



# Presentation to Steering Committee

TOWN OF MATTHEWS | DOWNTOWN MOBILITY PLAN  
MAY 30, 2019

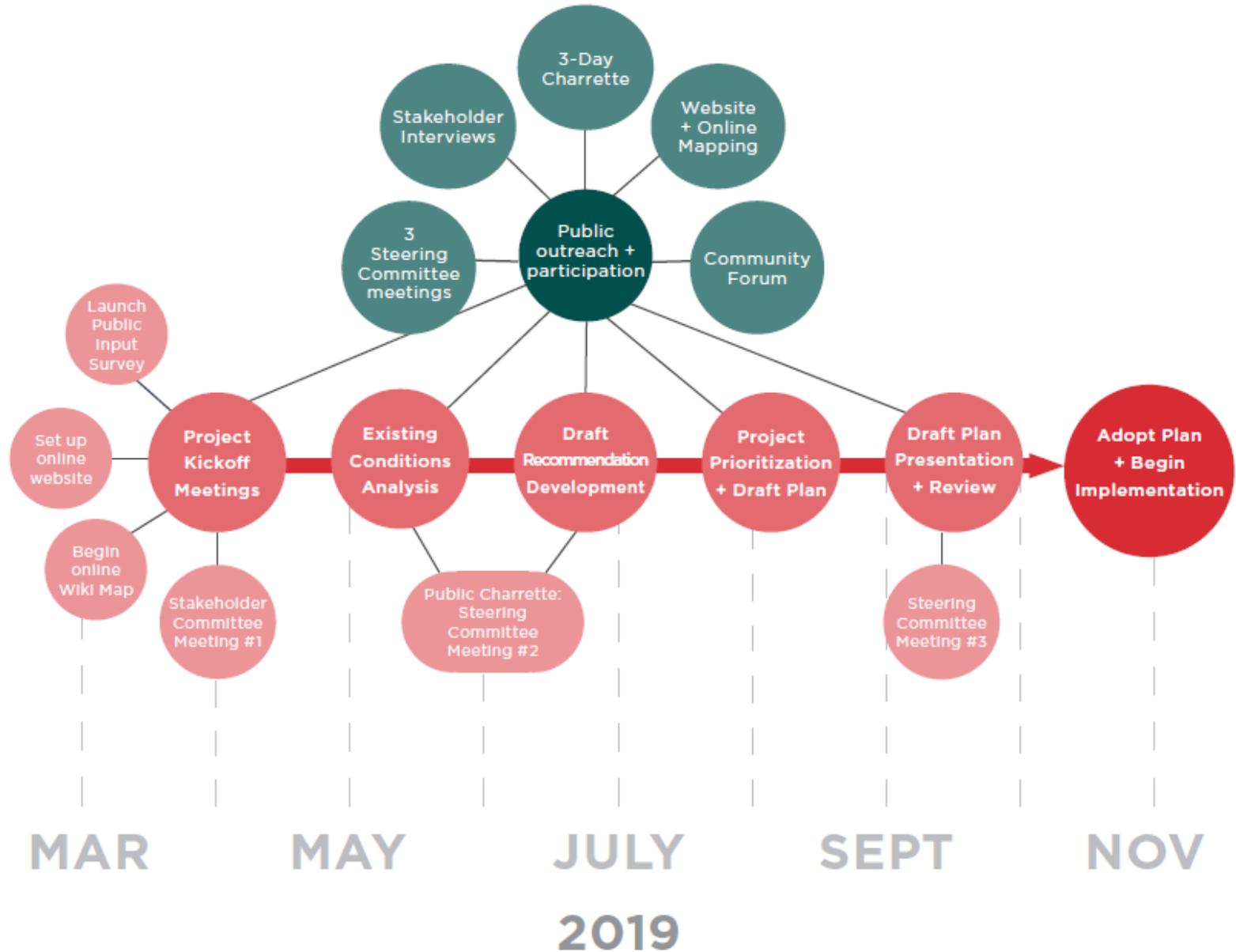


**Stantec**

# Tonight's Agenda

- What We've Learned
- What We've Heard
- Preliminary Ideas/Concepts
- Discussion/Priorities

# Project Overview

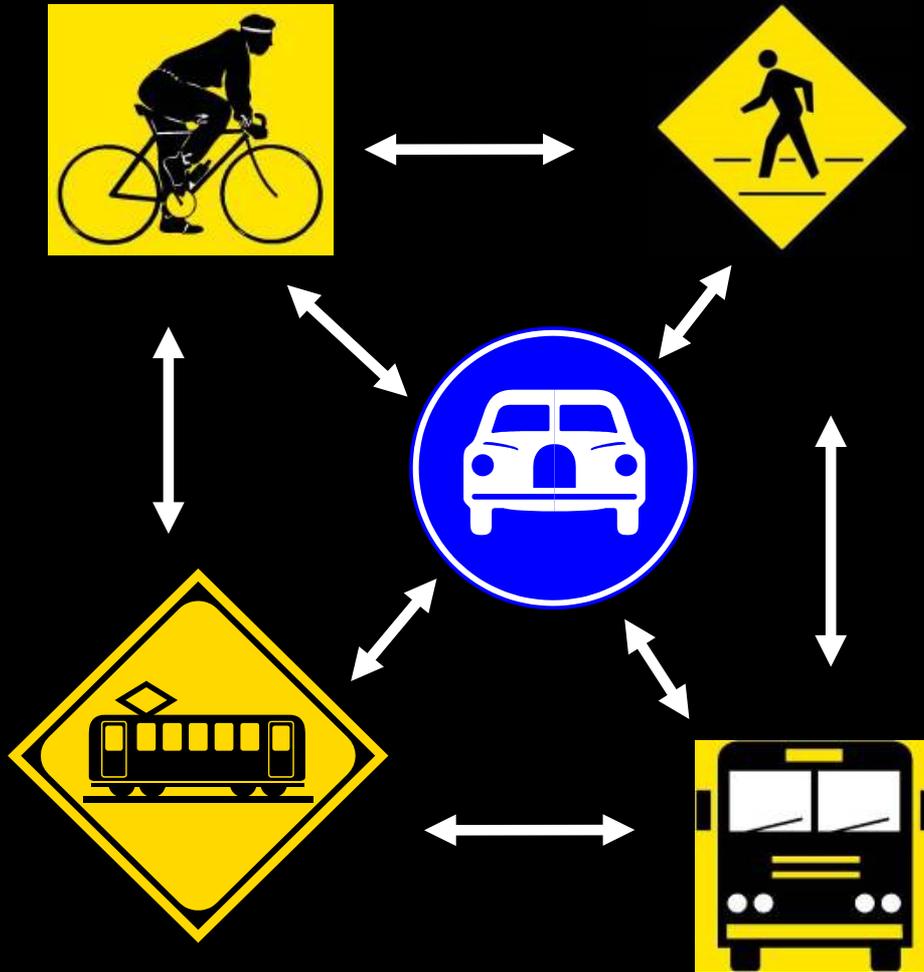


# Project Intent

- Evaluate pedestrian and bicycle infrastructure and how it is connected to parking areas, downtown destinations and surrounding neighborhoods.
- Evaluate the current and future multimodal needs of Downtown Matthews, including walking, biking, driving and transit.
- Evaluation of the current parking capacity and an analysis of current and future parking needs downtown.
- Explore how better connections can be made to surrounding residential neighborhoods and retirement communities located near Downtown Matthews, and use those demographics when planning public involvement.



Goal: move **PEOPLE**, not just cars



# Mobility/Access Framework

## MOBILITY IS...



WALKABILITY  
+ PEDESTRIAN  
ACCESS



MOTOR  
VEHICLE  
ACCESS



RELIABLE  
TRANSIT



BIKEABLE  
STREETS +  
CORRIDORS



CAR-FREE  
CORRIDORS  
(GREENWAYS)



NEW  
MOBILITY  
OPTIONS

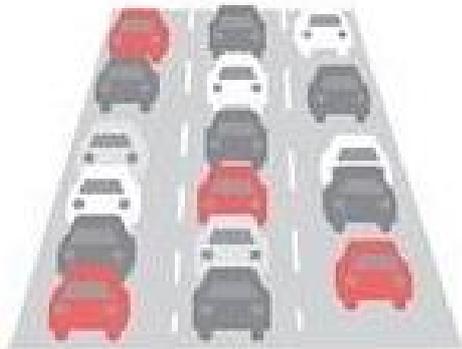


PARKING  
OPTIONS

# Complete Streets 2.0 in Practice

## Design for **Person-capacity**

A growing city,  
a fixed right-of-way



**Cars:** 28 people / city block



**Buses:** 225 people / city block



**Walking:** 1000 people / city block

*Source: Portland Bureau of  
Transportation*

# Person Capacity: Matthews



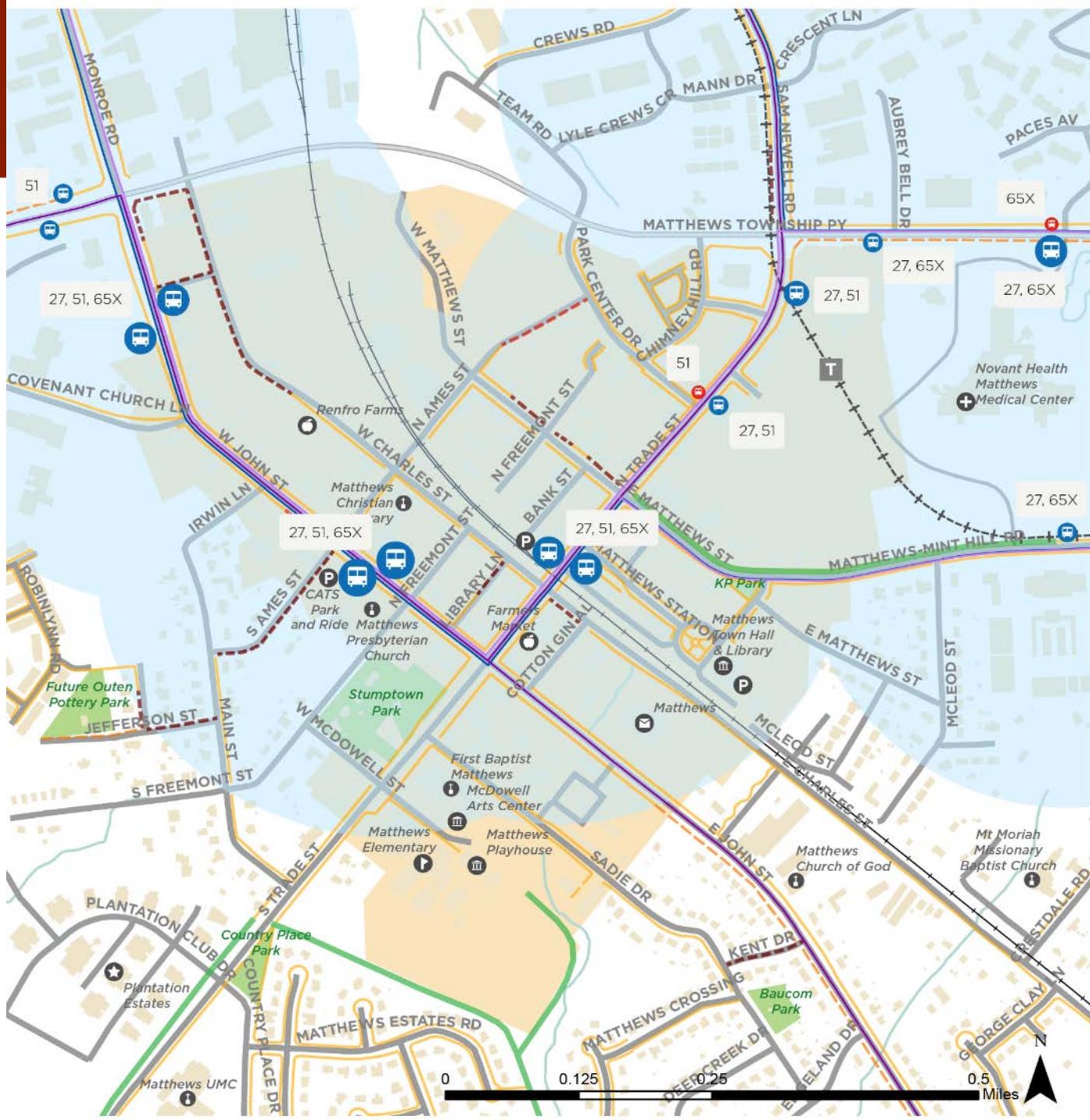


# Mobility Today

Town of  
**Matthews**<sup>TM</sup>  
North Carolina



# ACCESS TO TRANSIT



## Average Daily Riders



## Pedestrian Facilities



## Future Silver Line- Proposed





# CRASH ANALYSIS



## Bike & Ped Crashes (2014-2018)

### Pedestrian-Involved Crash

-  No/Possible Injury
-  Evident/Disabling Injury
-  Fatality

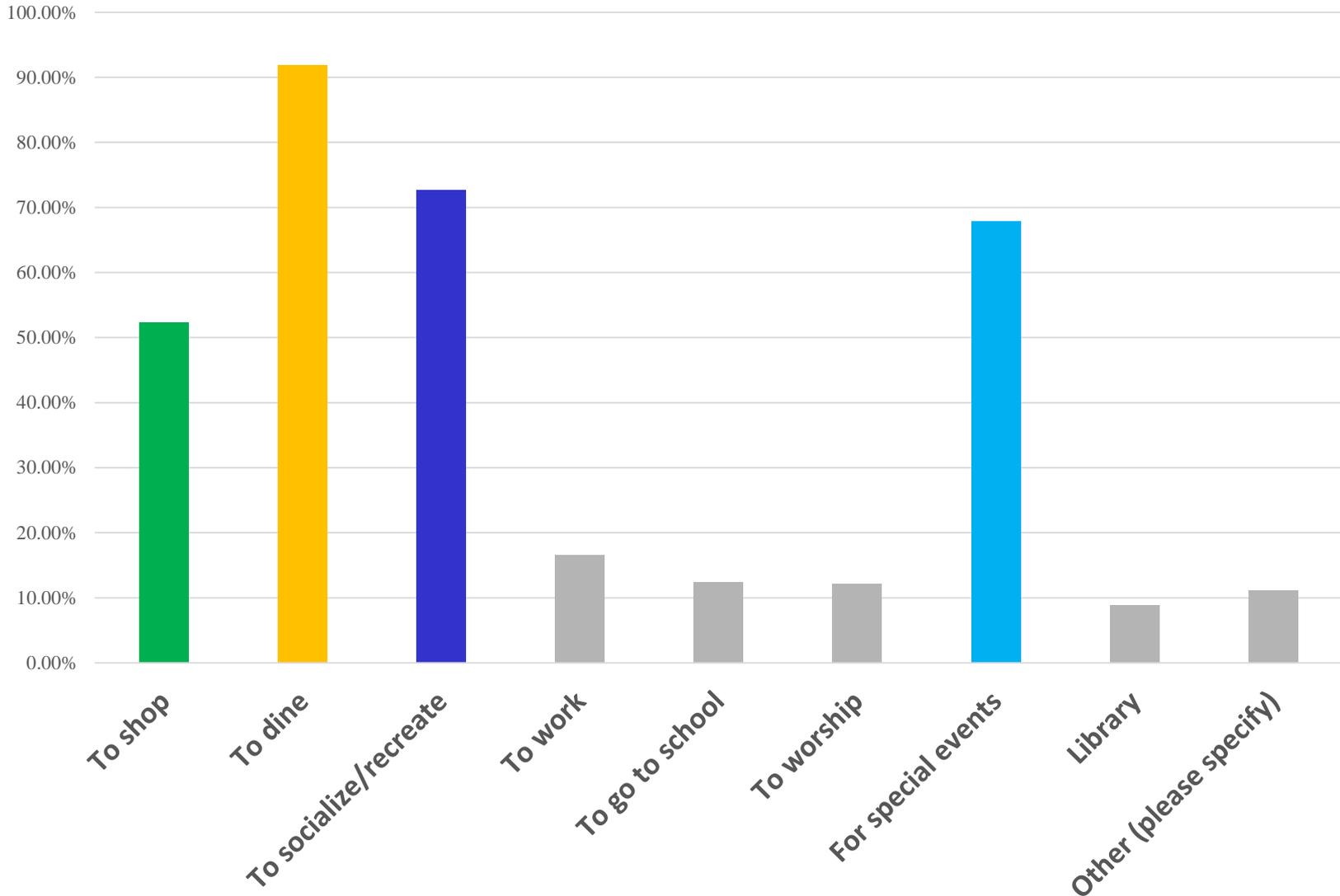
### Bicyclist-Involved Crash

-  No/Possible Injury
-  Evident/Disabling Injury
-  Fatality

3 Pedestrian &  
3 Bike Crashes  
within Study  
Area

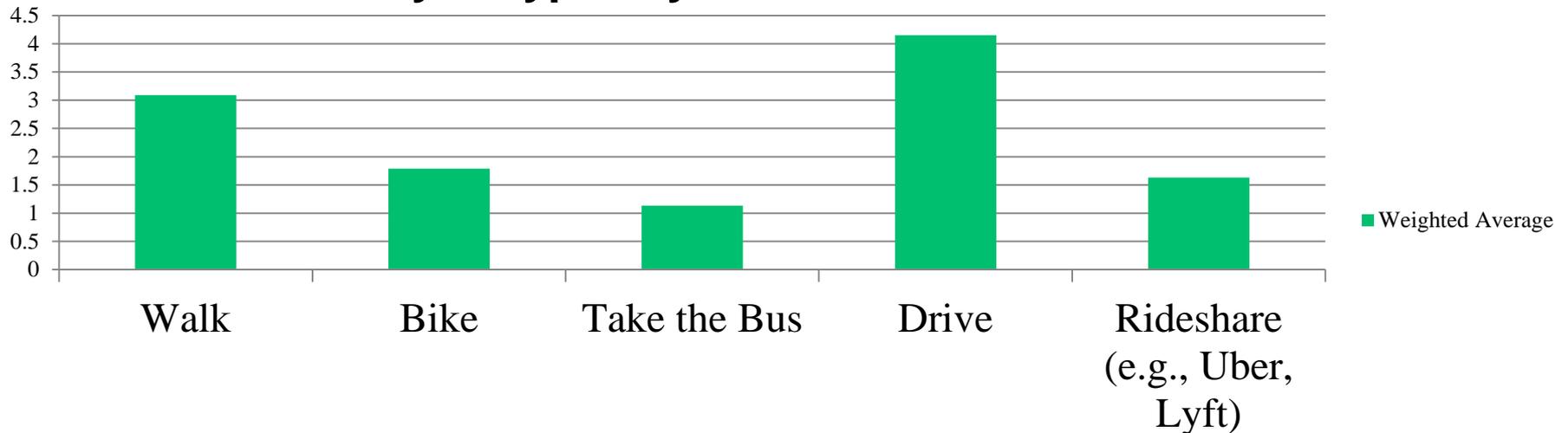
# Public Input Summary: Survey

For what do you come to Downtown Matthews?

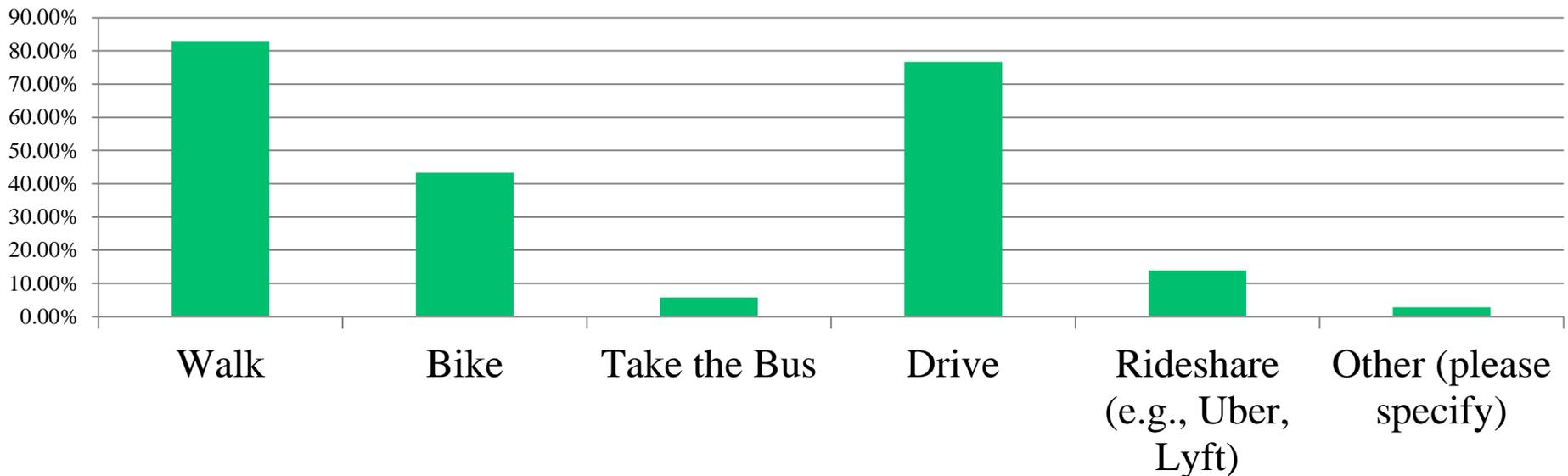


# Public Input Summary: Survey

## How do you typically move to/from/around Downtown?



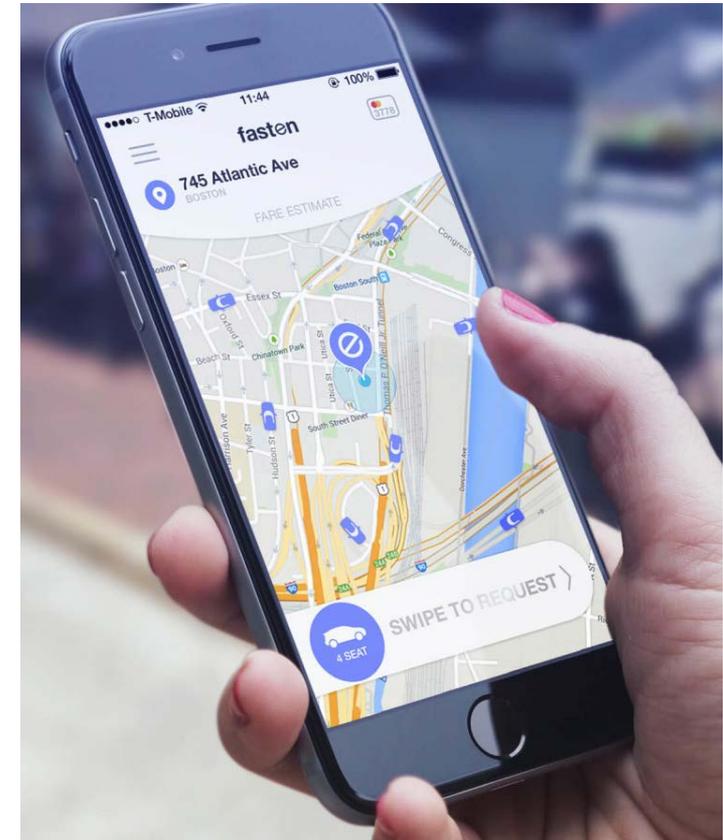
## How do you want to move to/from and around Downtown?



