



Green and Equitable Pedestrian Infrastructure Update

City Council Work Session
November 4, 2021

Agenda

- Context: **Green & Equitable Infrastructure**
- Sidewalks
- Pedestrian Safety and Accessibility Improvements
- Feedback & next steps



June 2021

Green & Equitable Infrastructure



CityofDurhamNC @CityofDurhamNC

Earlier this evening, the #Durham City Council adopted the FY21-22 budget, which includes a 2 cents property tax rate increase to fund community safety, affordable housing, green & equitable infrastructure projects, and COVID-19 recovery.

durhamnc.gov/CivicAlerts.as...



8:45 PM · Jun 21, 2021 from North Carolina, USA · Hootsuite Inc.

April 2021

City Council Prioritization of Green & Equitable Infrastructure Projects

Rank	Category	Avg. Score
1 (tie)	Sidewalks	1.8
1 (tie)	Pedestrian Safety and Accessibility Improvements	1.8
3	Bicycle Facilities	4.3
4	Trails	5
5	Enhanced and Equitable Green Spaces	5.5
6	Waste Reduction and Circular Economy	5.8
7	Energy Generation & Transportation Electrification	6.3
8	Energy Resilience & Retrofits	6.5
9	Dirt Street Paving	7.8

April 8th, City Council Work Session

Sidewalks



2017 Bike Walk Plan

Sidewalk Corridor Prioritization

Round 1 prioritizations of > 900 sidewalk corridor gaps

- **Safety:** pedestrian crashes, speed limit
- **Connectivity:** connections to existing sidewalks
- **Demand:** commercial centers, future light rail stations, bus stops, employment centers, pop. density, schools, colleges, parks
- **Equity:** households in poverty within ½-mile

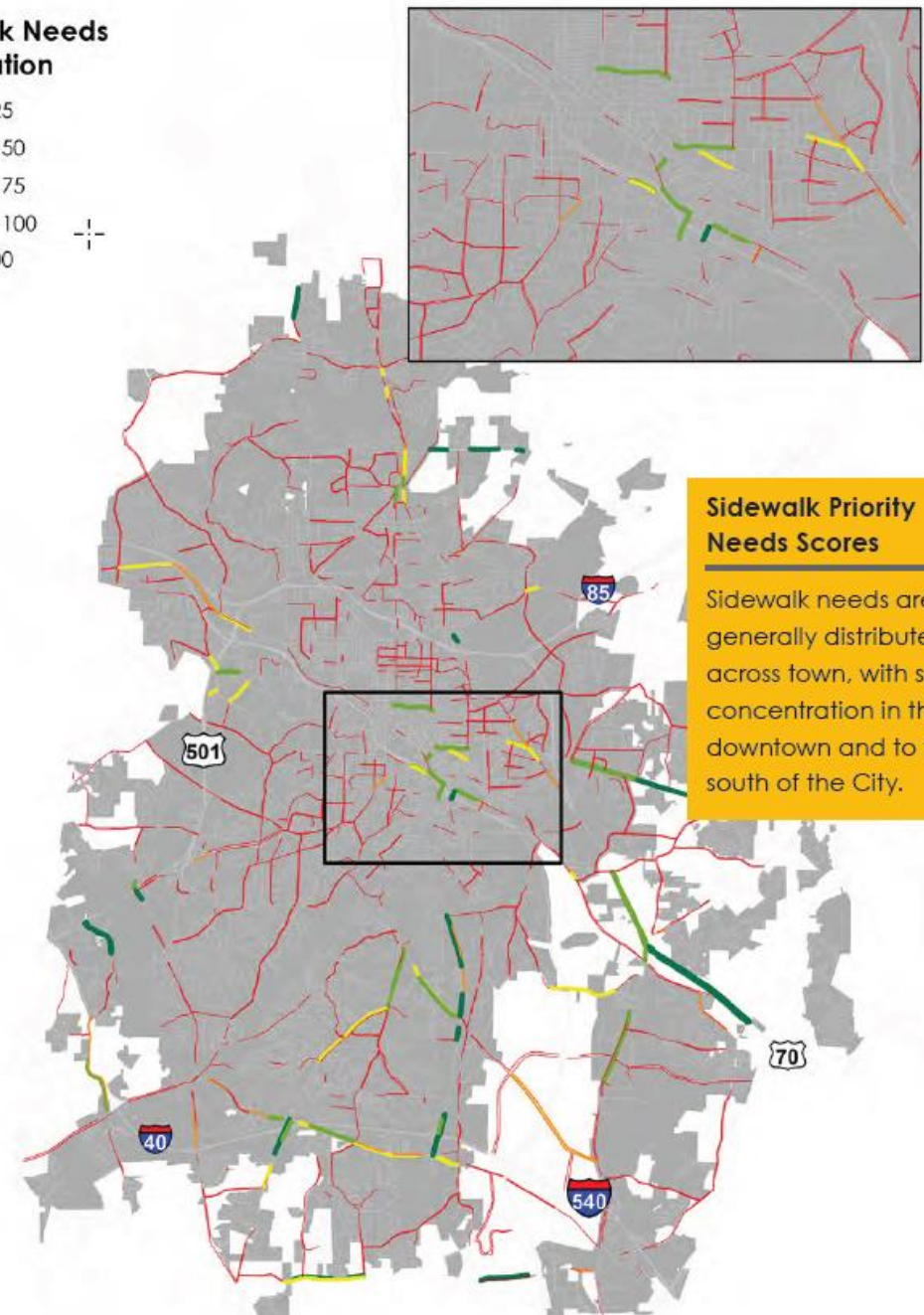
Round 2 Review

- Existing plans
- Demand
- Constructability
- Alternatives
- Public Input

Final list of 16 sidewalk corridor projects

Sidewalk Needs Prioritization

- 1 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- > 100



Sidewalk Priority Needs Scores

Sidewalk needs are generally distributed across town, with some concentration in the downtown and to the south of the City.

2017 Bike+Walk Plan Sidewalk Projects

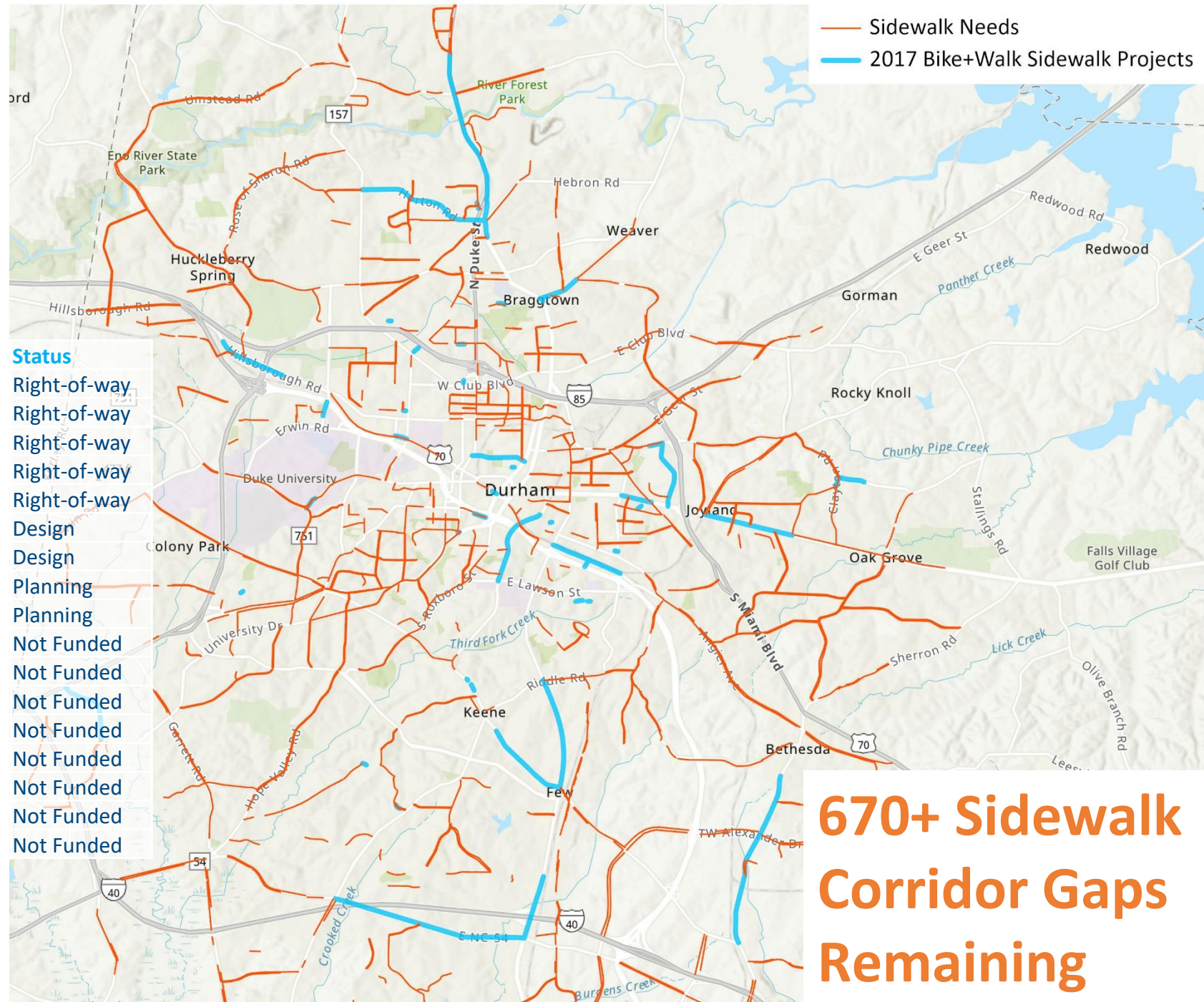
16 B+W Sidewalk Corridor Projects

Project Name

- Clayton Rd and Freeman Rd SW Chandler Rd to Obsidian Way
- Hillsborough Rd SW Bus Stop to N LaSalle St
- Holloway St SW Gary Ave to Guthrie Ave
- Old Oxford Rd SW N Roxboro St to Dearborn Dr
- Corporation St SW N Duke St to Mangum St
- SW Durham Dr SW Durham Chapel Hill to Old Chapel Hill
- Fayetteville SW Lawson to Main
- Pettigrew/Bacon SW Briggs to Alston
- Hardee St SW Cheek to Holloway
- Holloway SW Chandler to Junction
- Horton SW Roxboro to Guess
- NC 55 SW Riddle to Cornwallis
- NC 54 SW NC 55 to Fayetteville
- Miami SW Existing Sidewalk/New Haven to Cornwallis
- Cornwallis SW Existing Sidewalk/Fayetteville to NC 55
- NC 55 SW NC 54 to Carpenter Fletcher
- N Roxboro Street SW Milton Rd to Pacific Ave

