



VISION

The Town of Wake Forest will have a safe, efficient, flexible, innovative, and inclusive multimodal transportation system that provides residents of and visitors to the Town with a multitude of transportation options for local and regional travel while promoting a welcoming small-town charm and vibrant business environment.

OBJECTIVES

Safety



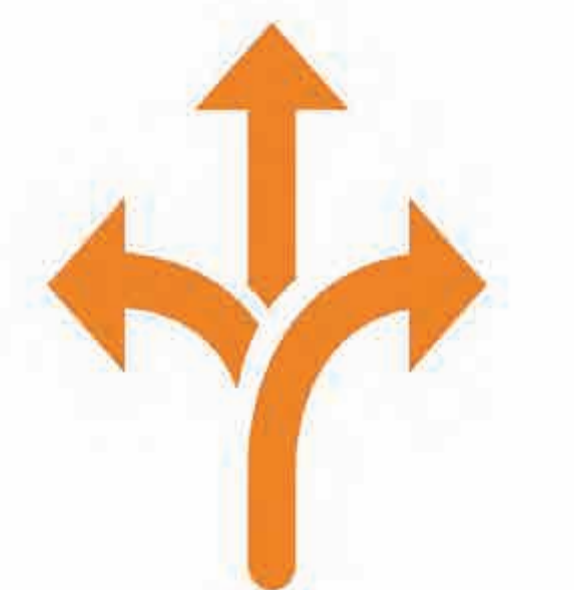
- Work toward the Vision Zero goal.
- Focus on safe bicycle and pedestrian crossings of major roadways.
- Provide uniform signage and branding initiatives to address accident prevention.

Efficiency



- Coordinate with other jurisdictions
- Utilize technology to move vehicle traffic efficiently
- Promote increased density and commercial development
- Ensure that policies in UDO and other documents support the CTP
- Appropriate transportation improvements from new developments

Flexibility



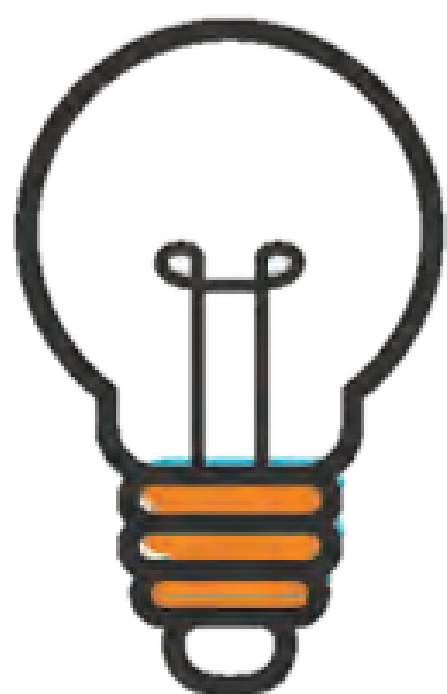
- Multiple travel options for local and regional travel
- Promote interconnectivity between existing and future developments
- Focus on providing complete streets
- Prepare for future commuter rail service
- Plan for multiple time horizons with flexibility.
- Focus on the best use of limited funds

Inclusivity



- Ensure that modes serve low income communities
- Provide educational support on various modes
- Respect previous planning and community involvement efforts
- Plan must consider the Town as a whole
- Respect and reinforce the history and scenic character of the Town, the small-town charm

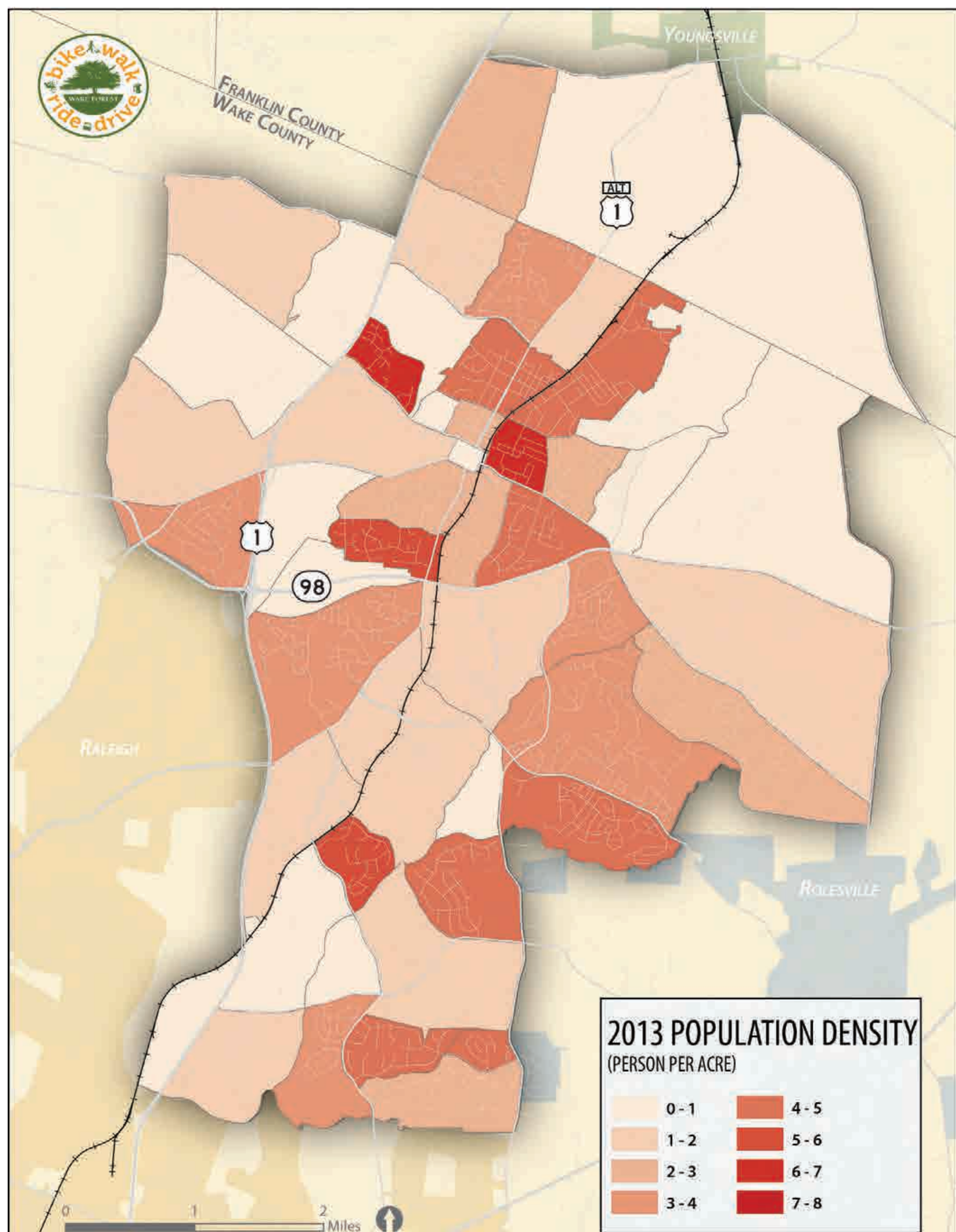
Innovation



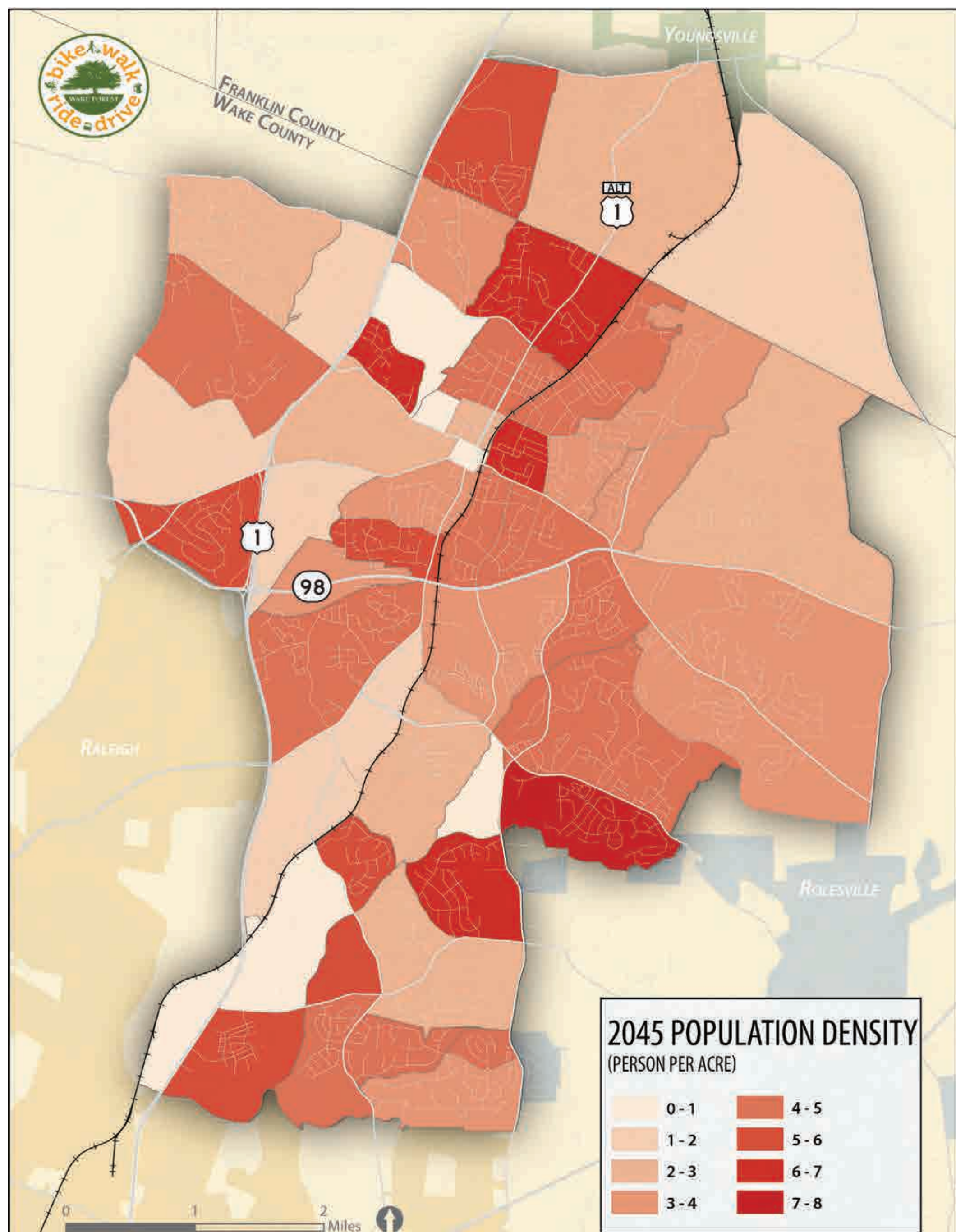
- Embrace technology, innovation, innovative modes of travel, and mobility as a service
- If outside agencies are not meeting the Town's needs and desires, explore a more proactive action by the Town in funding and operating the transportation system



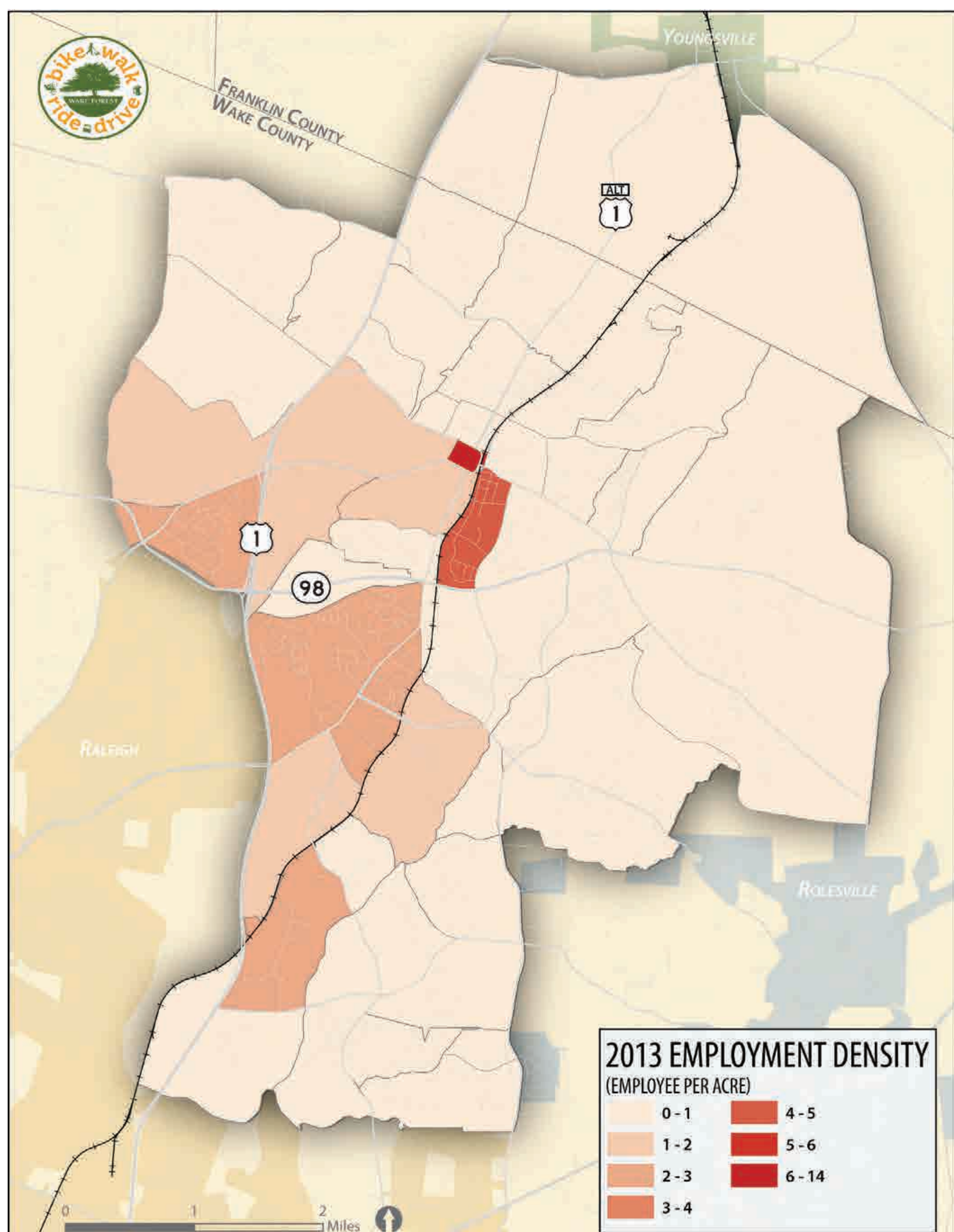
Demographics | Population and Employment Densities (2013 and 2045)



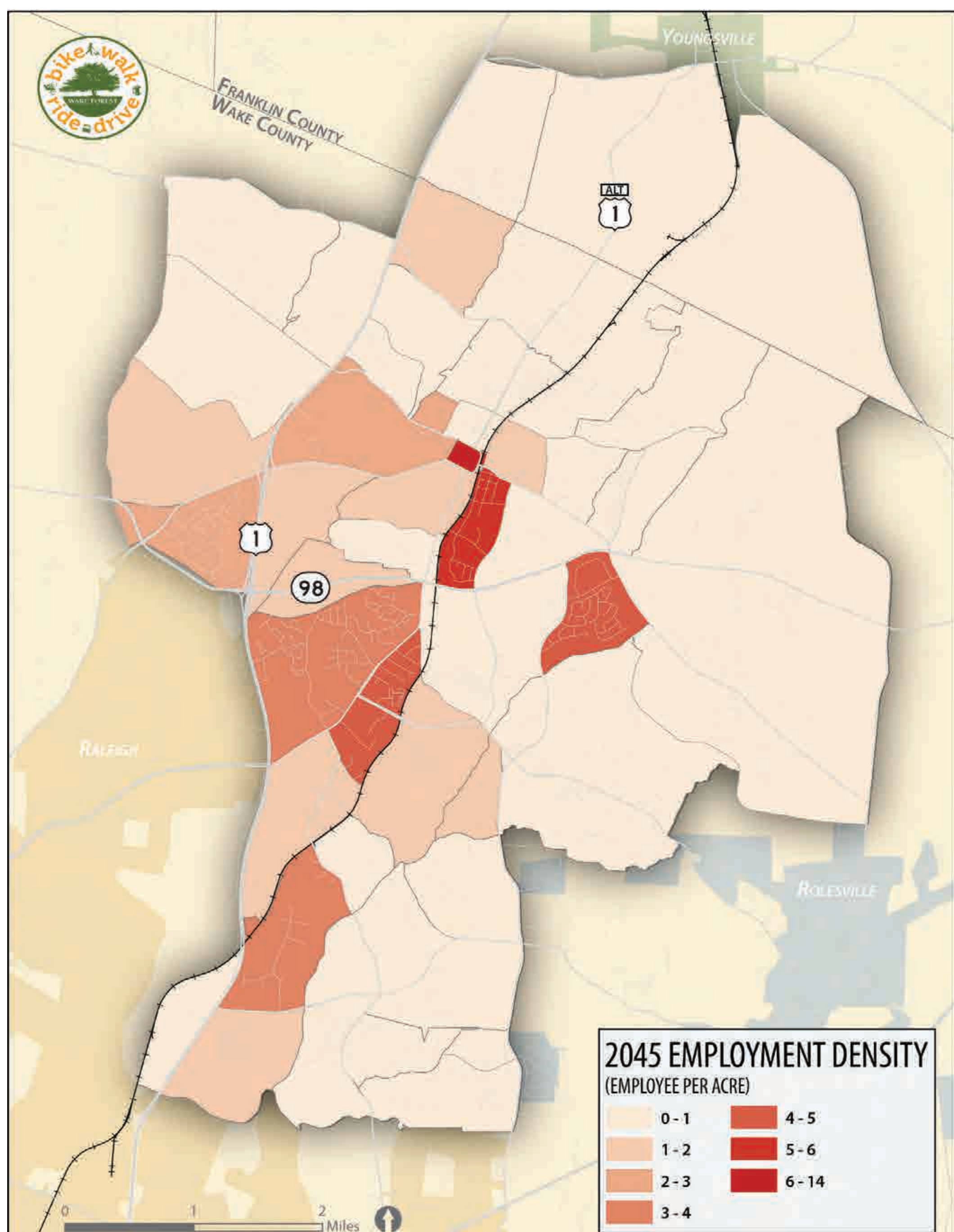
This map shows the population density in and around the Town of Wake Forest in 2013 as per the Triangle Regional Model.
Total Population (2013) - 42,534



This map shows the population density in and around the Town of Wake Forest in 2045 as per the Triangle Regional Model (modified).
Total Population (2045) - 74,663