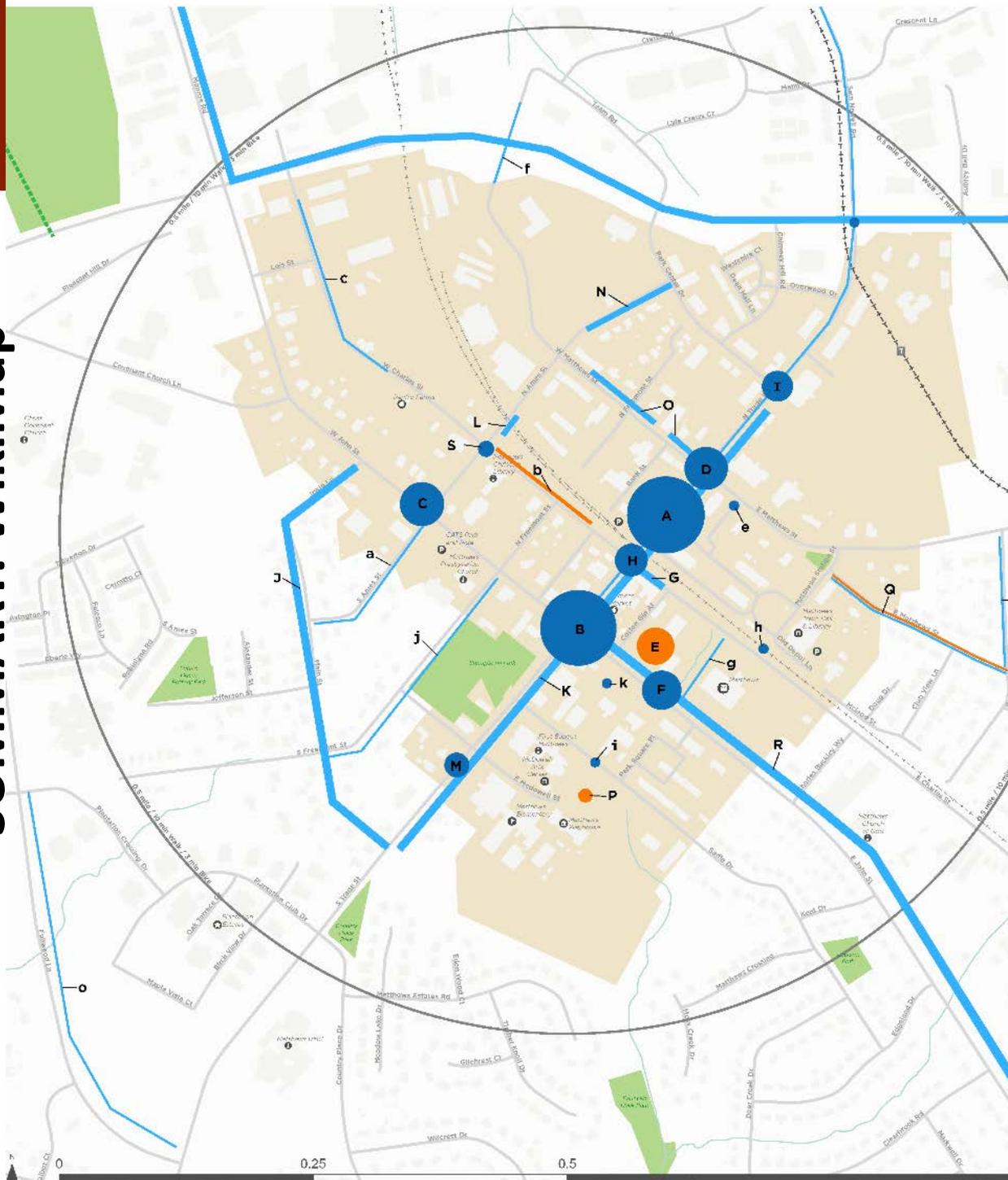
# Mobility Plan Input Summary To Date

27% of respondents use a **Rideshare** app to get to Downtown at least 1x month

- Need a safe/sober ride home (58%)
- Event downtown (13%)
- Avoid parking (14%)



# PUBLIC INPUT SUMMARY: WikiMap



-  Intersection Improvement Needed
-  Route Improvement Needed
-  Parking Improvement Needed

## Top Mentions

### Corridors:

- Trade St (ped/vehicle/pa
- S. John St (bike/ped)
- Charles St (sidewalks)
- Main St (sidewalks/traffic calming)

### Top Intersections:

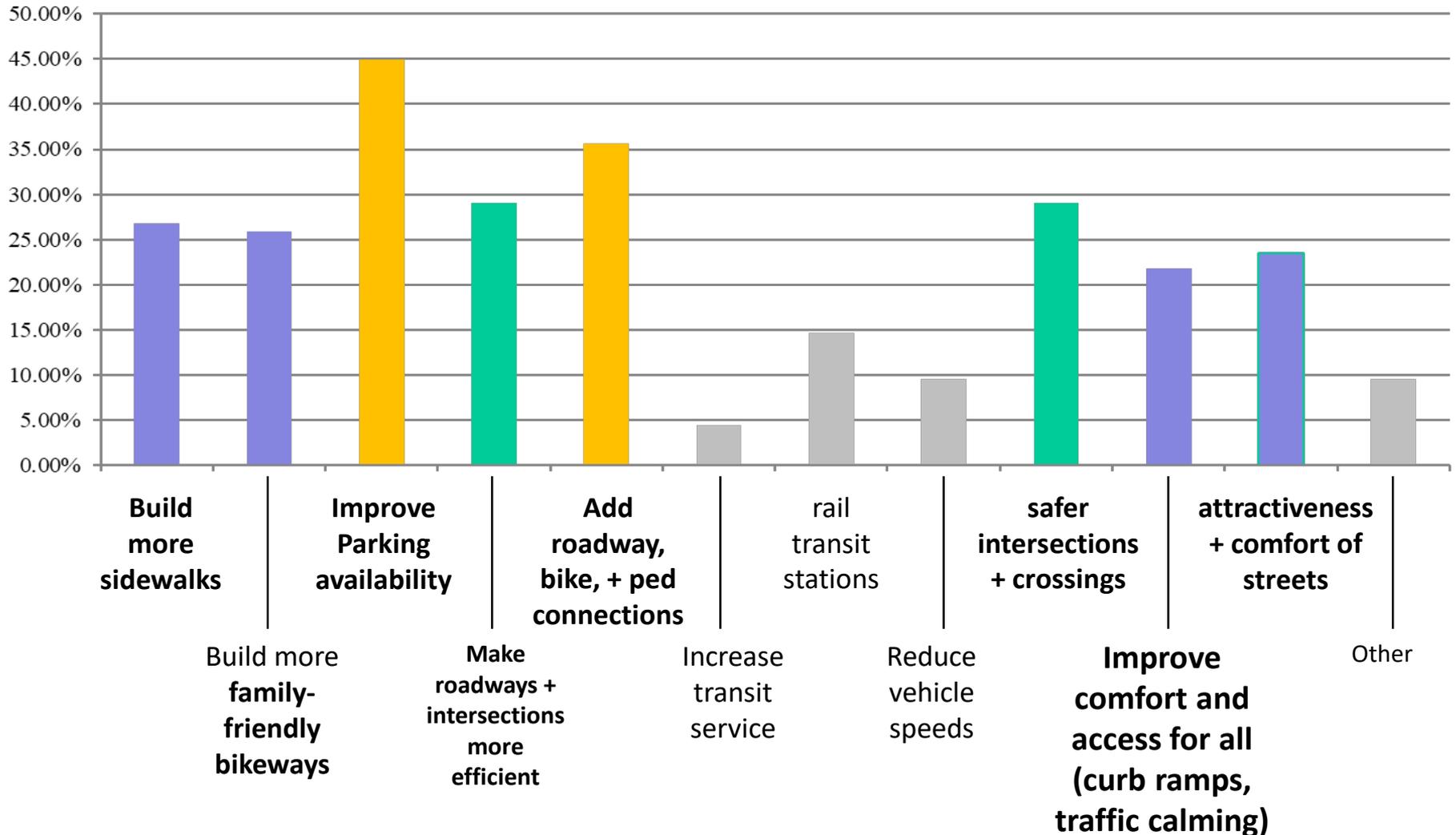
- Trade St + Matthews Station Rd
- Trade St + John St
- Trade St + Matthews St
- John St (various)

### Parking:

- Cotton Gin Alley/Farmer's Market
- School/Playhouse
- Charles St

# Public Input Summary: Survey

If you could do something to improve getting to and around Downtown Matthews, what would you do?



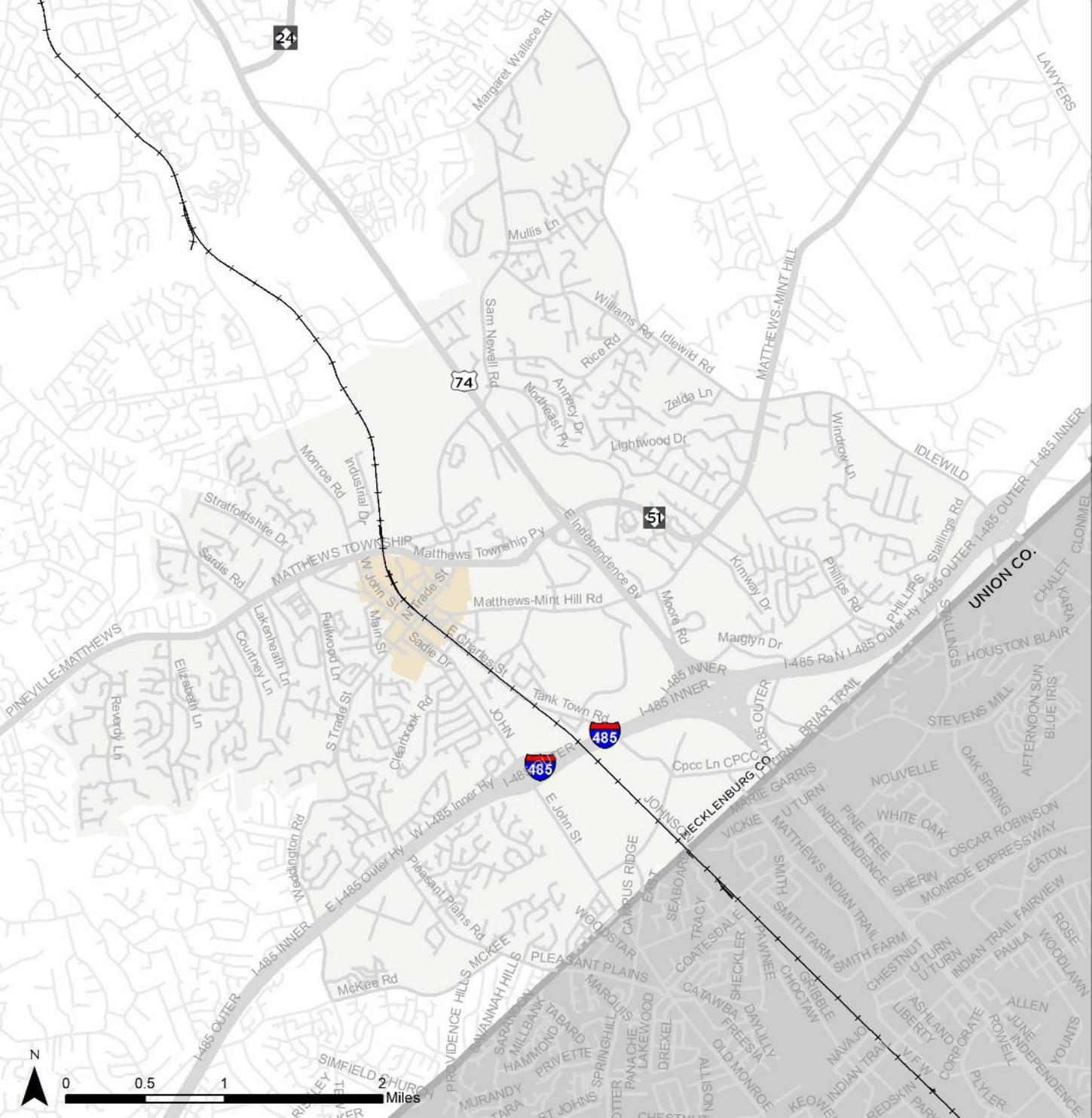


# In-progress Ideas



# Town of Matthews

North Carolina



**Roadway Projects By Status**

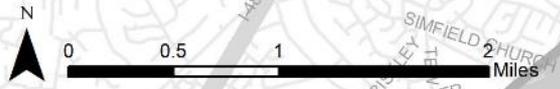
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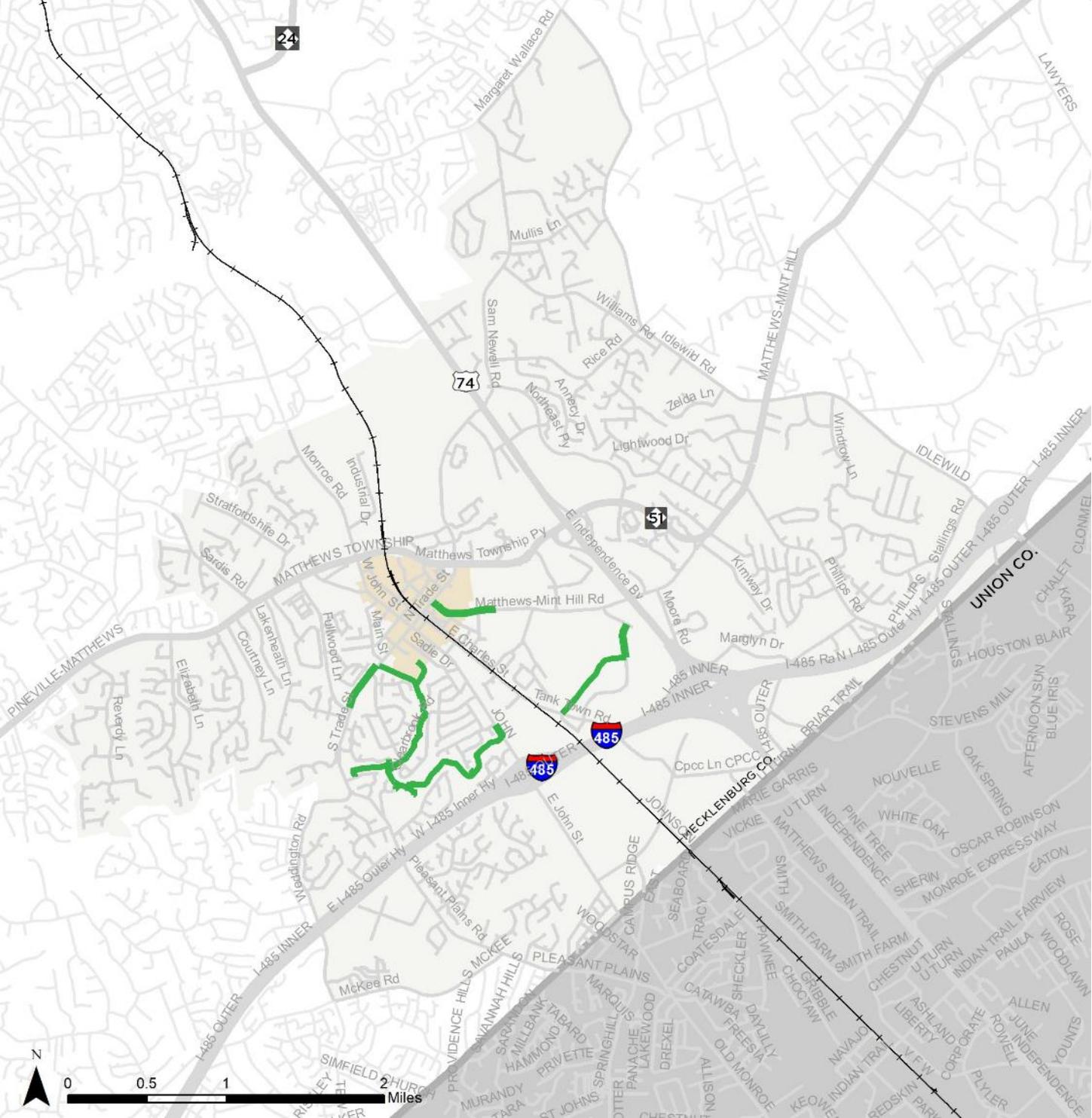
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- Multi-Use Path & Greenways
- Stream
- + Railroad Tracks

- Park
- + Downtown Matthews Mobility Plan Study Area
- Matthews Town Limits
- Mecklenburg County
- Union County



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North Carolina



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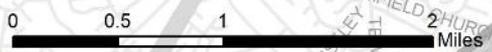
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### Map Features Legend

- Street
- Multi-Use Path & Greenways
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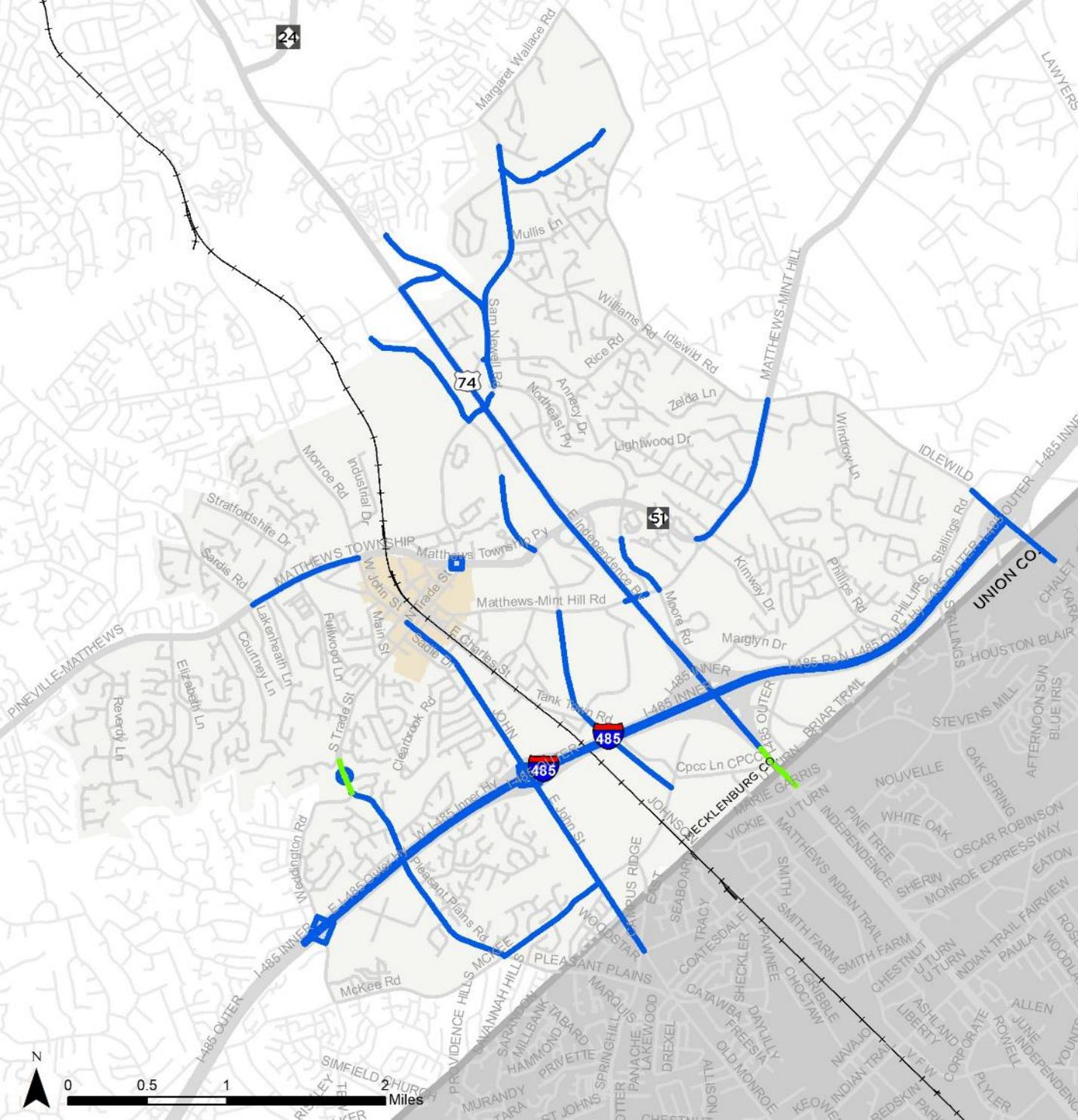
### Map Features Legend

