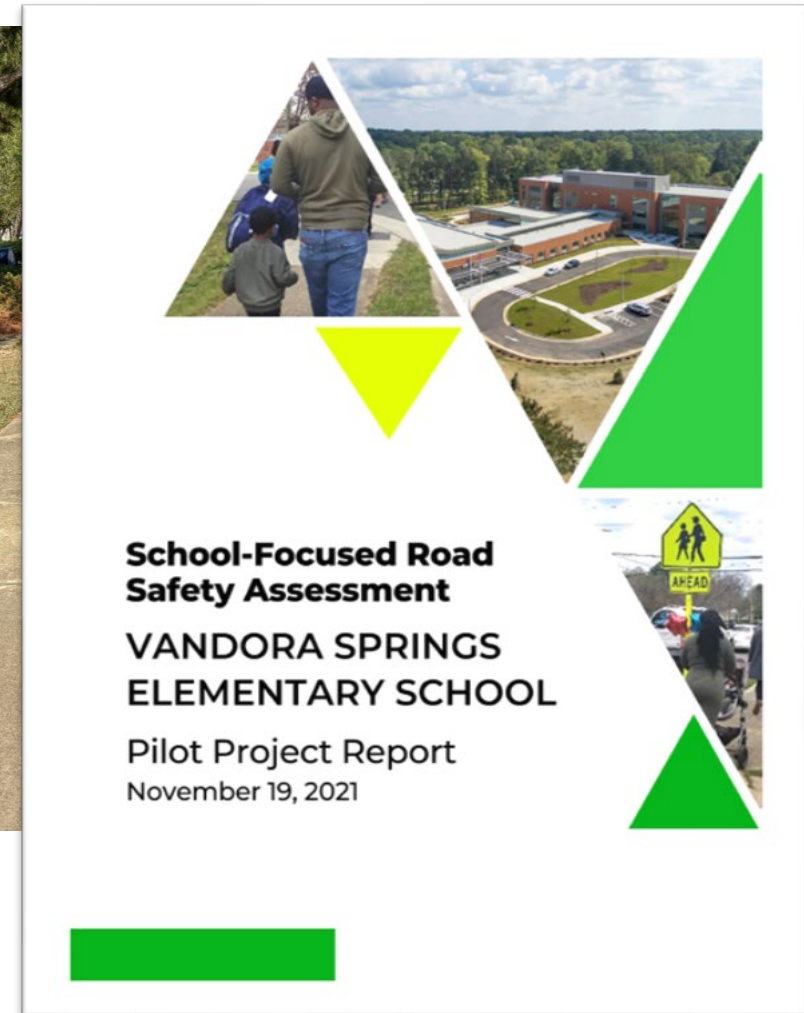
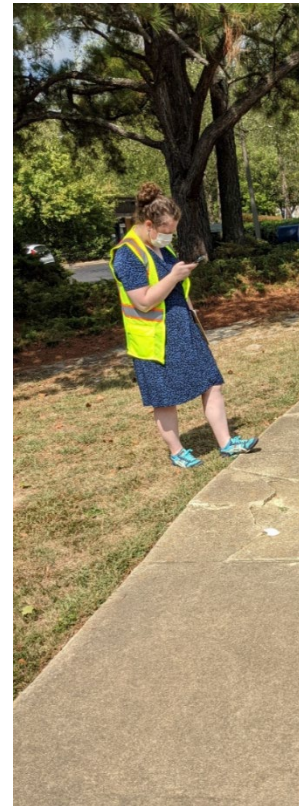
- ▶ Original Timeline : Aug 2019 - Aug 2022
- ▶ No-Cost Extension : Aug 2022- Dec 2023
 - 1. DATA: Continue biannual data collection w/ WCPSS
 - 2. ENCOURAGEMENT:
 - a. Get School Awards Program off the ground
 - b. Continue support for WBTSD events (O&S)
 - 3. EDUCATION:
 - a. Continue support for traffic gardens
 - b. Develop bike trailer program
 - c. Implement All Kids Bike in pilot schools
 - 4. ENFORCEMENT - Develop training for LEOs
 - 5. ENVIRONMENT - Continue work with WCPSS & RSAs

Town of Garner Updates

2022 Triangle Bicycle & Pedestrian Workshop

Vandora Springs ES RSA

- Data Review
- Field Visit
- Documentation
- Report to support LAPP application



Vandora Springs ES RSA

Takeaways

- RSA process is an on-going effort
- Cooperation across relevant agencies is key