Status

- Right-of-way
- Right-of-way
- Right-of-way
- Right-of-way
- Right-of-way
- Design
- Design
- Planning
- Planning
- Not Funded
- Not Funded
- Not Funded
- Not Funded
- Not Funded
- Not Funded
- Not Funded
- Not Funded



670+ Sidewalk Corridor Gaps Remaining

2021 Sidewalk Corridor Prioritization

Round 1
prioritization of
670 sidewalk
corridor gaps

- **Safety:** pedestrian crashes, speed limit, major street, no sidewalks on either side
- **Connectivity:** connections to existing sidewalks
- **Demand:** commercial centers, ~~future light rail stations~~, bus stops within 200' weighted by ridership, employment centers, retail attractors, pop. density, schools, colleges, parks
- **Equity:** households in poverty within ½-mile, minority households in ½ mile

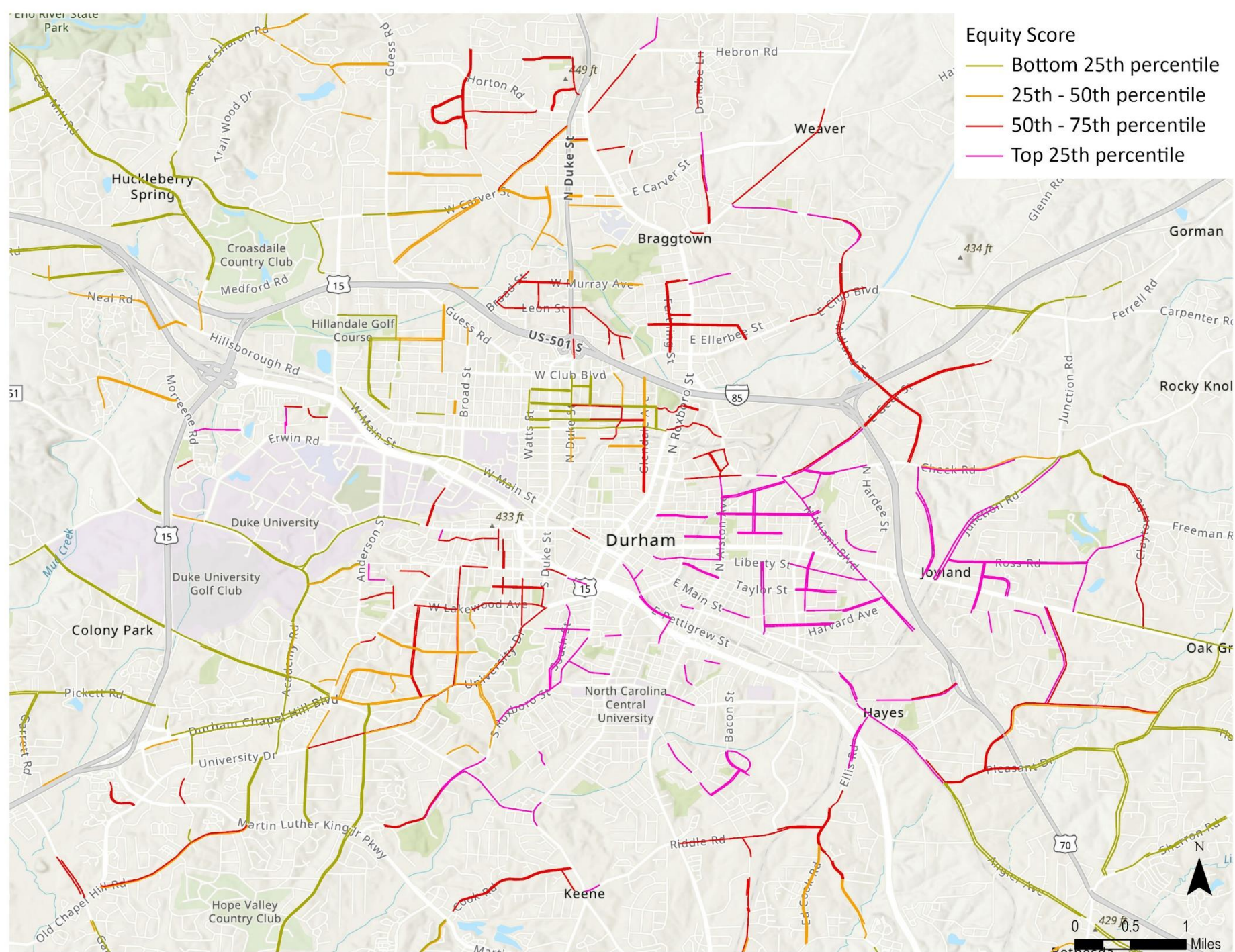
Round 2 Working
Group review of
top 200 sidewalk
corridor gaps