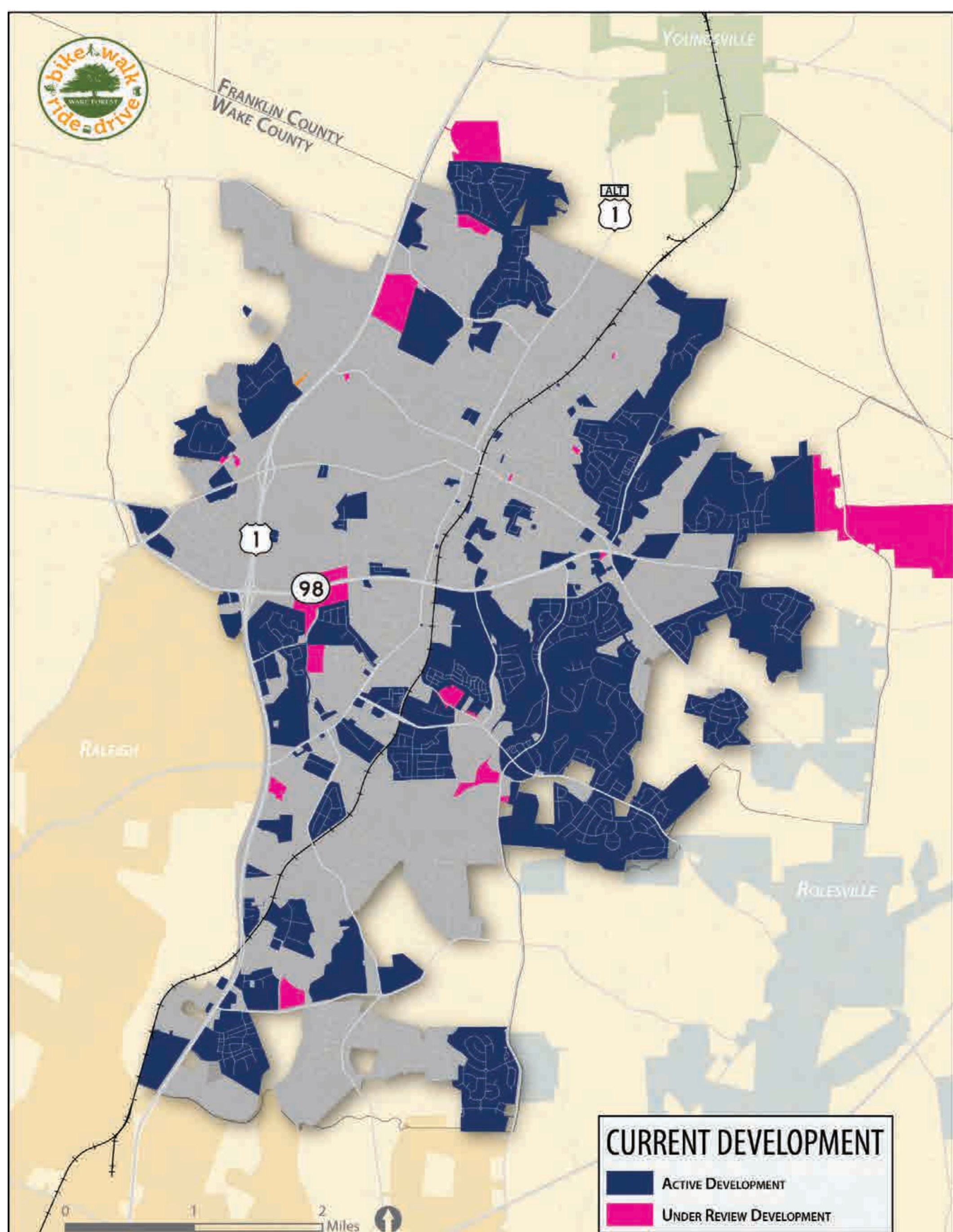
This map shows the employment density in and around the Town of Wake Forest in 2013 as per the Triangle Regional Model.
Total Population (2013) - 12,936



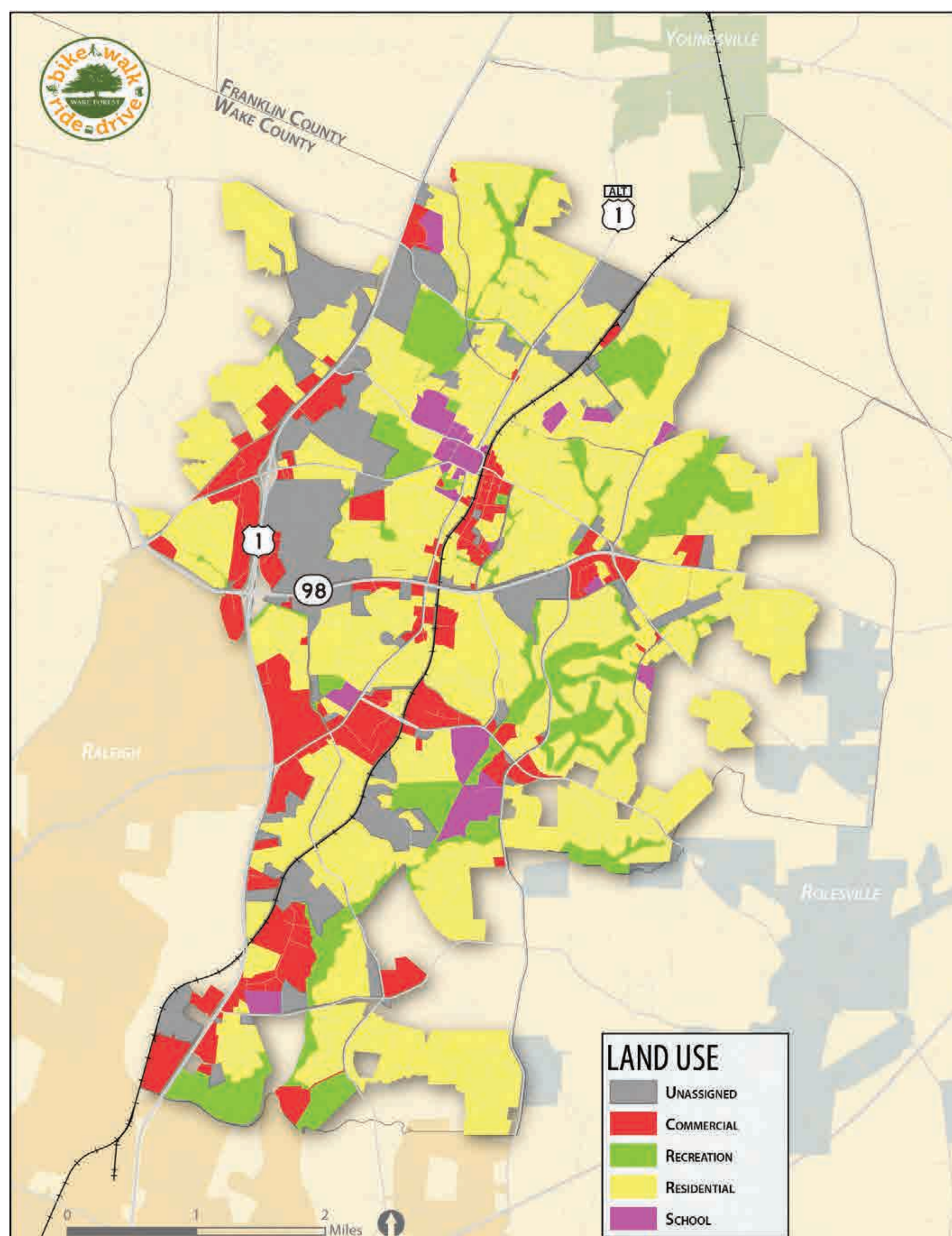
This map shows the employment density in and around the Town of Wake Forest in 2045 as per the Triangle Regional Model (modified).
Total Population (2045) - 19,778



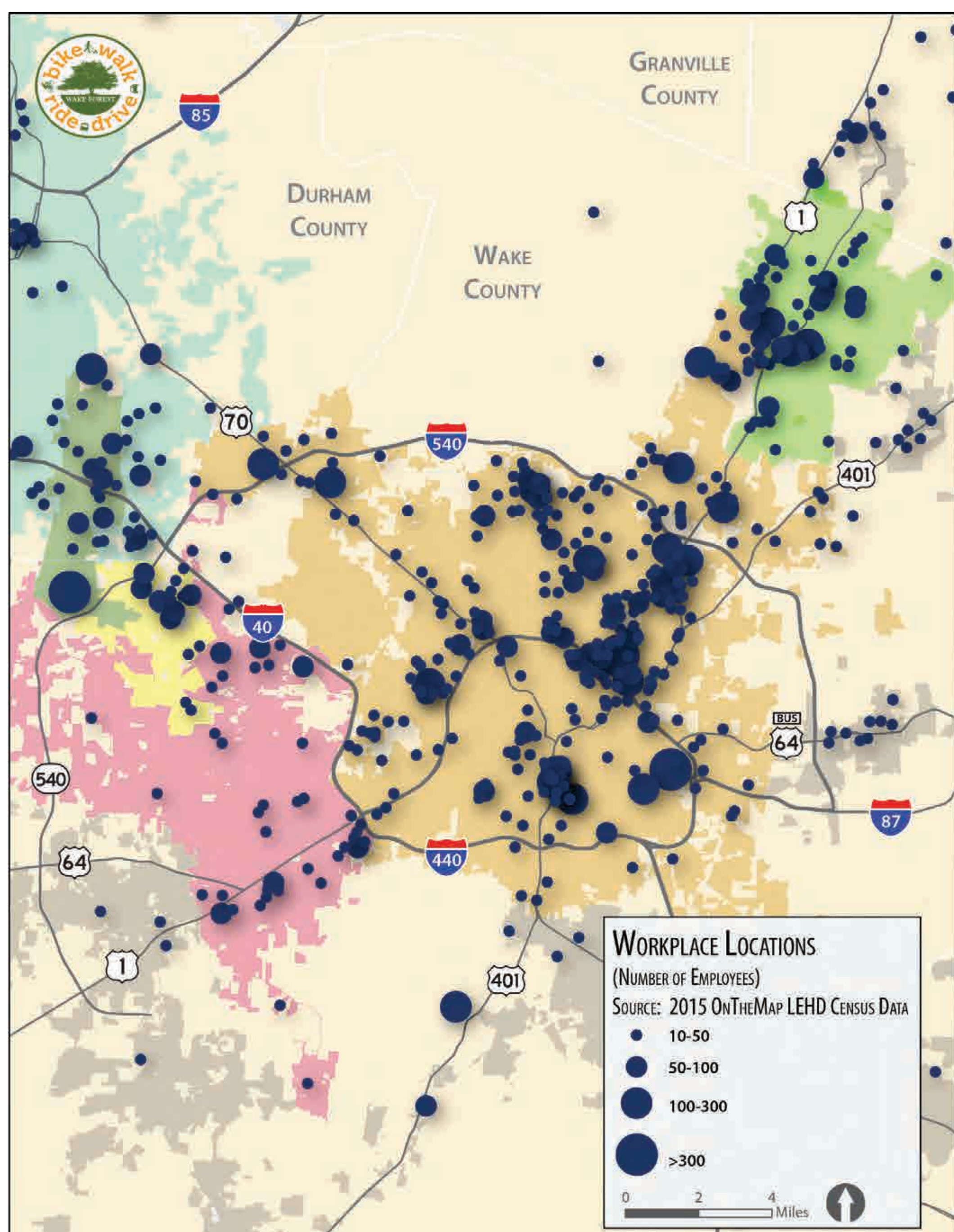
Existing Conditions | Land Use, Development, and Workplace Locations



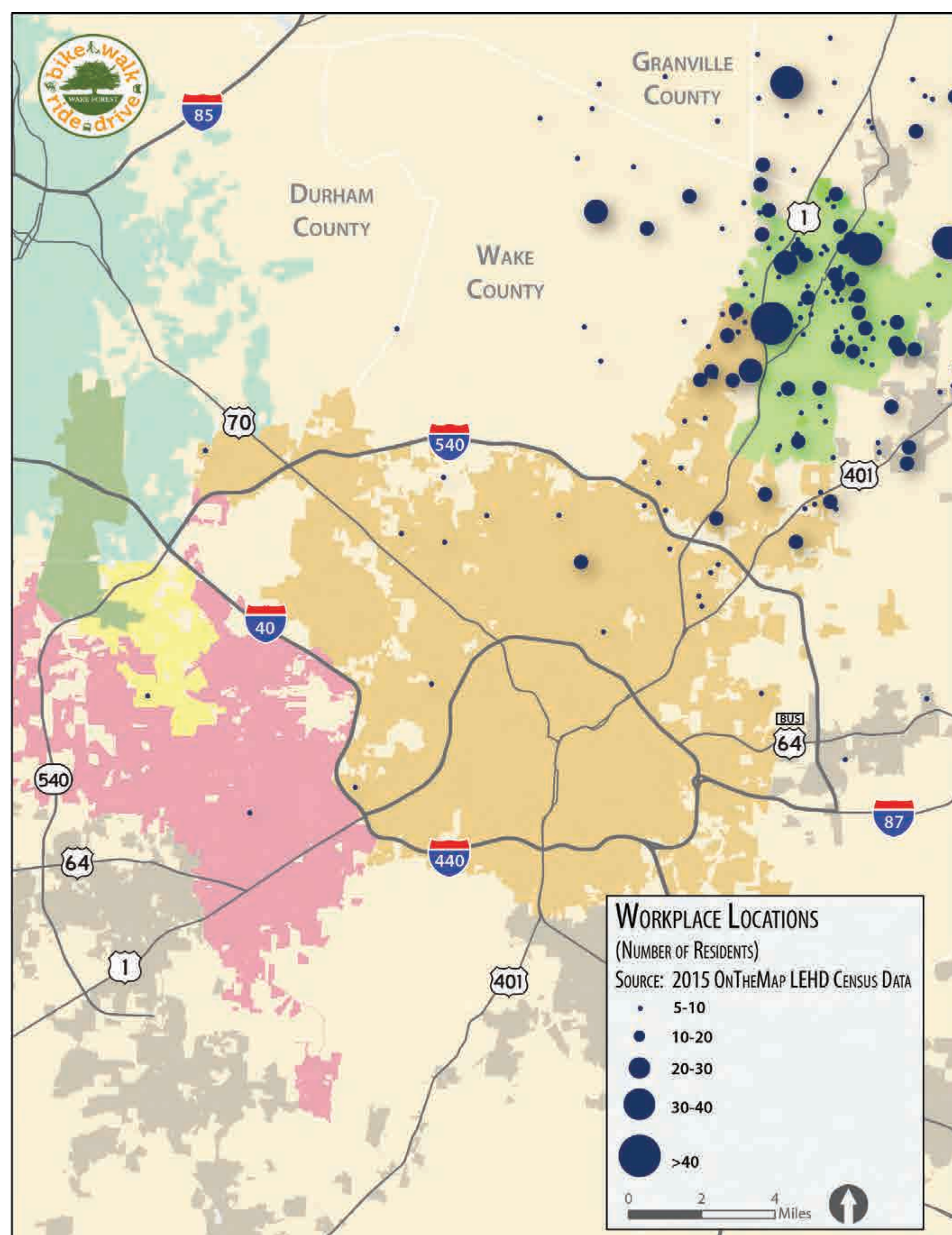
Wake Forest is currently witnessing a great influx of residential and commercial development primarily concentrated east and south of downtown. There are a total of 5.75 square miles of active and under review developments.



The Town of Wake Forest is primarily residential (59%) followed by commercial (12%) and recreational (11%). 15% of the town is currently not zoned.



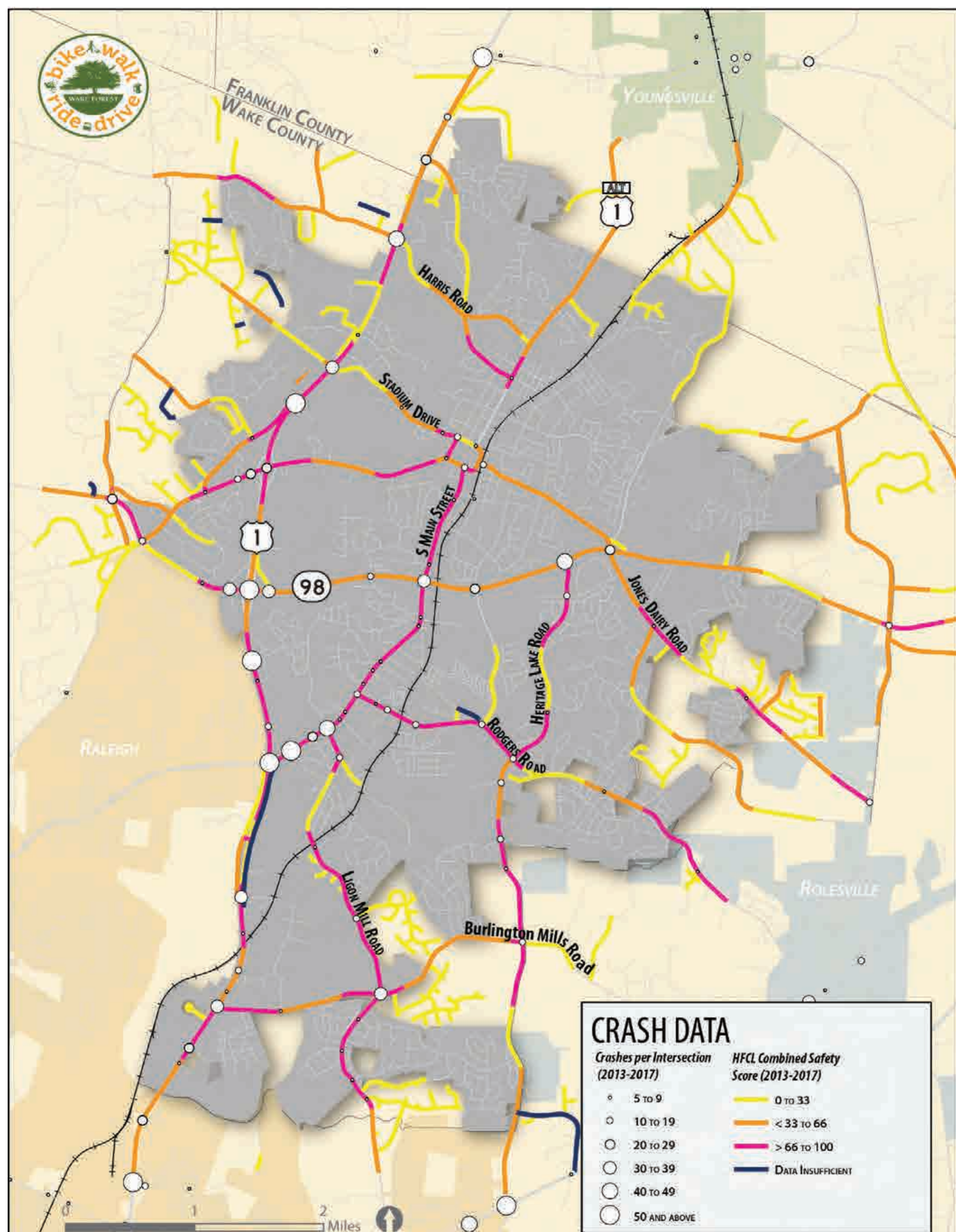
This map shows where Wake Forest residents work. Most workplaces are concentrated along Capital Boulevard between I-440 and I-540. Other significant concentrations are Downtown Raleigh, Wake Med and RTP.