Pedestrian Improvements

- Town Funded
 - Ongoing
 - *Vandora Springs Rd sidewalk (Tiffany Circle to Timber Dr)*
 - *Lake Dr*
 - Planned through bond funds
 - *Aversboro Road (YMCA to Summers Walk Subdivision)*
 - *Bryan Road (Ackerman Rd to Bryan Rd Elementary)*
 - *Garner Rd (Vandora West to Weston Rd)*
- NCDOT Funded
 - *US 401 superstreet – Betterment Agreement*

Bicycle Improvements

- Bicycle lanes as part of NCDOT resurfacing contracts
 - *Spring Dr*
 - *Thompson Rd*

Pedestrian Plan

- NCDOT Planning Grant Initiative
- Plan completion ~ Feb 2023



Thanks!

Gaby Lawlor

Senior Transportation Planner

glawlor@garnernc.gov

SAFE ROUTES TO SCHOOL DURHAM NC



BIKE SAFETY CLASSES



Bike Safety Classes in 12 DPS Elementary school in 2022-2023

BIKE SAFETY CLASSES



Family and Community Day Celebration of Bike Safety Class



Community and parent engagement through School community events

New bike fleet and new Strider Bikes program!



Bike, Walk & Roll to school events



Students deserve safe places to walk and bike, starting with the trip to school

Bike, Walk & Roll to school events



October 12th 2022 - 17 DPS elementaries to participate

Bike, Walk & Roll to school events



October 12th 2022 - 17 DPS elementaries to participate



New certified Bike Instructors



KEYNOTE SPEAKER

Simone Kellum-Hamlett - Black Girls Do Bike: Raleigh - Durham

October 14, 2022

Triangle Bike &
Pedestrian Workshop

Simone D. Hamlett

Personal

- Wife
- Mother
- Lives in Durham (25 yrs.)
- Breast Cancer Survivor
- Loves to ride bikes, outdoor activities, teaching, traveling, and giving back

Values

- Curious
- Creative
- Courteous and Kind
- Collaborative

Professional

- Sr. Program Mgr. @ SAS
- Project Management Professional
- Certified Scrum Master
- League of American Bicyclists – Cycling Instructor

Education



B.S. Computer Science



Executive MBA



Co-Shero

Black Girls Do Bike: Raleigh - Durham



Black Girls Do Bike History



Monica Garrison
Black Girls Do Bike Founder



2022 Black Girls Do Bike
National Meet-up in Pittsburgh, Pa

- Monica conceived the idea in the spring/summer of 2013 riding through the streets of Pittsburgh and wondered, where were the black female cyclists. It really was a question... "Do black girls bike?"
- Today there are 108 chapters with an estimated 25,000 members. Each chapter has its own private Facebook group, led by Shero/s
- We champion efforts to introduce the joy of cycling to all women, but especially, women and girls of color.
- The Raleigh Durham Chapter has over 1200 members, and we are growing.

Practices of Engagement

- Facebook Welcome Messages
- Bike Maintenance Workshops
- Themed Chapter Rides
- Annual & Special Events
- Off Season Engagement
 - Monday Matters – Health & Wellness
 - Zwift Rides



Biking & Walking Fun Facts

1. What are the most common forms of physical activity?

Biking & Walking

2. How much money in annual health care costs are attributed to inadequate levels of physical activity?

\$117 Billion

3. In the state of North Carolina, what % of people

- Bike to work

.2%

- Walk to work

1.7%

- Take public transit



1%

4. What % of motor vehicle trips are 3 miles or less?

45%



Disparities

- Trail quality is based on demographic of community
 - Lack or limited trail resources (bathroom and water)
 - Lack of biking and walking infrastructure in underserved neighborhoods
 - Lack of representation in planning decisions and investments
 - Laws don't seem to change or action taken unless something tragic happens
- 
- 

What To Do?