Preliminary list
of 50 sidewalk
corridor gaps

Round 1 Prioritization Factors: EQUITY Score

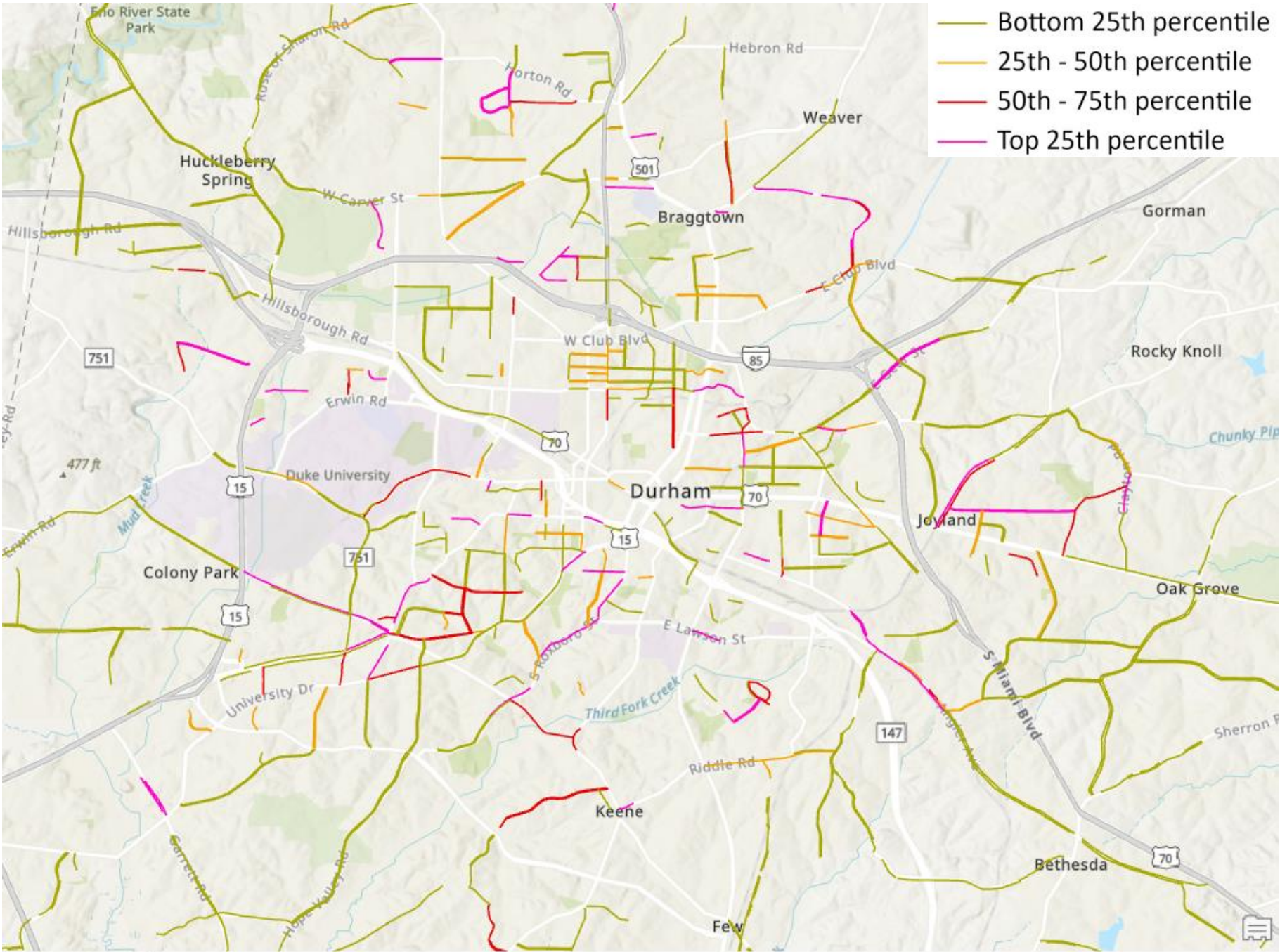
Variables

- Minority Households
- Households in Poverty



Round 1 Prioritization Factors: DEMAND – Transit Score Variables

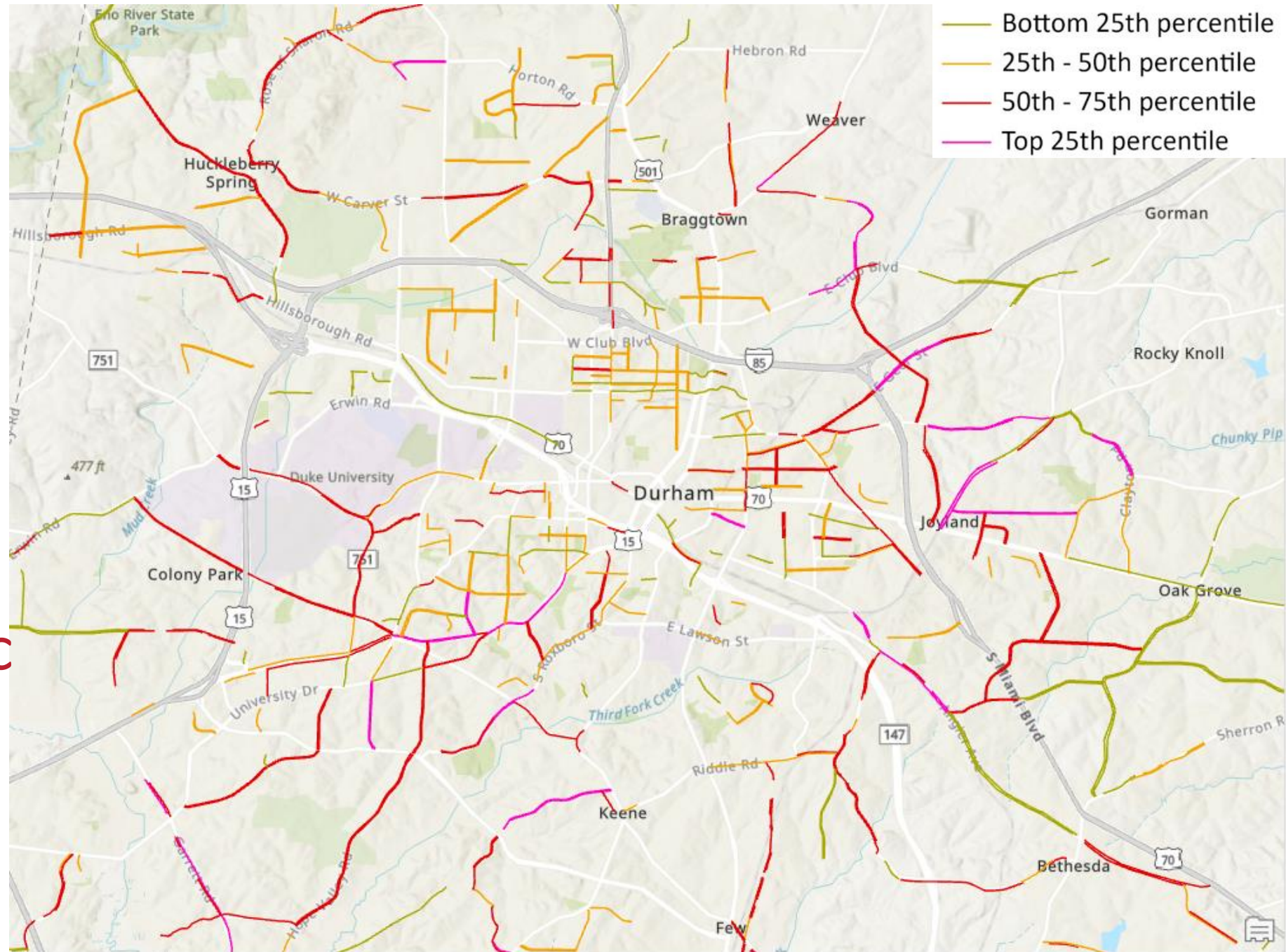
- Bus Stops
- Ridership at Bus Stops



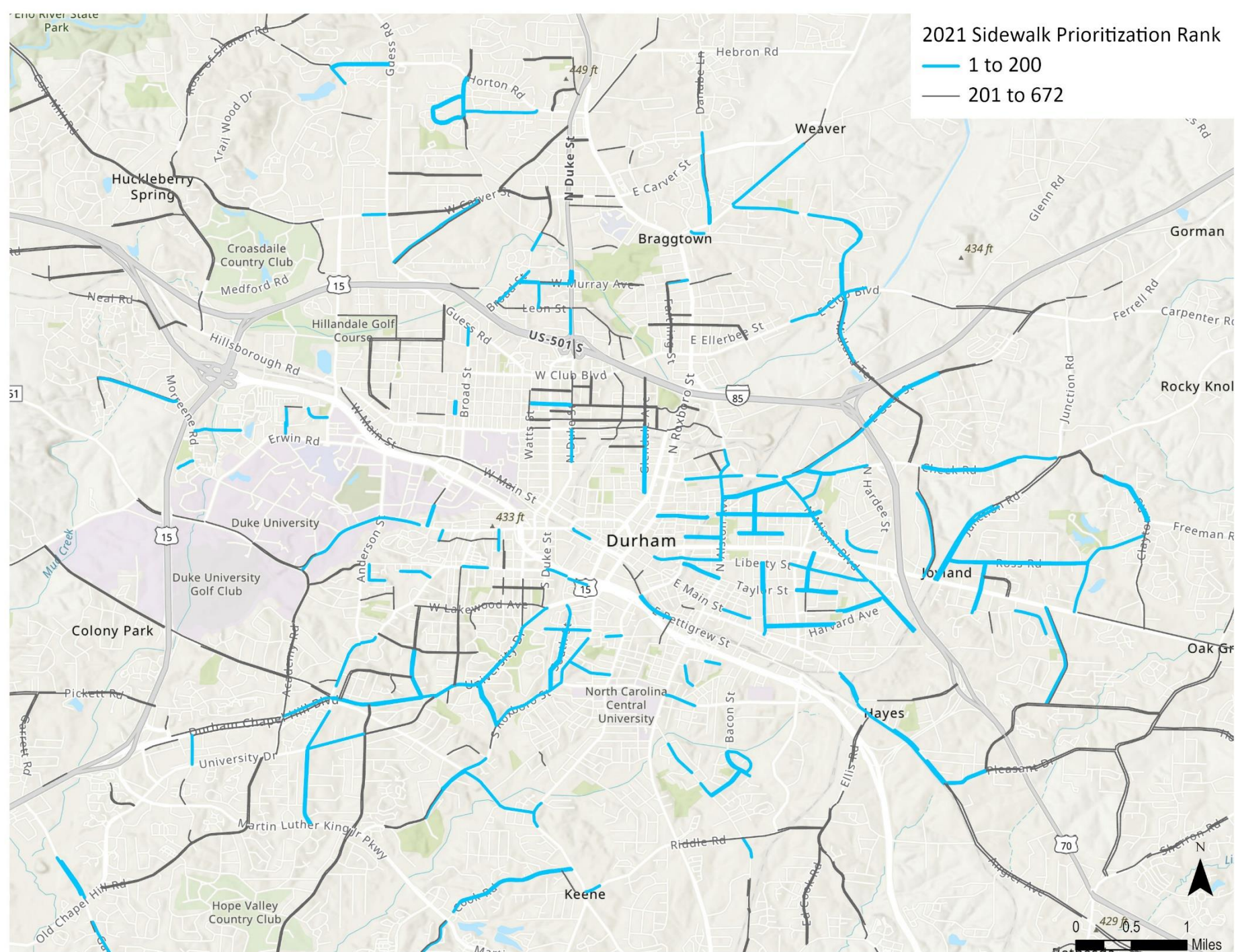
Round 1 Prioritization Factors: SAFETY Score

Variables

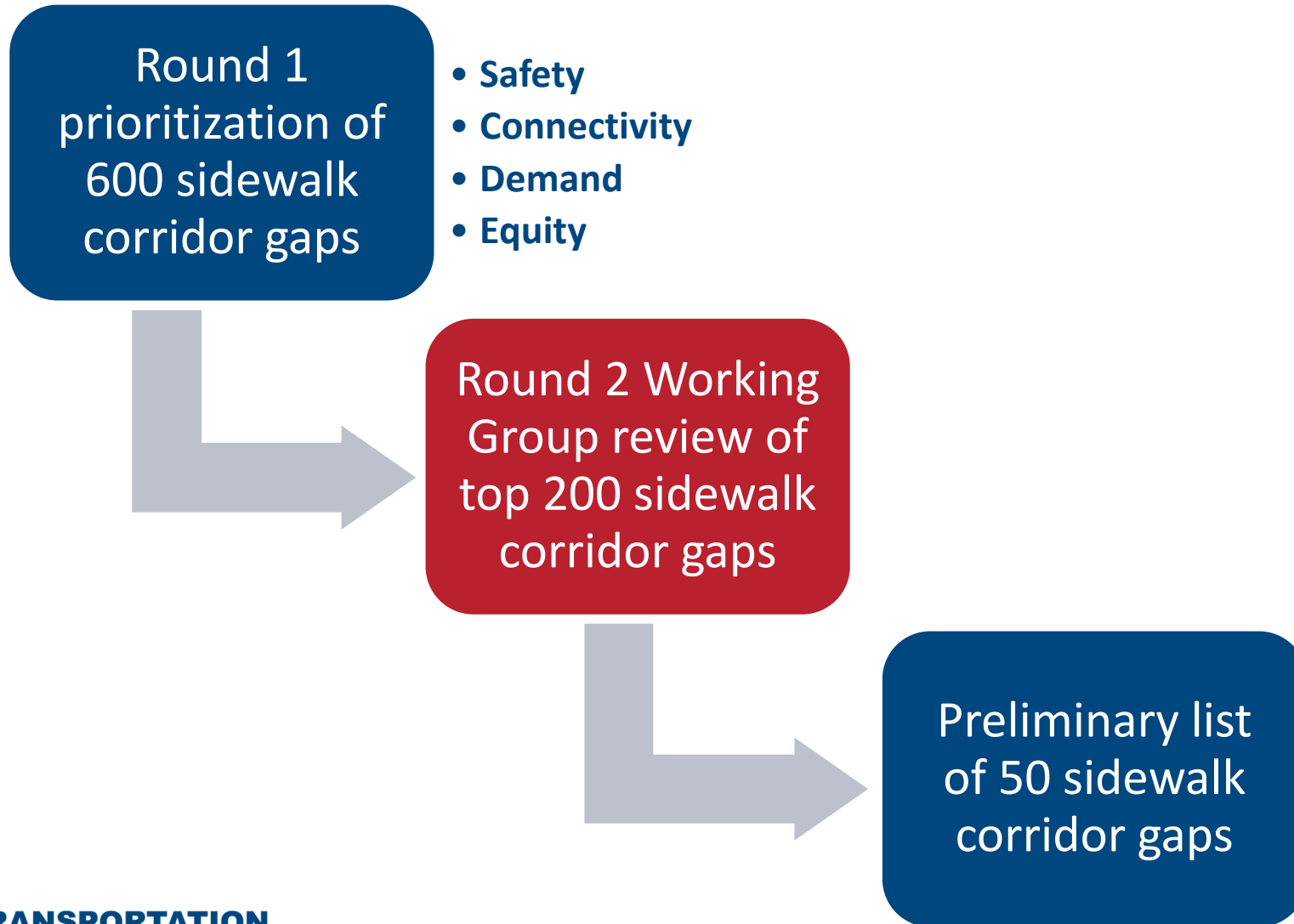
- Ped. Crashes
- Speed Limit
- Vehicle Traffic
- Sidewalk Gap on both sides