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**Map Symbols**

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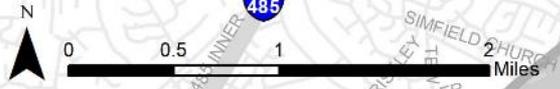
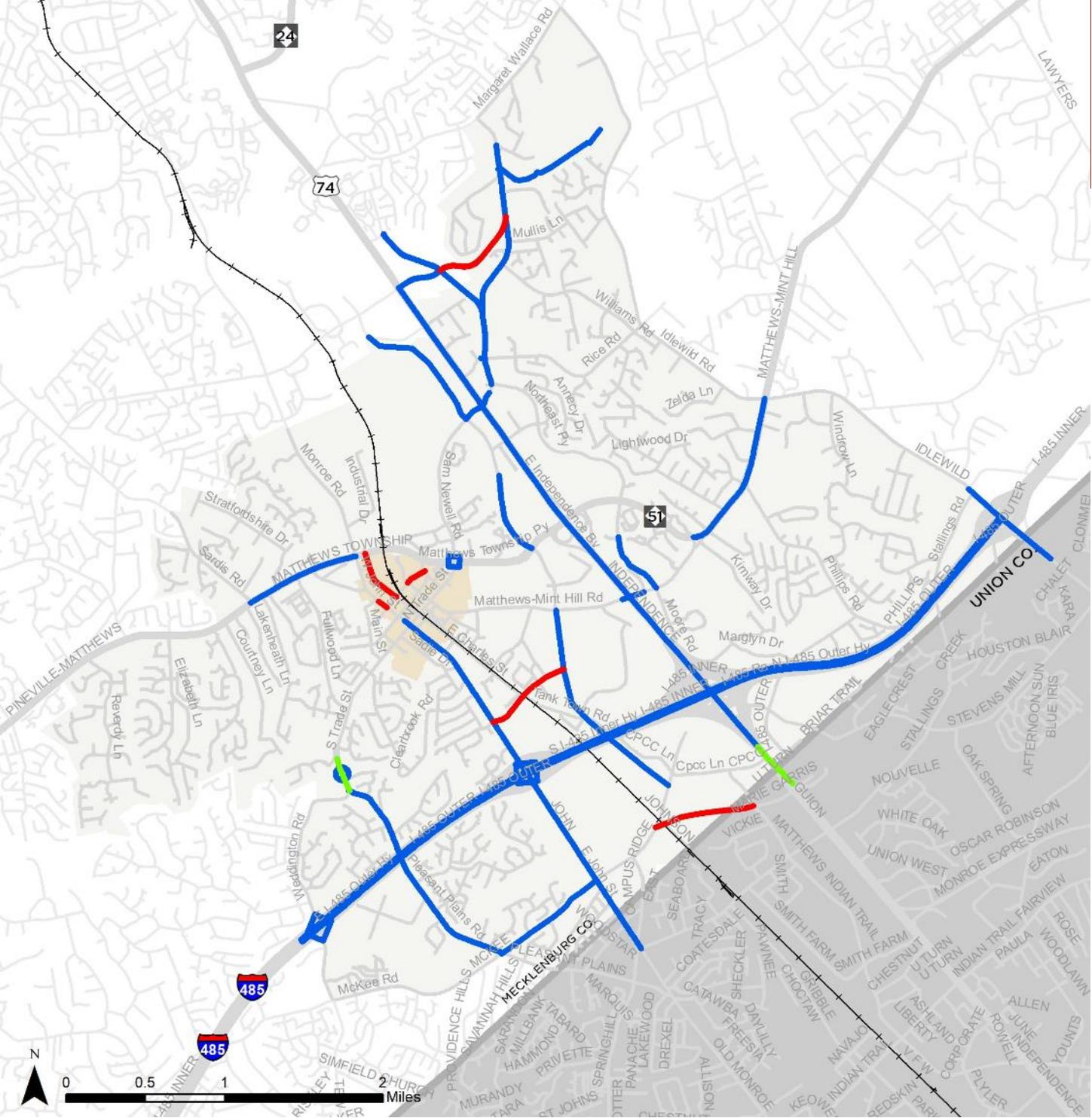
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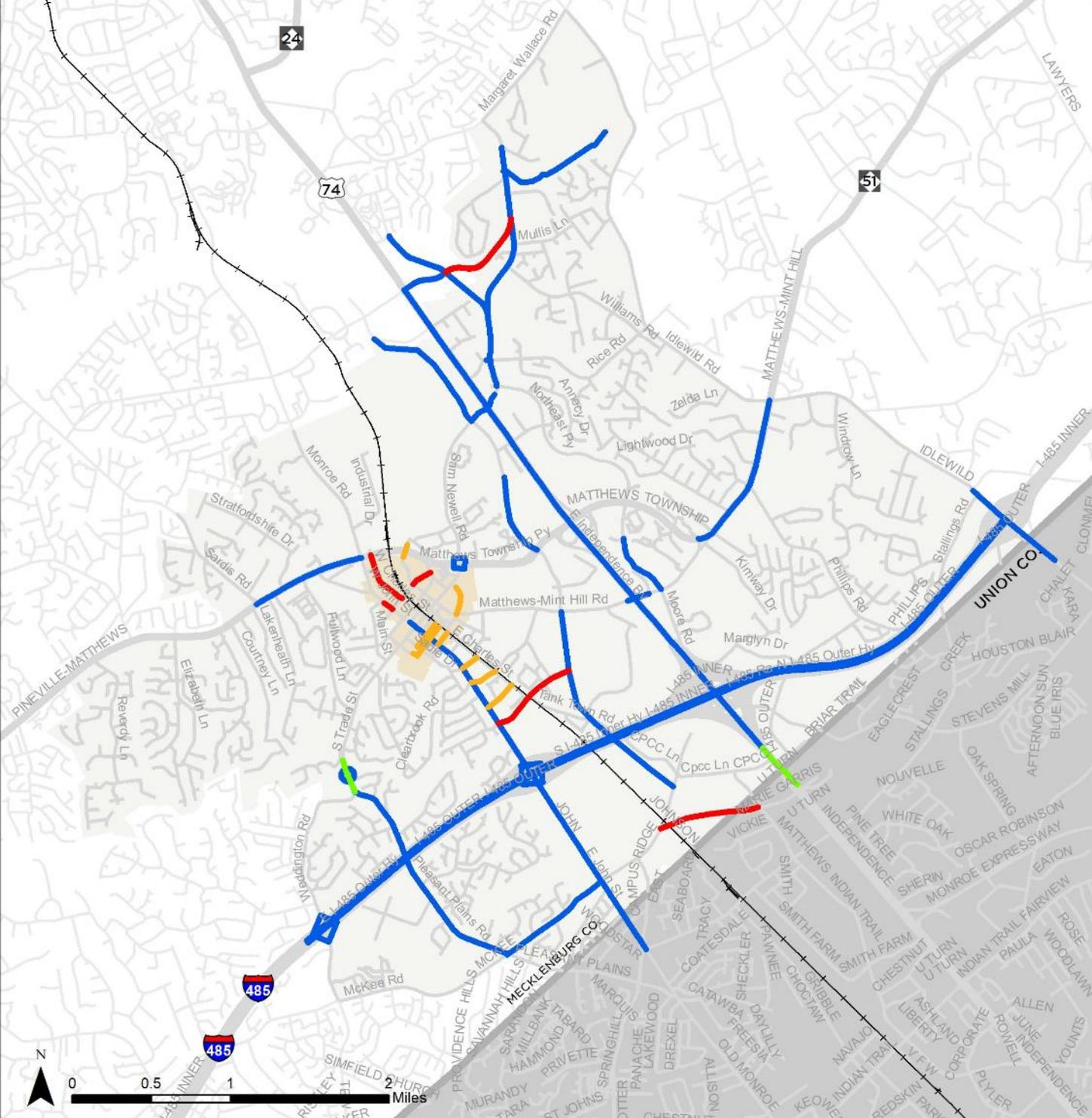
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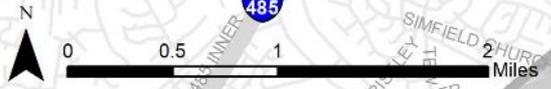
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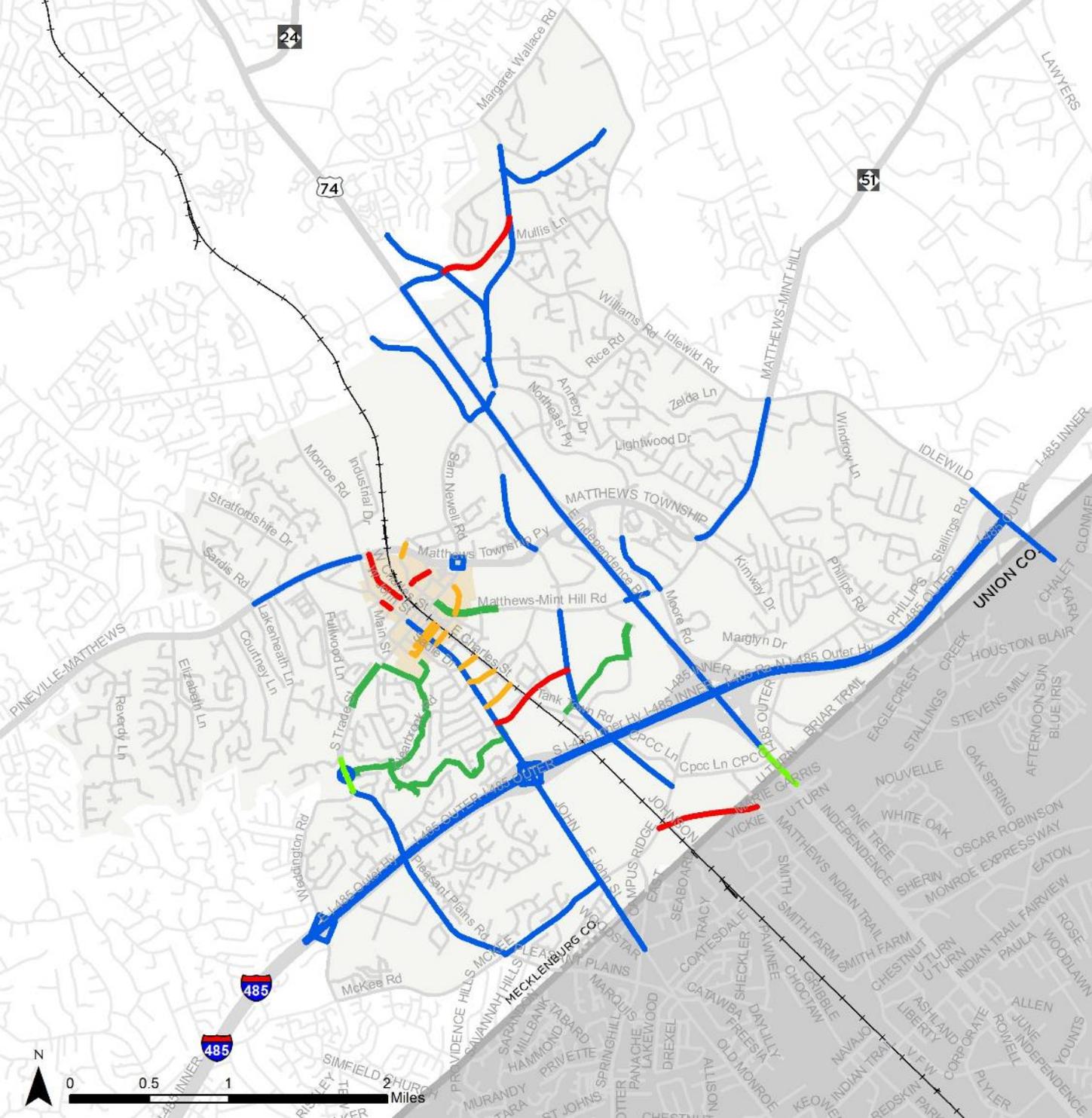
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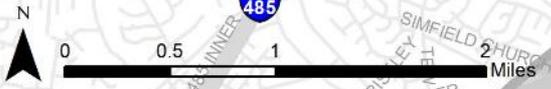
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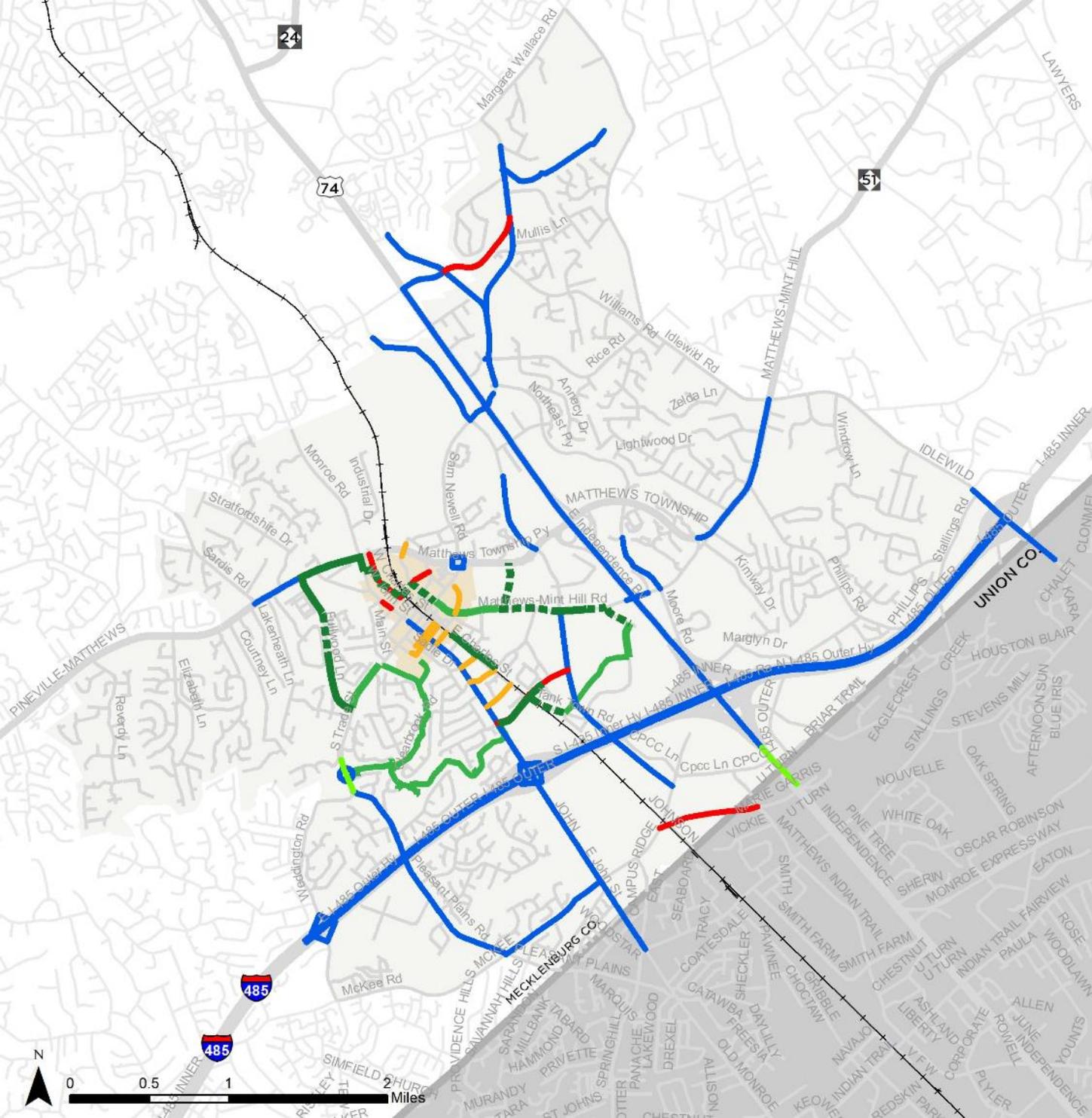
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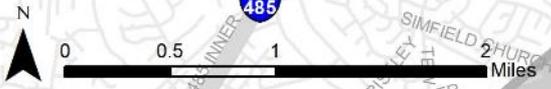
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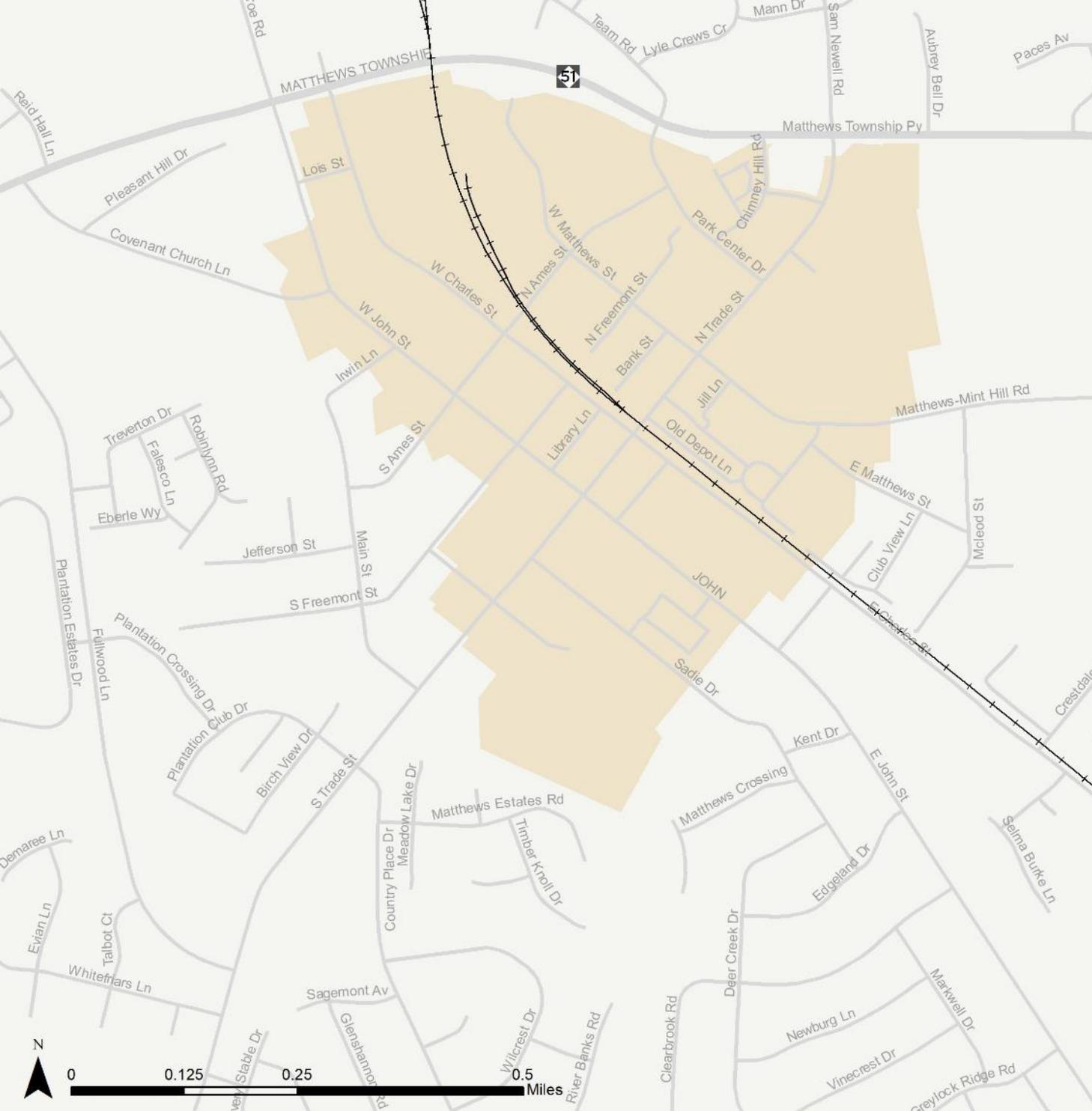
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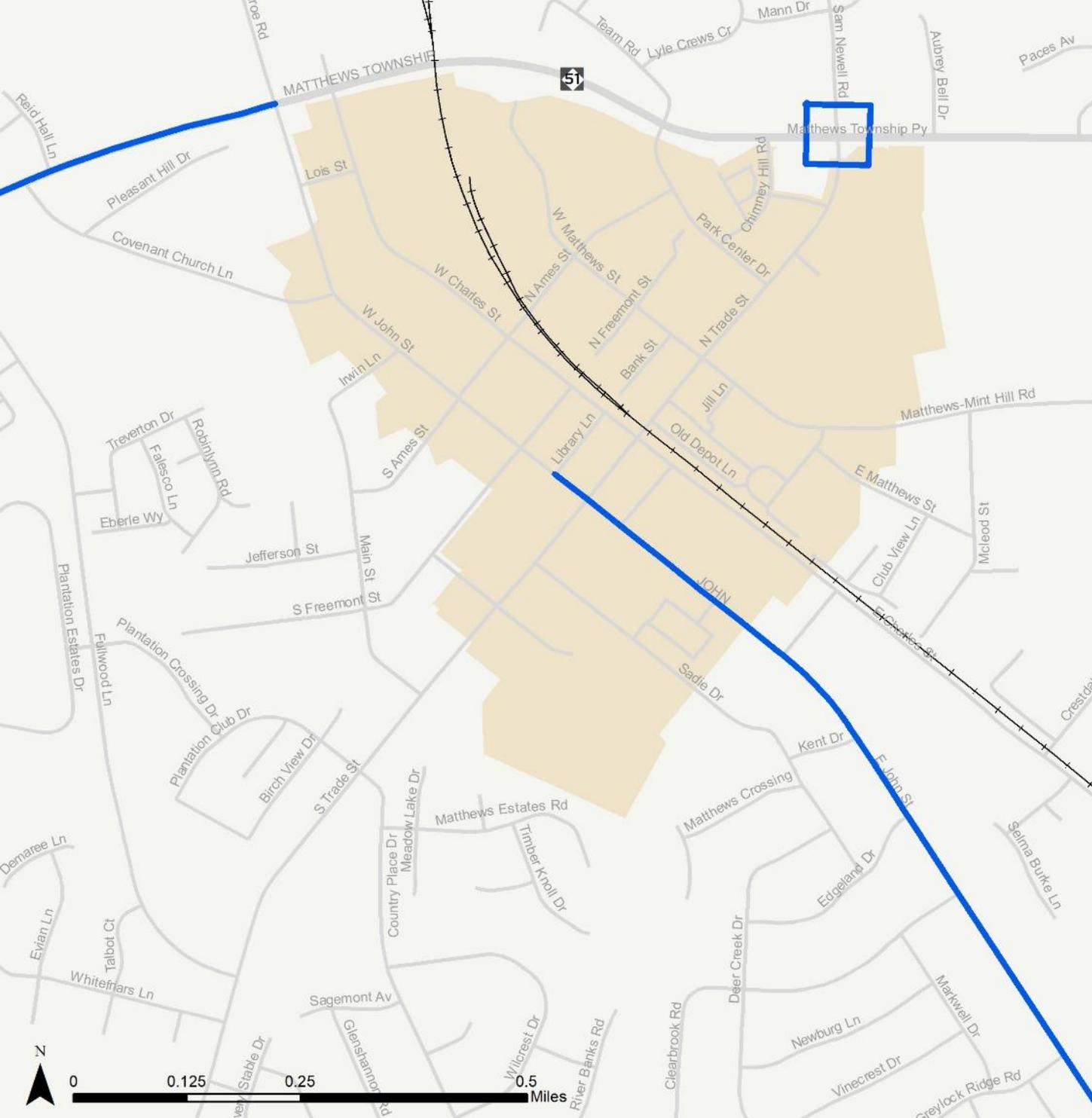