Adopt the Five E Framework:

- Equity & Accessibility
- Engineering
- Education
- Encouragement
- Evaluation & Planning



Planners & City Officials

Do's

Equity & Accessibility

- Acknowledge that there are historically underserved and underrepresented populations
- Promote inclusive experiences for all groups
- Commit to improving and increasing access and mobility options for everyone, including, and in particular, for people with disabilities
- Hire diverse qualified candidates into Planner roles. Hire interns

Engineering

- Avoid infrastructure projects / enhancements during prime cycling and running season.
- Engage with the community to learn biking and walking experiences. Get proximate
- Ensure adequate bike parking and ramps
- Imagine a traffic free city...Architect for the future with biking and walking as primary modes of transport

Education

- Enhance/Revise Drivers Education programs to increase motorists awareness of the rights of cyclists and pedestrians
- Invest in and promote Smart Cycling classes and bicycle skills building
- Incorporate bike safety in every elementary/middle school PE curriculum

Encouragement

- Promote walking challenges
- Promote Bike Month, Create weekly events, Car free bike events
- Promote, adopt, and incentivize Bike to Work programs

Evaluation & Planning

- Partner with Bike & Pedestrian advocacy groups to review data and influence planning and legislation.

Thank You

Q&A



BIKEWALKNC



BikeWalkNC.org

Terry Lansdell, Executive Director



Contributory Versus Comparative Negligence

North Carolina is one of the very few states where the principle of contributory negligence applies in personal injury claims. Unlike comparative negligence (the standard used by a majority of states), the contributory negligence rule bars the victims of accidents and serious injuries from recovering damages if they have any degree of responsibility.



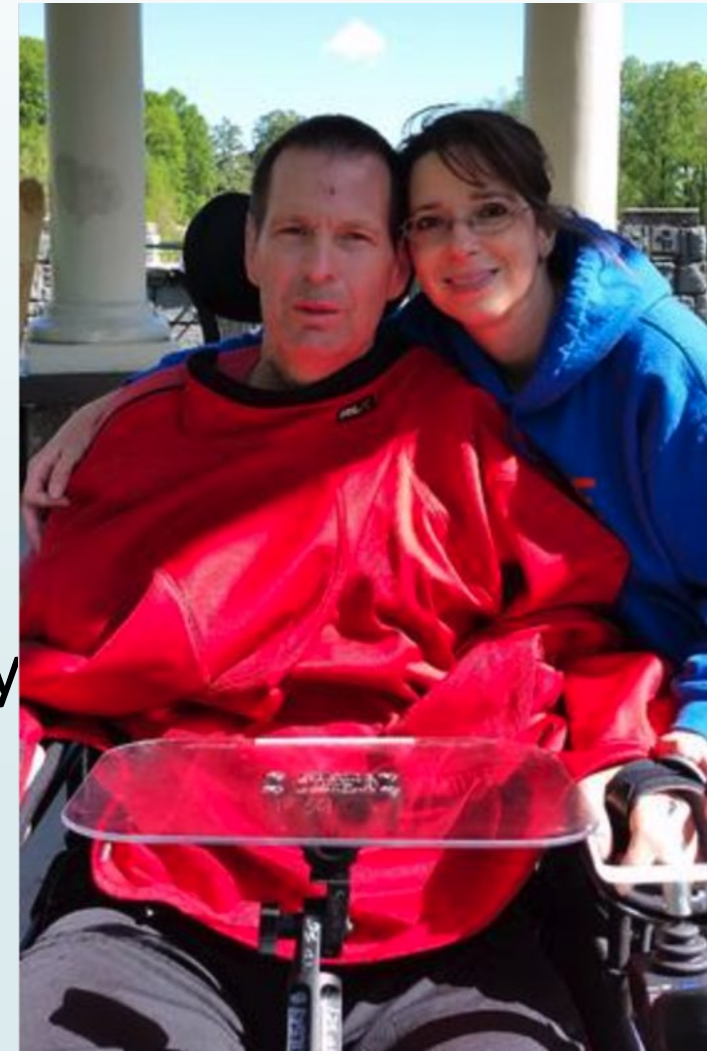
Mignon Elkes' daughter was just a mile from home when she was struck and killed by a car while walking along the side of the road.

She was walking on the white line on the road in the direction of traffic. There is no sidewalk on Sharpe Road.





“That’s just insane that that’s the kind of life I have to live due to someone else’s negligence,” he said. An outdated North Carolina law greatly restricted Kelly’s rights to recover money to help pay for his recovery.” Many thanks to Stanly News and Press for sharing Ironman triathlete Kelly Caudle's story. Victims like Kelly deserve fair treatment under North Carolina law.