Round 1 Prioritization Top 200 Sidewalk Corridor Gaps

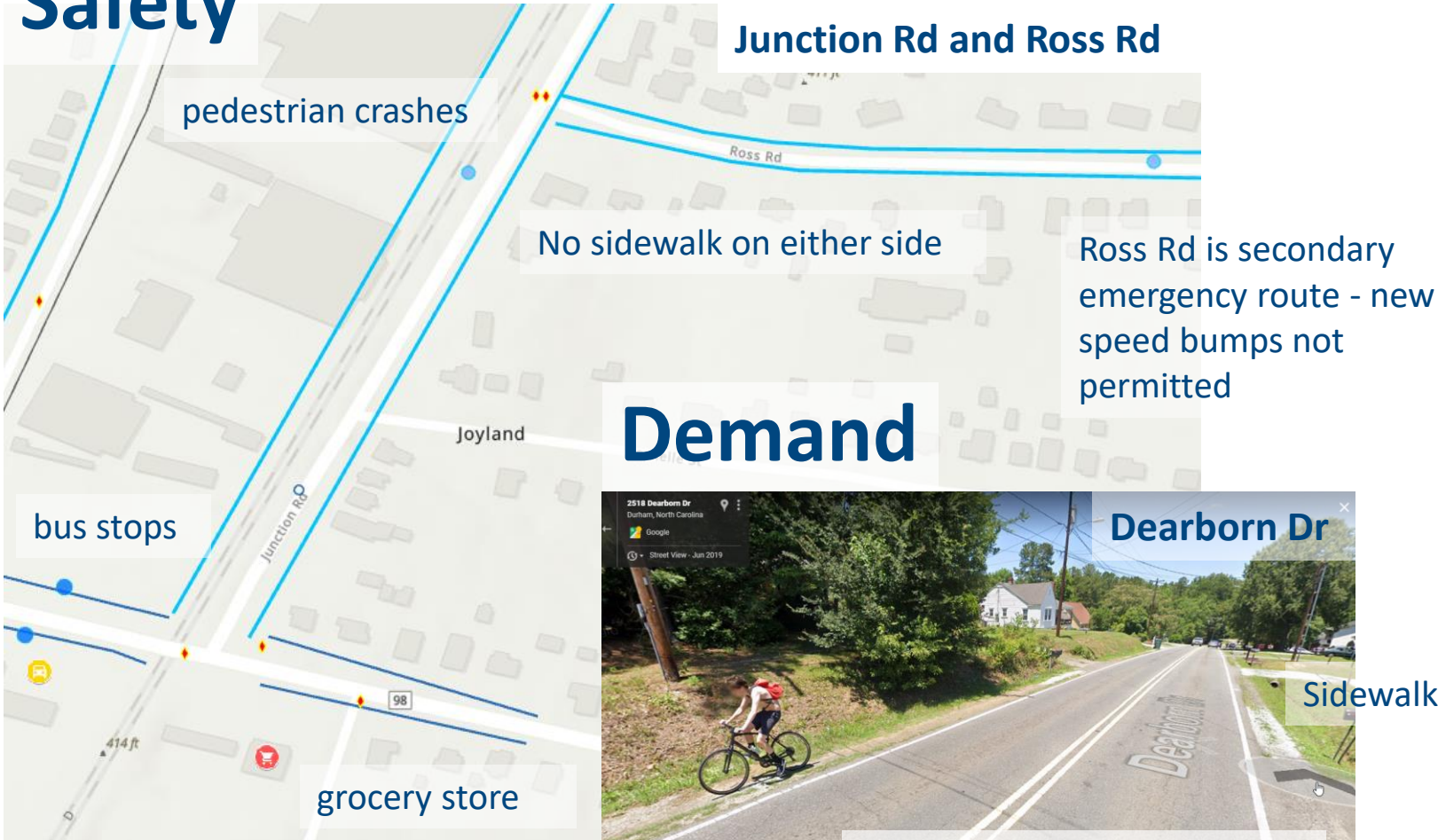


Round 2 Working Group

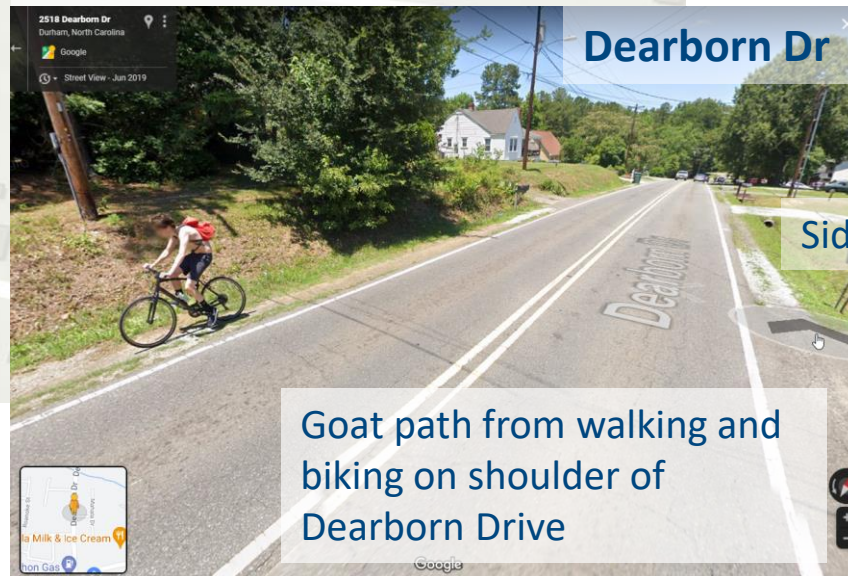


Round 2 Working Group

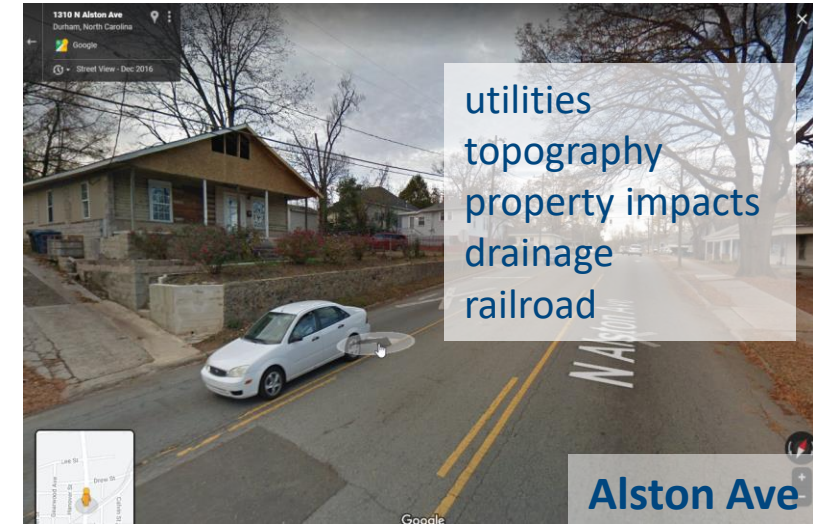
Safety



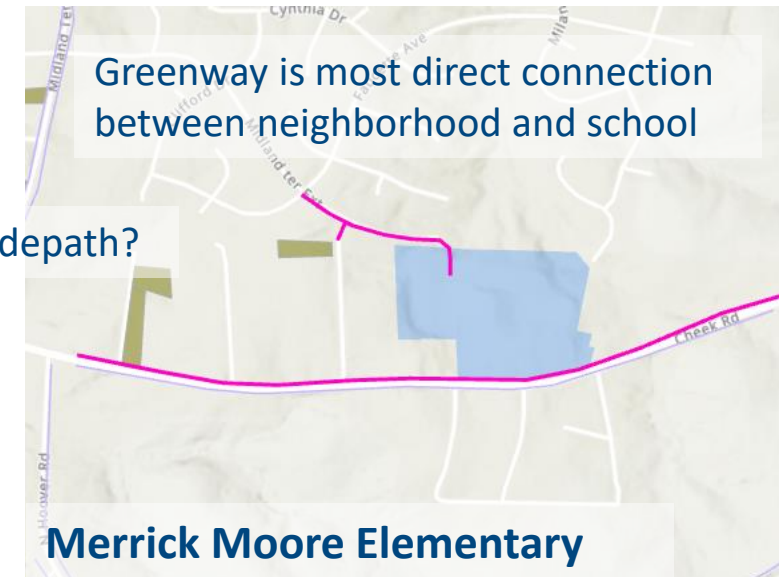
Demand



Constructability



Alternatives



Spring 2021

City Council Prioritization of Green & Equitable Infrastructure Projects

Rank	Category	Avg. Score
1 (tie)	Sidewalks	1.8
1 (tie)	Pedestrian Safety and Accessibility Improvements	1.8
3	Bicycle Facilities	4.3
4	Trails	5
5	Enhanced and Equitable Green Spaces	5.5
6	Waste Reduction and Circular Economy	5.8
7	Energy Generation & Transportation Electrification	6.3
8	Energy Resilience & Retrofits	6.5
9	Dirt Street Paving	7.8