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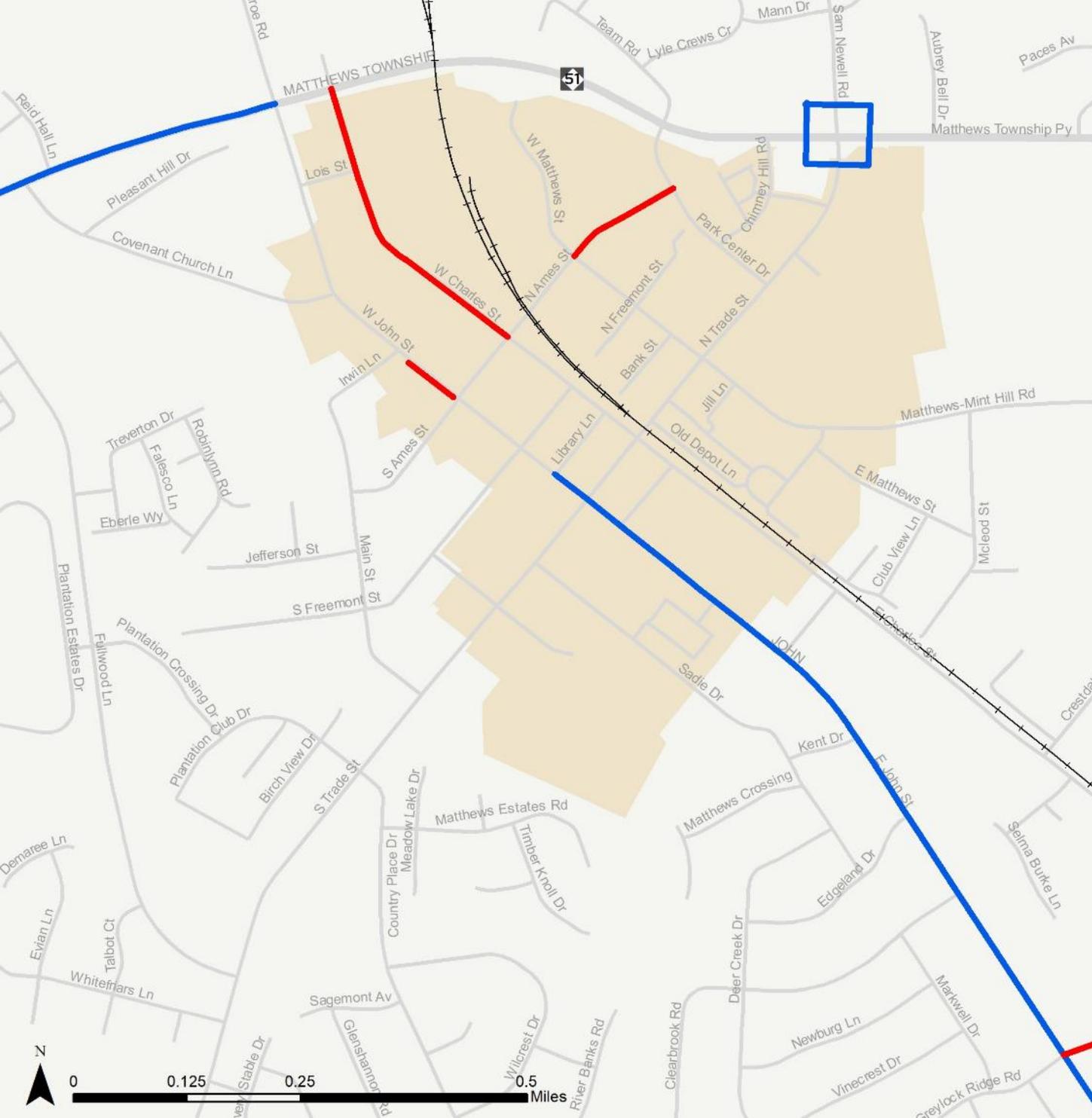
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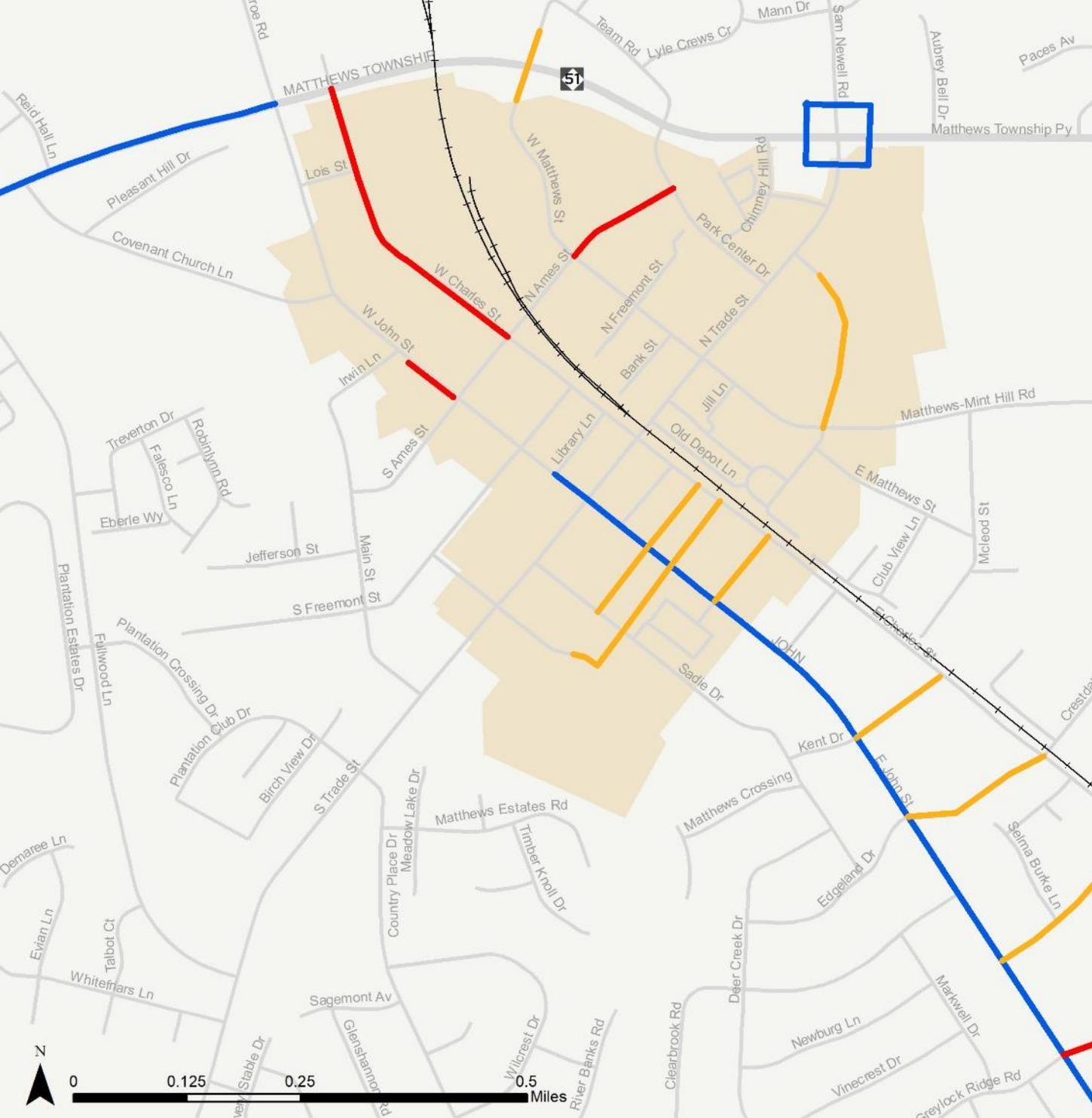
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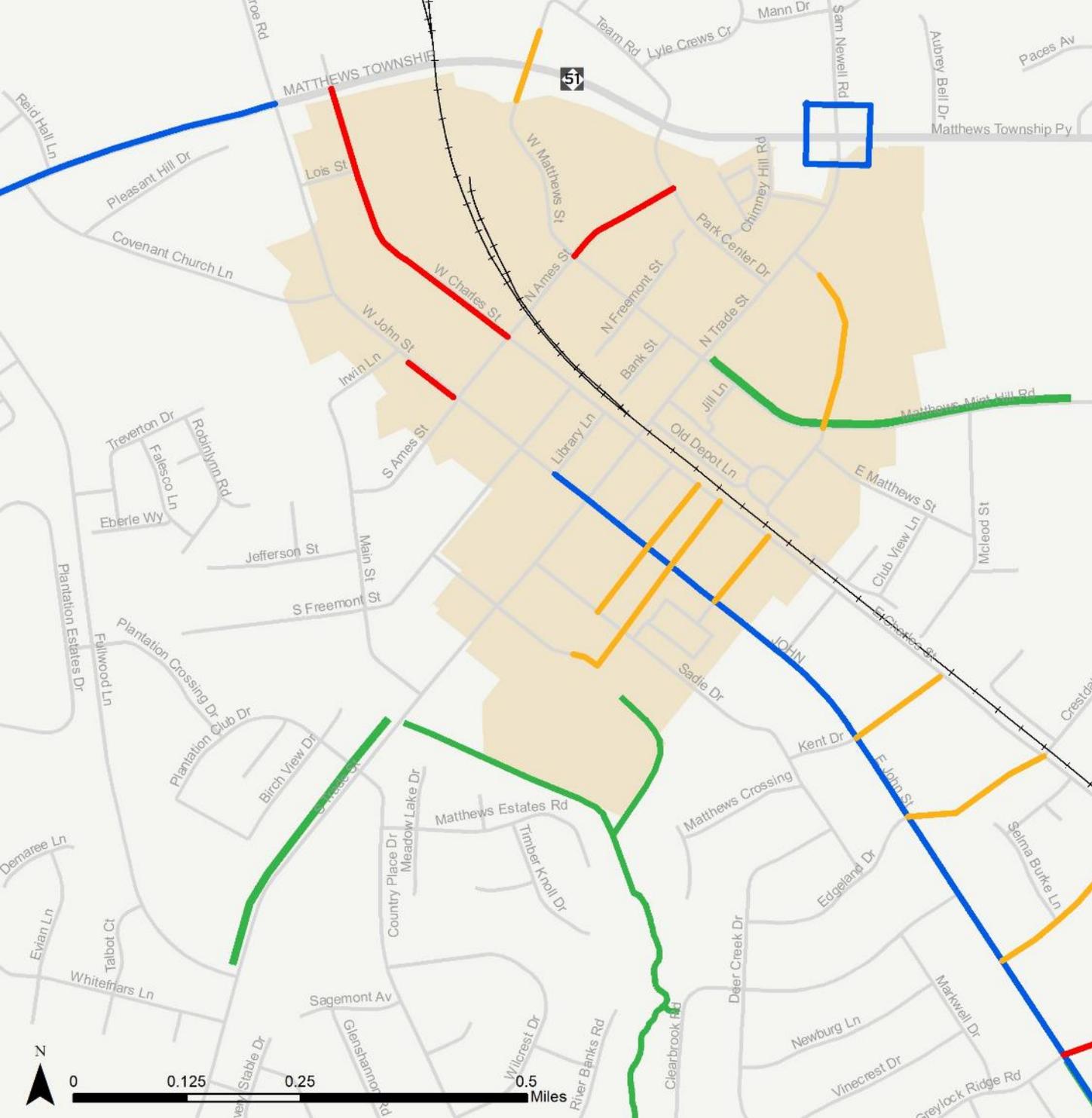
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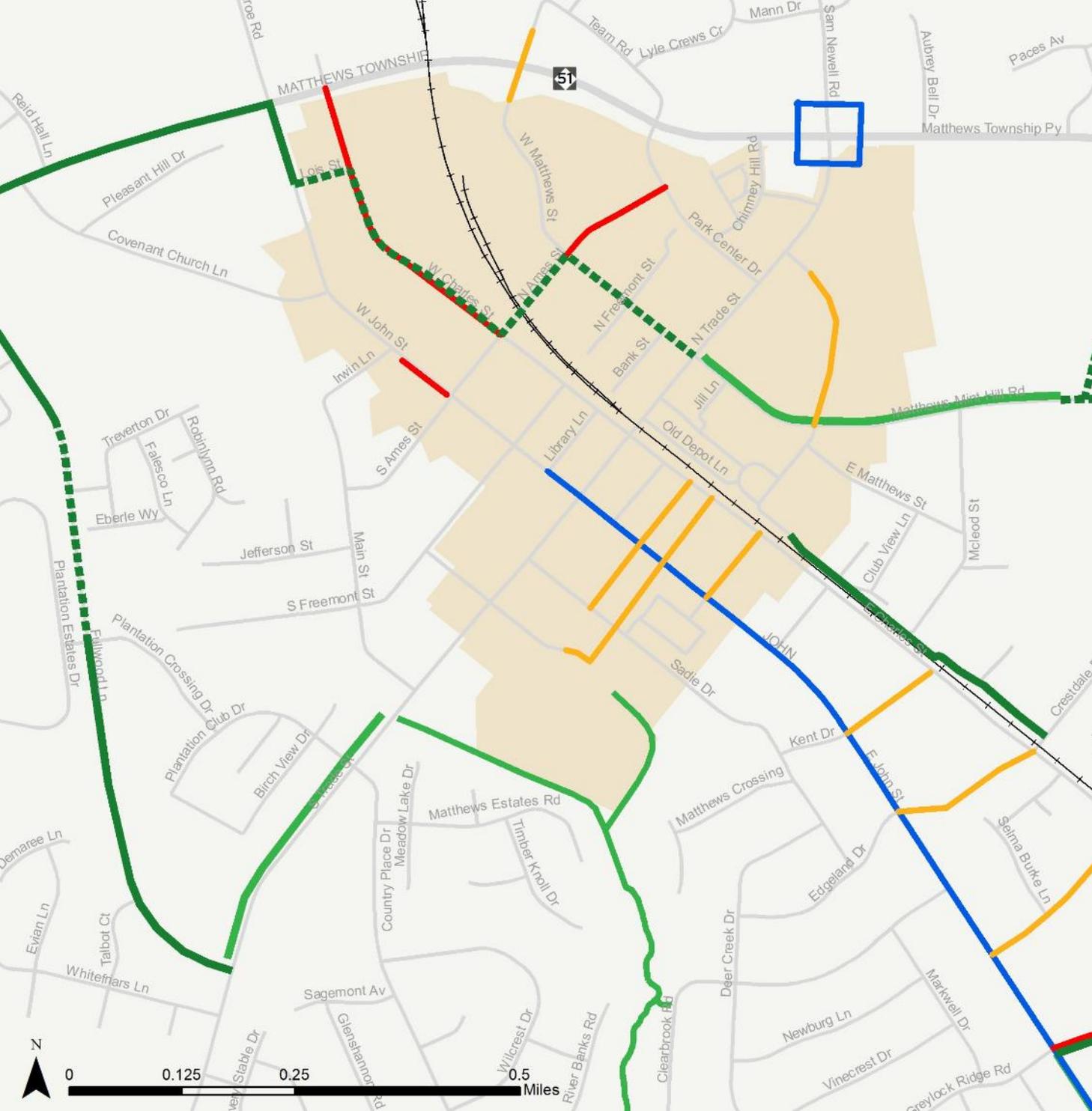
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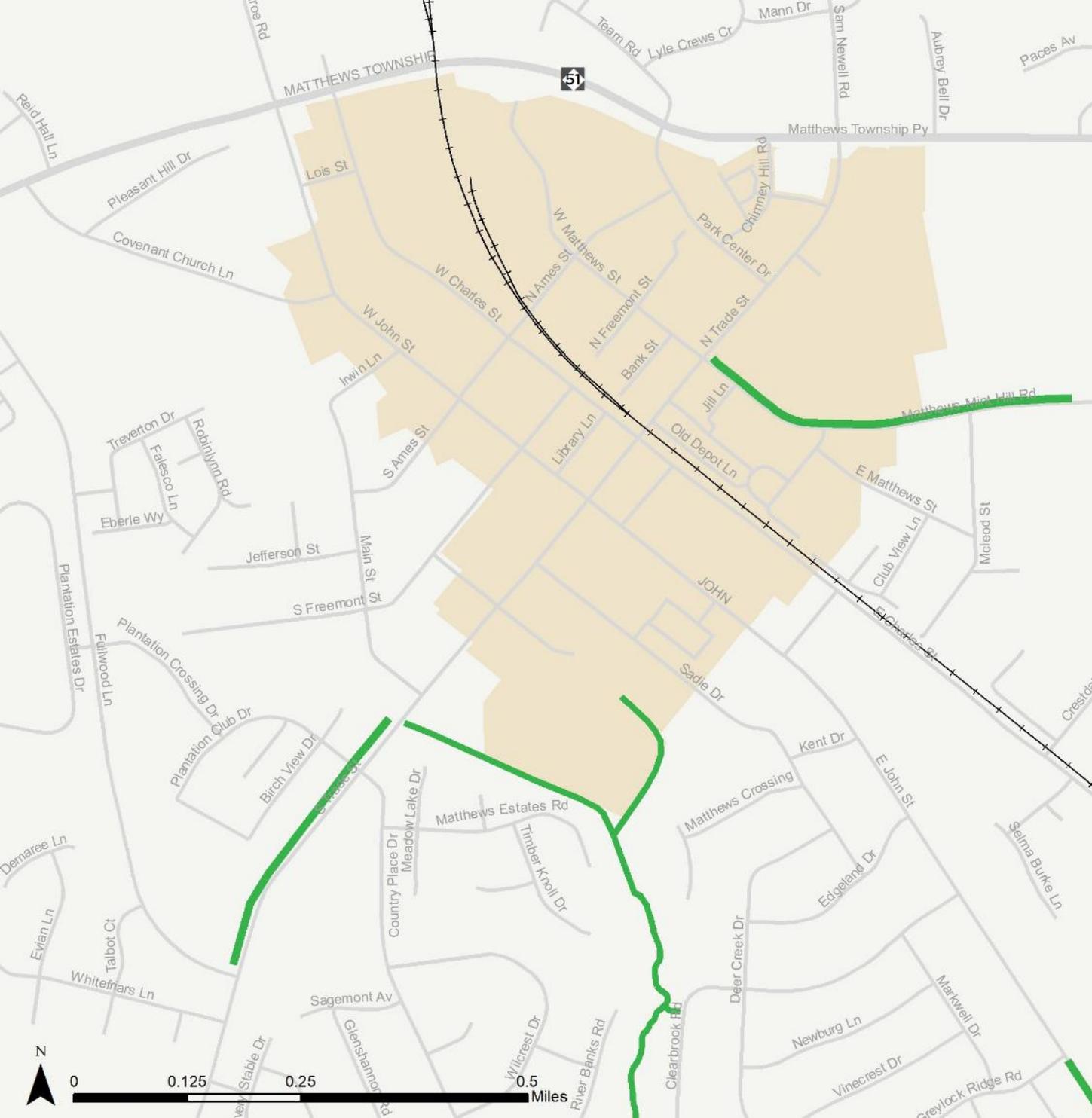
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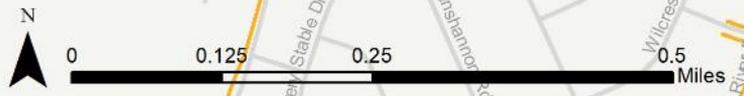
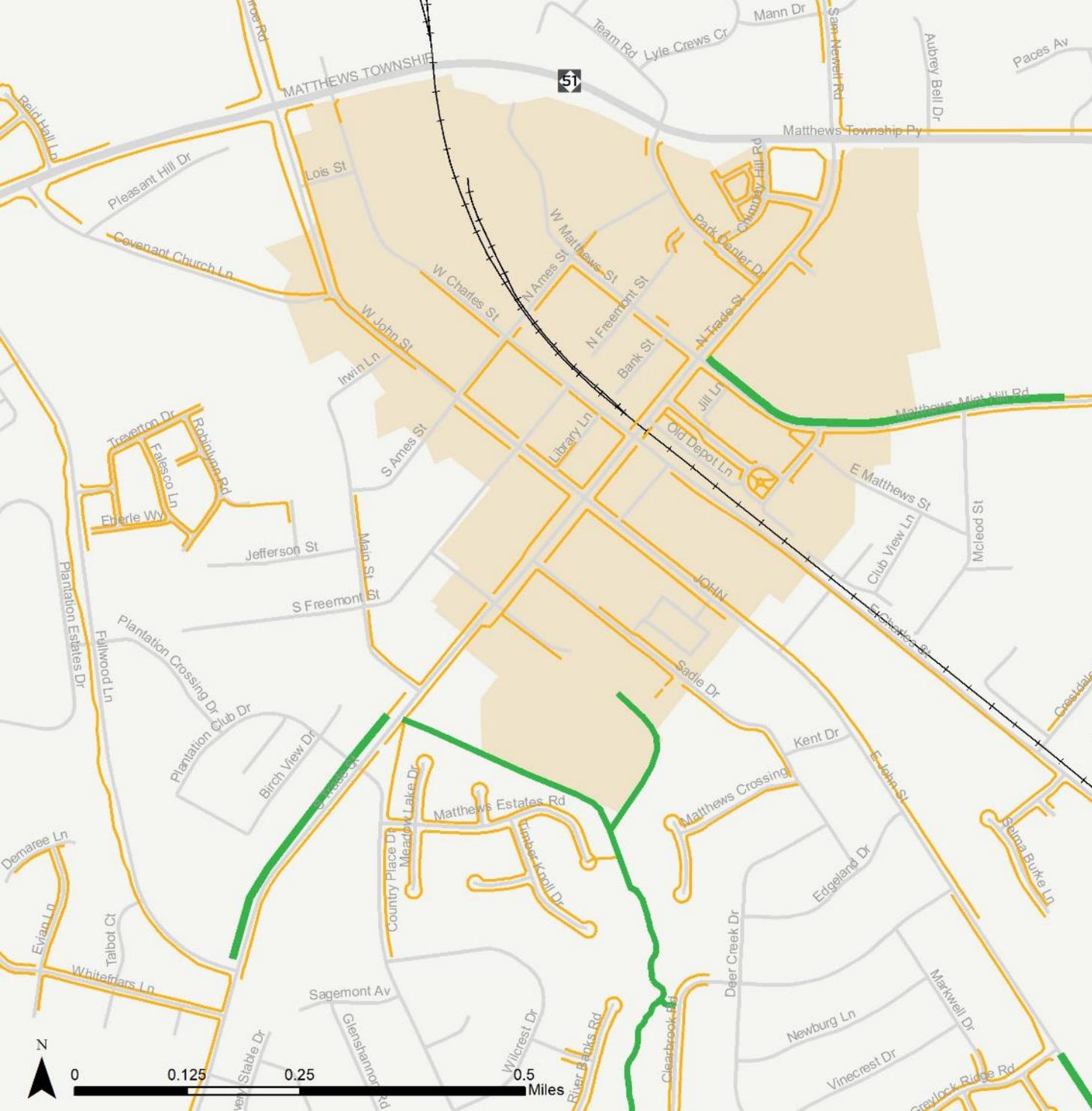
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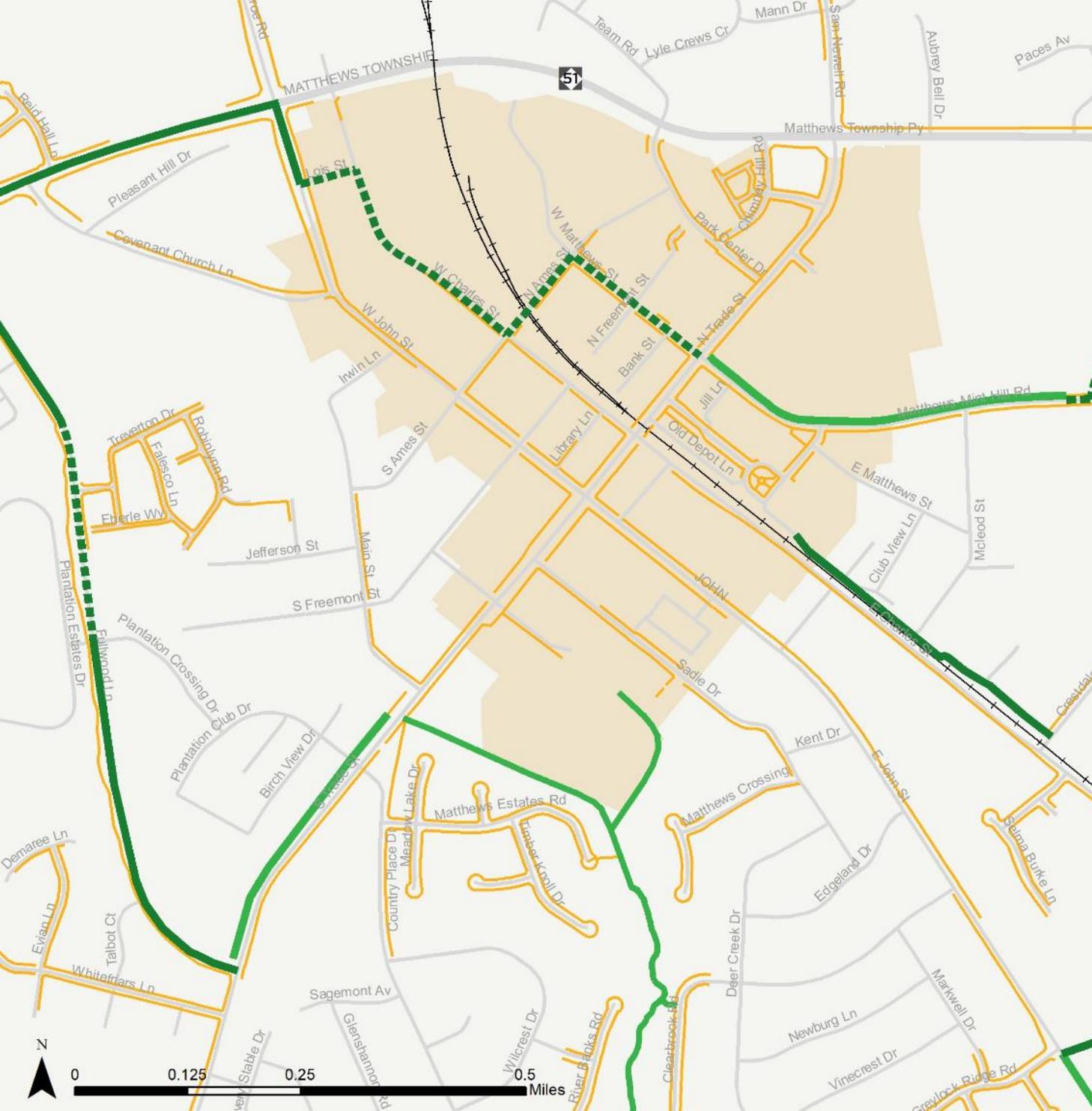
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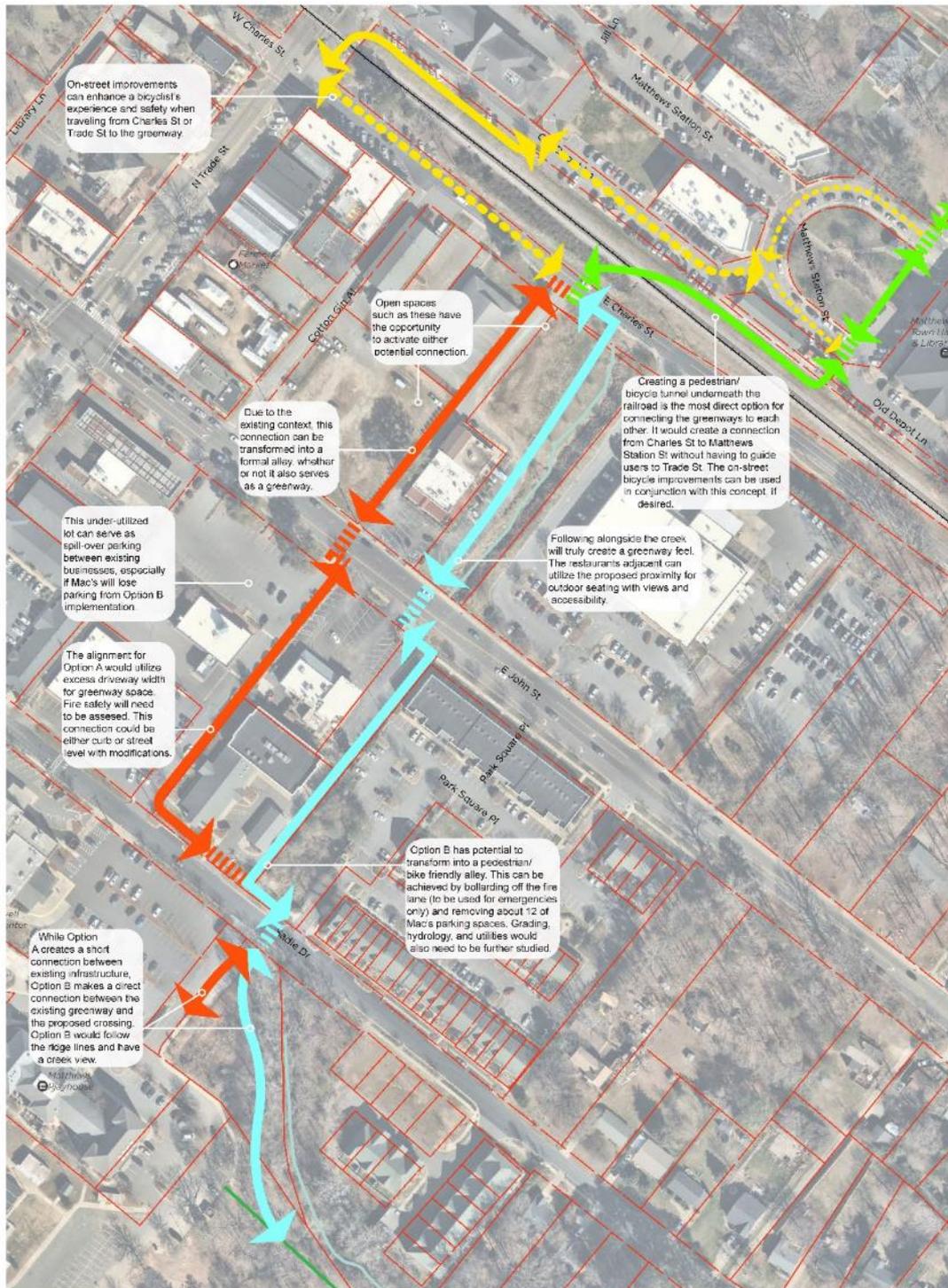
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On-street improvements can enhance a bicyclist's experience and safety when traveling from Charles St or Trade St to the greenway