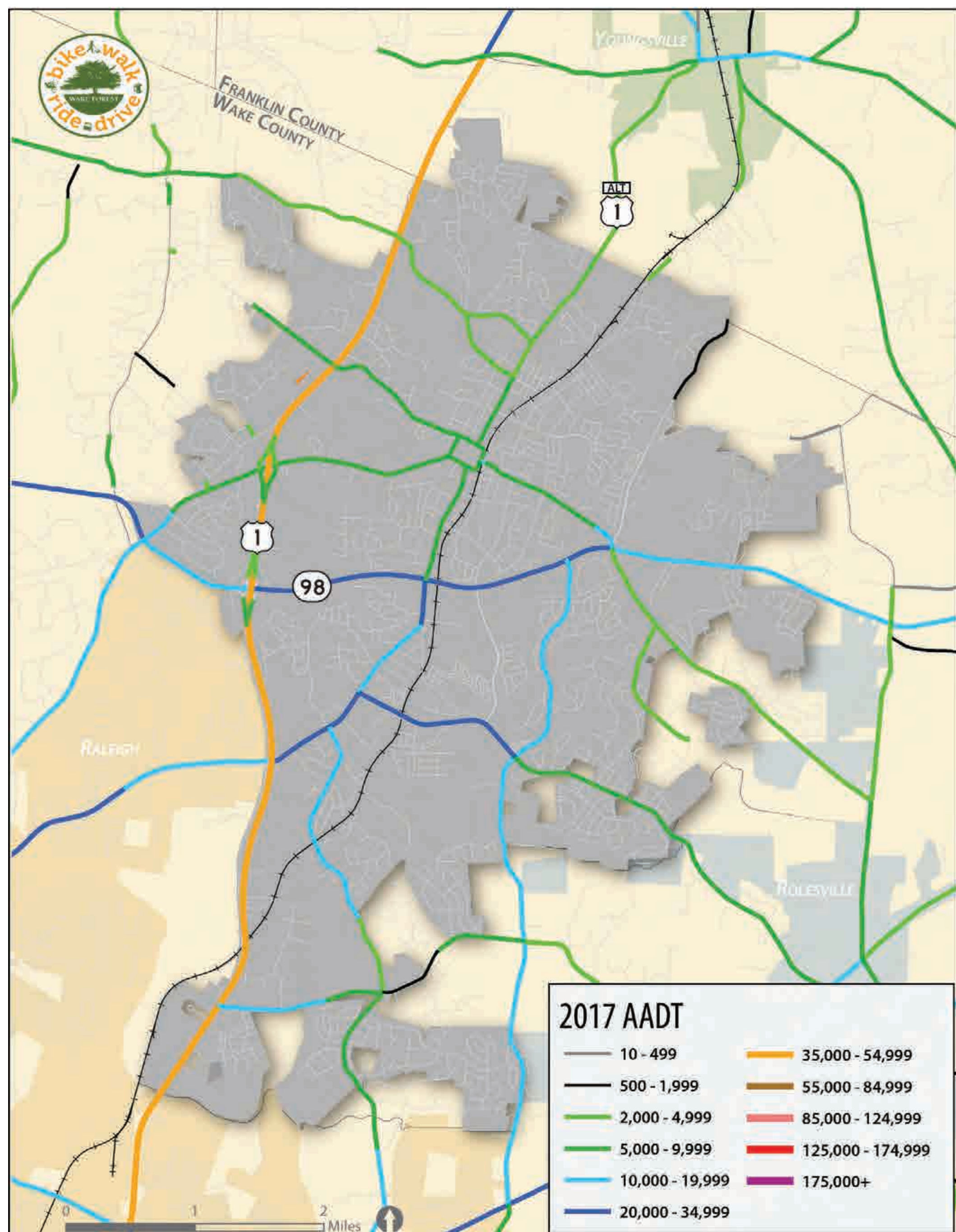
This map shows the residence locations for the people who work in the Town of Wake Forest. Most people who work in Wake Forest live within or close to the town.



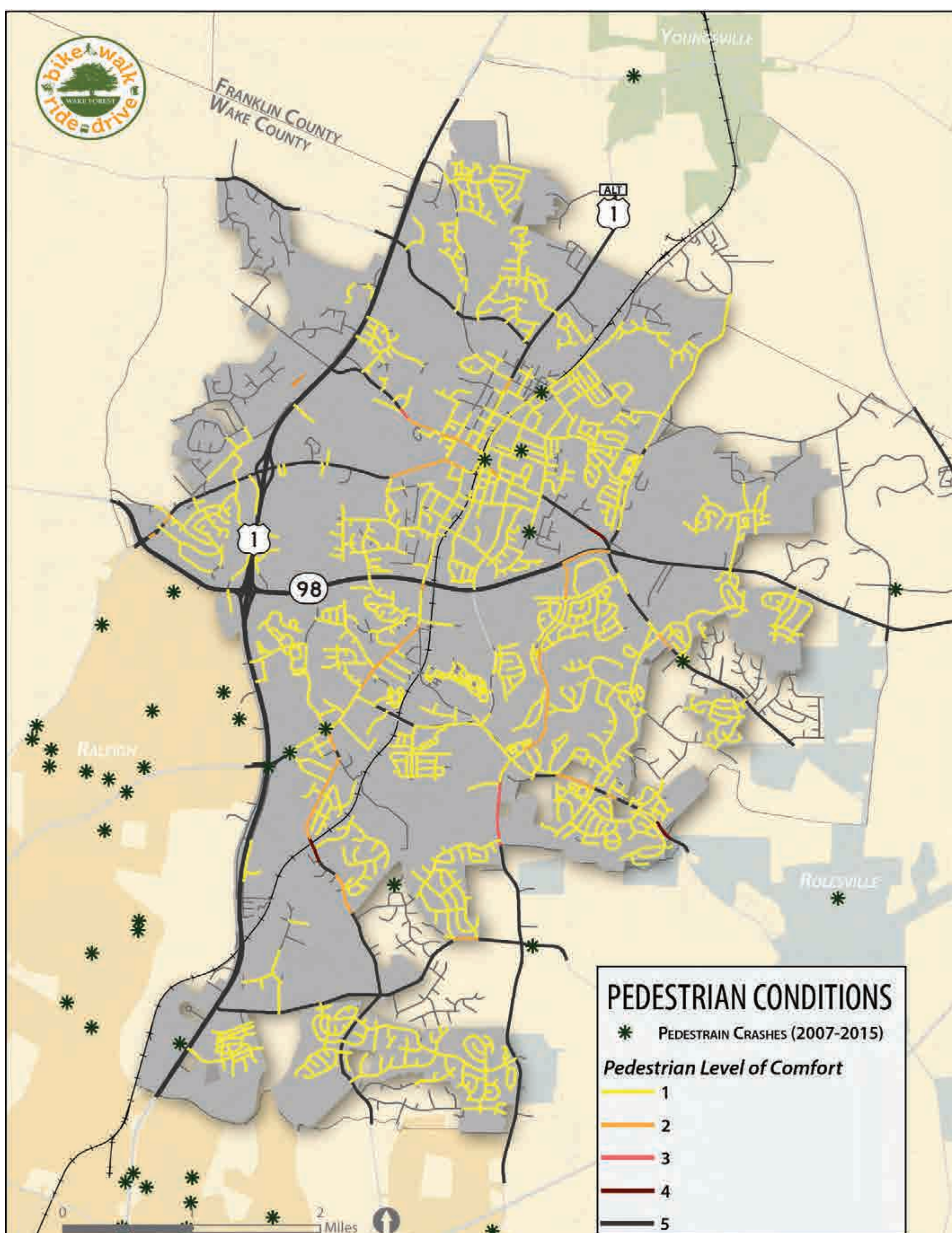
Metrics | Traffic Volume, Crashes, Bicycle and Pedestrian Conditions



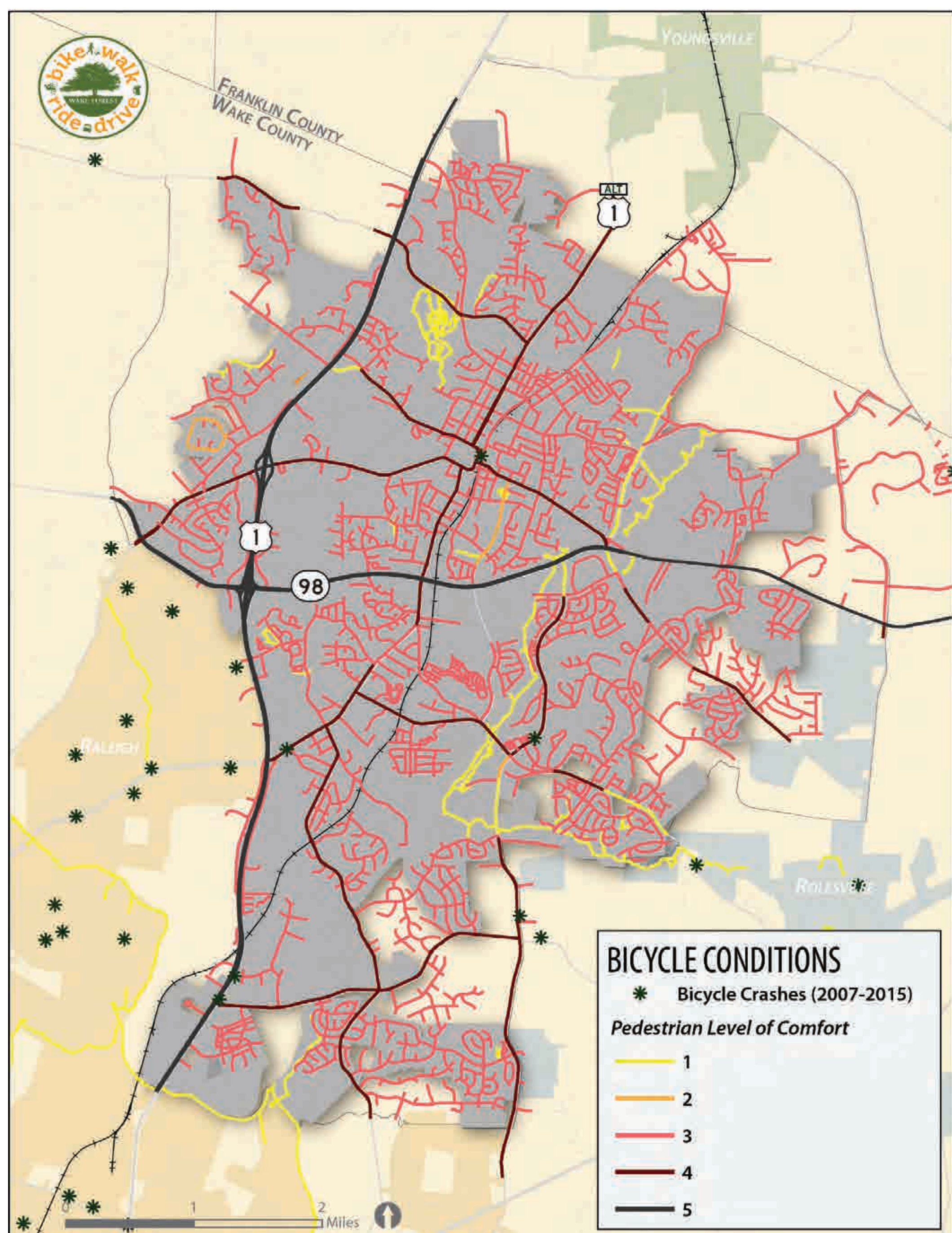
This map shows NCDOT Safety Scores for major roads and Crashes per Intersection between 2013 and 2017. Safety scores denote the relative safety index of a street based on number of crashes and total traffic volume.



AADT or Average Annual Daily Traffic is a metric measured by NCDOT for major roads. This metric reports average daily traffic without seasonal variations.



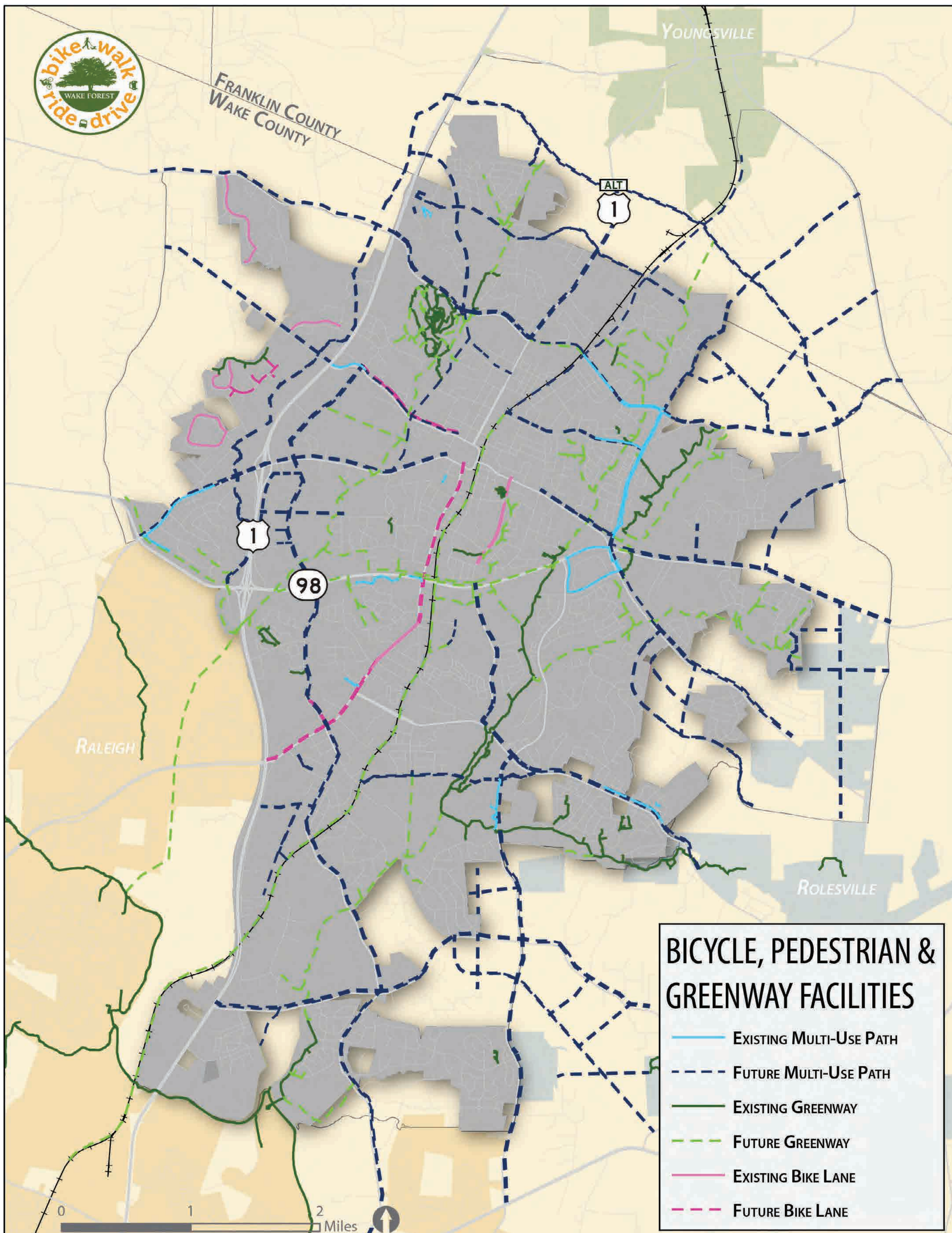
Pedestrian Level of Comfort is measured based on the easiness and comfort experienced by pedestrians. It is determined by availability of continuous usable greenways, multi-use paths, or sidewalks on one or both sides of a street.



Bicycle Level of Comfort is measured based on the easiness and comfort experienced by bicycle riders. It is determined by availability of continuous usable greenways, multi-use paths, or bike lanes or sharrows on both sides of a street.



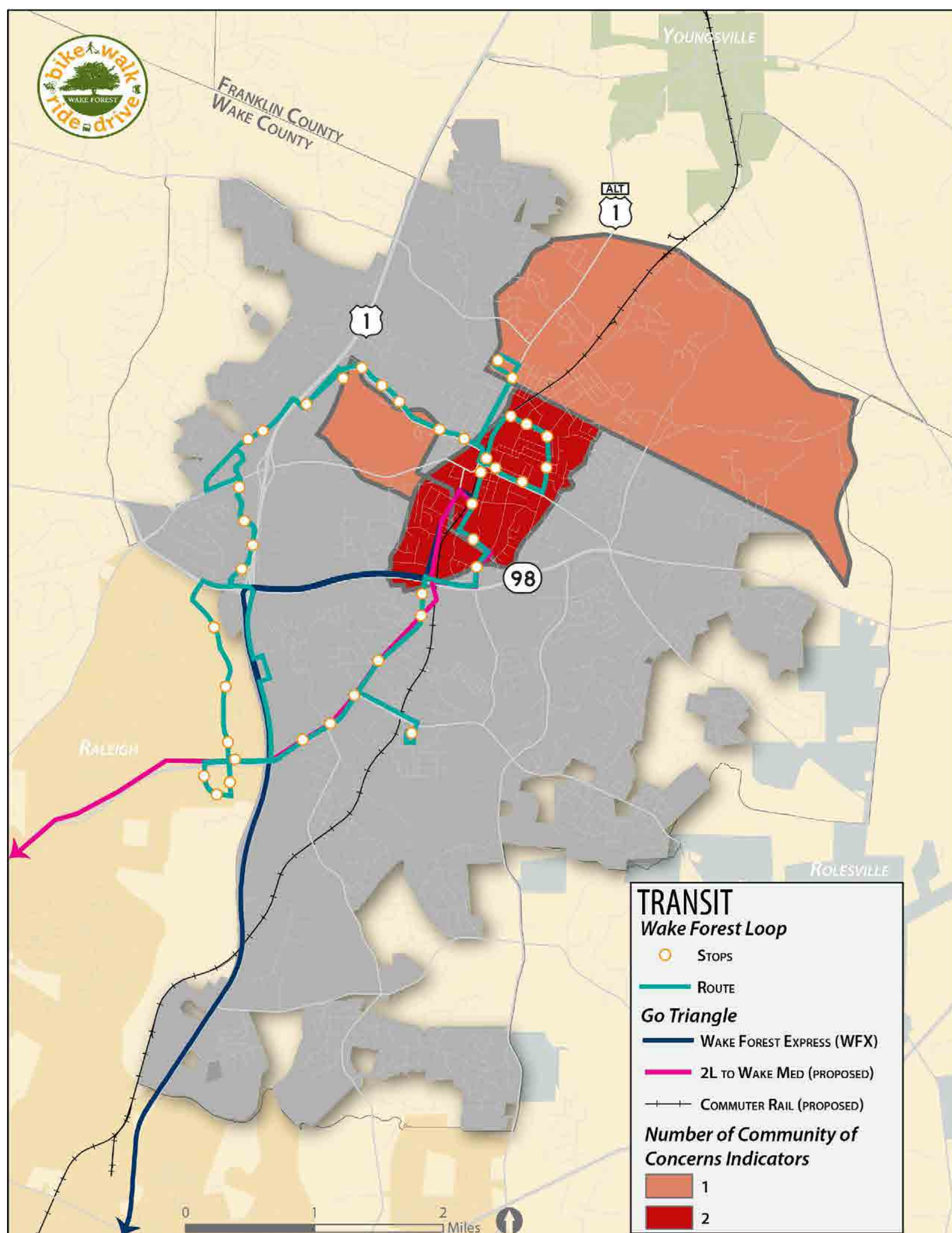
Recommendations | Bicycle and Pedestrian Network



This map shows existing and recommended bicycle and pedestrian network for the Town of Wake Forest and environs. Multiple discussions with the Town and the public denoted that there is a strong will to enhance active transportation network and these recommendations have been made to reflect that. Several new Multi-Use paths, Greenways and Bike Lanes have been recommended to expand the reach of non-motorized transport within Wake Forest.