Vision Zero

September 2017

The Herald-Sun

Zero crash fatalities? Durham hopes so



At the corner of Chapel Hill Boulevard and University Drive a "Ghost Bike" is adorned with brightly colored flowers in February 2014. The bike honored Joshua Johnson, of Durham, who was killed Aug. 21, 2013, while riding his scooter. The driver of a van was charged with failure to yield right of way and misdemeanor death by vehicle. CHUCK LIDDY CLIDDY@NEWSOBSERVER.COM



TRANSPORTATION

CITY OF DURHAM

	Traditional approach	Vision Zero
Traffic deaths are..	inevitable	preventable
Humans...	act perfectly	make mistakes
Prevent...	collisions	fatal & severe crashes
Saving lives is...	expensive	inexpensive
The solution lies in...	individual responsibility	systemic change



If hit by a car traveling:

● Fatality ● Person survives collision



20 MPH

5%



30 MPH

45%



40 MPH

85%

Behavior

Outcomes



Durham Vision Zero

Community Readiness Assessment (2021)

Recommendations

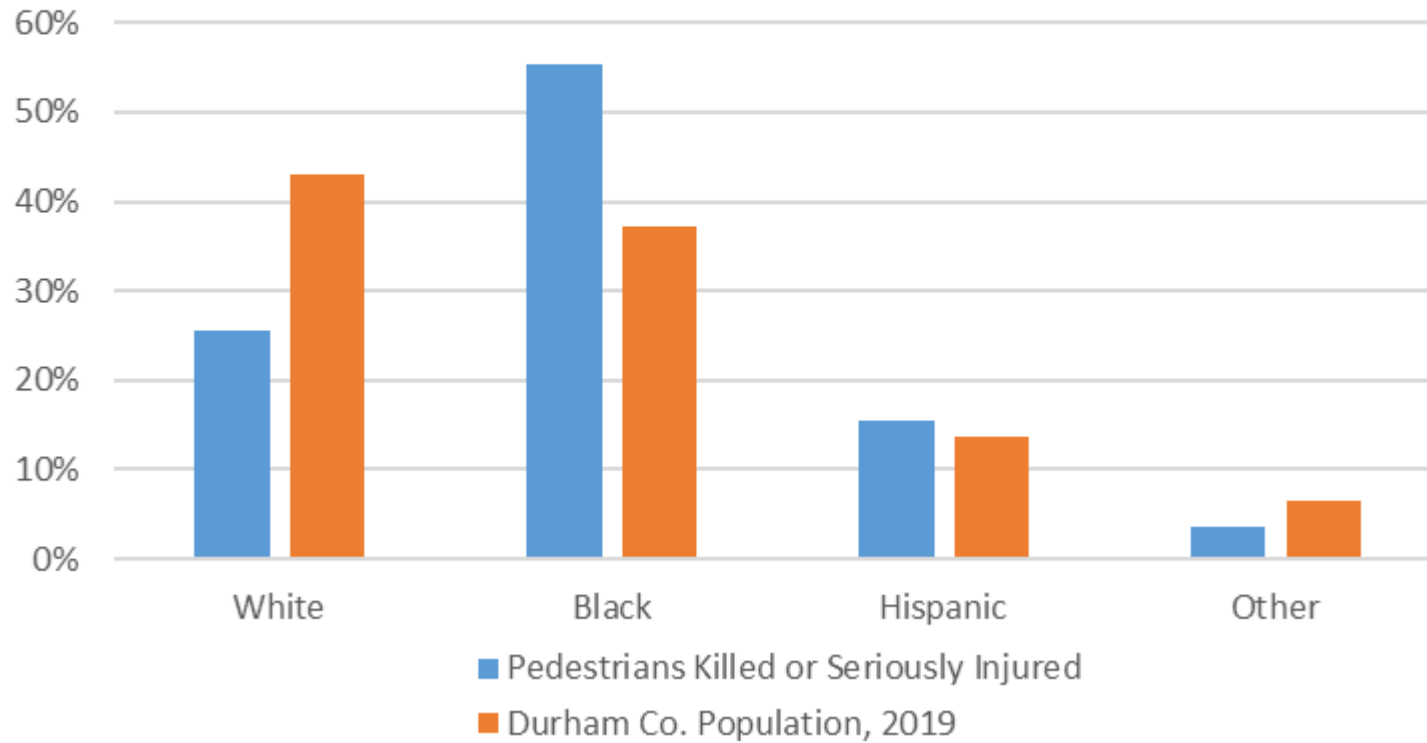
1. Leverage existing community capacity
2. Improve information access
- 3. Center vulnerable users**