Open spaces such as these have the opportunity to activate either potential connection.

Due to the existing context, this connection can be transformed into a formal alley, whether or not it also serves as a greenway.

This under-utilized lot can serve as spill-over parking between existing businesses, especially if Mac's will lose parking from Option B implementation.

The alignment for Option A would utilize excess driveway width for greenway space. Fire safety will need to be assessed. This connection could be either curb or street level with modifications.

While Option A creates a short connection between existing infrastructure, Option B makes a direct connection between the existing greenway and the proposed crossing. Option B would follow the ridge lines and have a creek view.

Option B has potential to transform into a pedestrian/bike friendly alley. This can be achieved by bollarding off the fire lane (to be used for emergencies only) and removing about 12 of Mac's parking spaces. Grading, hydrology, and utilities would also need to be further studied.

Creating a pedestrian/bicycle tunnel underneath the railroad is the most direct option for connecting the greenways to each other. It would create a connection from Charles St to Matthews Station St without having to guide users to Trade St. The on-street bicycle improvements can be used in conjunction with this concept, if desired.

Following alongside the creek will truly create a greenway feel. The restaurant's adjacent can utilize the proposed proximity for outdoor seating with views and accessibility.

**MATTHEWS DOWNTOWN MOBILITY PLAN: MATTHEWS ELEMENTARY SCHOOL BLOCK**

- CATS Bus Stop
- Taskcenter Community
- Community Building
- Farmers Market
- Post Office
- Church
- Public Hearing
- School
- Office
- Home
- Road
- Railroad Tracks
- Multi-Use Path & Greenway
- Trail
- Access
- Potential Connection (Under Railroad)
- Street to Path Connection
- Side Road (One-way)
- Side Connection (One-way)
- Connection A
- Connection B



EXISTING CONDITIONS @ BB&T AND VESSEL YOUTH

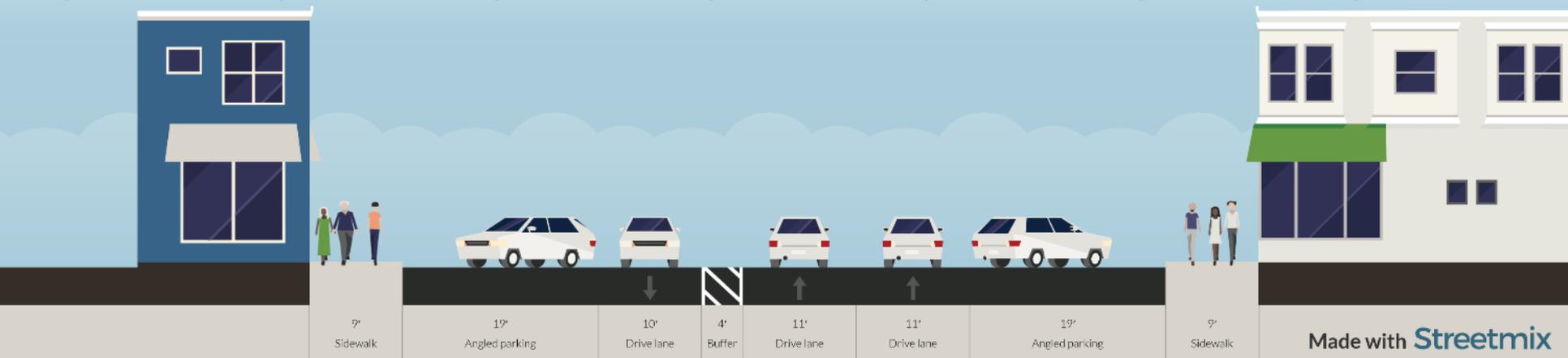




GREENWAY CONNECTION A @ BB&T AND VESSEL YOUTH -  
PAINT W/ BOLLARDS AT STREET LEVEL

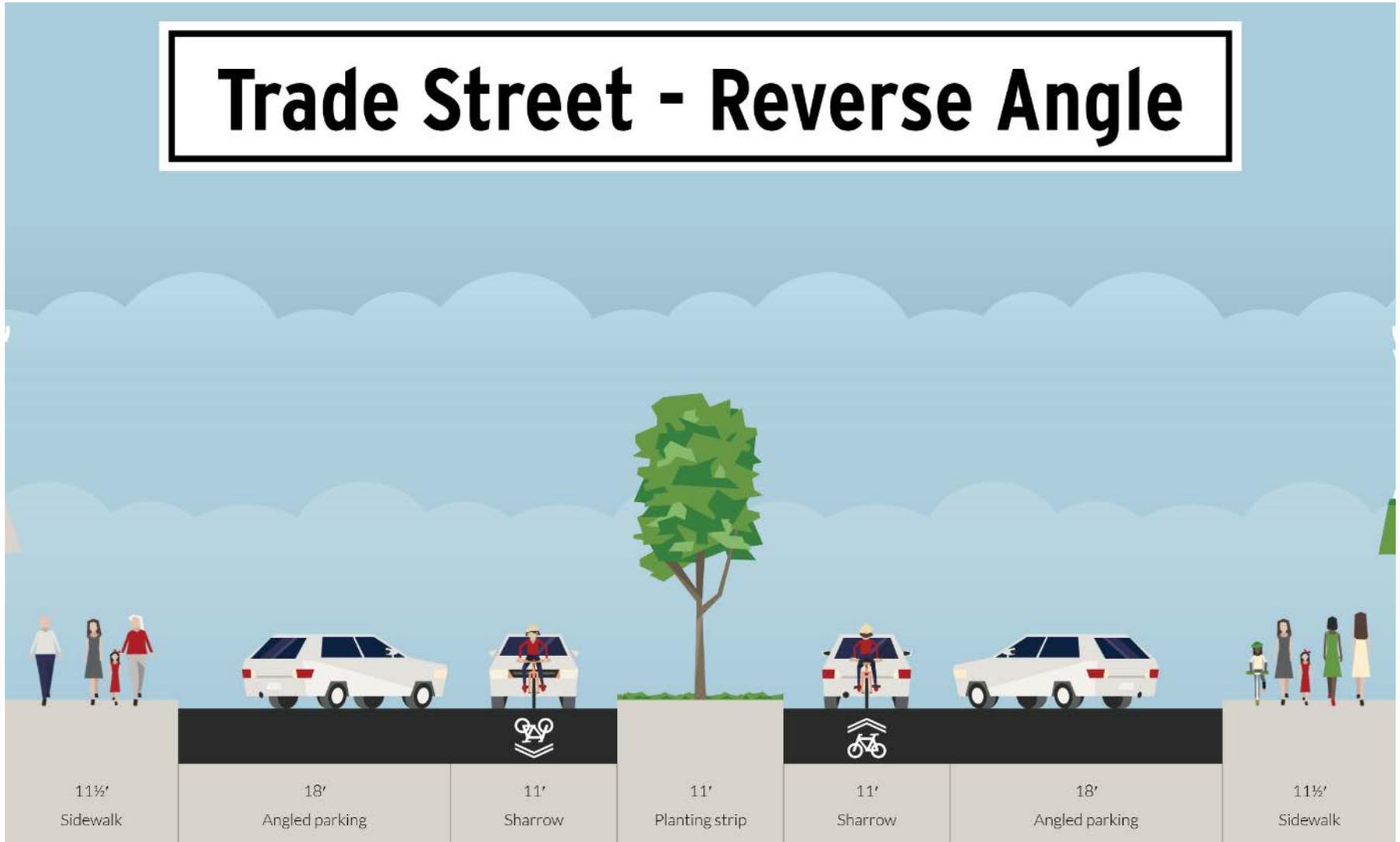
# Trade Street Concepts

## Trade Street - Existing



# Trade Street Concepts

## Trade Street - Reverse Angle



# Trade Street Concepts

## Trade Street - Parallel



An aerial, grayscale photograph of a city grid. The image shows a dense arrangement of buildings, streets, and parking lots. The text "How much parking do I need?" is overlaid in white, bold, sans-serif font across the upper portion of the image. The perspective is from a high angle, looking down on the city.

How much parking do I need?