Transit | Commuter Rail, Bus Loop and Underserved communities



Existing Conditions

- The adjoining map shows the existing **Wake Forest Loop** bus route superimposed on a map indicating the existence of Communities of Concern.
- Communities of Concern include underserved sections of the community including older adults, low income households, minority households, households without adequate number of cars etc.
- Communities of concern have a higher propensity to use public transportation.
- Town of Wake Forest is planning to implement a **reverse loop** bus service to complement the existing loop route.

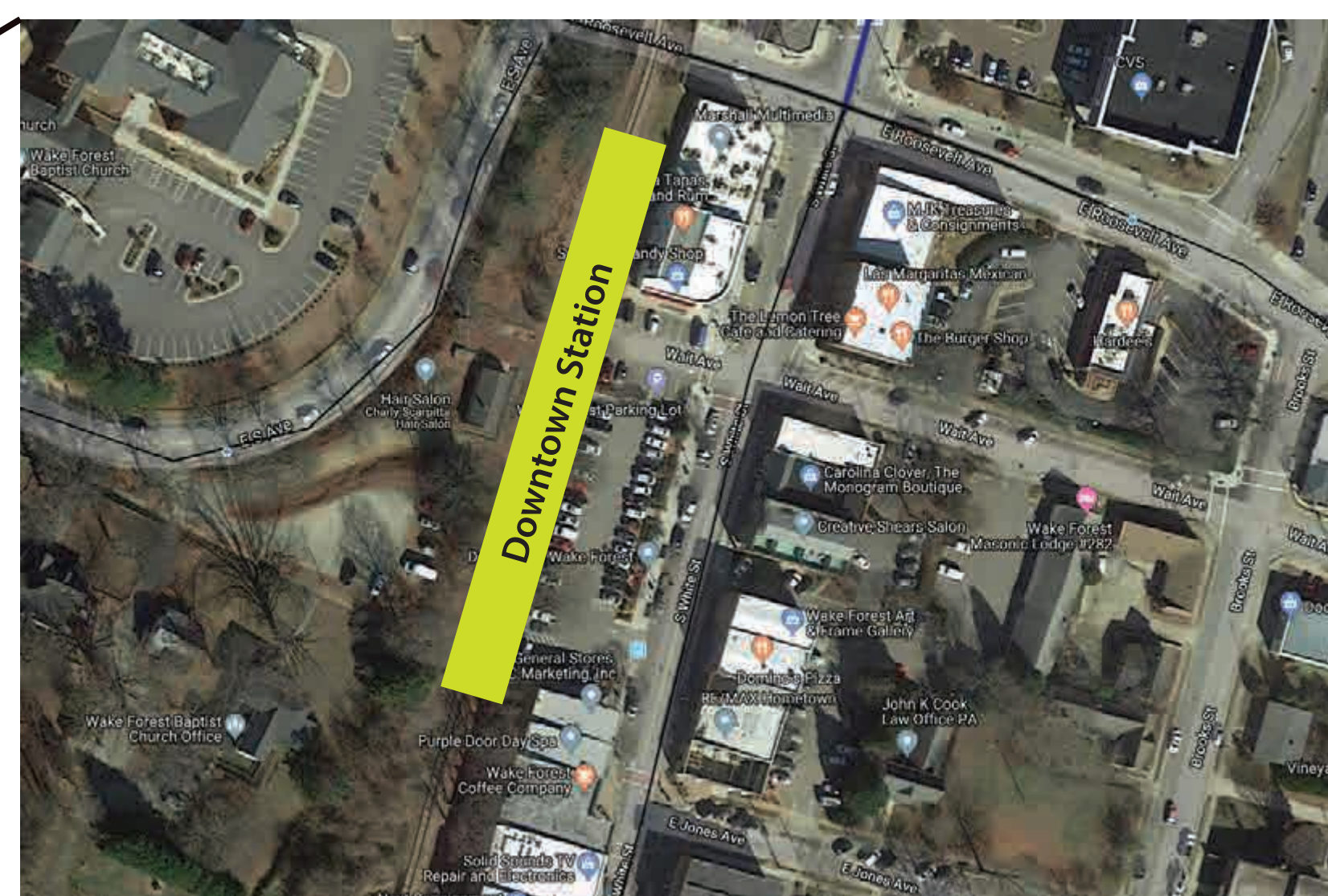
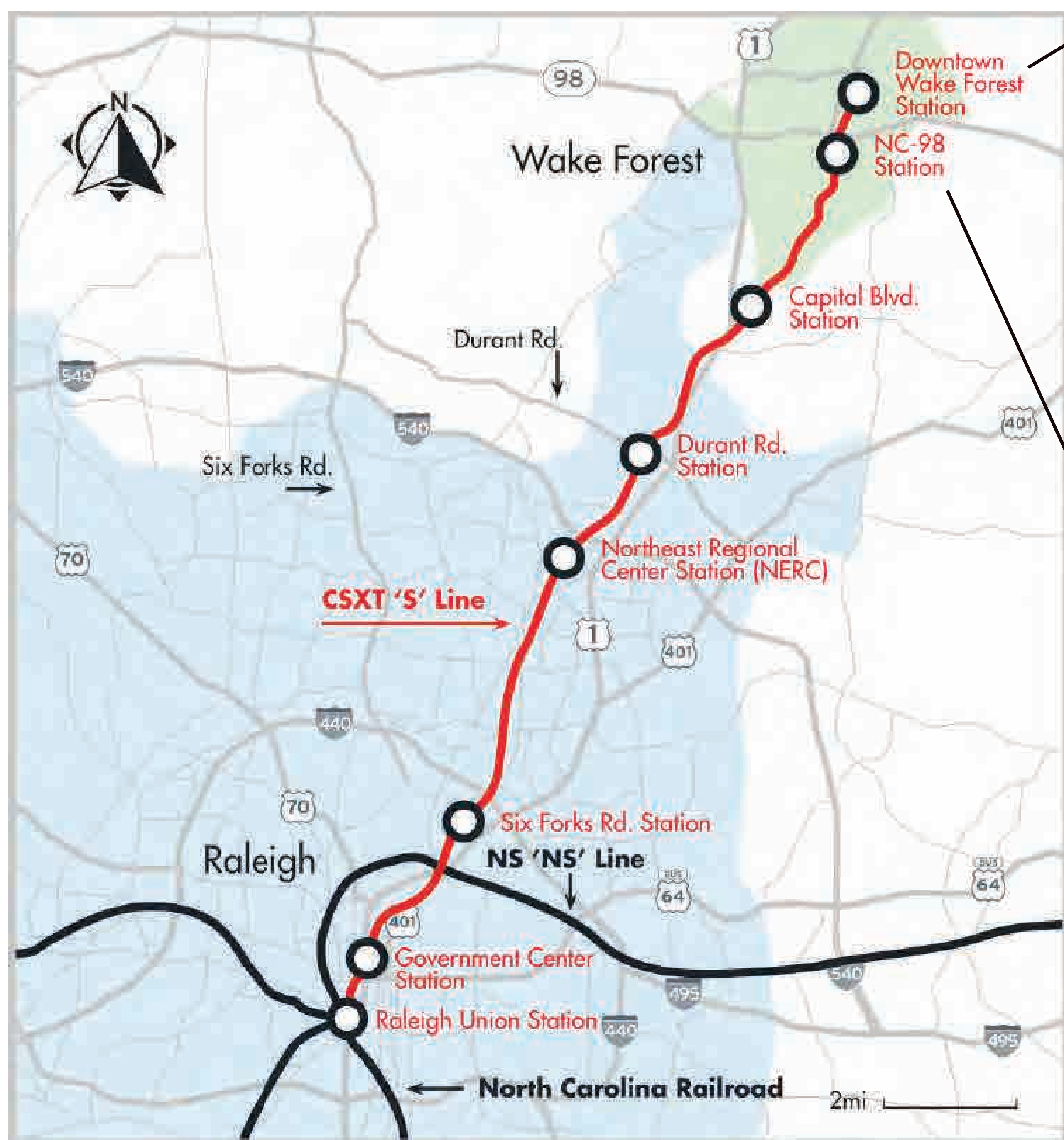
Recommendations

Bus

- The reverse loop bus route should be extended to serve the communities of concern.
- On-Demand service to and from nearby towns of Youngsville and Rolesville need to be studied.

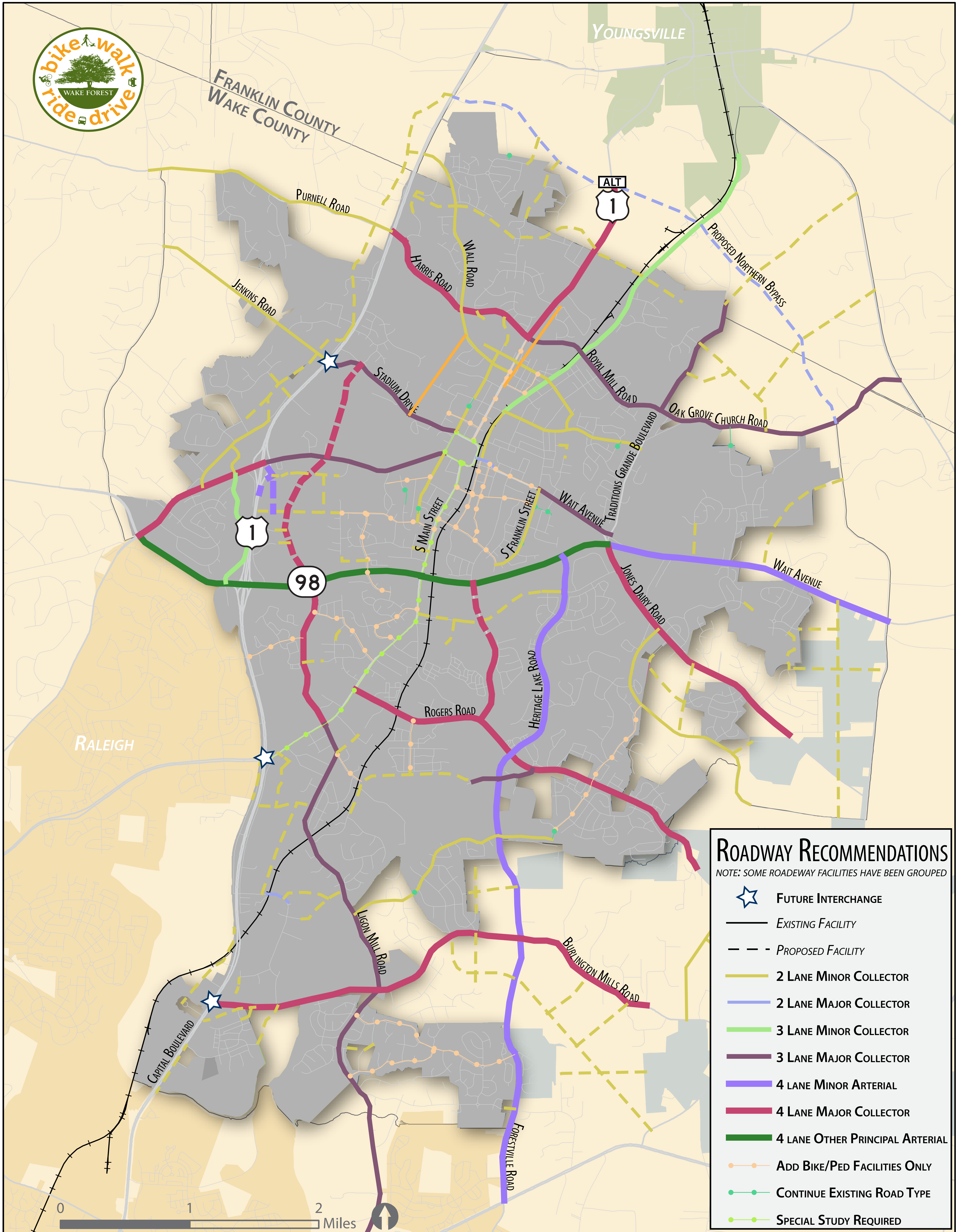
Rail

- Commuter rail service between Raleigh and Wake Forest is in the early stages of planning.
- Two stations are proposed within Wake Forest as shown in the map below.
 - Downtown station - Near S White Ave close to E Jones Ave
 - NC-98 Station - Intersection of NC-98 and S Main St
- NC-98 Station has a higher probability to be planned as a Park and Ride Station. The streets and neighborhood around this station should be planned accordingly.

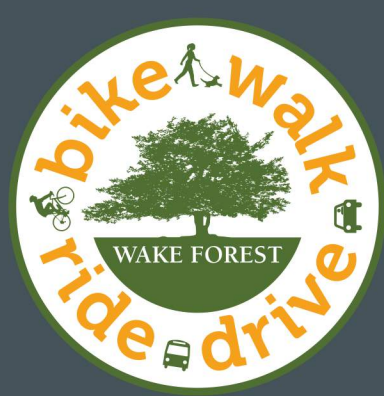




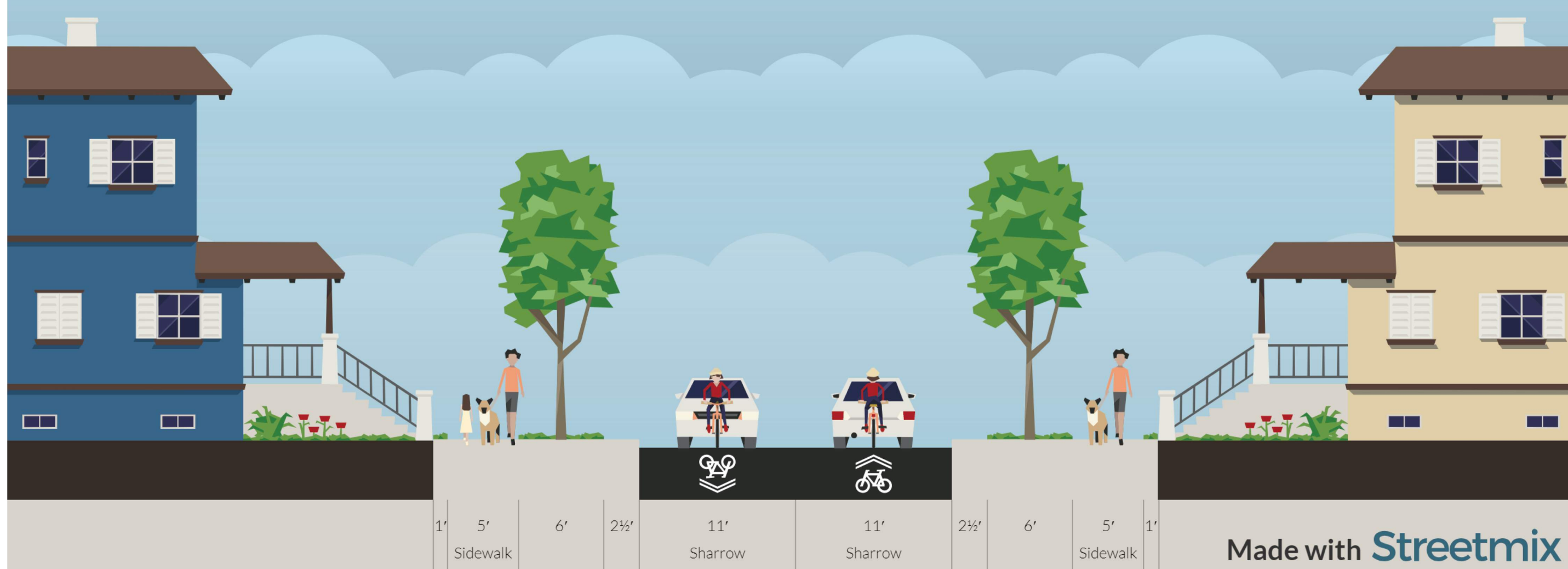
Recommendations | Roadways



This map shows all recommended roadway improvements, including new roads, widening, adding bicycle lanes, etc. based on the data analysis and multiple rounds of discussion with the Town. Please note that US-1 Capital Boulevard Freeway has not been included in this map because it is currently in the design stage and final plans for all the service roads have not been made public yet. Please see the INTERACTIVE MAP for more details



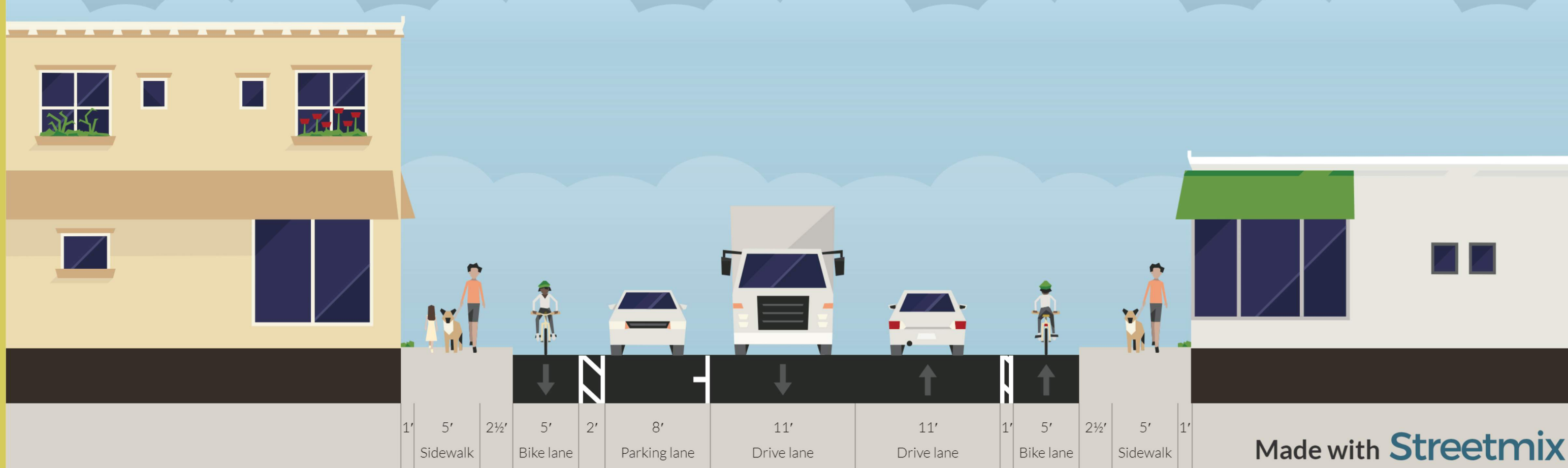
A - 2 Lane Local Street (50')