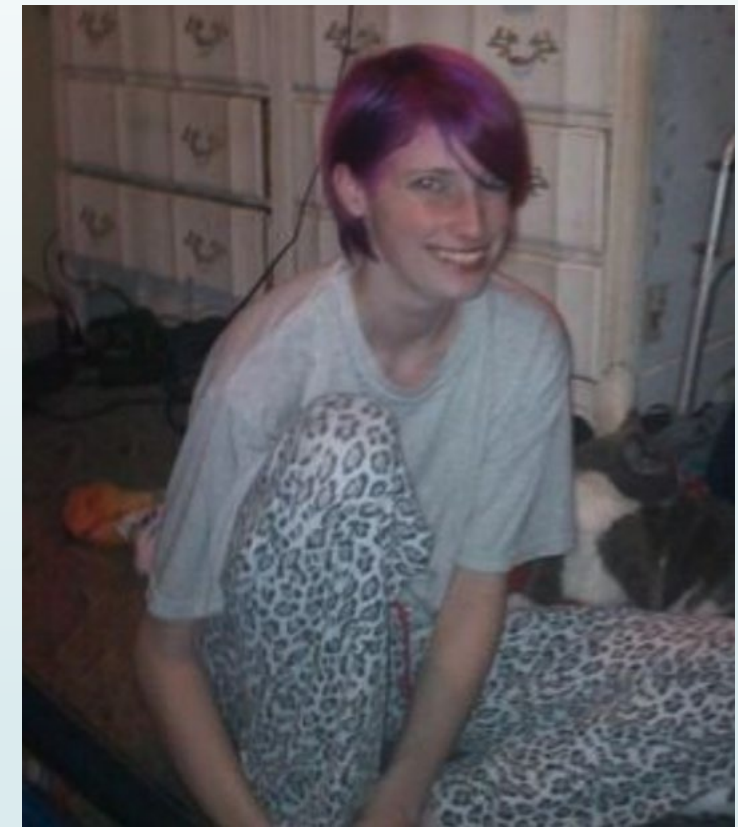


The driver admitted being distracted by her baby in the backseat when she ran over Heather in the crosswalk.

But, it didn't matter.

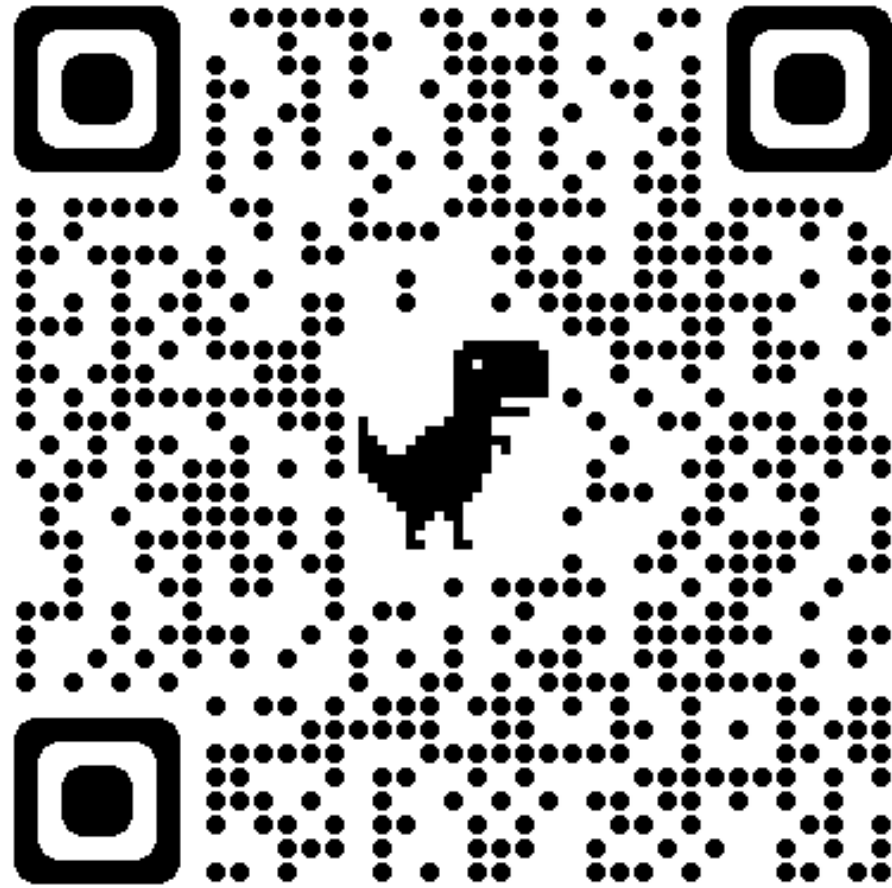
A 150-year-old state law meant Heather couldn't even hold the driver accountable despite spending a month in a wheelchair and needing hip surgery.