# Zoning and market requirements often lead to underutilized supply

Louisiana State University

**29,000** spaces

**45%** vacant



Austin, Texas

**72,000** spaces

**30%** vacant



University of North Texas

**15,000** spaces

**25%** vacant



Chattanooga, Tennessee

**43,000** spaces

**50%** vacant



Savannah, Georgia

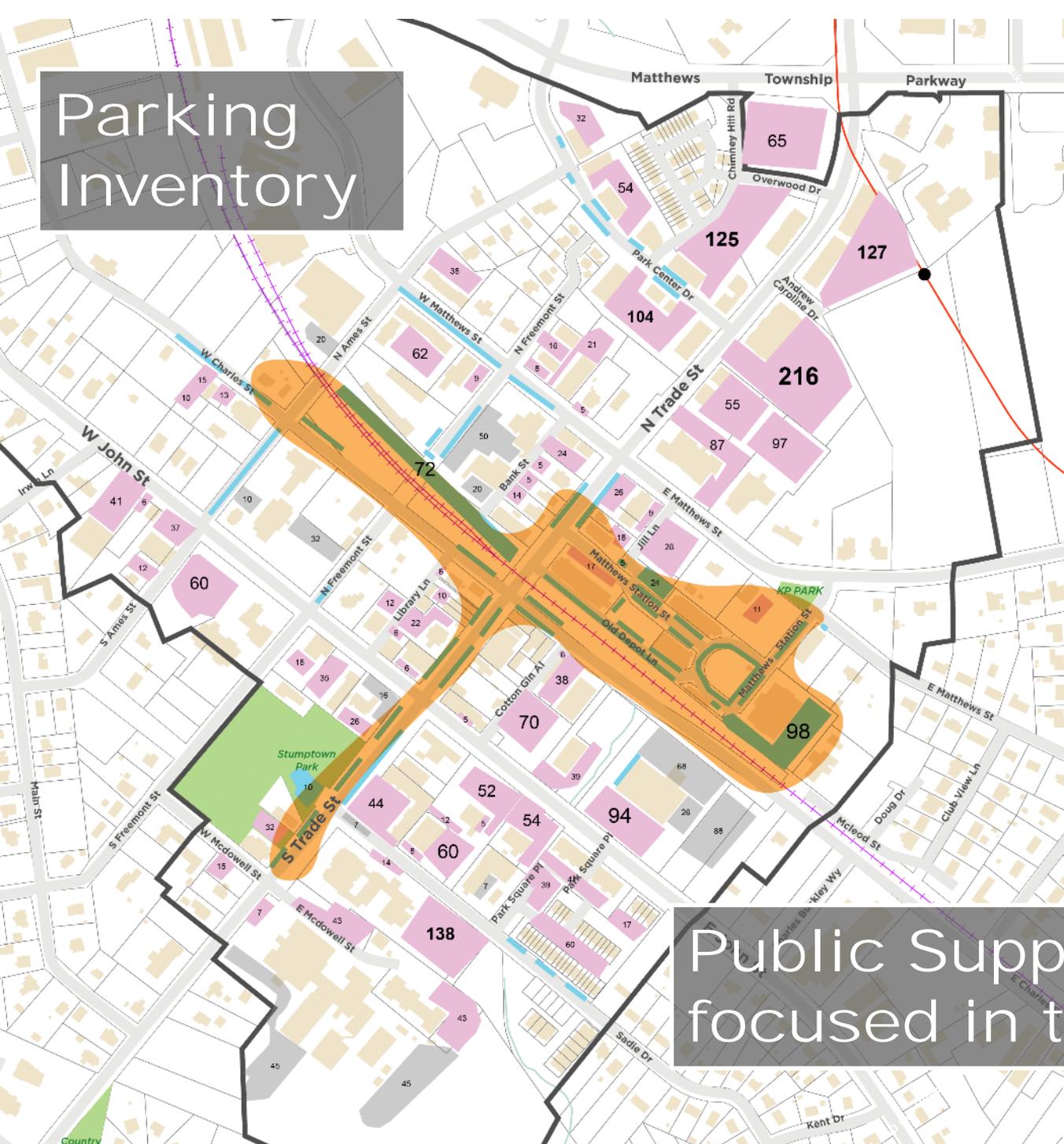
**32,000** spaces

**50%** vacant





# Parking Inventory

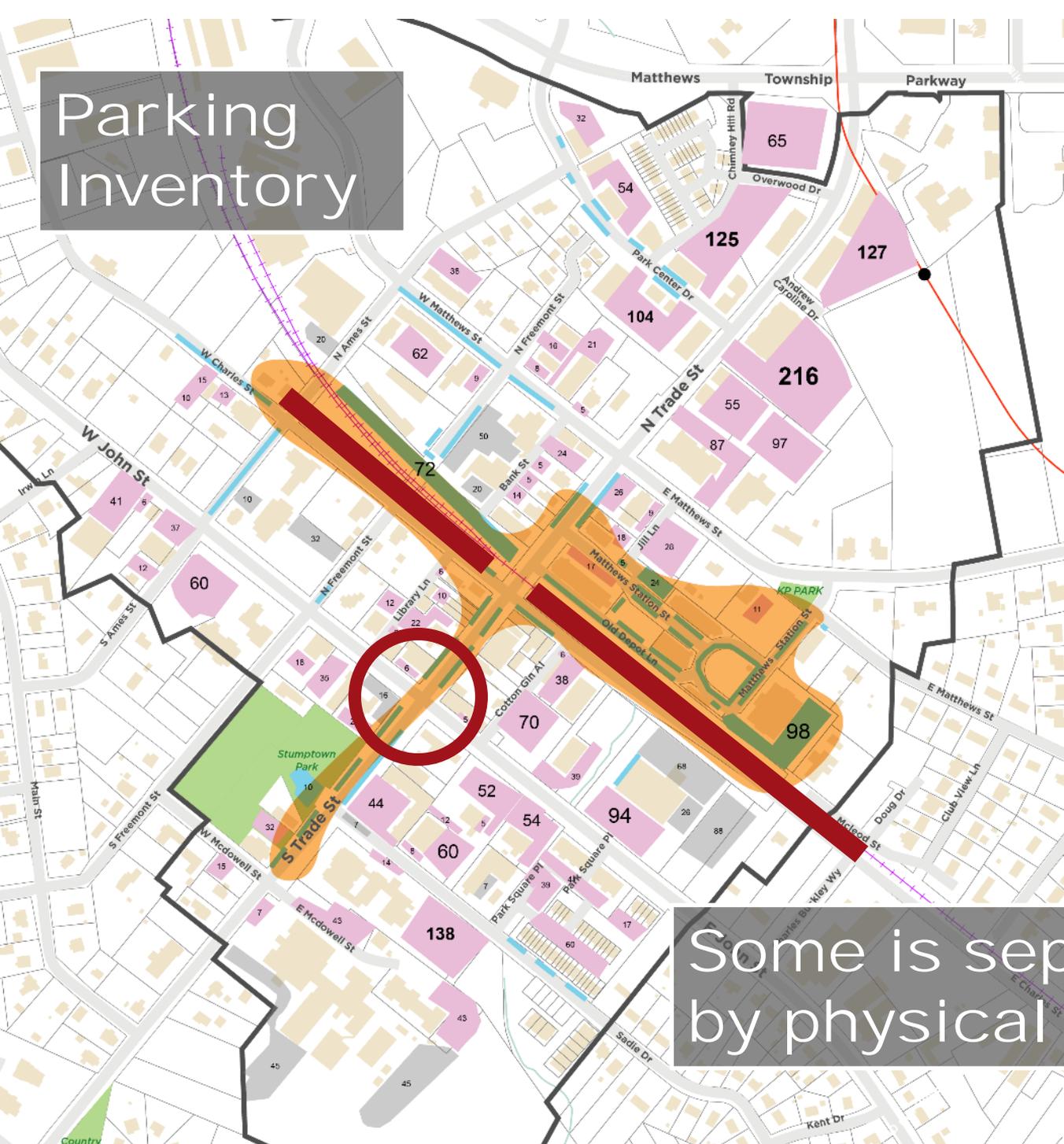


Parking Facility Type	Number of Spaces*
<b>TOTAL SPACES</b>	<b>3,659</b>
Public Spaces	925
Public lot	458
On-Street	467
Private Off-Street	2,734

\*Includes spaces that weren't counted as part of the study. Only counted spaces were used to calculate utilization rates.

Public Supply is focused in the center

# Parking Inventory

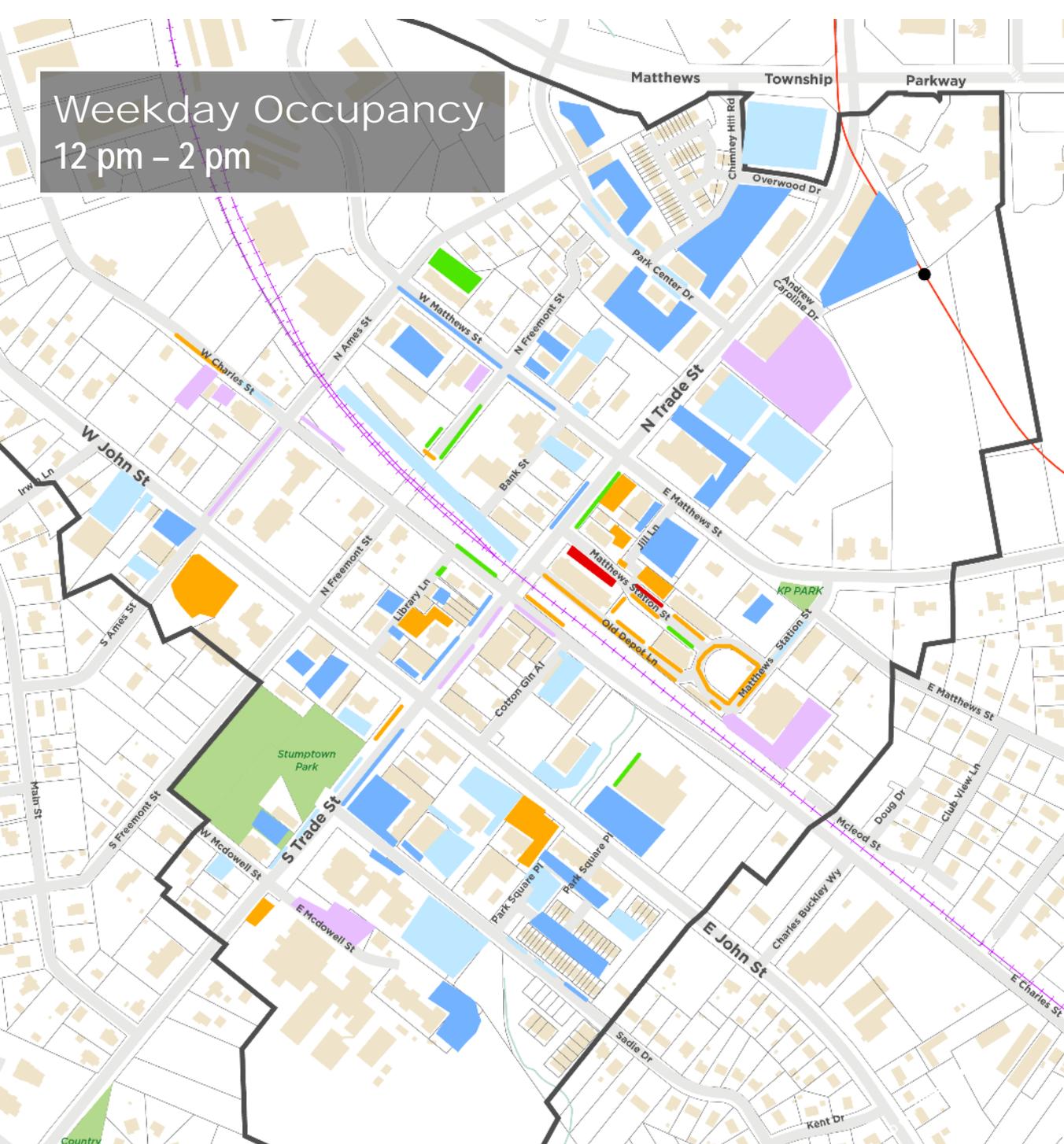


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Some is separated by physical barriers

# Weekday Occupancy 12 pm – 2 pm



Peak demand driven by Matthews Street Station businesses

Overall Percent Utilization	51.3%
Number of Spaces Occupied	1,117
Number of Spaces Vacant	1,061
Private Utilization Rate	44.4%
Public Utilization Rate	65.1%

## Parking Utilization



Weekday Occupancy  
12 pm – 2 pm

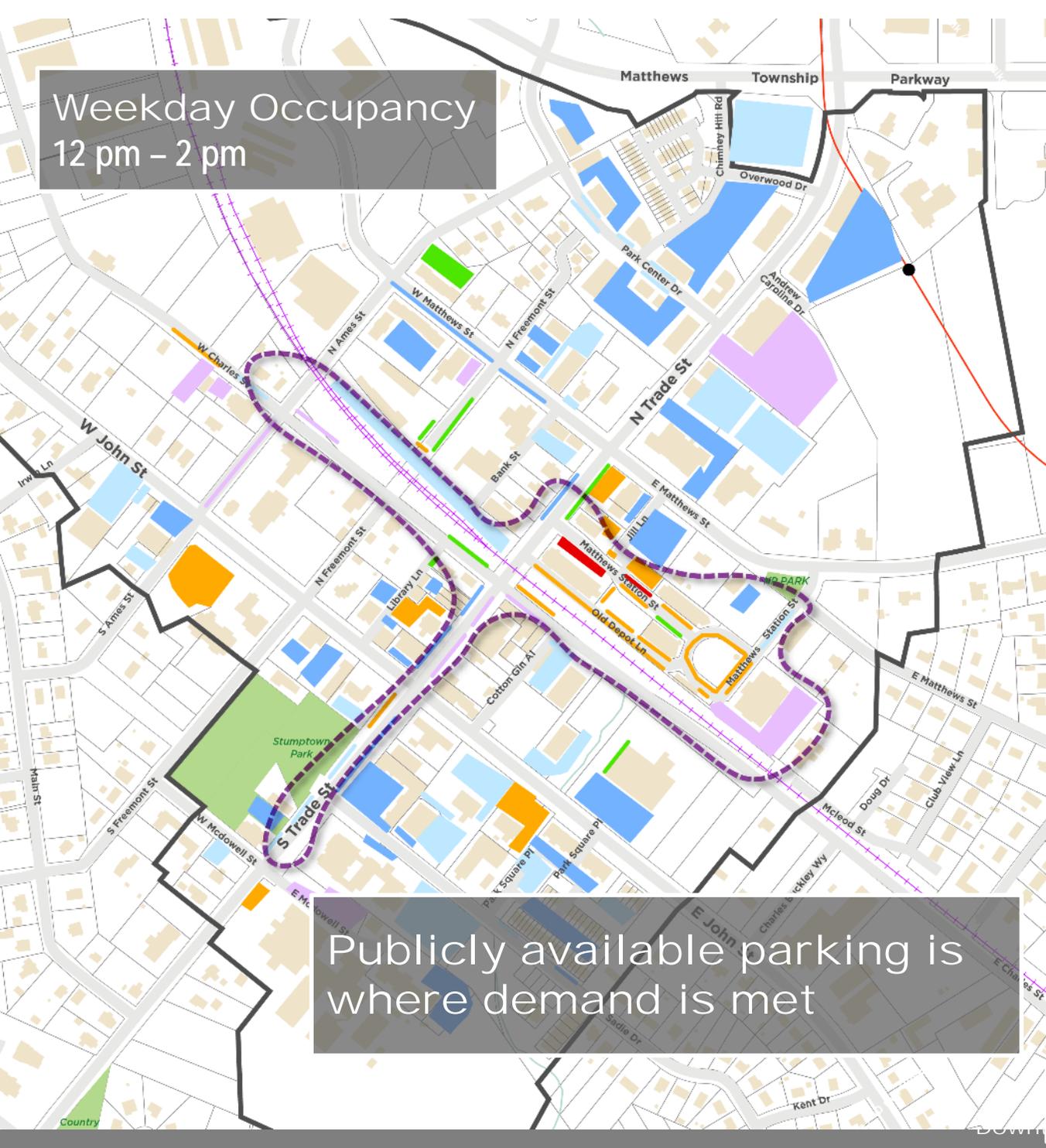
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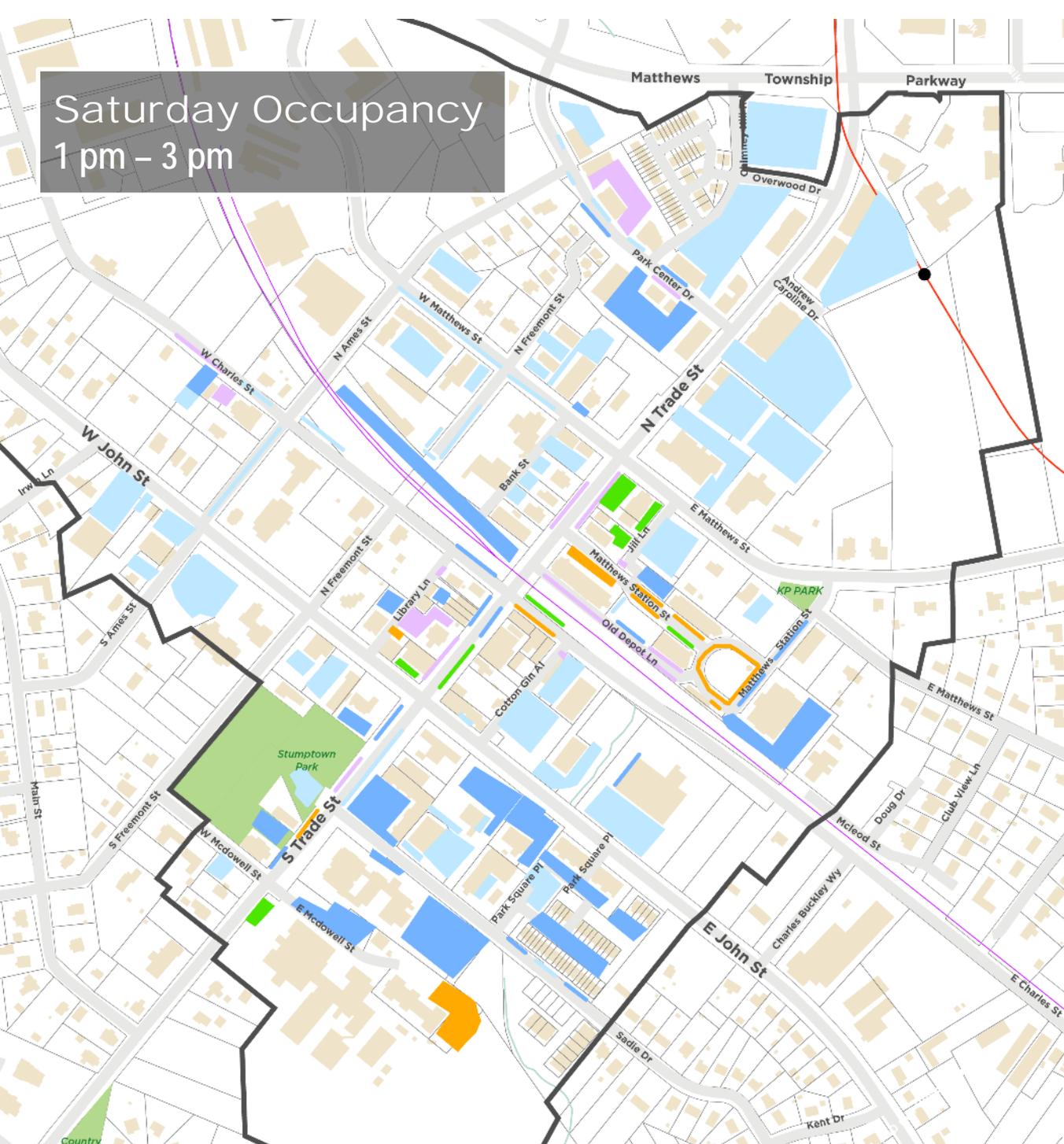
### Parking Utilization



Publicly available parking is  
where demand is met



# Saturday Occupancy 1 pm - 3 pm



Overall Percent Utilization	33.4%
Number of Spaces Occupied	1,063
Number of Spaces Vacant	2,116
Private Utilization Rate	25.2%
Public Utilization Rate	47.3%

## Parking Utilization



Can we address parking challenges without building more?





**CARTA**  
South Garage

**LEGEND**

- Existing Pedestrian Enhancement
- Proposed Pedestrian Enhancement to link CARTA South to Restaurant District

Use curb extensions for pedestrian crossing safety

Close pull-off for Choo Choo

Pedestrian-scale lighting exists, enhancing safety

Streetscape recently improved to create pleasant walking

Extend curb to limit fast right turns Main-Market

Market St

**Five Minute Walk**

Install pedestrian level signage for both restaurant district and CARTA south. Include other landmarks such as the Choo Choo

Station Street prioritizes the pedestrian

Station St

Close one curb cut for this lot to limit pedestrian conflicts

Consolidate these lots and associated curb cuts

Consider painting/lighting off-street ped connection

Rossville Ave

W Main St

Main Street Restaurant District

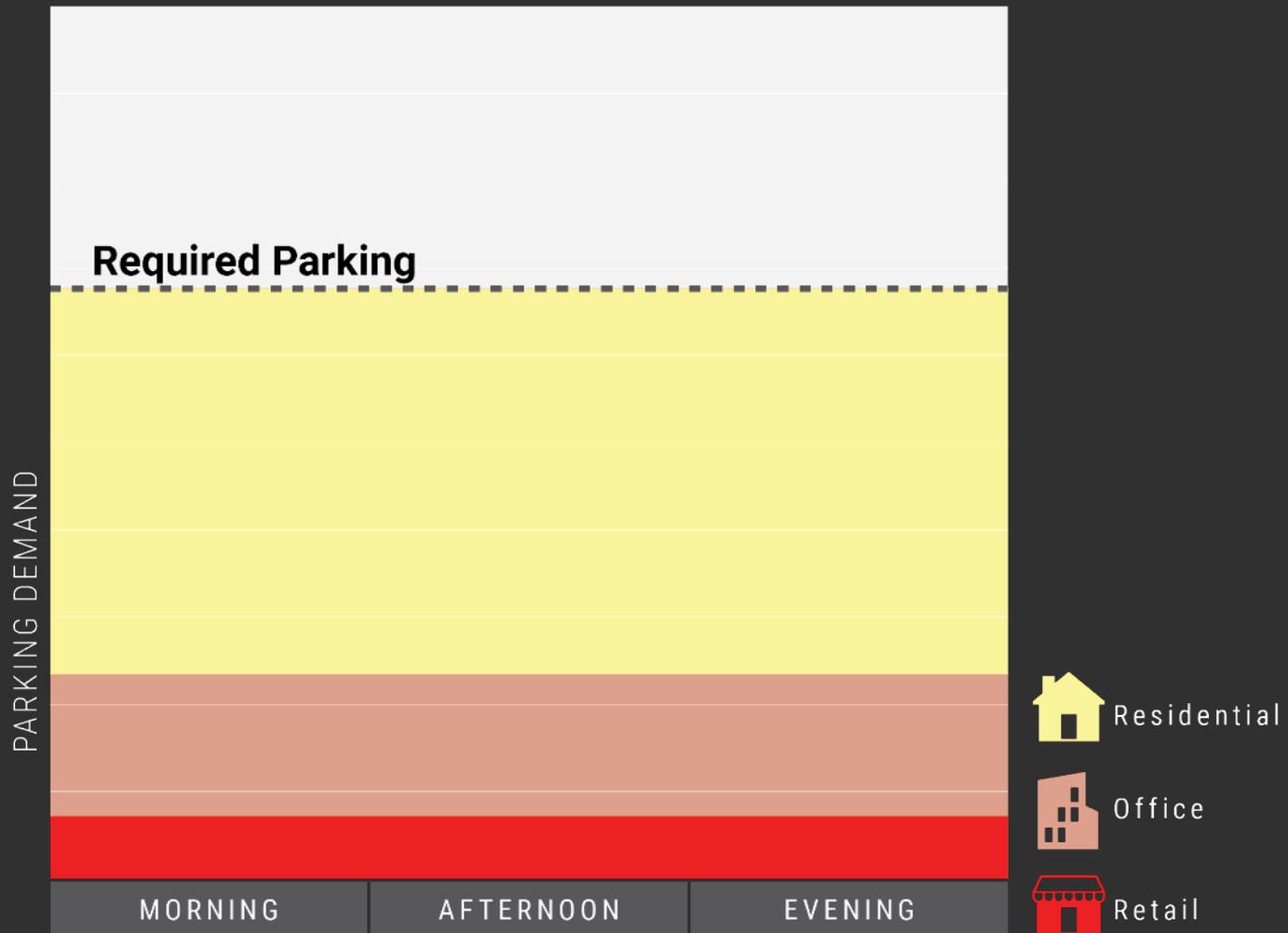
# CHATTANOOGA, TN

Less than \$1M worth of improvements open access to more than \$5M worth of parking supply