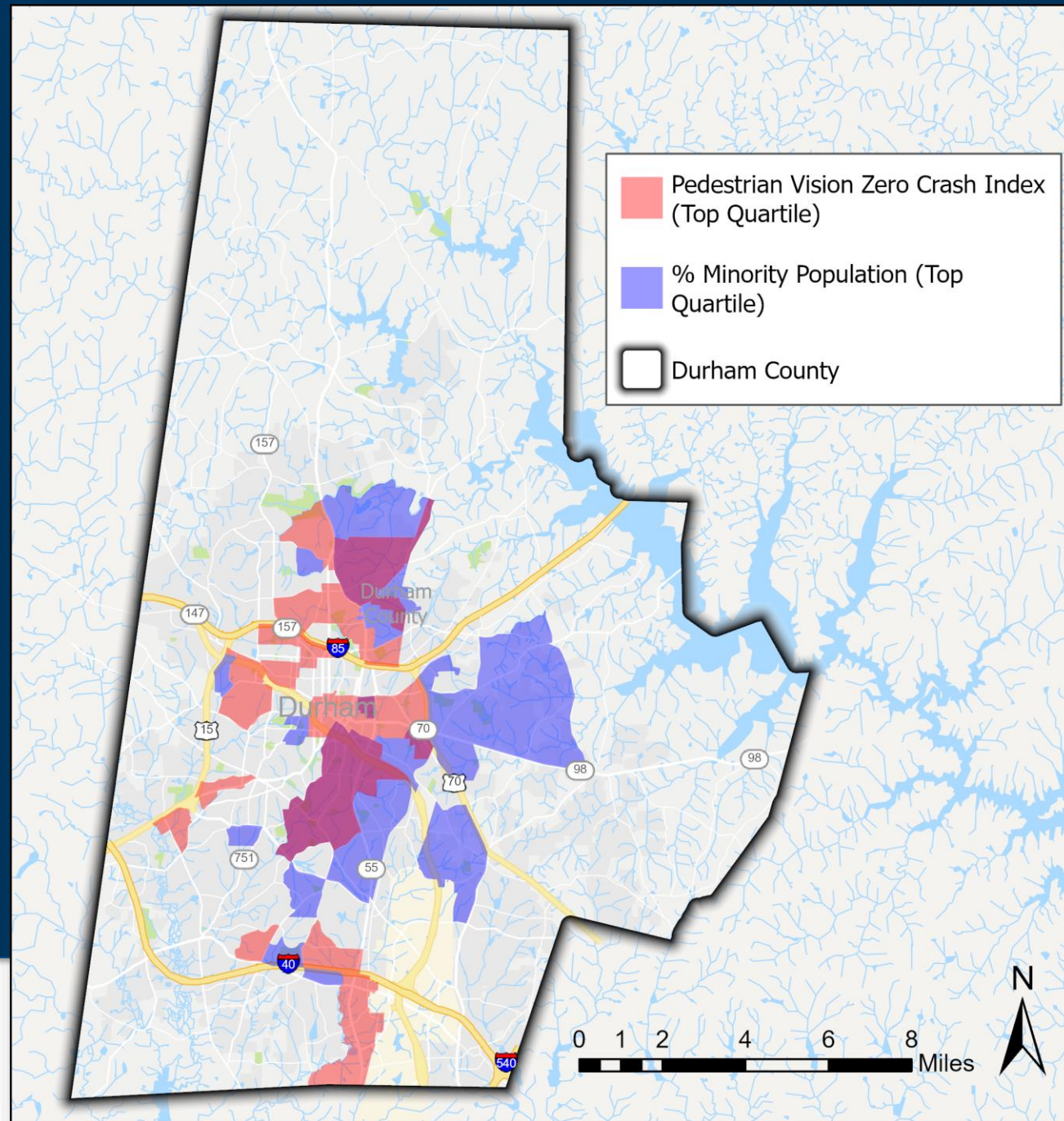
TRANSPORTATION

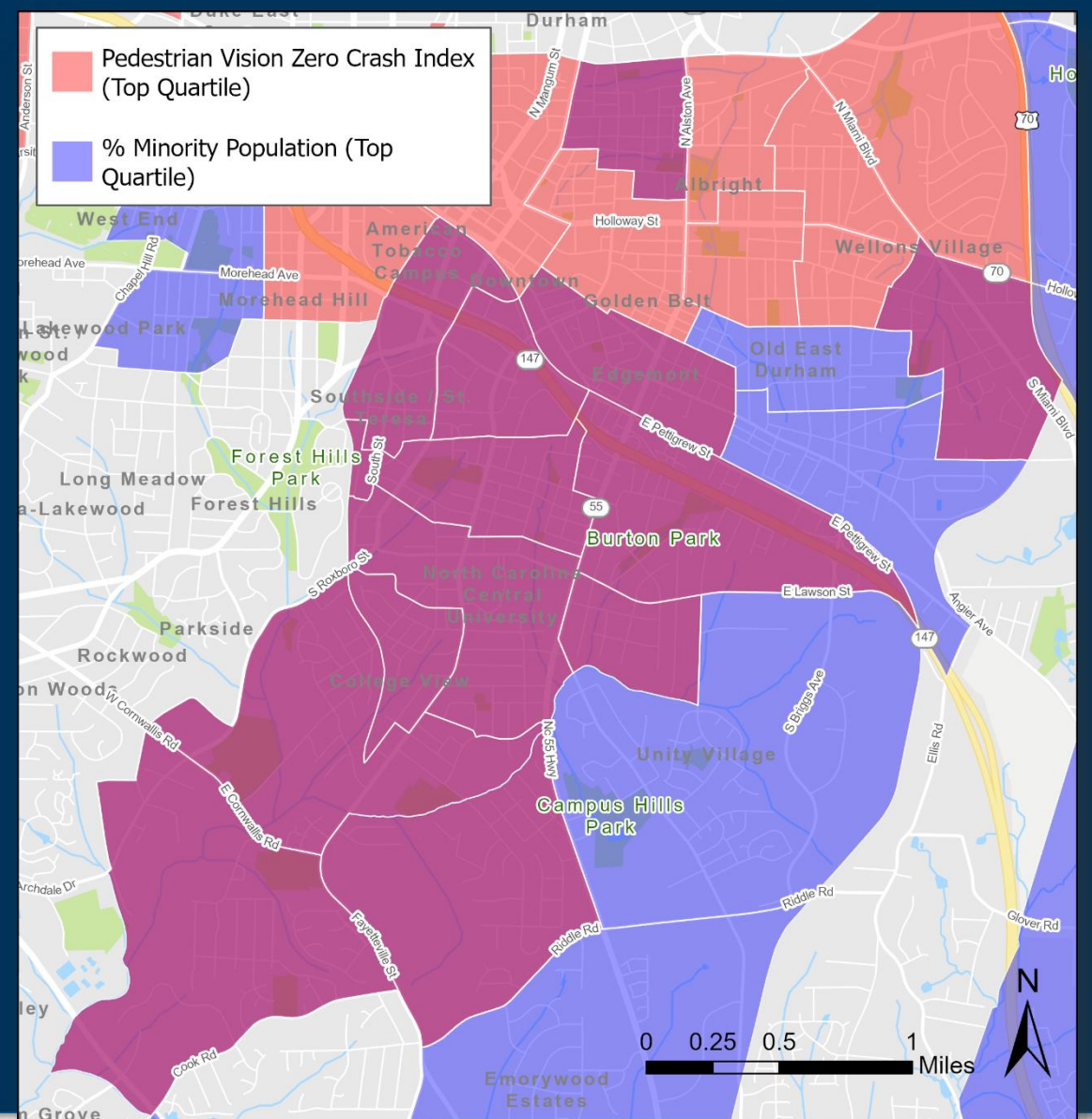
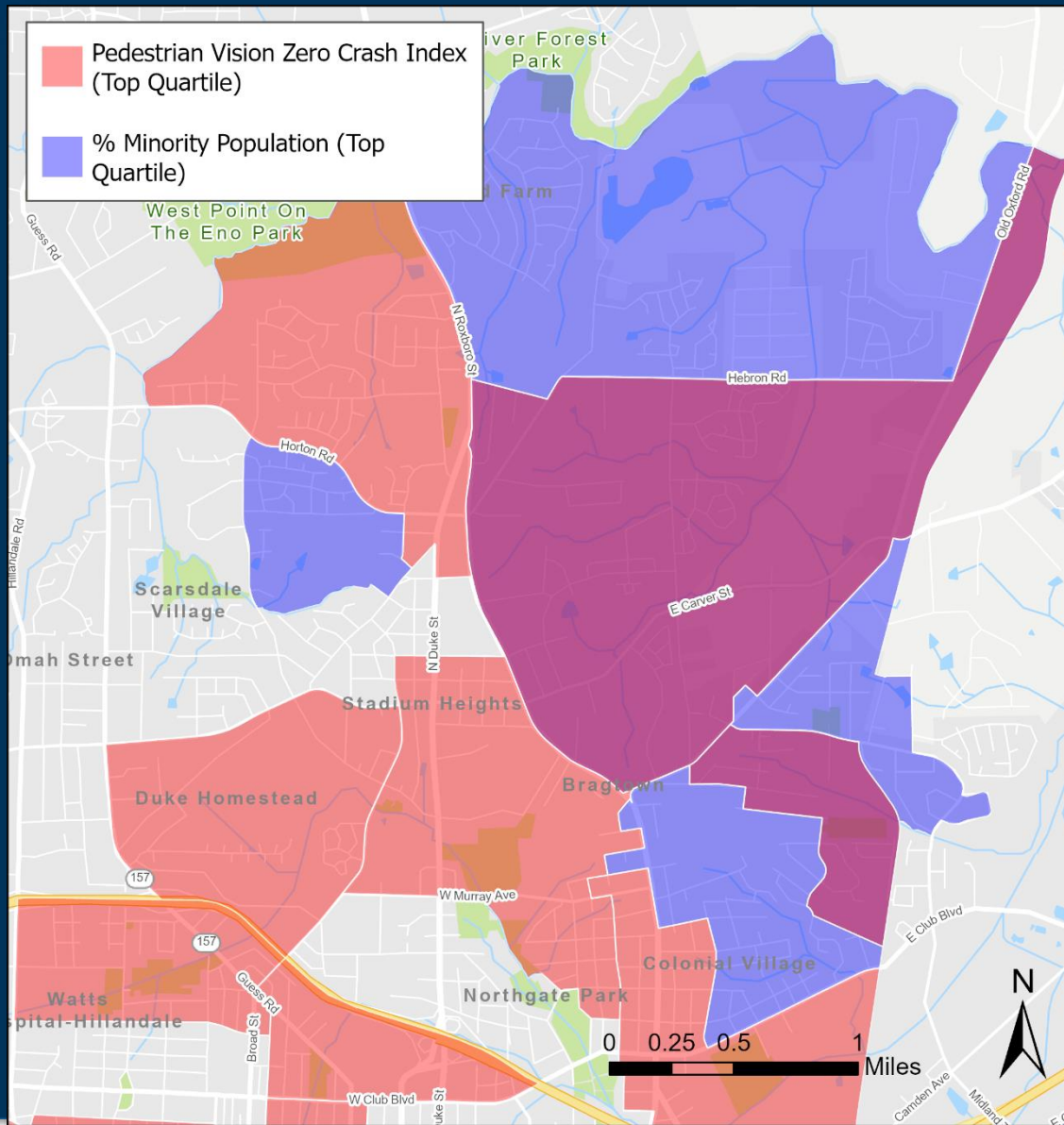
CITY OF DURHAM

Pedestrians Killed or Seriously Injured Durham Co. (2007-2019)



+ Pedestrian Vision Zero Index Minority Population Priority Neighborhoods





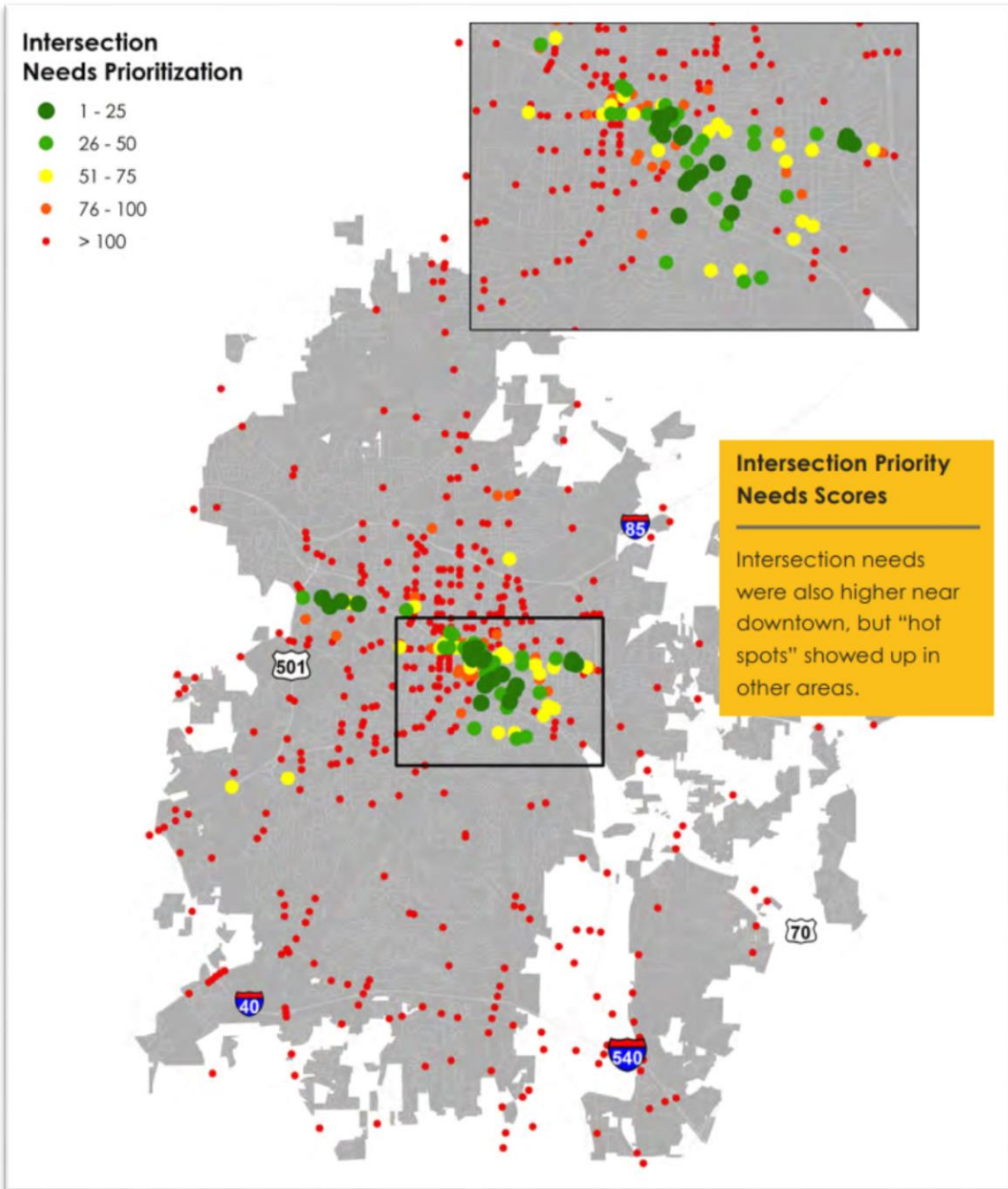
2017 Bike Walk Plan Intersection Prioritization