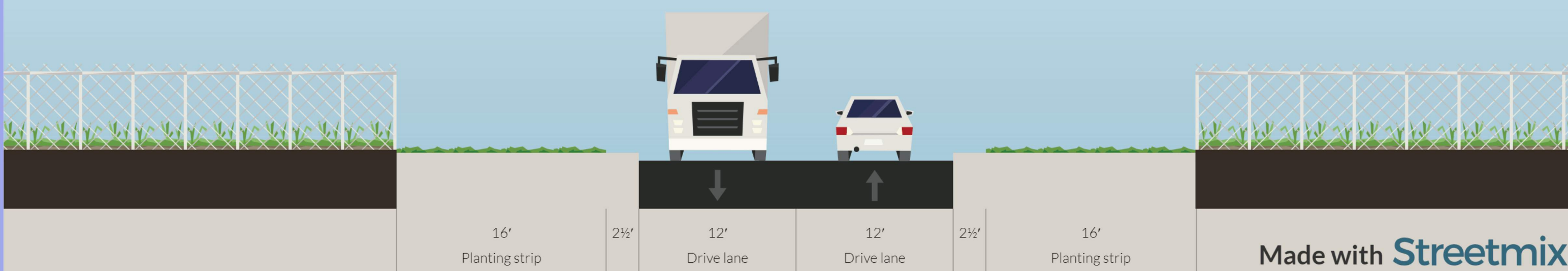
B - 2 Lane Minor Collector (60')



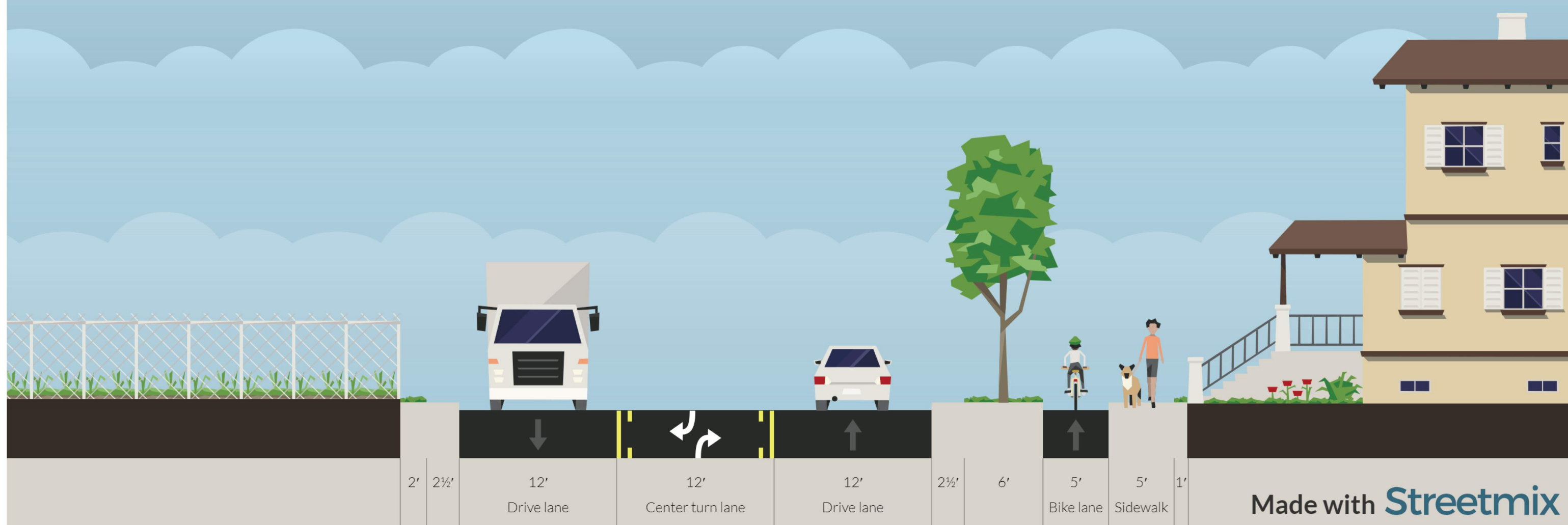
B1 - 2 Lane Minor Collector (Downtown) (60')



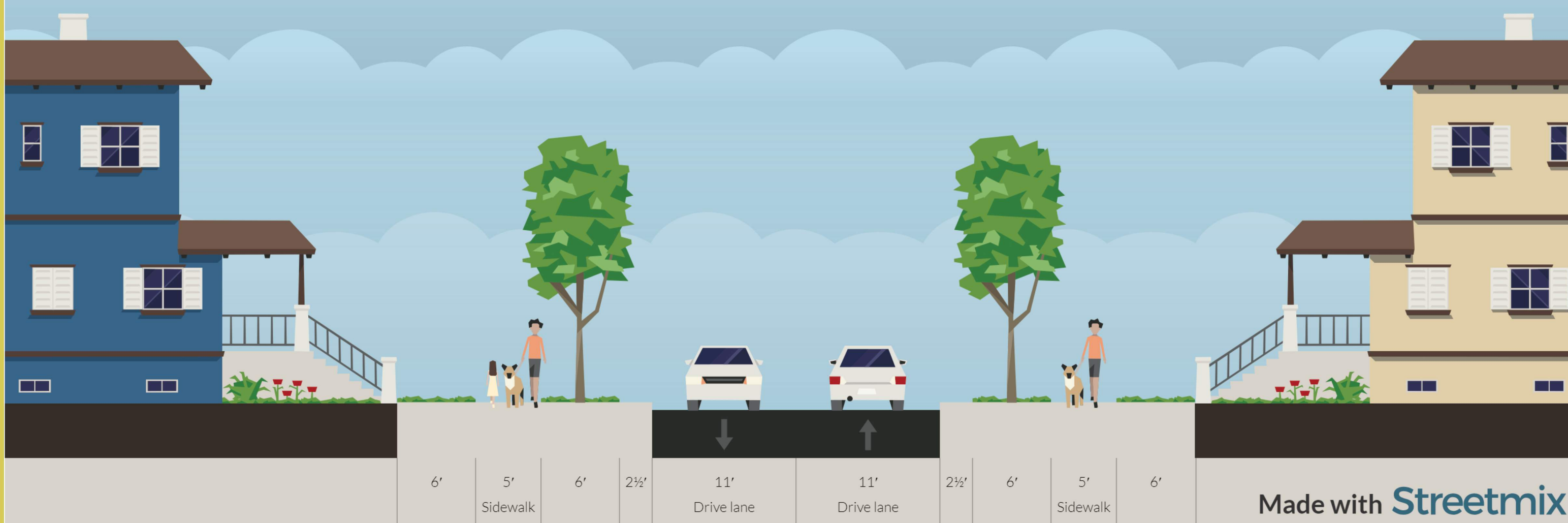
I - 2 Lane Industrial (60')



B2 - 3 Lane Minor Collector (1MUP) (60')



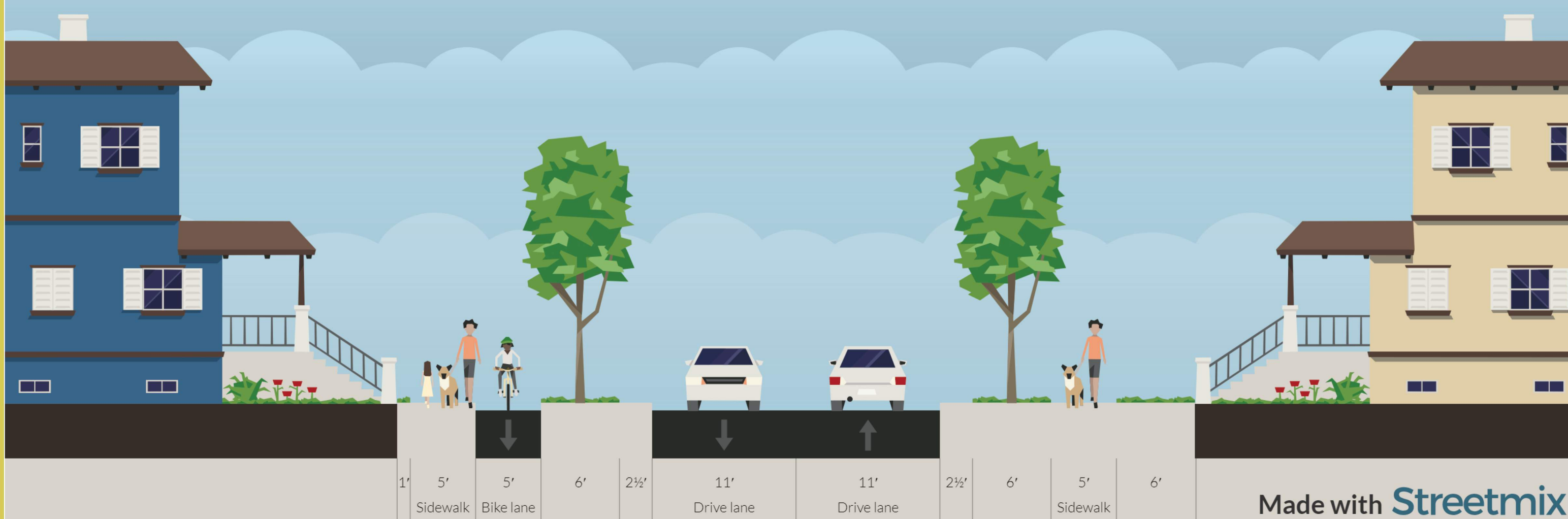
B3 - 2 Lane Minor Collector (No MUP) (60')

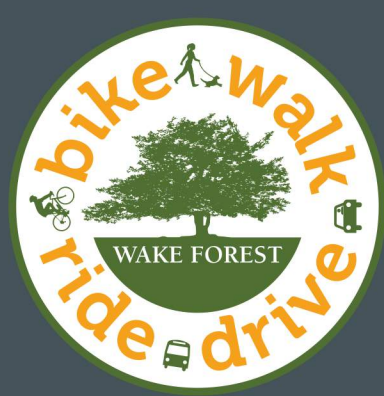


B4 - 2 Lane Minor Collector (1 SW) (50')

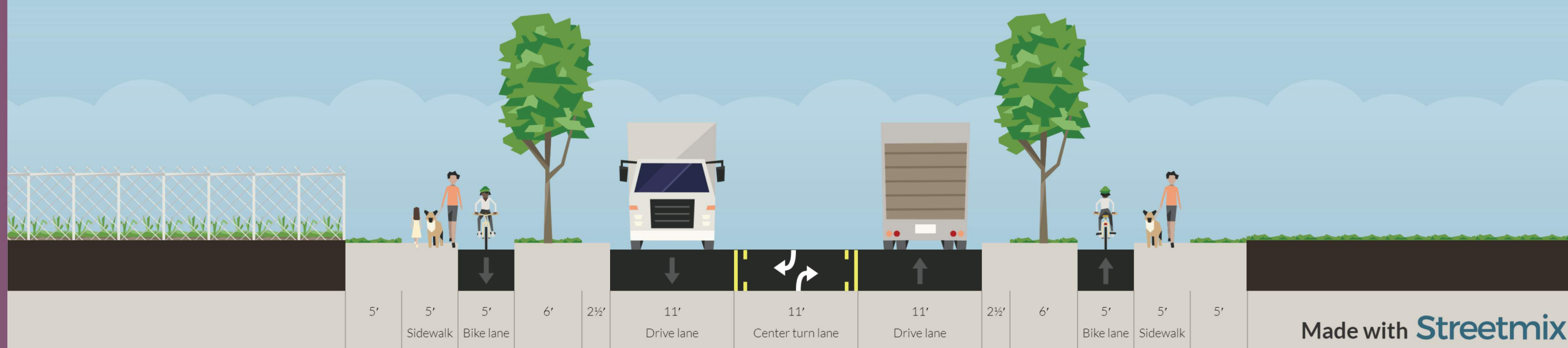


B5 - 2 Lane Minor Collector (1MUP 1SW) (60')

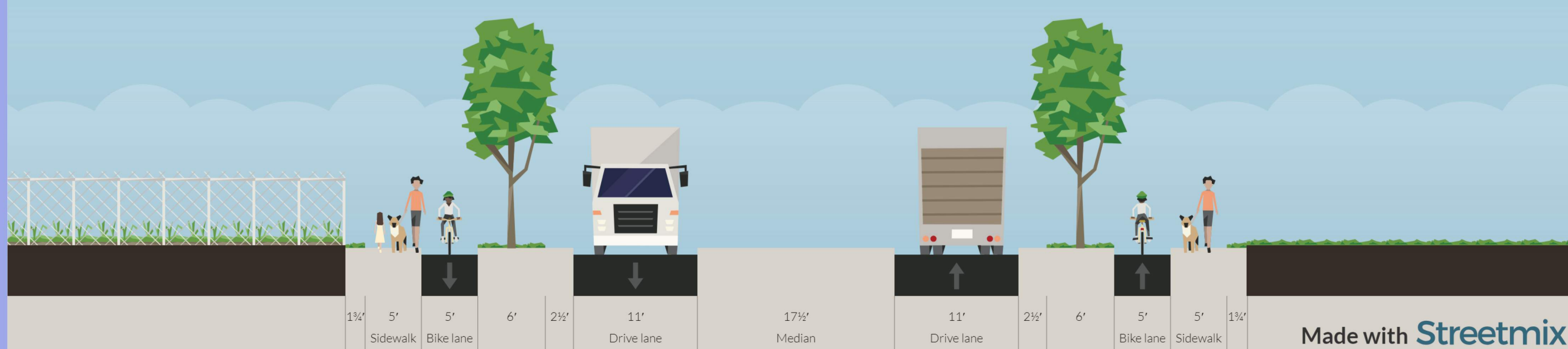




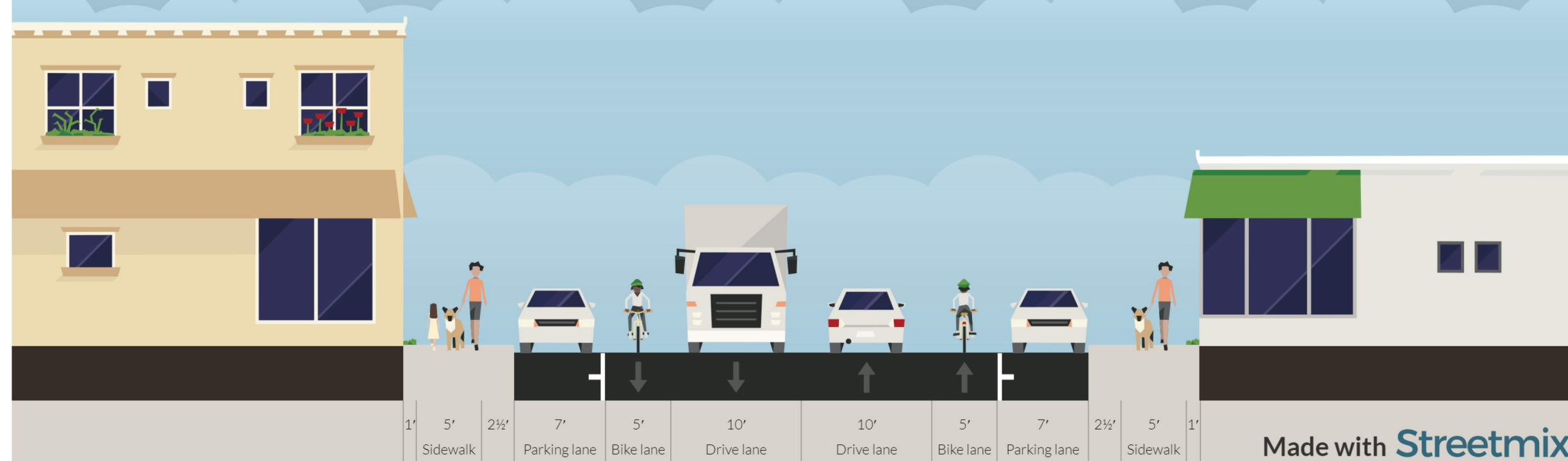
C - 3 Lane Major Collector (60')



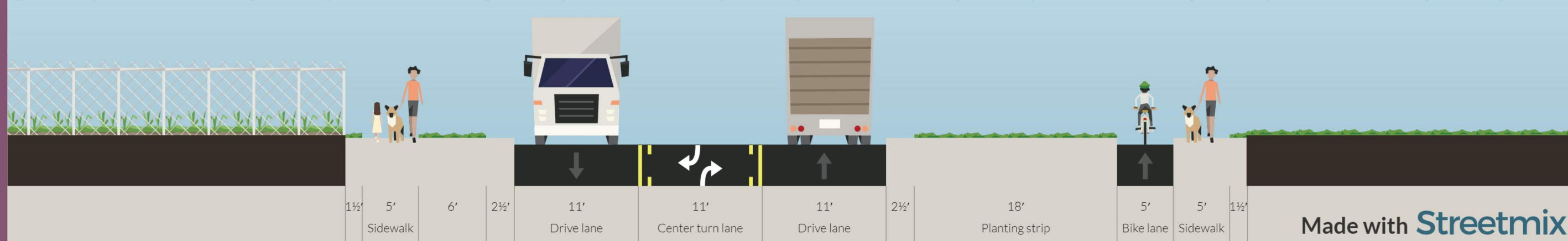
C0 - 2 Lane Major Collector (median) (80')