Accident victims shouldn't be further victimized by this out-dated law.





Ann Groninger
Explains
Contributory
Negligence
Importance in 4
Minutes





2021 The Victims Fair Treatment Act

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2021

S 1
SENATE BILL 477

Short Title: Victims' Fair Treatment Act. (Public)

Sponsors: Senators Britt, Perry, and Galey (Primary Sponsors).

Referred to: Rules and Operations of the Senate

April 5, 2021

1 A BILL TO BE ENTITLED
2 AN ACT TO ENACT THE VICTIMS' FAIR TREATMENT ACT.
3 The General Assembly of North Carolina enacts:
4 SECTION 1. The General Statutes are amended by adding a new Chapter to read:
5 "Chapter 1H.
6 "Contributory Fault.



Seems simple and logical...

GENERAL ASSEMBLY OF NORTH CAROLINA
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2 AN ACT TO ENACT THE VICTIMS' FAIR TREATMENT
3 The General Assembly of North Carolina enacts:
4 SECTION 1. The General Statutes are amended
5 to read:
6 "Chapter 11H.
7 "Contributory Fault."
8 "§ 11H-1. Short title.
9 This Chapter may be cited as the Victims' Fair Treatment
10 "§ 11H-5. Definitions.
11 The following definitions apply in this Chapter:
12 (1) "Contributory fault." — Contributory fault is
13 an unreasonable failure to avoid or mitigate
14 the risk is expressly assumed in a leg
15 agreement.
16 (2) "Person." — An individual, corporation, busi
17 nessed liability company, association,
18 government, or governmental subdivision
19 other legal or commercial entity.
20 (3) "Released person." — A person that would
21 for personal injury or harm to property if
22 from liability under G.S. 11H-35 or G.S. 11
23 (4) "Responsibility." — With respect to a claim
24 harm to property, the legal consequences
25 for liability or a defense in whole or in part.
26 "§ 11H-10. Effect of contributory fault.
27 (a) Except as otherwise provided in subsection (b),
28 damages for personal injury or harm to property based on a
29 which the claimant may be subject to a defense in whole or
30 any contributory fault chargeable to the claimant dimin
31 otherwise would be entitled to recover as compensatory da
32 percentage of responsibility assigned to the claimant pursua
33 (b) If the claimant's contributory fault is greater than th
34 other parties and released persons whose responsibility is
35 injury to or harm to property of the claimant, the claimant m



General Assembly Of North Carolina Session 2021

1 has been reallocated must be distributed to each of the parties to whom the reallocation was made
2 in the same proportion as the original reallocation.
3 (d) Reallocation does not make a released person liable for any reallocated share of
4 responsibility unless the release or other agreement so provides.
5 (c) If a motion for reallocation is made, any party may conduct discovery regarding any
6 issue relevant to the motion.
7 "§ 11H-25. Entering and modifying judgment.
8 (a) After determining an award of damages to a claimant and the amount of the several
9 shares, including any reallocated share, for which each party found liable is responsible, the court
10 shall enter judgment severally against each party adjudged liable, except in the following
11 situations:
12 (1) If two or more parties adjudged liable acted in concert or
13 cause personal injury to, or harm to property of, the claimant
14 enter judgment jointly and severally against the parties for th
15 (2) If a party is adjudged liable for failing to prevent an
16 intentionally causing personal injury to, or harm to property,
17 the court shall enter judgment jointly and severally against the
18 combined shares of responsibility.
19 (3) If a party is adjudged liable for the act or omission of ano
20 G.S. 11H-15(c), the court shall enter judgment jointly and sev
21 parties for their joint share.
22 (4) If a statute of this State, other than this Chapter, so requir
23 enter judgment jointly and severally or otherwise conform the
24 statute.
25 (5) If more than one defendant is found responsible for indivisi
26 any defendant to whom more than fifty percent (50%)
27 responsibility of all parties for such indivisible damages is a
28 jointly and severally liable for the total amount of such indivi
29 (b) If a court grants a motion for reallocation pursuant to G.S. 11H-20 a
30 entered, the court shall modify the judgment to declare the rights and obligation
31 the reallocation, including any rights and obligations with regard to subrogat
32 position.
33 "§ 11H-30. Right of contribution and indemnity; third-party action.
34 (a) Except as otherwise provided in subsection (b) of this section, a par
35 severally liable with one or more other parties under this Chapter has a righ
36 from another party jointly liable for any amount the party pays in excess of th
37 for which the party is responsible. A party against which contribution is sought
38 more than the monetary amount of the party's several share of responsibility dete
39 to G.S. 11H-20.
40 (b) A party that is adjudged liable for the act or omission of anot
41 G.S. 11H-25(a)(3) has a right of indemnification from the other party.
42 (c) A party that is subject to liability for injury to, or harm to propert
43 under this Chapter has a right:
44 (1) To join a person that is also subject to liability to the claims
45 of the same injury or harm if the claimant has not used the pe
46 (2) To seek contribution or indemnity, whichever is appropriat
47 person whose liability is not determined in the proceeding in
48 is adjudged liable if the other person is responsible for al
49 claimant's injury or harm.
50 (d) A claim for contribution or indemnity may be asserted in the origin
51 separate action.