Prioritization
Scoring

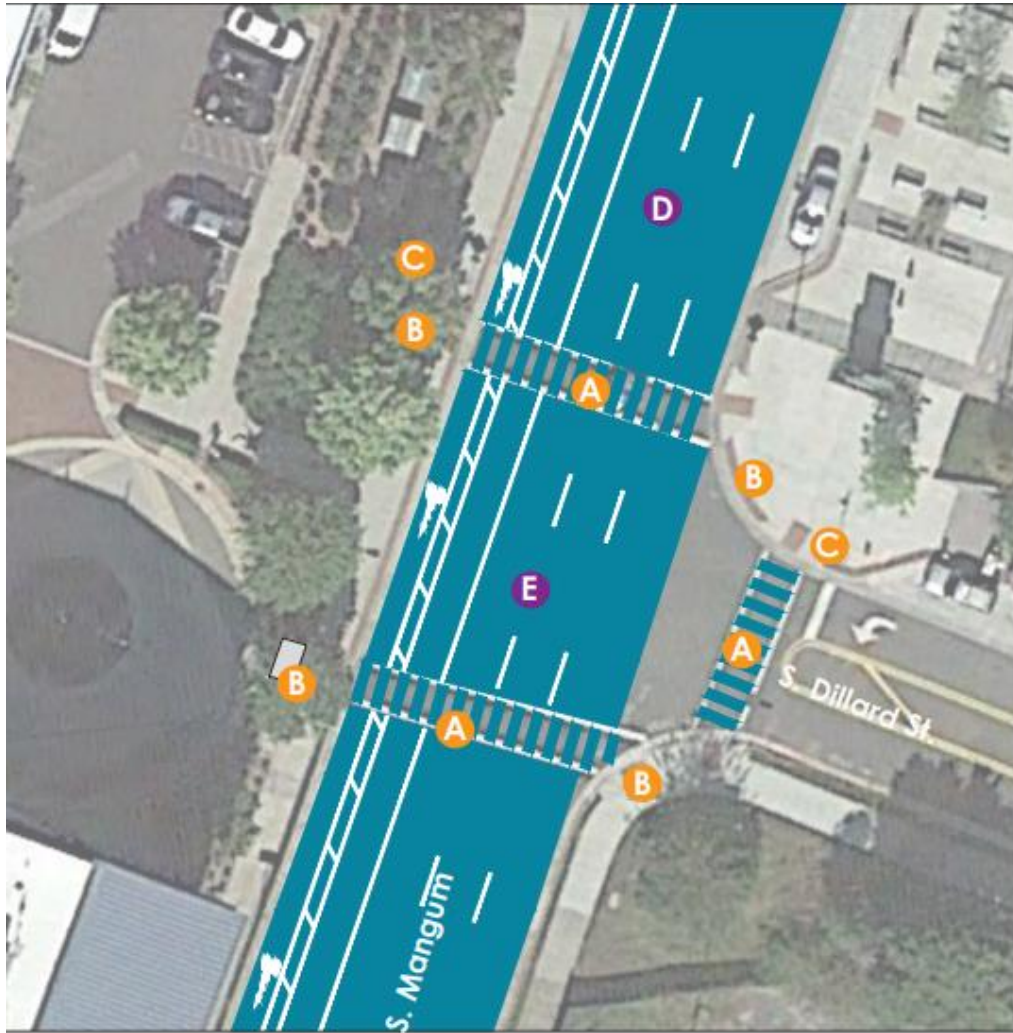
- 480 intersections
- **Included equity consideration**, but limited to poverty

Further
evaluation

Final list of
25 projects



Mangum & Dillard



Phase I

- A. High Visibility Crosswalks
- B. Pedestrian push buttons & overhead pedestrian signal
- C. Add MUTCD W11-2 signage



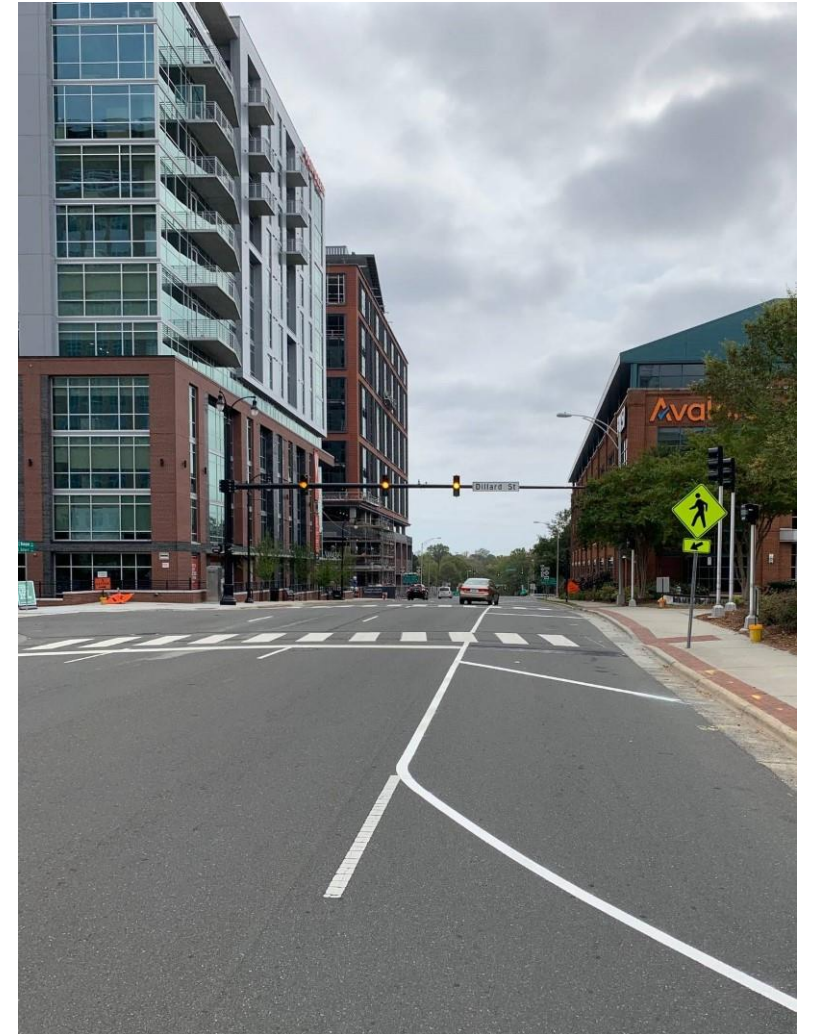
W11-2

Phase II

- D. Rechannel roadway ROW from Four 12+\' travel lanes to Three 11\' travel lanes, 8\' parking lane, 3\' buffer and 5\' bike lane.
- E. Signalize intersection



"Rampant speeding and aggressive motorists makes crossing here at the courthouse hairy. I'm an experienced cyclist and I wouldn't ride a bicycle on this street with its current design."