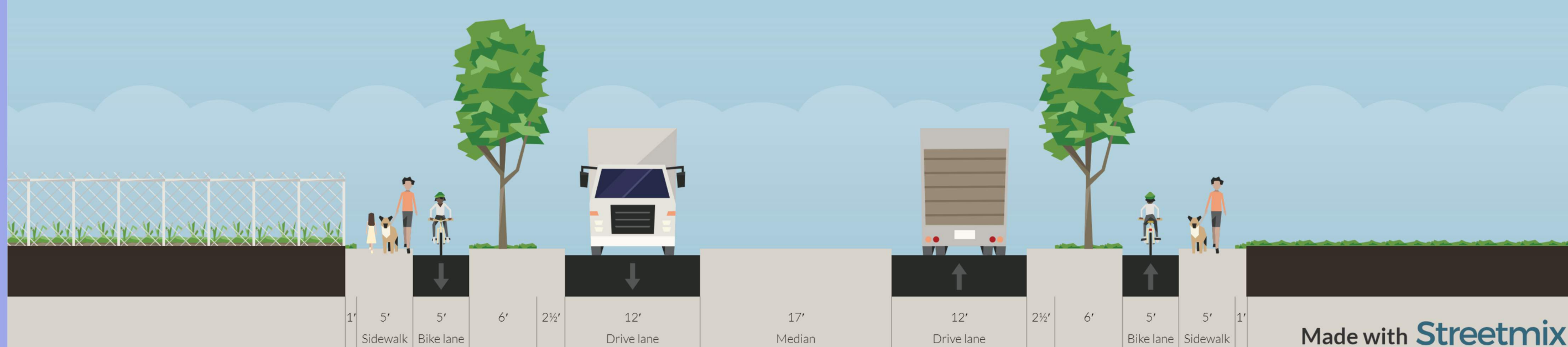
C1 - 2 Lane Major Collector (Downtown) (60')

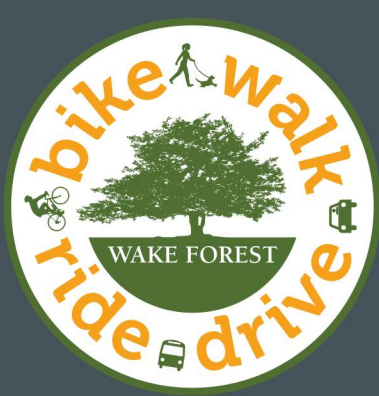


C2 - 3 Lane Major Collector (1 MUP 1 SW) (80')

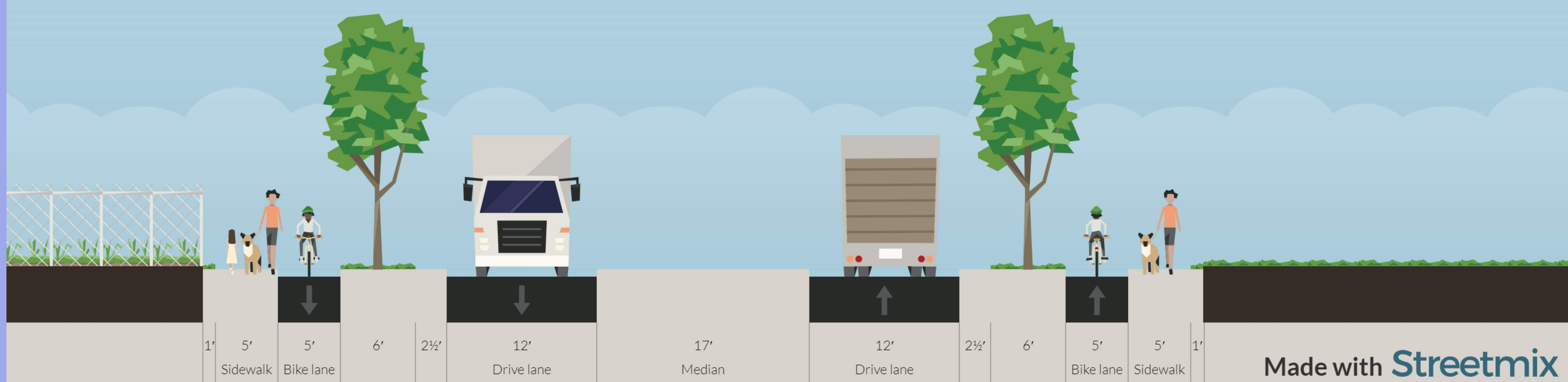


C3 - 2 Lane Major Collector (wide) (80')

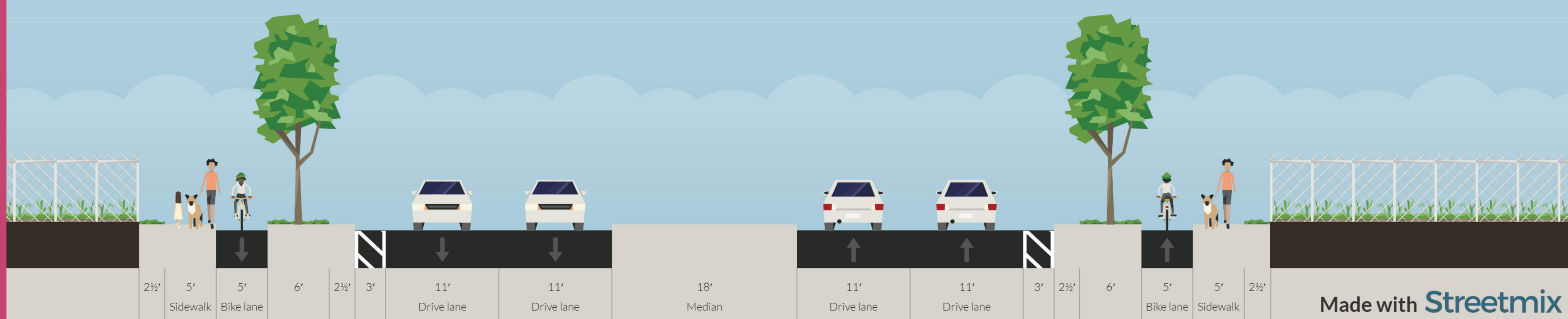




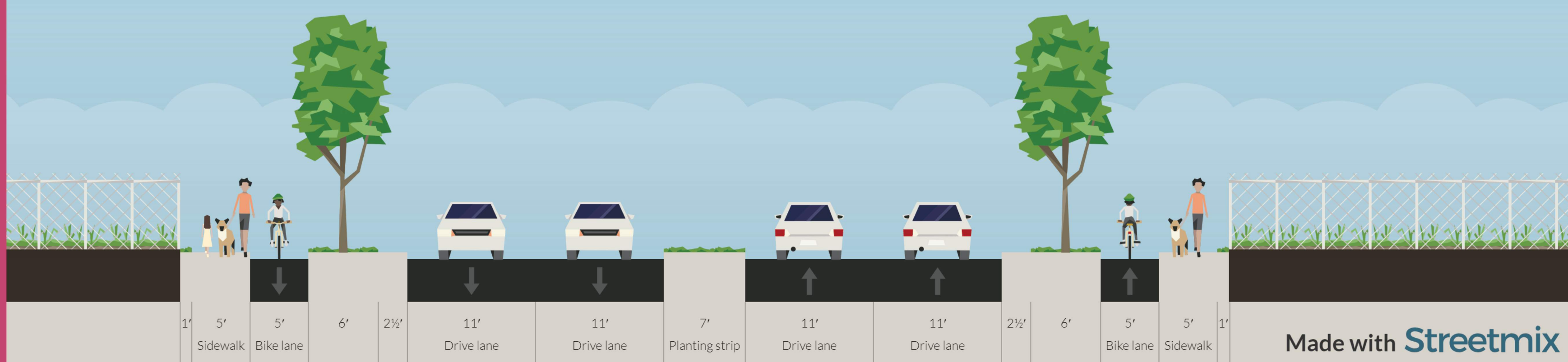
C3 - 2 Lane Major Collector (wide) (80')



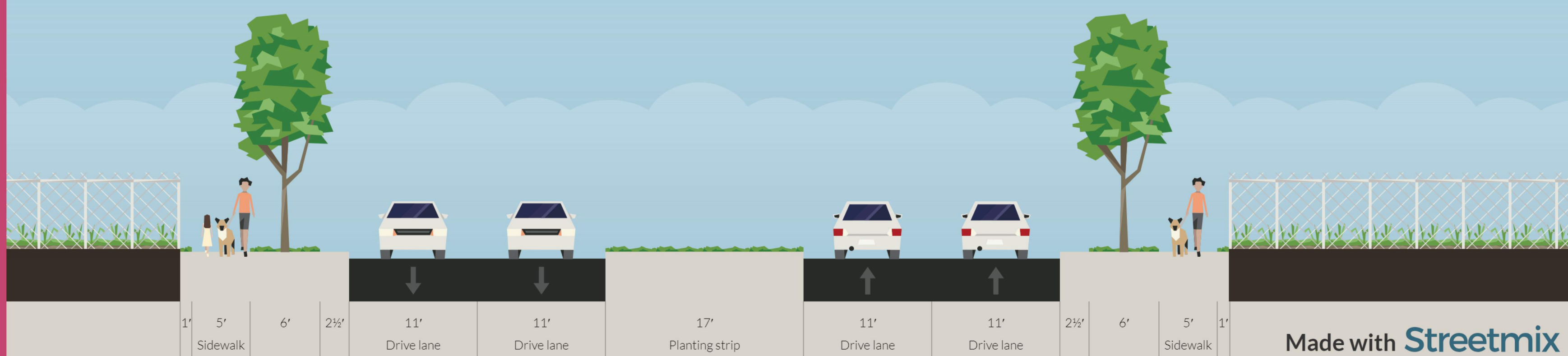
D - 4 Lane Major Collector (110')

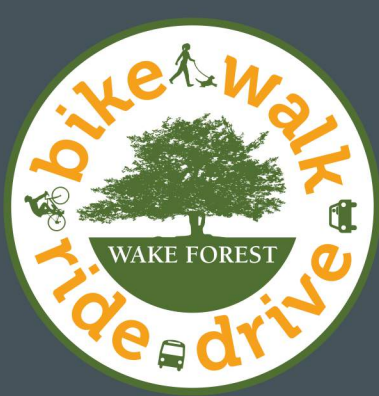


D2 - 4 Lane Major Collector (narrow) (90')

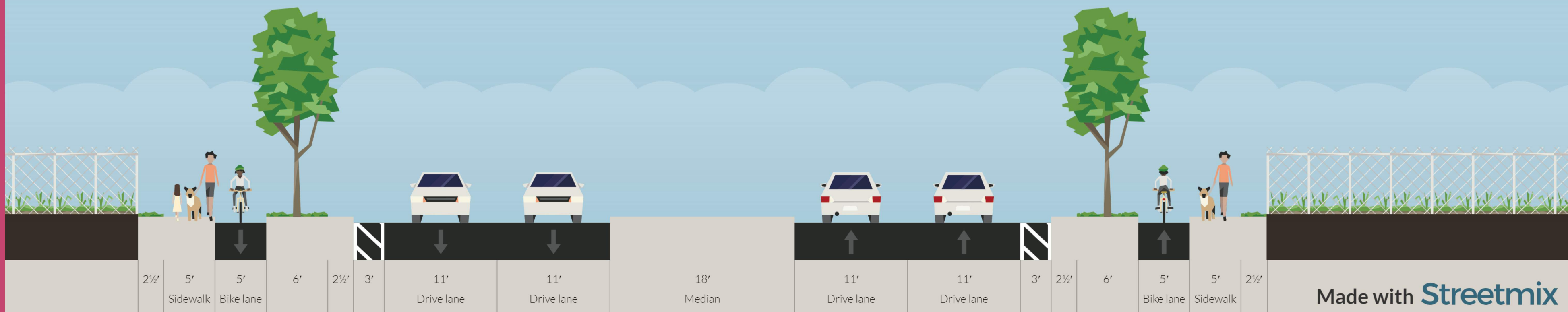


D3 - 4 Lane Major Collector (No MUP) (90')

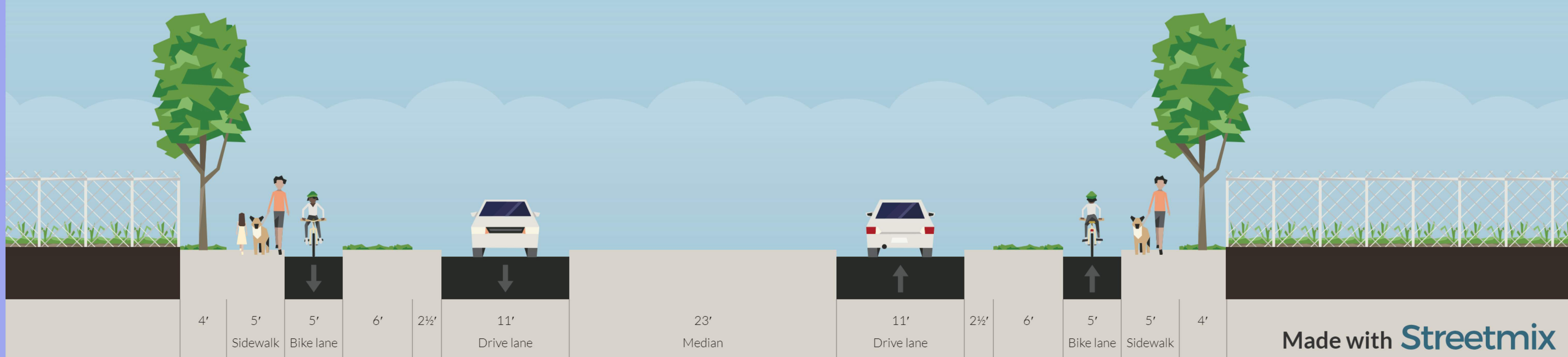




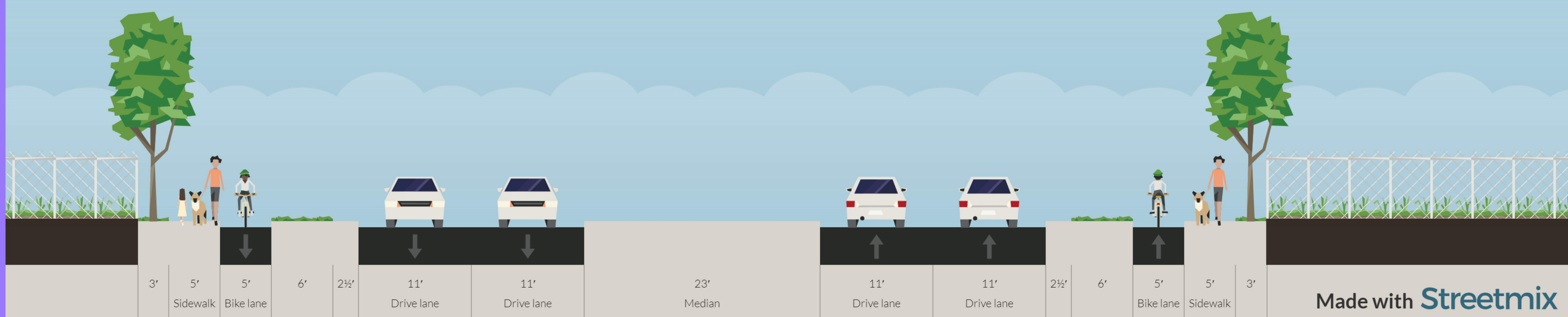
D - 4 Lane Major Collector (110')



E - 2 Lane Minor Arterial (90')



F - 4 Lane Minor Arterial (110')



G - 4 lane Other Principal Arterial (140')