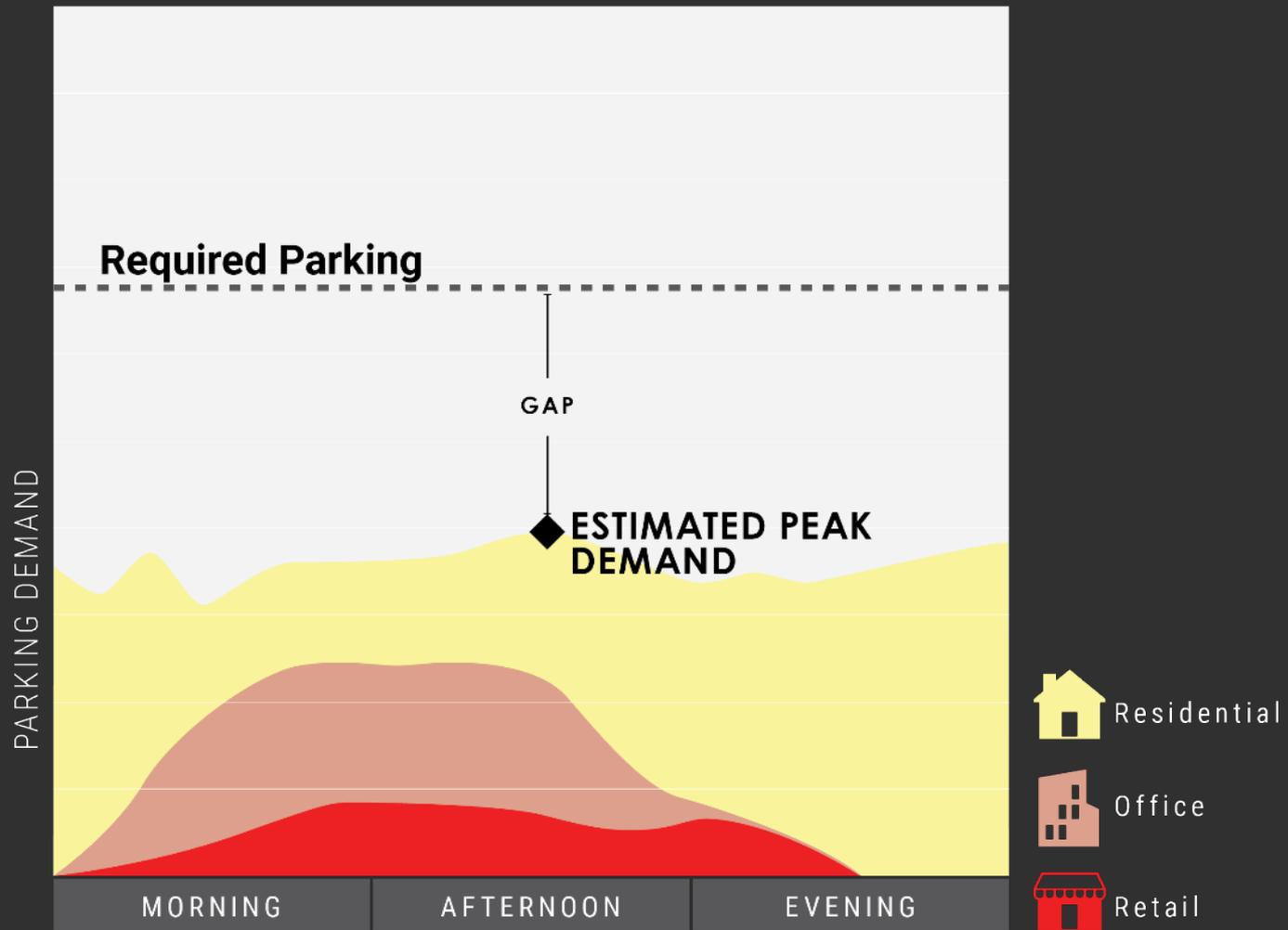
How do parking and development work together?



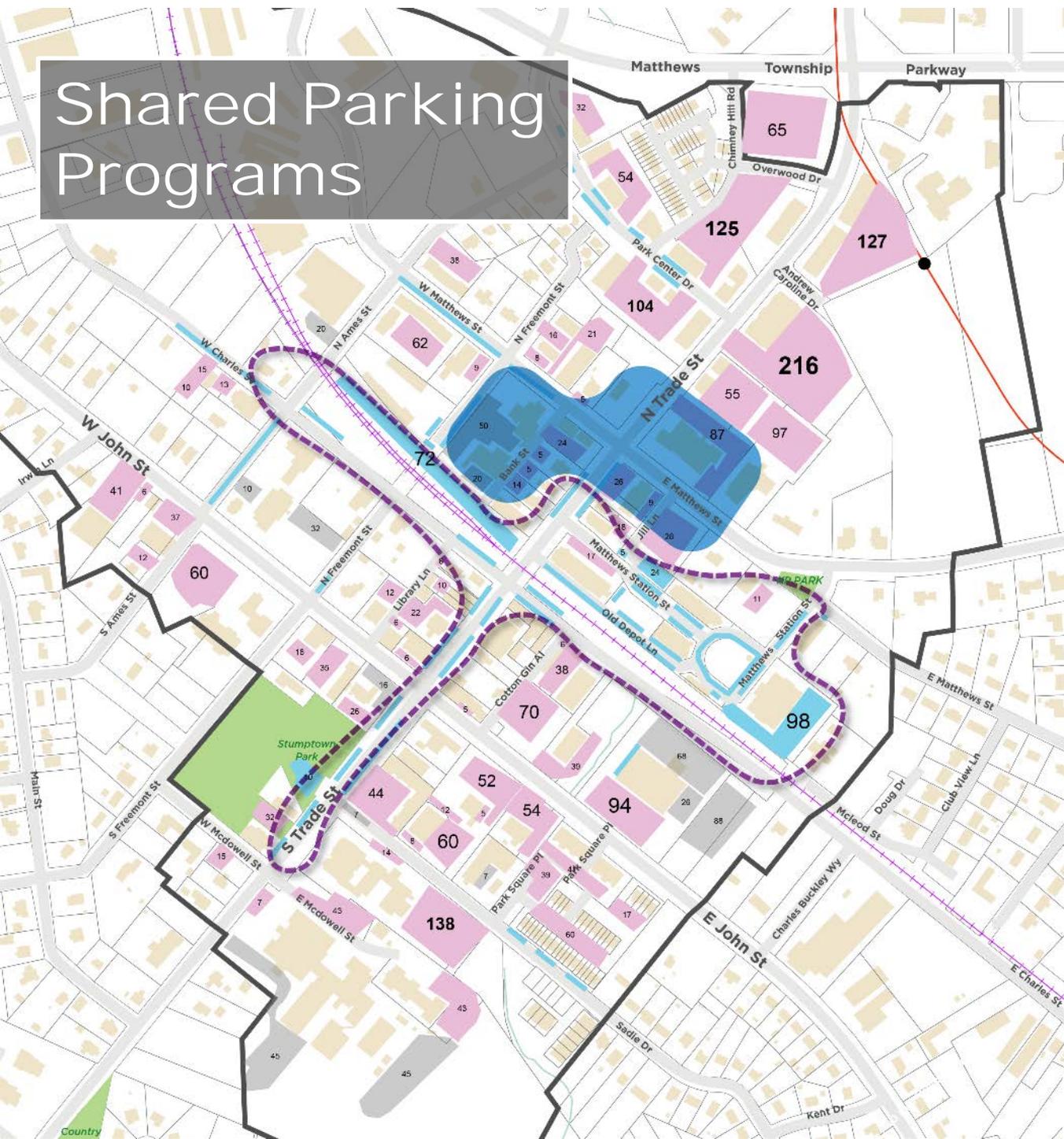
# Better management opens development opportunity



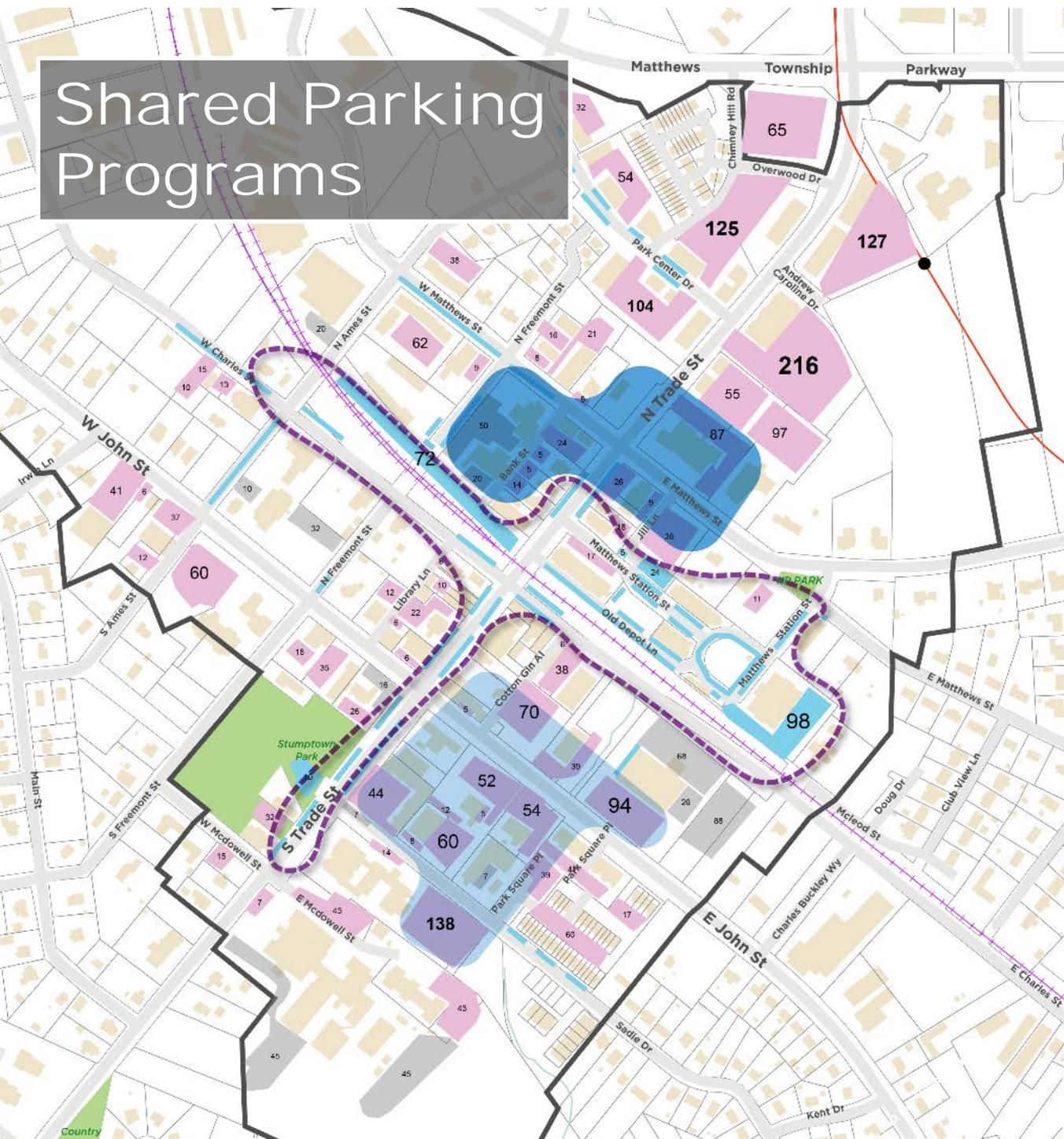
# Better management opens development opportunity