TRANSPORTATION

CITY OF DURHAM

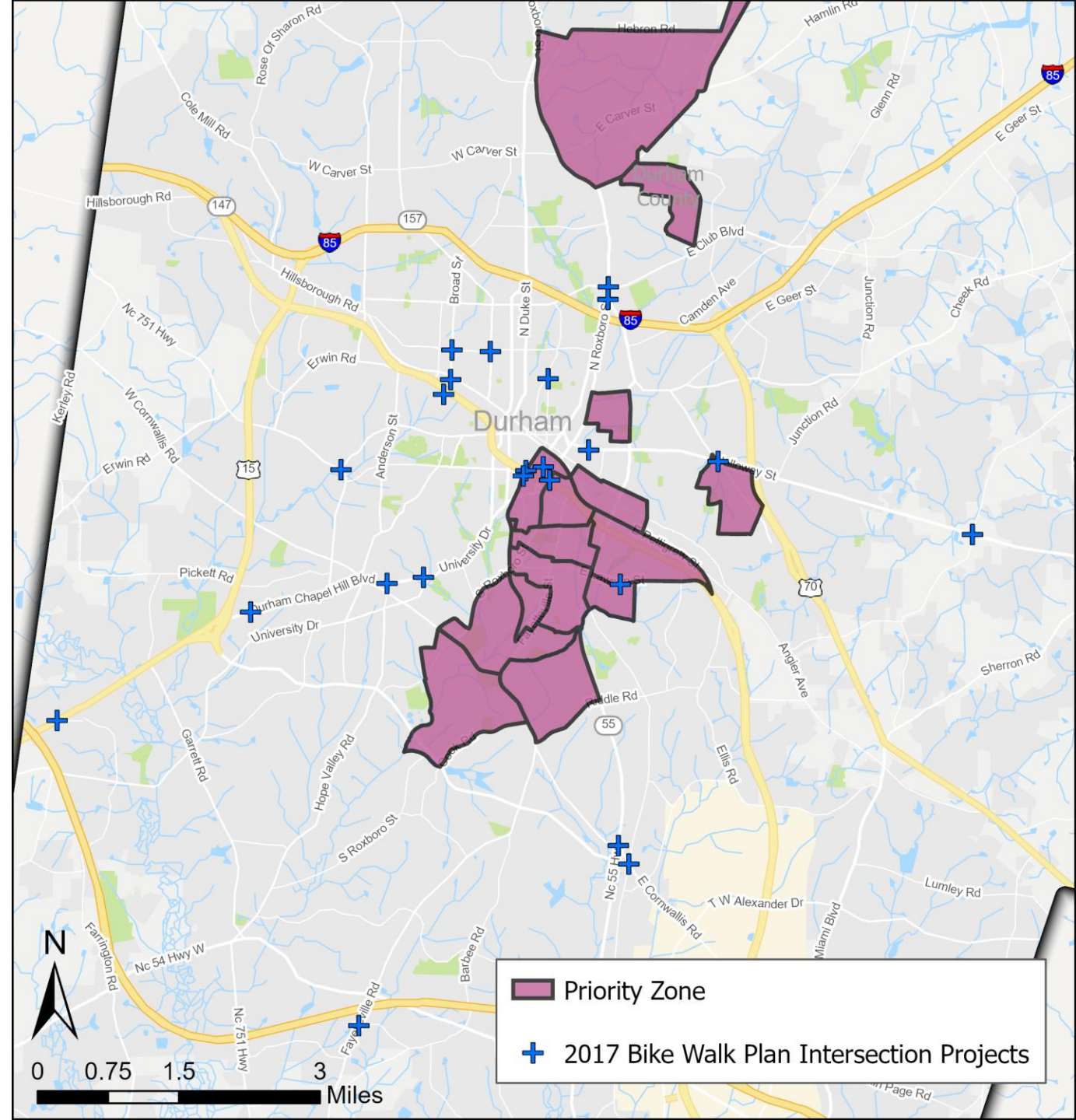
2017 Bike Walk Plan in Context

25 projects

5 in priority neighborhoods

4 in city remain unfunded

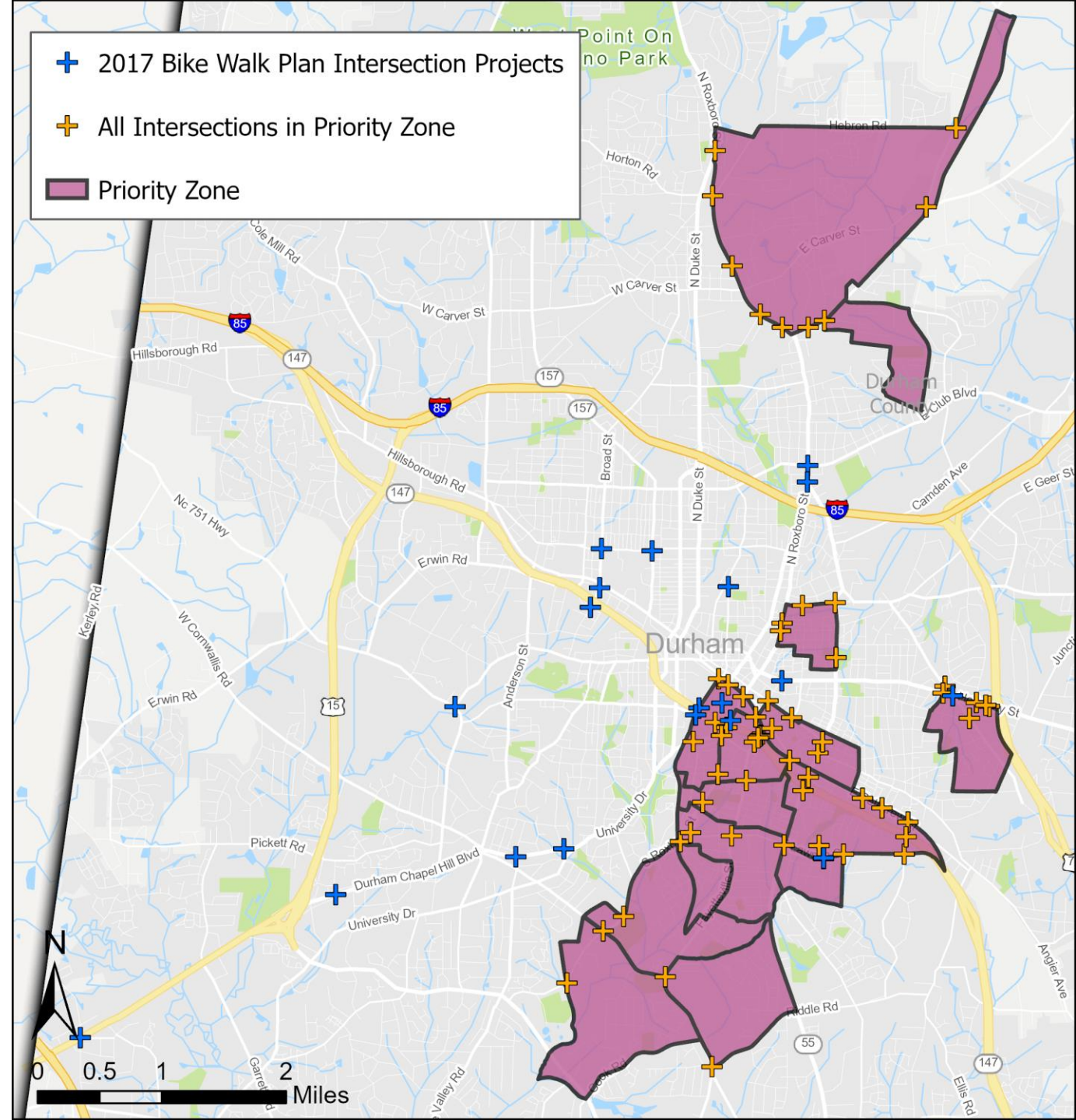
0 unfunded in priority neighborhoods



TRANSPORTATION
CITY OF DURHAM

2017 Bike Walk Plan in Context

65 intersections in
priority neighborhoods
were originally scored




Traffic Calming

5

CALM THE NERVES


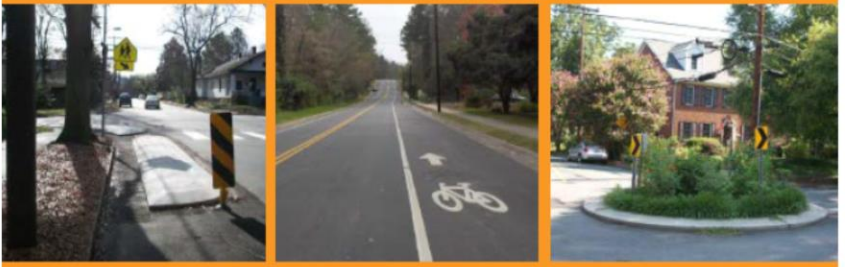
Encourage residents to utilize the City of Durham's newly revised Traffic Calming Guidelines to slow down motor vehicles on roads without sidewalks and to make walking and bicycling on those roads safer and more comfortable in the absence of formal pedestrian and bicycle facilities.



CITY OF DURHAM

TRAFFIC CALMING GUIDELINES

Outlines the general evaluation and decision-making procedure for the City of Durham Department of Transportation to determine priorities among city-maintained streets for traffic calming.



City of Durham
Department of Transportation

101 City Hall Plaza, 4th Floor
Durham, NC 27703
(919) 560-4366

VISION ZERO DURHAM
WALK SAFE. RIDE SAFE. DRIVE SAFE.

Raised Crosswalk

\$2k-20k



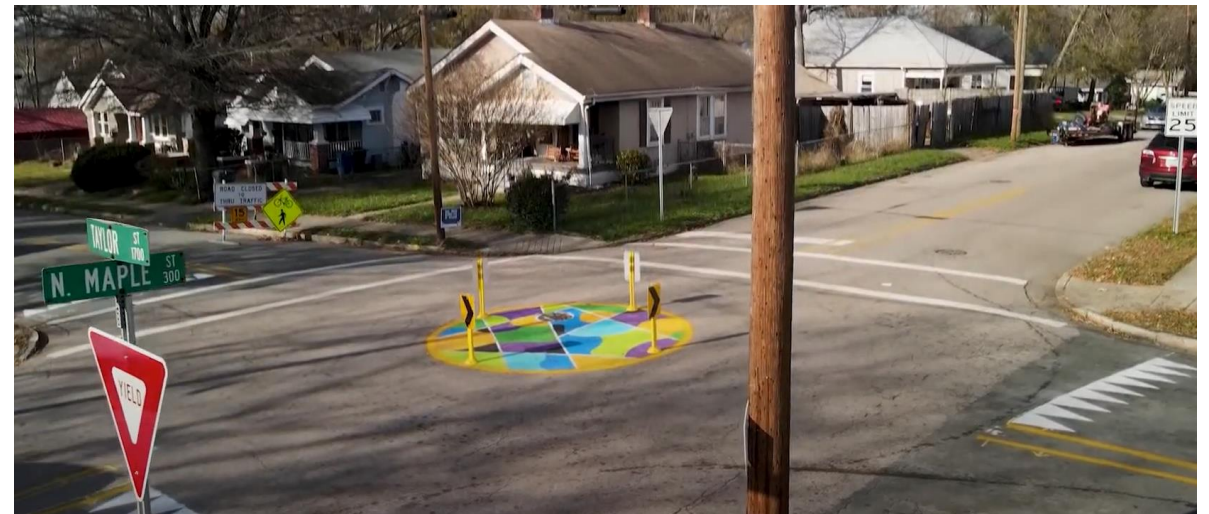
W. Markham Ave. and Onslow St.

Traffic Circles

\$40k-50k



W. Markham Ave. and Glendale Ave.



N. Maple St. and Taylor St.

Next Steps

- **Incorporate feedback** from City Council into prioritization method
- **Apply updated method** to identify priority projects:
 - Sidewalks
 - Intersections
 - Traffic calming
 - Bicycle facilities
- **Engage with community** to validate priority projects
- **Pursue funding** sources to deliver priority projects



Feedback & Questions



TRANSPORTATION
CITY OF DURHAM