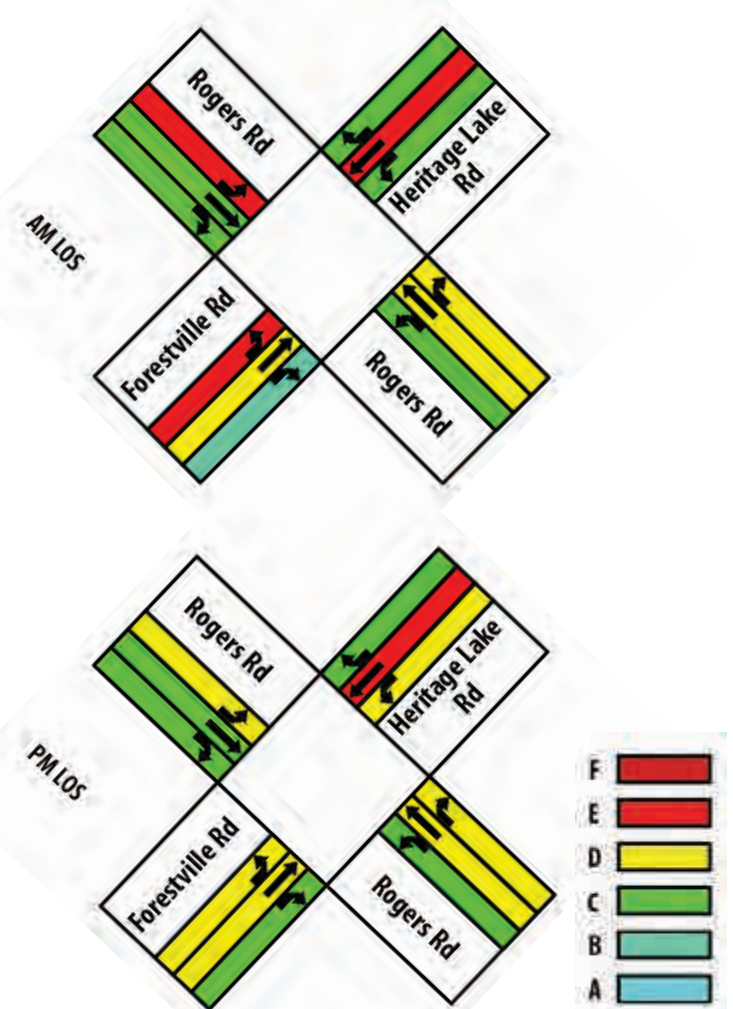




Hotspot Intersections | Existing Conditions and Recommendations

Forestville Rd & Heritage Lake Rd at Rogers Rd

Existing Level of Service



Existing Conditions



Recommended Improvements



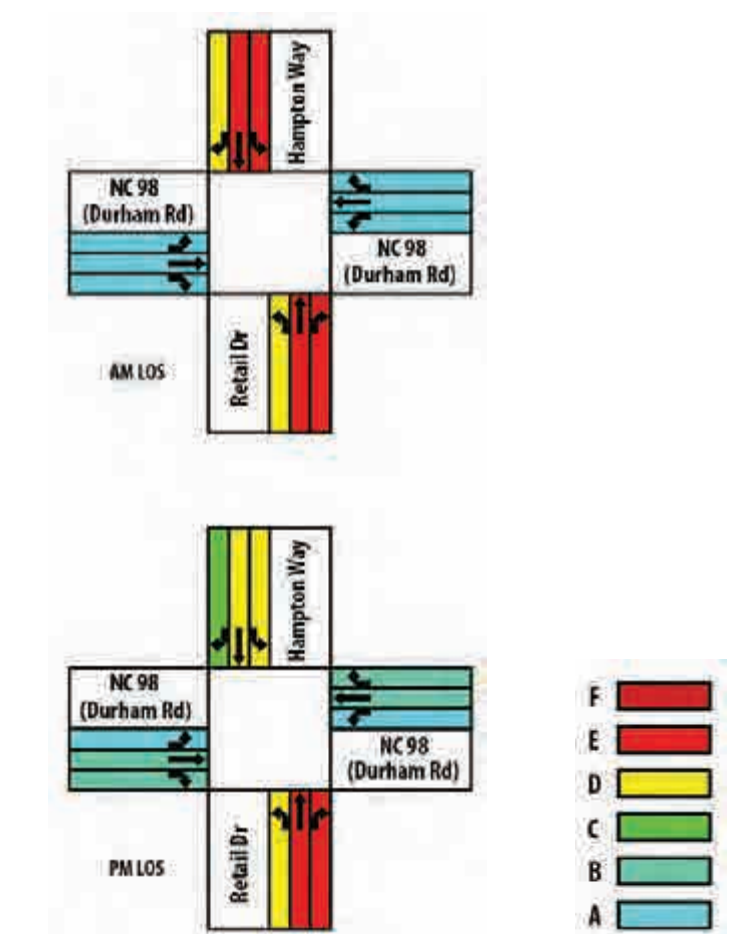
Recommendations

2045 Long Term Improvements

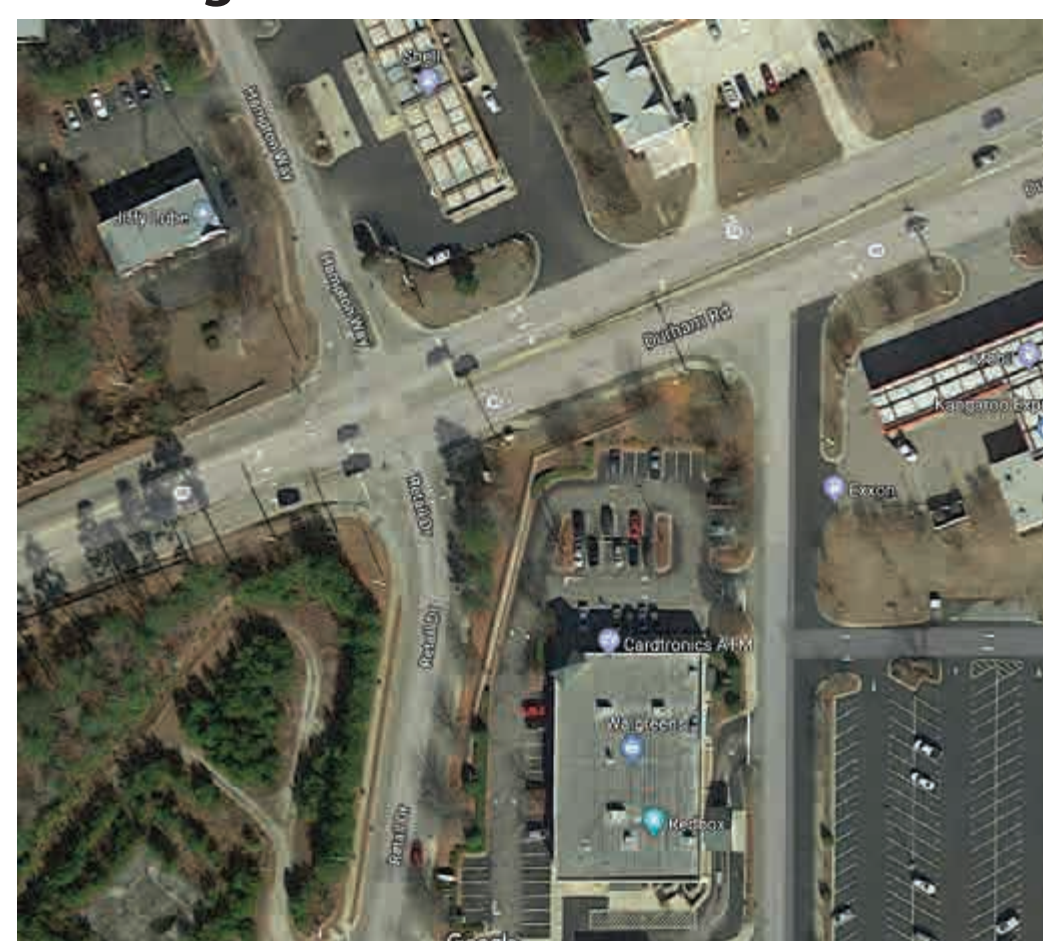
- Widen the eastbound Rogers Road approach with an additional exclusive left-turn lane. Provide the left-turn lane with at least 325 feet of storage and an appropriate taper.
- Widen the southbound Heritage Lake Road approach to provide an additional through lane.
- Widen the northbound Forestville Road approach with an exclusive left-turn lane and an additional through lane. Provide the left-lane turn lane with at least 425 feet of storage and an appropriate taper.

Retail Dr & Hampton Way at Durham Rd

Existing Level of Service



Existing Conditions



Recommended Improvements



Recommendations

2019 Short Term Improvements

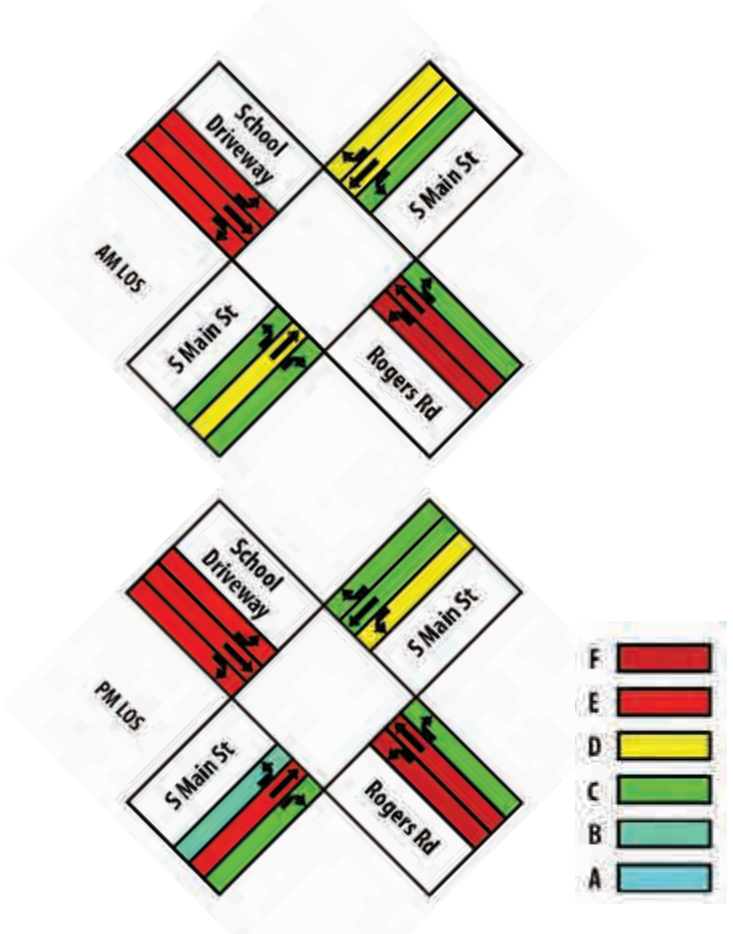
- Widen the northbound Retail Dr with an exclusive right-turn lane. Provide the right-turn lane with at least 100 feet of storage and appropriate taper.

2045 Long Term Improvements

- Widen the northbound Retail Dr with an exclusive right-turn lane. Provide the right-turn lane with at least 100 feet of storage and appropriate taper.
- Widen the southbound Hampton Way approach with an exclusive left-turn lane. Provide the left-turn lane with at least 100 feet of storage and appropriate taper.

S Main St at Rogers Rd

Existing Level of Service



Existing Conditions



Recommended Improvements



Recommendations

2019 Short Term Improvements

- Widen the eastbound Wake Forest-Rolesville Middle School Driveway approach with an exclusive left-turn. Provide the left-turn lane with at least 200 feet of storage and an appropriate taper.
- Widen the northbound S Main Street approach with an additional through lane and make right turn lane free flowing. Provide the right-turn lane with at least 150 feet of storage and an appropriate taper.
- Widen the westbound Rogers Road with an additional exclusive left-turn lane, making the shared left-through lane, an exclusive through lane. Provide the left-turn lanes with at least 450 feet of storage and an appropriate taper.

2045 Long Term Improvements

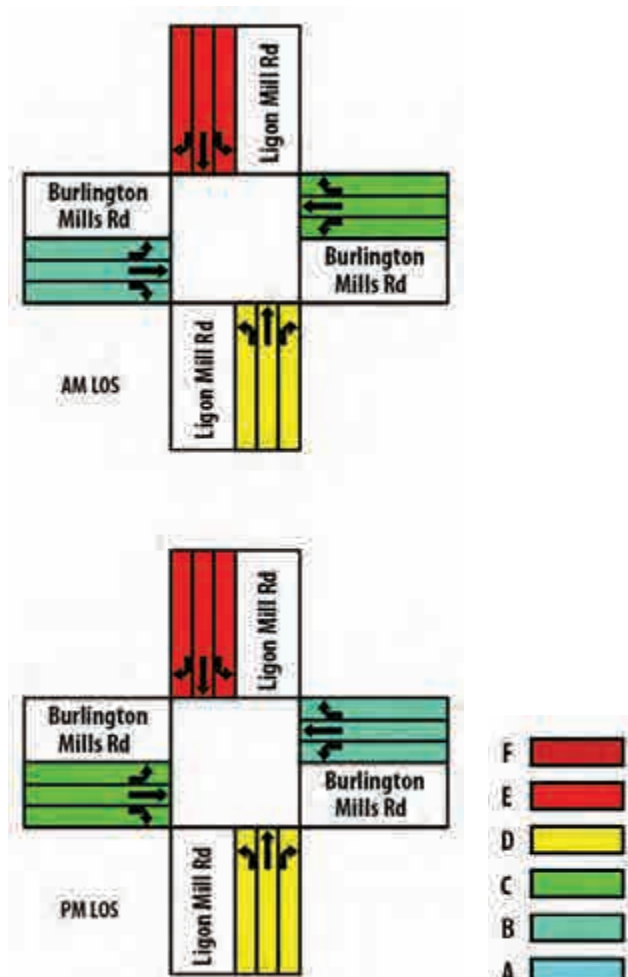
- Widen the southbound S Main Street approach with an additional left-turn lane, additional through lane and an exclusive right turn lane. This results in five total lanes: two exclusive left, two through, and one exclusive right. Provide the left-turn lane with at least 100 feet of storage and an appropriate taper. Provide the right-turn lane with at least 175 feet of storage and an appropriate taper.



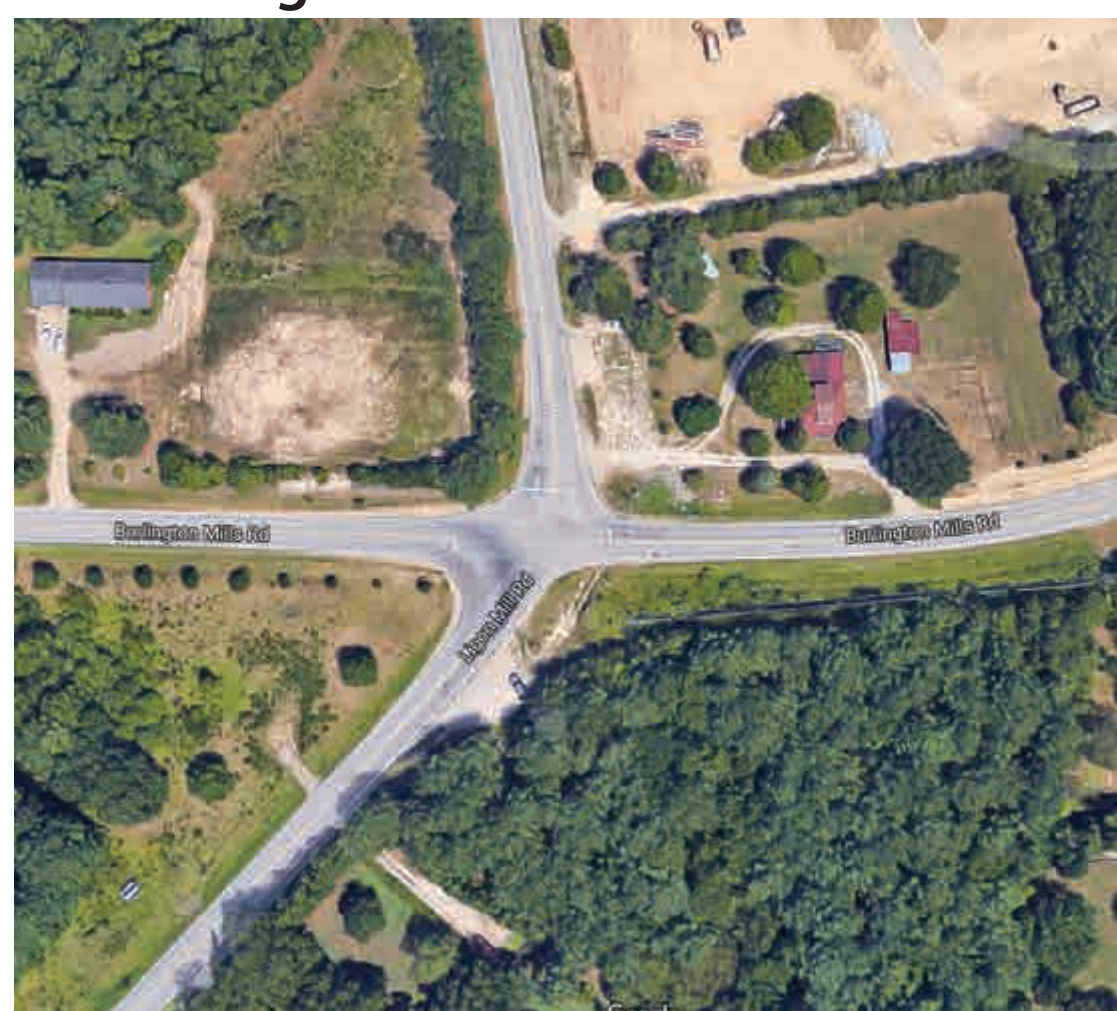
Hotspot Intersections | Existing Conditions and Recommendations

Burlington Mills Rd at Ligon Mill Rd

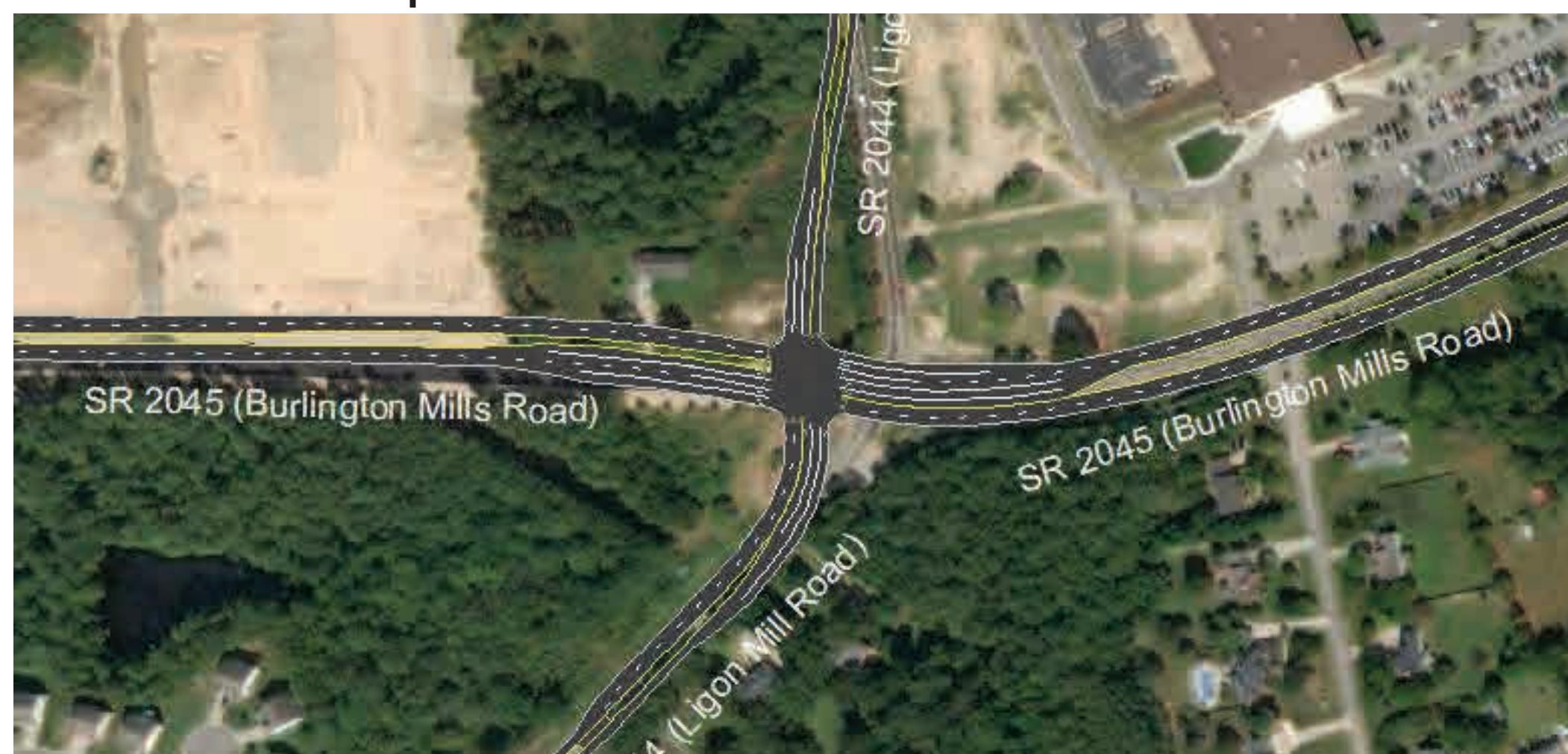
Existing Level of Service



Existing Conditions



Recommended Improvements



Recommendations

2019 Short Term Improvements

- Widen the southbound Ligon Mill Road approach with an exclusive left-turn lane and provide the left-turn lane with at least 120 feet of storage and an appropriate taper.