Senate Bill 477-First Edition

General Assembly Of North Carolina Session 2021

1 "§ 11H-35. Effect of release.
2 (a) A release, covenant not to sue, covenant not to
3 agreement by a claimant and person subject to liability dischar
4 claimant to the extent provided in the agreement and from lia
5 person subject to liability to the claimant for the same injur
6 discharge any other person subject to liability upon the sam
7 provides.
8 (b) The amount of the claim of the releasing person u
9 against other persons jointly and severally liable for the sa
10 released person would have been liable is reduced by the per
11 to the released person pursuant to G.S. 11H-15.
12 (c) A release, covenant not to sue, covenant not to
13 agreement extinguishes any claim for contribution or indem
14 have had against another person that would have been join
15 released person.
16 "§ 11H-37. Judicial determination as to amount reasonably
17 (a) Any party to a proposed settlement of a claim in an
18 apply to the court for a determination of whether or not the
19 payment of all funds that reasonably could be collected from
20 proposed settlement is of a claim for which there is a pending
21 made to the court in which the action is pending. If the pr
22 which there is no pending civil action, the application shall be
23 judge of the county in which the cause of action arose or w
24 presiding superior court judge of either county, to be determin
25 by the applicant.
26 (b) After a hearing upon due notice, with all parties h
27 and present evidence, the court shall determine, in the court's
28 settlement involves the payment of all funds that reasonably c
29 party or parties.
30 (c) In making a determination pursuant to this section,
31 (1) The likelihood of success by the claimant at
32 or defendants.
33 (2) The amount of applicable primary and exce
34 (3) Whether there is insurance coverage dis
35 (4) Whether the settling defendant or defend
36 of the applicable insurance coverage.
37 (5) The liquid assets of the settling defendant c
38 (6) The assets potentially available to the cl
39 judgment obtained against the settling defen
40 of difficulty and likelihood of being able
41 circumstances, including whether a settling agreement has already
42 already ahead in line.
43 (7) The equities of the case and whether a settlement is in the interests of justice
44 and the proper administration of the courts.
45 (8) Any other factors that weigh for or against the proposed settlement, under all
46 of the circumstances.
47 (d) If the court determines that the amount of the proposed settlement involves payment
48 of all funds that reasonably could be collected from the settling party or parties, then the claimant
49 may proceed with the proposed settlement. If a judgment is entered against the nonsettling
50 defendant or defendants that exceeds the amount of all settlements between the claimant and
51 settling defendants, the claimant shall be entitled to recover the amount of the verdict from the