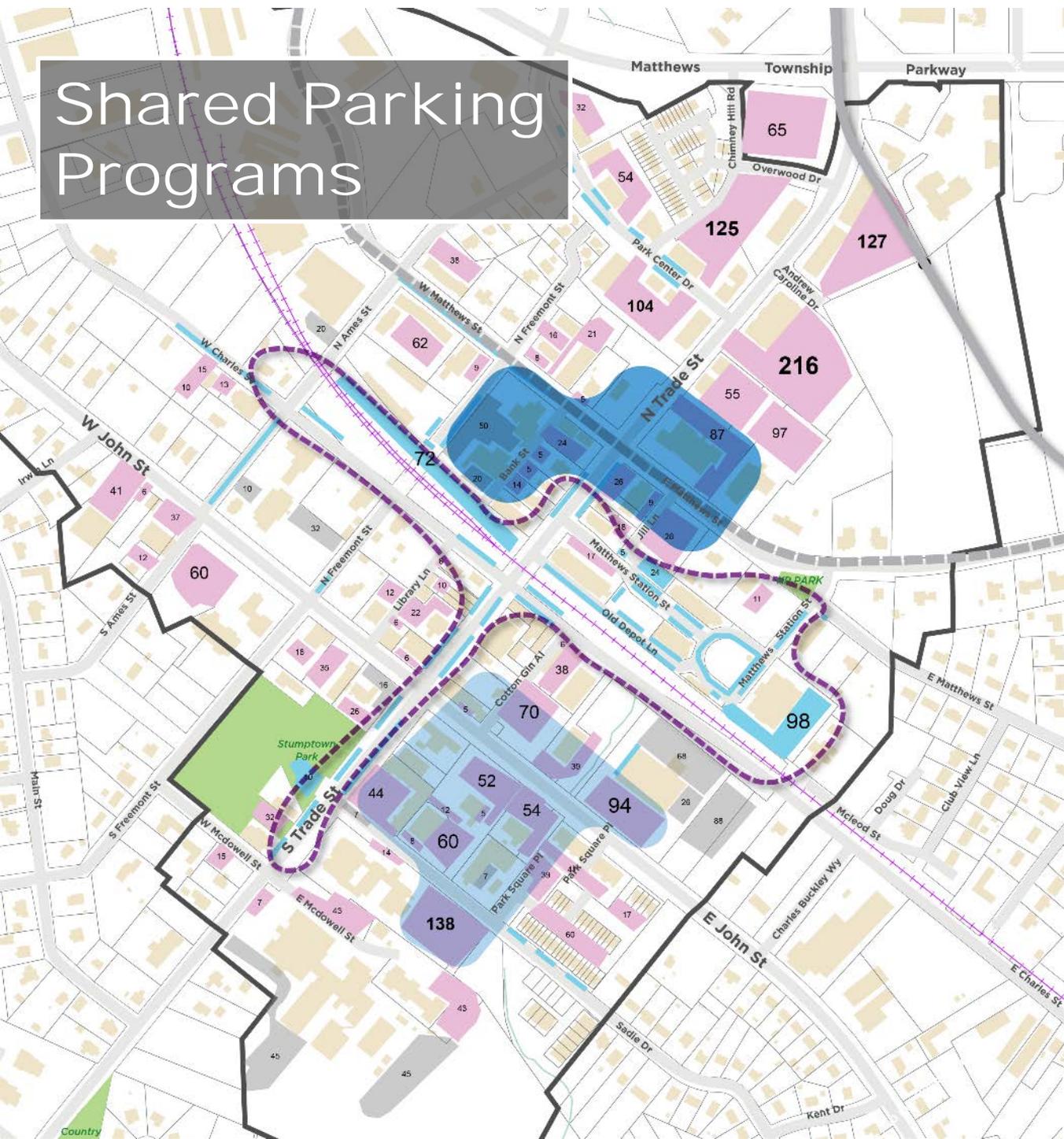
# Shared Parking Programs



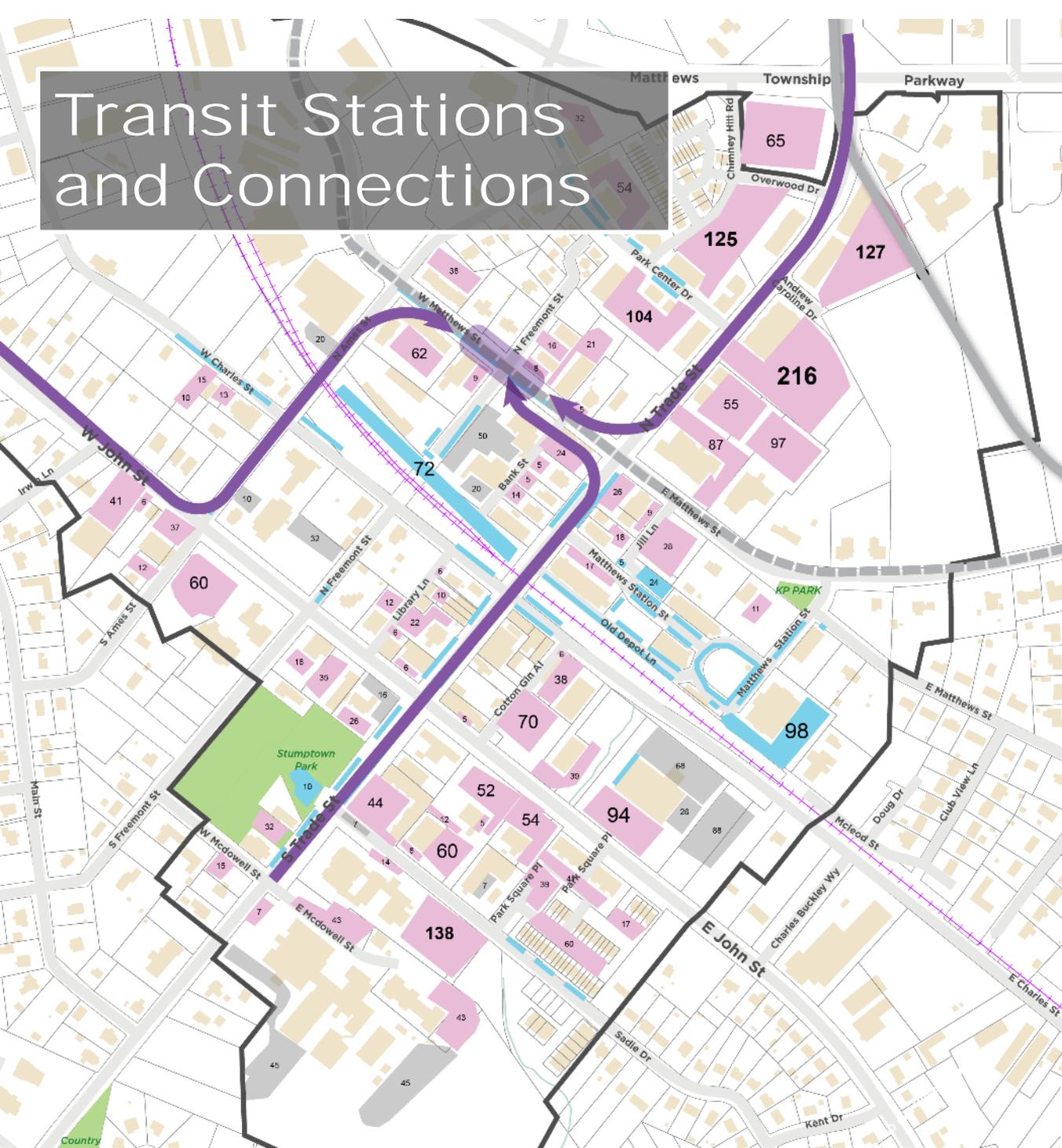
# Shared Parking Programs



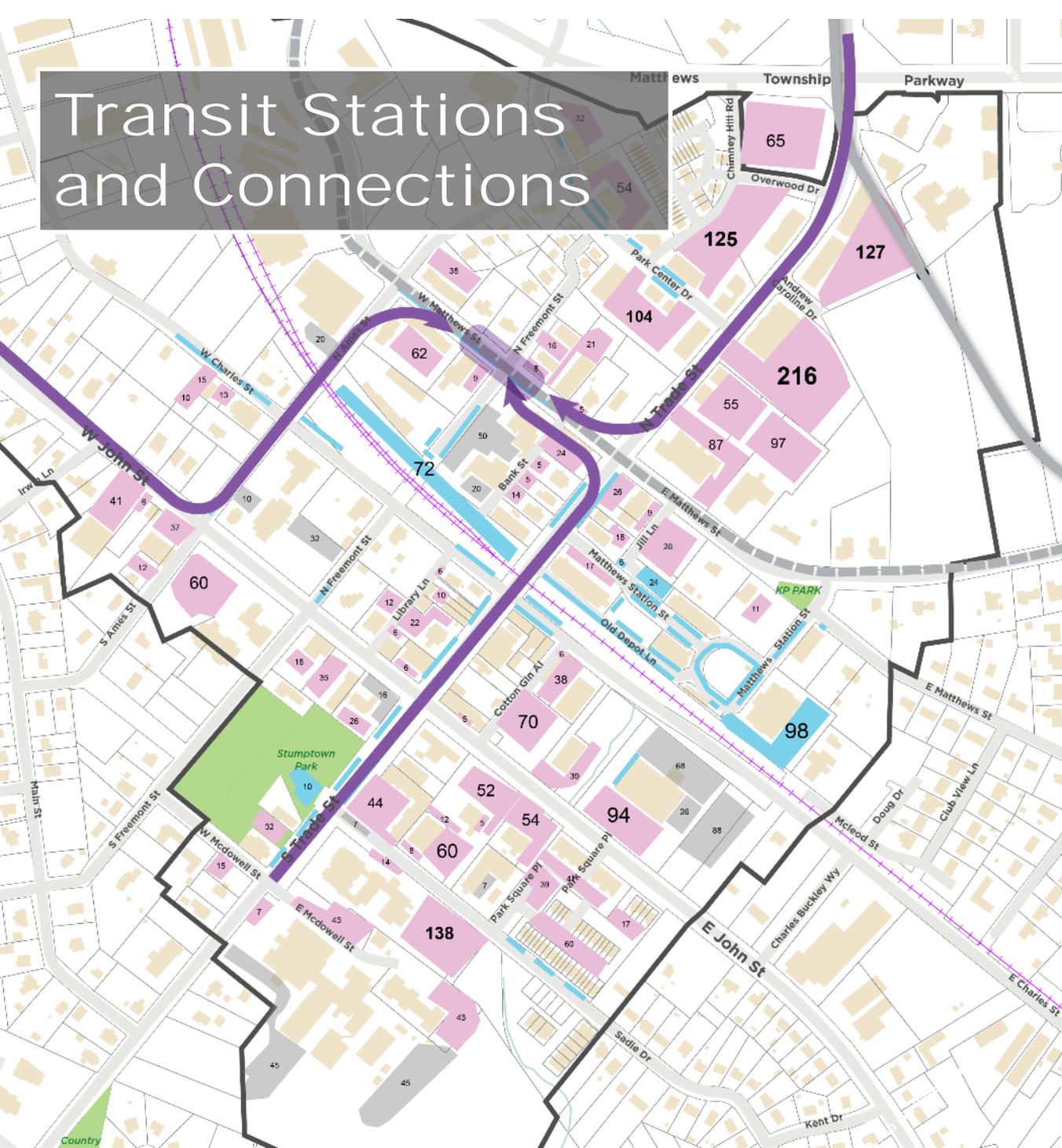
# Shared Parking Programs

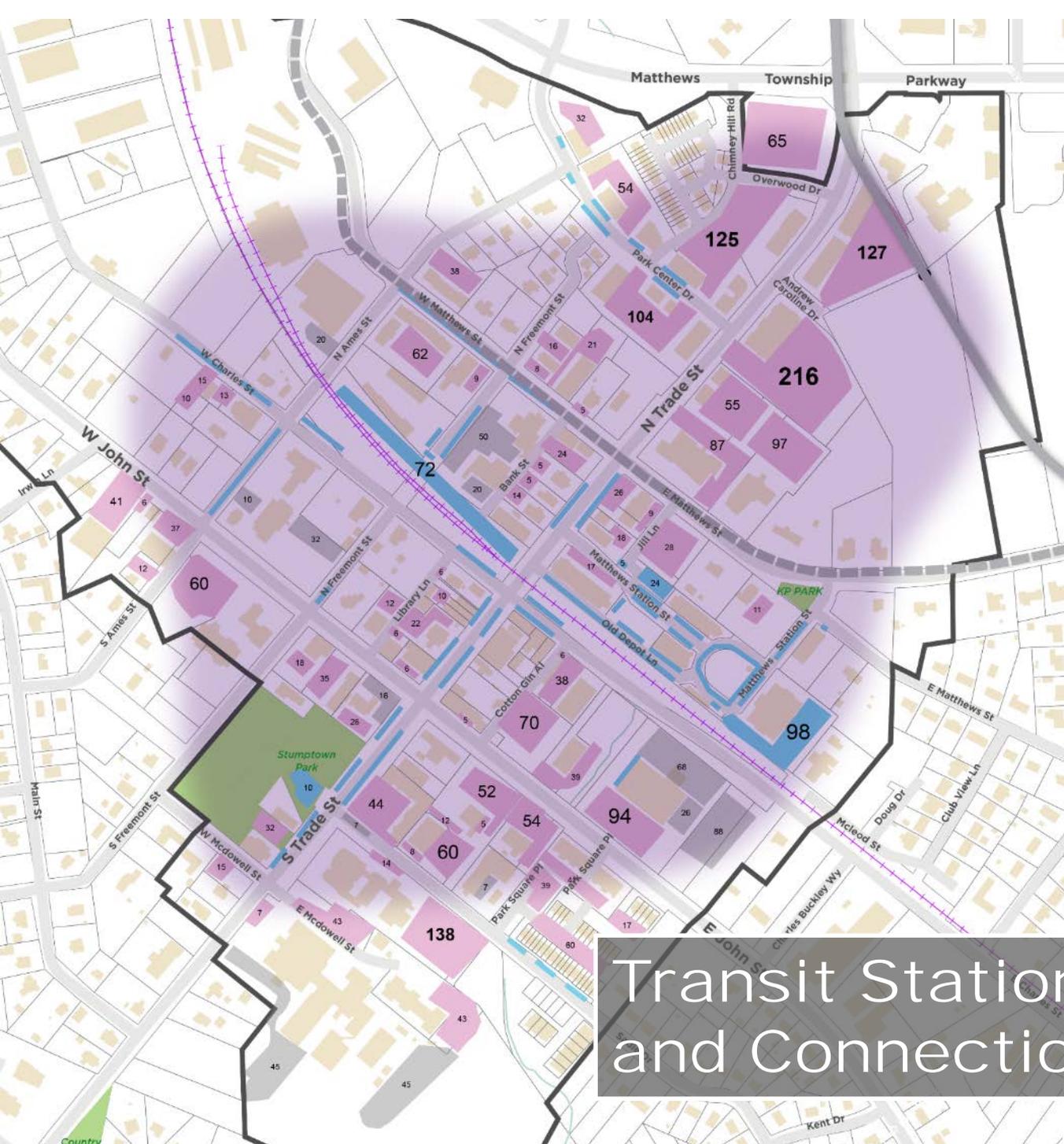


# Transit Stations and Connections



# Transit Stations and Connections





# Transit Stations and Connections



New Service Models

# Buc's beginnings (2003)



# Today (2018)



# Different Options: Pros and Cons



## PROS

- Service in place today: no change needed
- CID/LBI enjoying relatively low operating costs

- User interface (stations, schedules) more fluid
- Allows flexibility of real-time arrival as part of technology

- By now, brands and concept are familiar and established
- Easy payment and interface
- Essentially available 24/7

## CONS

- Essentially transit: relies on user to make all the effort
- Service interface is not modern
- Limited technology integration

- 'Victim of its own success': High demand can exhaust capacity if operations aren't scaled up

- Does not help with traffic problems
- Expensive to user if relied on regularly

# On-Demand Service: Primary Options

## *TECHNOLOGY ONLY*

- Existing service/operator enhanced with on-demand algorithm/app
- User pays one-time fee and monthly license
- Pilot options available for minimum periods of time
- Data reporting and monitoring available

## *FULL OPERATIONS*

- Technology company provides operations and algorithm/app
- Typically no up-front setup fee; hourly vehicle-hour cost
- Pilot options available for minimum periods of time
- Data reporting and monitoring available

### *SETUP LOGISTICS*

- Work with operators to outfit vehicles with technology
- Push out app and begin pilot program to test
- Adjust schedule for cost

### *COST IMPLICATIONS*

- Transfers part of current operating cost to technology program
- Requires staff support for reporting/monitoring

- **New contract, new service**
- Pilot program should make transition seamless
- Overlap with current service is desirable

- **Costs increase at current scale**
- Cost per hour achievable at current rates once service scales up

# Via: Arlington, Texas

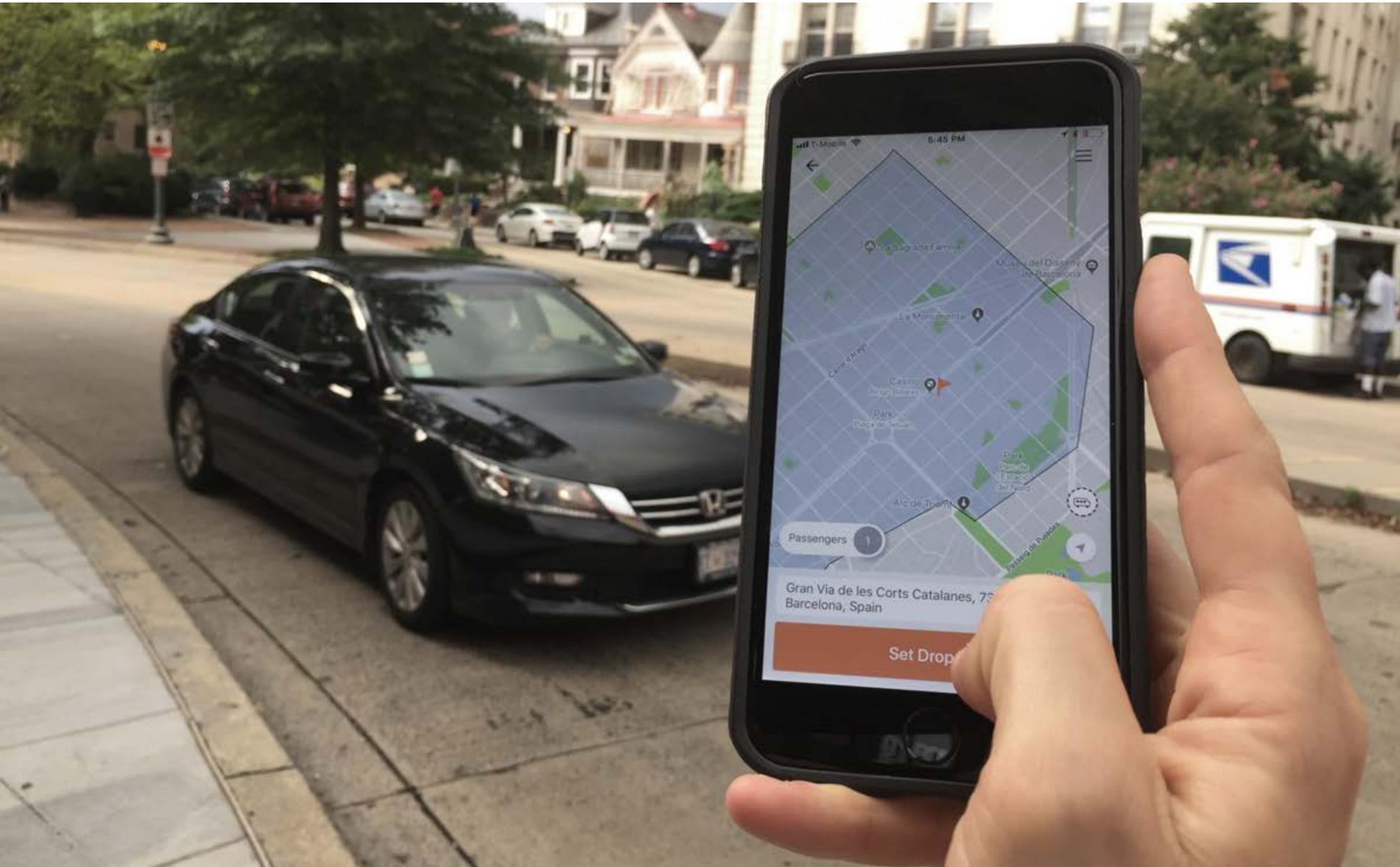


- May be 'technology enhancement' only, or full operations
- Greater choice of vehicles to meet customer expectations
- At typical scale, operating costs lower than many fixed-route options

# Via: On-Demand Microtransit



# Shotl: Optimizing Transit Service



# Scooters and Micro-Mobility



# Scooters and Micro-Mobility

## Charlotte Pilot Evaluation

- May – July 2018: 174,000 rides on scooters
- Nov. 2017 – July 2018: 173,000 rides on dockless bikes
- 100,000 scooter trips in July alone
- Pilot program limits both Bird and Lime to 400 scooters each
- **Average scooter trip length: 1.42 miles**
- **Average bike trip length: 0.75 miles**





# Discussion

Town of  
**Matthews**<sup>TM</sup>  
North Carolina



# Questions

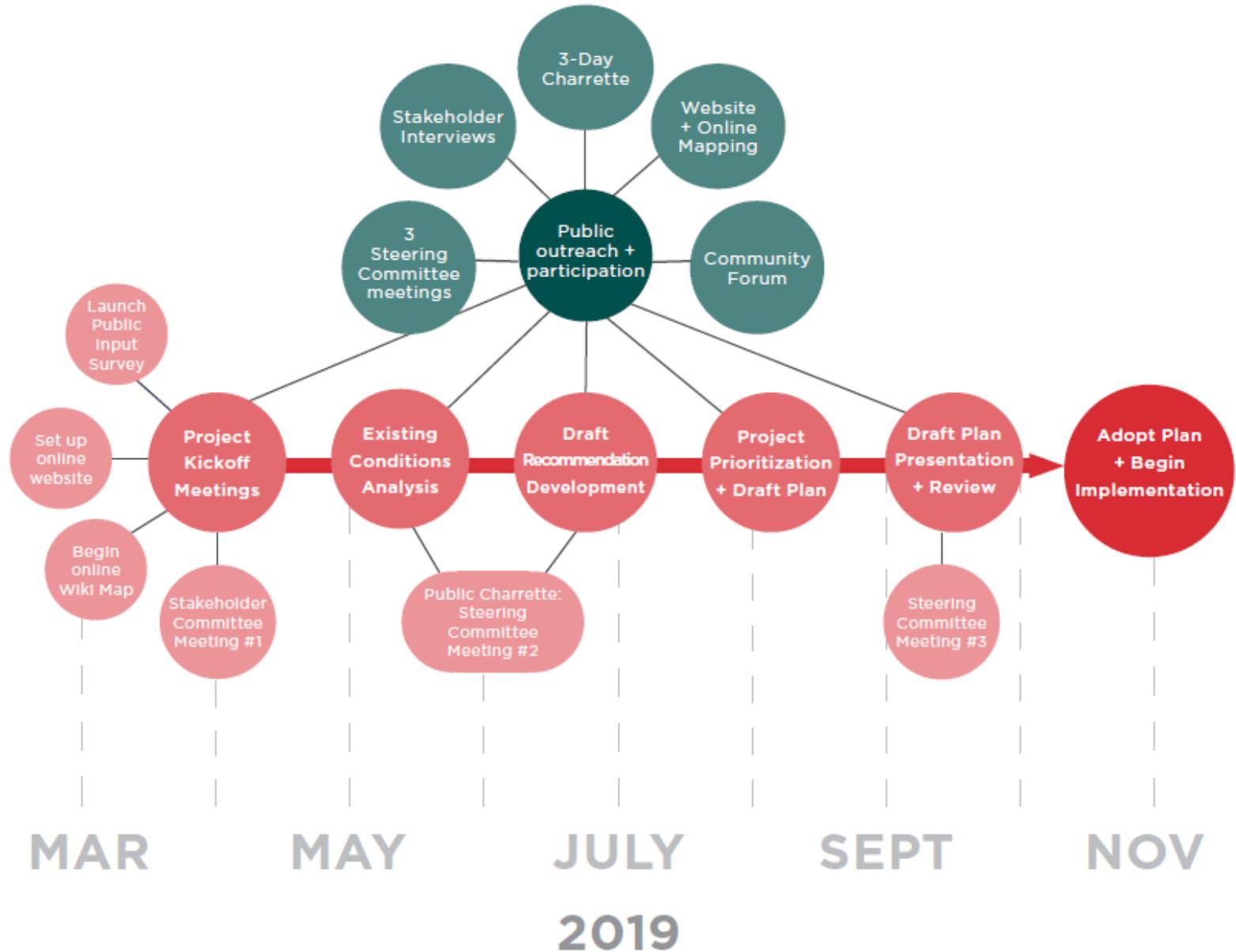
- What did we get right?
- What is missing? Or needs more work/thought?
- What Projects/Programs should Town tackle first? (3-5 years)



# Project Scope & Schedule



# Project Schedule



## Charrette Schedule & Next Steps

- “Pin-up” of Preliminary Ideas: Thursday 5-7pm (drop-in + Facebook Live)
- Drop-in public Input (Thursday 9-4; Friday: 9-1pm)
- Public Presentation of DRAFT Recommendations (fall 2019)



THANK YOU!

# Peer Communities

- Duluth, GA
- Fuqua-Varina, NC
- Carmel, IN
- Alpharetta, GA
- Davidson, NC

# Complete Streets & Multi-modal Orientation



# Trail/Greenway Connections to Downtown



Carmel, IN



Duluth, GA

# Regional Transit & Local Shuttles



Alpharetta, GA

# Parking Strategies



## Varina District

### Downtown Parking Info

#### Where to Park:

Public parking available in designated surface parking lots and marked on-street parking.

- ▶ When parking your vehicle, make sure it is parked between the lines of the designated parking space.
- ▶ Public Parking Lot (2-hour parking where posted) Monday - Saturday 8:00 AM - 6:00 PM
- ▶ Accessible Parking - Town provides accessible parking spaces for exclusive use of vehicles displaying the appropriate permit.

#### Where NOT to Park:

- ▶ In front of fire hydrants
- ▶ In loading zones
- ▶ In crosswalks
- ▶ In front of driveways

**Fuquay-Varina Police Department  
and Parking Enforcement:**

▶ 919.552.3191



# New Mobility Transport Options



**Zagster**  
a better way to bike

**need a bike?  
borrow ours!**

Join on our app or at [Zagster.com/Carmel](http://Zagster.com/Carmel)

<b>1. BORROW</b>  Enter your bike's number into the app and tap "START RIDE". You'll get a code to open and close the lockbox.	<b>2. UNLOCK</b>  Use the key from inside the lockbox to operate the U-lock to separate the bike to its station. Close the lockbox before you ride.	<b>3. RIDE</b>  Have fun and stay safe! Use the U-lock to keep the bike secure if you make stops along the way.	<b>4. RETURN</b>  When you're done, lock the bike back to a Zagster dock and close the lockbox. Then go to the app and tap "END RIDE".
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Available for the public

**CARMEL BIKE SHARE**

Need help? Call 202-999-3924

# Promoting Multi-modal Transportation



# Promoting Multi-modal Transportation

Alpharetta, GA



# Mobility & Placemaking



Duluth, GA

# Mobility & Placemaking



Duluth, GA

# Complete Streets 2.0 Principles



**PRIORITIZED  
USES**



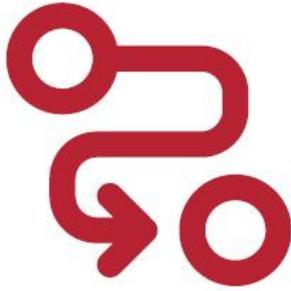
# Complete Streets 2.0 Principles



**SAFE BY  
DESIGN**



# Complete Streets 2.0 Principles



**POINT-TO-POINT  
TRIPS**



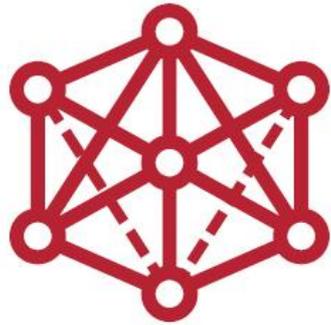
# Complete Streets 2.0 Principles



**MULTIMODALISM**



# Complete Streets 2.0 Principles



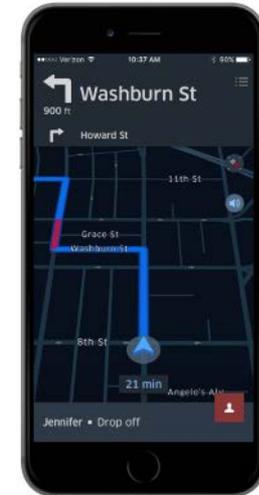
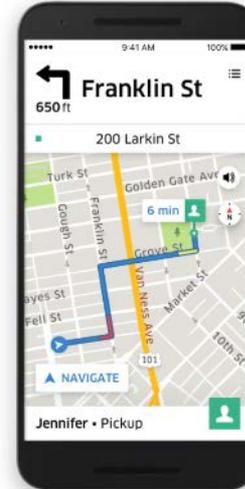
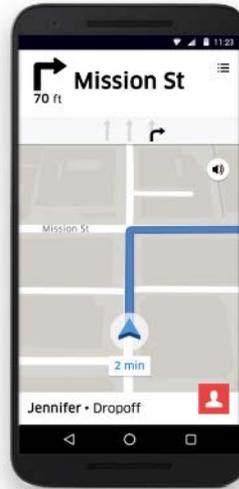
**COMPLETE  
NETWORKS**



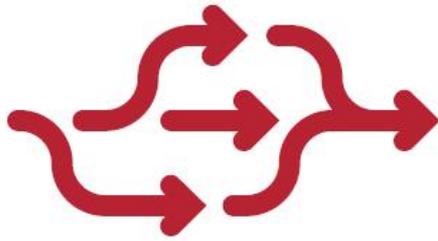
# Complete Streets 2.0 Principles



**DIGITAL  
INFRASTRUCTURE**



# Complete Streets 2.0 Principles



**ADAPTABILITY**



# Complete Streets 2.0 Principles



**OUTCOMES  
BASED**