General Assembly Of North Carolina Session 2021

1 nonsettling defendant or defendants, less the amount of all settlements with settling defendants.
2 If a judgment is entered in favor of a claimant against nonsettling defendants that is less than the
3 amount of all settlements between the claimant and settling defendants, the claimant shall recover
4 nothing from nonsettling defendants.
5 (c) If the court determines that the amount of the proposed settlement does not involve
6 payment of all funds that reasonably could be collected from the settling party or parties, the
7 court shall also determine, in the court's discretion, the amount of a settlement that would involve
8 payment of all funds that reasonably could be collected from the settling party or parties.
9 "§ 11H-40. Reduction of workers' compensation lien and subrogation right; notice and
10 intervention.
11 (a) If an employer or workers' compensation insurer asserts a lien or right of subrogation
12 under G.S. 97-10.2, the employer or insurer is deemed to have had its obligation to the employee
13 for the compensation benefits paid or payable discharged under G.S. 11H-35 as if the employer or
14 insurer had received a release, covenant not to sue, or entered a similar agreement with the
15 responsibility that the employer would have
16 not in accordance with Article 1 of Chapter 97
17 a released person pursuant to G.S. 11H-15,
18 monetary amount of the employer's percent
19 against the third party.
20 (b) A party asserting that an emp
21 of subrogation should be reduced under thi
22 fault shall give notice to the employe
23 employer or insurer may intervene in the
24 "§ 11H-45. Uniformity of application and
25 In applying and construing this Chapter
26 uniformity of the law with respect to its su
27 "§ 11H-50. Severability clause.
28 If any provision of this Chapter or its
29 invalid, the invalidity does not affect other
30 given effect without the invalid provision.
31 Chapter are severable."
32 SECTION 2. G.S. 11B-2 reads
33 "§ 11B-2. Pro rata shares.
34 In determining the pro rata shares of
35 following apply:
36 (1) Their relative degree of
37 liability is based upon a
38 defined in G.S. 11H-5, and
39 General Statutes shall be
40 (2) If equity requires, the e
41 single share and share,
42 (3) Principles of equity
43 apply generally."
44 SECTION 3. Article 31 of Cha
45 a new section to read:
46 "§ 11B-300.1B. Contributors' fault appl
47 Subject to the provisions of G.S. 143-3
48 acts or omissions that constitute contrib
49 Chapter 11H of the General Statutes shall ap
50 SECTION 4. G.S. 99B-1.1 rea

Senate Bill 477-First Edition

General Assembly Of North Carolina Session 2021

1 "§ 99B-1.1. Strict liability liability; contributory fault.
2 (a) There shall be no strict liability in tort in product liability actions.
3 (b) When liability is based upon acts or omissions that constitute contributory fault as
4 defined in G.S. 11H-5, the provisions of Chapter 11H of the General Statutes shall apply to product
5 liability actions under this Chapter."
6 SECTION 5. G.S. 28A-18-2 is amended by adding a new subsection to read:
7 "(c) When liability under this section is based upon acts or omissions that constitute
8 contributory fault as defined in G.S. 11H-5, the provisions of Chapter 11H of the General Statutes
9 shall apply to actions for damages under this section."
10 SECTION 6. G.S. 1A-1, Rule 7(a), reads as rewritten:
11 "(a) Pleadings. — There shall be a complaint and an answer; a reply to a counterclaim
12 denominated as such; an answer to a crossclaim, if the answer contains a crossclaim; a third-party
13 complaint if a person who was not an original party is summoned under the provisions of Rule
14 14; and a third-party answer, if a third-party complaint is served. If the answer alleges
15 contributory negligence, a party may serve a reply alleging last clear chance. No other pleading
16 shall be allowed except that the court may order a reply to an answer or a third-party answer."
17 SECTION 7. G.S. 1A-1, Rule 8(c), reads as rewritten:
18 "(c) Affirmative defenses. — In pleading to a preceding pleading, a party shall set forth
19 affirmatively accord and satisfaction, arbitration and award, assumption of risk, contributory
20 negligence, fault, discharge in bankruptcy, duress, estoppel, failure of consideration, fraud,
21 illegality, injury by fellow servant, laches, license, payment, release, res judicata, statute of
22 frauds, statute of limitations, truth in actions for defamation, usury, waiver, and any other matter
23 constituting an avoidance or affirmative defense. Such pleading shall contain a short and plain
24 statement of any matter constituting an avoidance or affirmative defense sufficiently particular
25 to give the court and the parties notice of the transactions, occurrences, or series of transactions or
26 occurrences, intended to be proved. When a party has mistakenly designated a defense as a
27 counterclaim or a counterclaim as a defense, the court, on terms, if justice so requires, shall treat
28 the pleading as if there had been a proper designation."
29 SECTION 8. This act becomes effective January 1, 2022, and applies to actions
30 originally filed on or after that date.



Risk Management, Consequence of Error, Rights and Engineering IRL

Sidewalk Riding-North Carolina is one of the eleven states without specific laws regarding cycling on sidewalks.

The driver of a vehicle emerging from or entering an alley, building entrance, private road, or driveway shall yield the right-of-way to any pedestrian, or person riding a bicycle, approaching on any sidewalk or walkway extending across such alley, building entrance, road, or



Risk Management, Consequence of Error, Rights and Engineering IRL

North Carolina is one of eight states in the nation that does not have an anti-dooring law.

Sec. 11-2137. - LIMITATION ON OPENING MOTOR VEHICLE DOORS INTO TRAFFIC. It shall be unlawful to open the door of a motor vehicle on the side available to moving traffic unless and until it is reasonably safe to do so, and can be done without interfering with the movement of other traffic, nor shall any person leave a door open on the side of a vehicle available to moving motor vehicle or bicycle traffic



The Idaho Stop

The original Idaho yield law was introduced as Idaho HB 541 during a comprehensive revision of Idaho traffic laws in 1982.

The term "Idaho Stop" came into popular use as a result of the California effort in 2008. Prior to that, it was called "Idaho Style" or "Roll-and-go". "Idaho Stop" was popularized by the bicycle blogger Richard Masoner in June 2008 coverage of the San Francisco proposal, but in reference to the "Idaho Stop Law"



The Idaho Stop

<https://legislature.idaho.gov/statutesrules/idstat/title49/t49ch7/sect49-720/>

49-720. STOPPING — TURN AND STOP SIGNALS. (1) A person operating a bicycle, human-powered vehicle, or an electric-assisted bicycle approaching a stop sign shall slow down and, if required for safety, stop before entering the intersection. After slowing to a reasonable speed or stopping, the person shall yield the right-of-way to any vehicle in the intersection or approaching on another highway so closely as to constitute an immediate hazard during the time the person is moving across or within the intersection or junction of highways, except that a person, after slowing to a reasonable speed and yielding the right-of-way, if required, may cautiously make a turn or proceed through the intersection without stopping.



BikeWalk NC



State	Statute	Can Treat Stop Signs as Yields	Can proceed through a red light	Can proceed through an inoperative and/or malfunctioning light	Can enter intersection ...	Notes
Arizona	28-645			Yes	when it is safe to do so	
Colorado	No state law, but Summit County, Breckenridge, and Dillon have stop as yield local laws.					
Delaware	§4196A	Yes			after yielding	Can only treat stop signs as yield signs on roadways with 2 or fewer lanes. Law expires Oct. 5, 2021
Idaho	49-720	Yes	Yes		after yielding	
Illinois	11-306(3.5)			Yes	after a reasonable period of time (not less than 120 seconds)	Only applies in municipalities with less than 2m inhabitants
Indiana	9-21-3-7(b)(3)(D)		Yes		after at least 120 seconds	Must exercise due caution, treating the red light as a stop sign
Kansas	8-1508(c)(4)			Yes	after a reasonable period of time	
Minnesota	169.06(9)			Yes	after a reasonable period of time	
Missouri	304.285			Yes	after a reasonable period of time	
Nevada	484B.307			Yes	after a two complete cycles of the lights or lighted arrows	
Oregon	811.36			Yes	after one complete full cycle	Signal must be controlled by a vehicle detection device

BICYCLE FRIENDLY STATES - "IDAHO STOP" AND "DEAD RED" LAWS

Learn more at WWW.BIKELEAGUE.ORG



peabikeimages.org/ganourden

State	Statute	Can Treat Stop Signs as Yields	Can proceed through a red light	Can proceed through an inoperative and/or malfunctioning light	Can enter intersection ...	Notes
South Carolina	56-5-970		Yes		after 120 seconds	
Tennessee	55-8-110(8)(d)			Yes	when safe to do so	Signal must actually be controlled by vehicle detection device
Utah	41-6a-305(7)		Yes		after a reasonable period of time of not less than 90 seconds	Only applies to persons 16 years of age or older
Virginia	§ 46.2-833(B)		Yes		after a two complete cycles or two minutes, whichever is shorter	
Washington	46.61.184			Yes	after one cycle of the traffic signal and exercising due care	Signal must actually be controlled by vehicle detection device
Wisconsin	346.37(1)(c)		Yes	Yes	after not less than 45 seconds	Must have reasonable belief that signal is controlled by vehicle detection device



Questions and Thanks from: Terry Lansdell



Director@bikewalknc.org
bikewalknc.org

Thank You