2045 Long Term Improvements

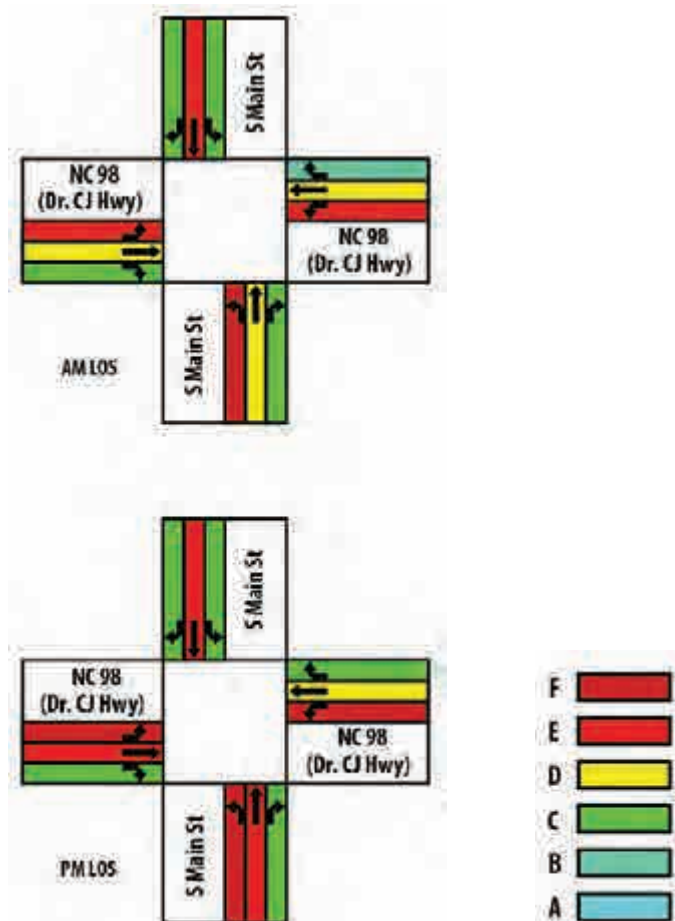
- Relain the intersection to improve the line of sight for turning vehicles.
- Construct the eastbound Burlington Mills Road approach with an exclusive left-turn lane, an additional through lane, and an exclusive right-turn lane. Provide the left-turn lane with at least 300 feet of storage and an appropriate taper. Provide the right-turn lane with 250 feet of storage and an appropriate taper.

2045 Long Term Improvements (contd.)

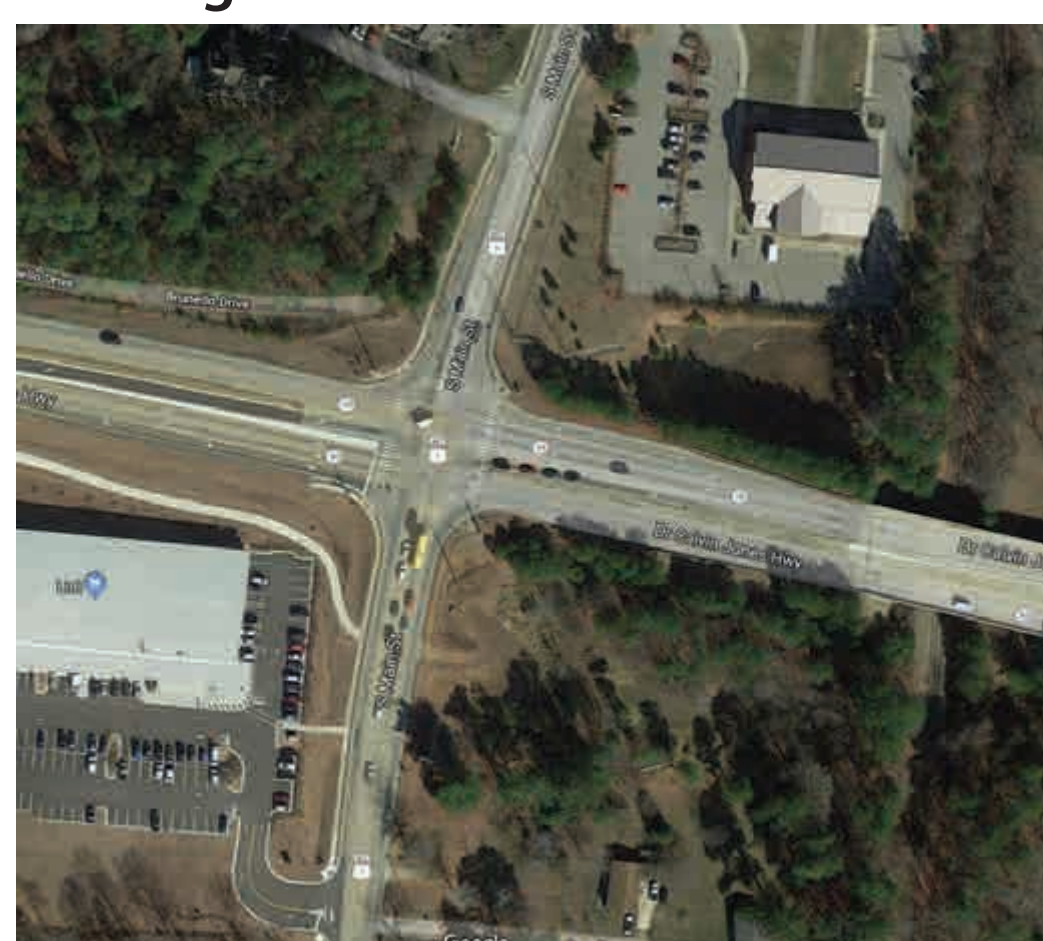
- Construct the westbound Burlington Mills Road approach with dual exclusive left-turn lanes, an additional through lane, and an exclusive right-turn lane. Provide the dual left-turn lanes with at least 300 feet of storage and an appropriate taper. Provide the right-turn lane with at least 200 feet of storage and an appropriate taper.
- Construct the southbound Ligon Mill Road approach with an extended left-turn lane and an exclusive right-turn lane. Provide the left-turn lane with at least 200 feet of storage and an appropriate taper. Provide the right-turn lane with at least 100 feet of storage and an appropriate taper.
- Construct the northbound Ligon Mill Road approach with an exclusive left-turn lane and an exclusive right-turn lane. Provide the left-turn lane with at least 150 feet of storage and an appropriate taper. Provide the right-turn lane with at least 250 feet of storage and an appropriate taper.

S Main St at NC98 Bypass (Dr Calvin Jones Hwy)

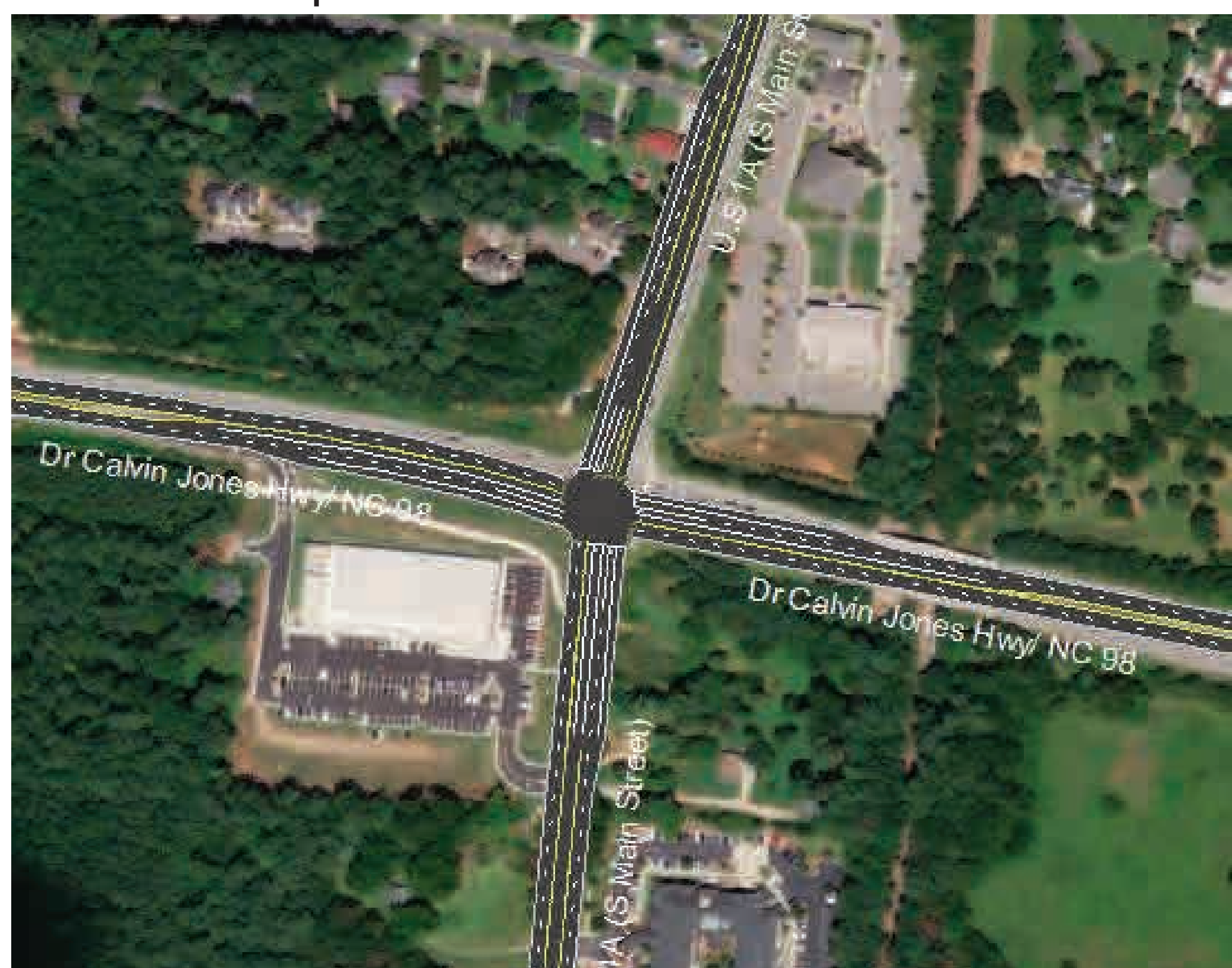
Existing Level of Service



Existing Conditions



Recommended Improvements



Recommendations

2019 Short Term Improvements

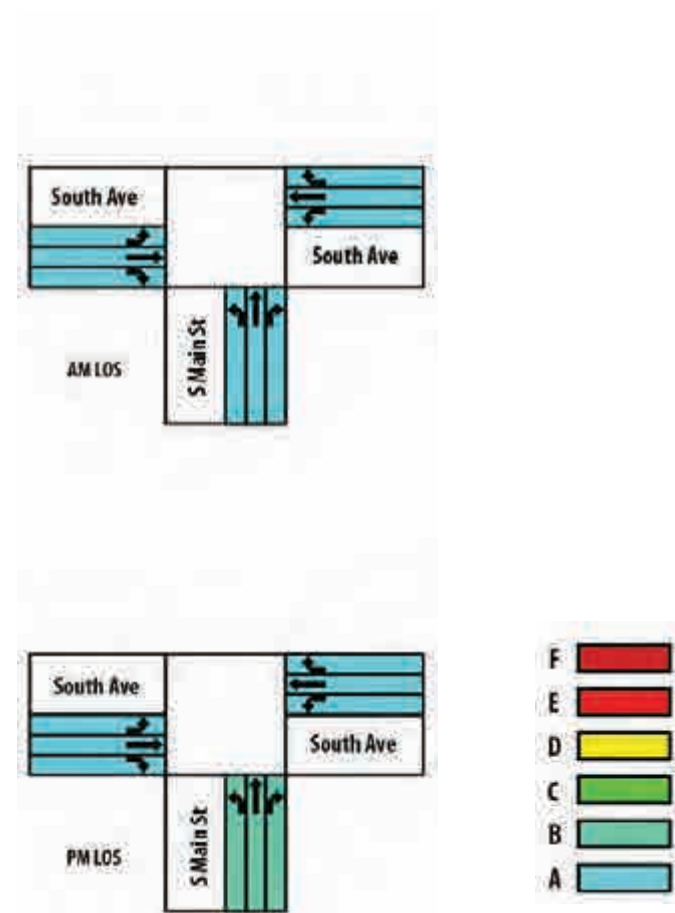
- Widen the northbound S Main Street approach with an additional exclusive left-turn lane and an additional through lane. Provide the left-turn lane with at least 300 feet of storage and an appropriate taper.
- Widen the southbound S Main Street approach with an additional through lane. Provide the existing right-turn lane with at least 75 feet of additional storage and an appropriate taper.

2045 Long Term Improvements

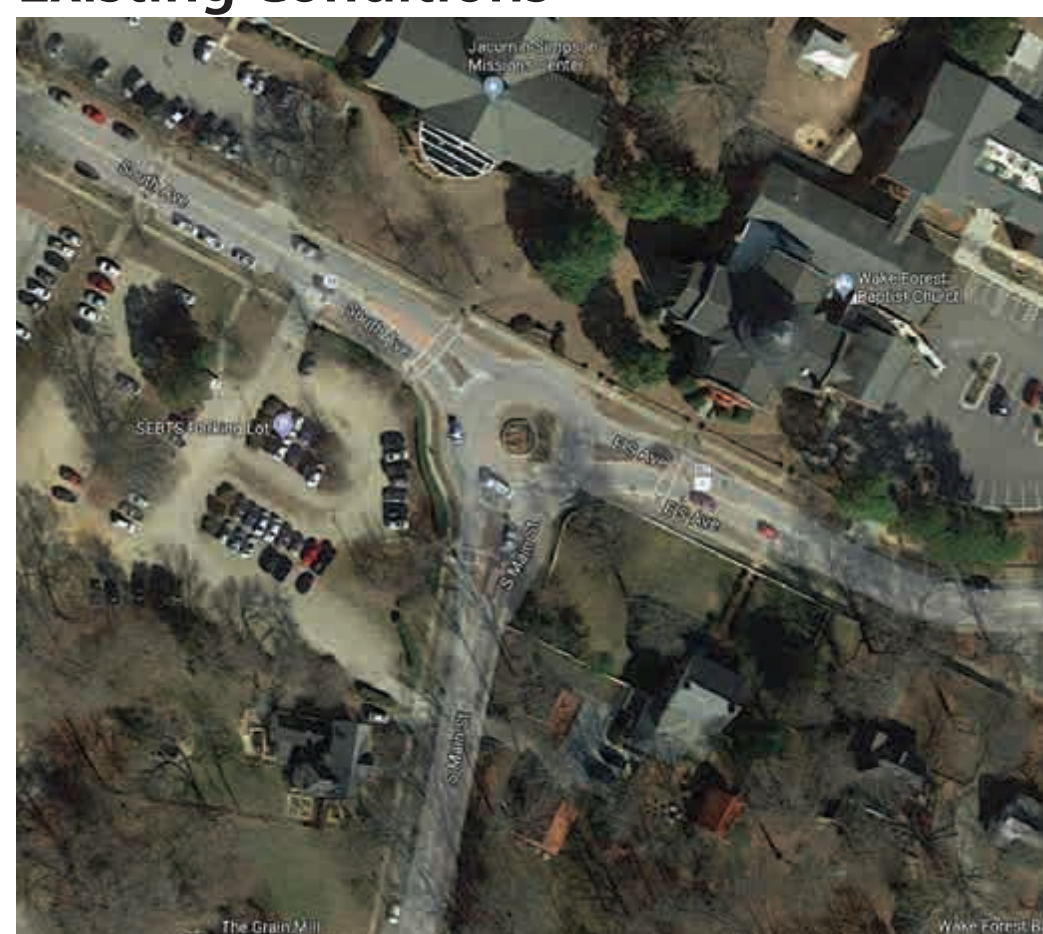
- Based on NC-98 Corridor Study, NC-98 is planned to be converted to a superstreet.

S Main St at South Ave

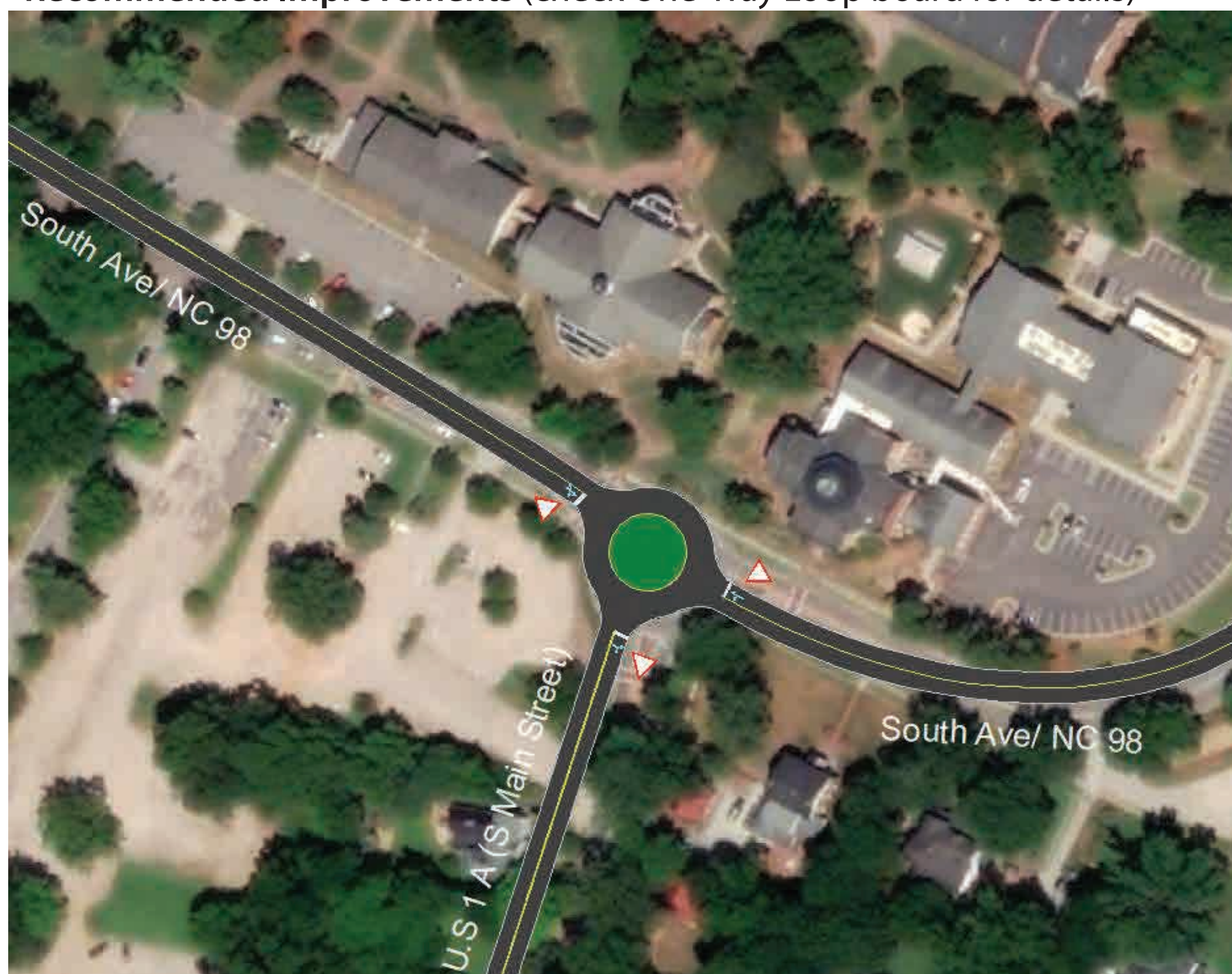
Existing Level of Service



Existing Conditions



Recommended Improvements (check One-Way Loop board for details)



Recommendations

2019 Short Term Improvements

- Create high visibility crosswalks with flashing pedestrian detection system to warn the oncoming traffic and improve safety.
- Based on the traffic studies, no improvements are required for this intersection in the short term.

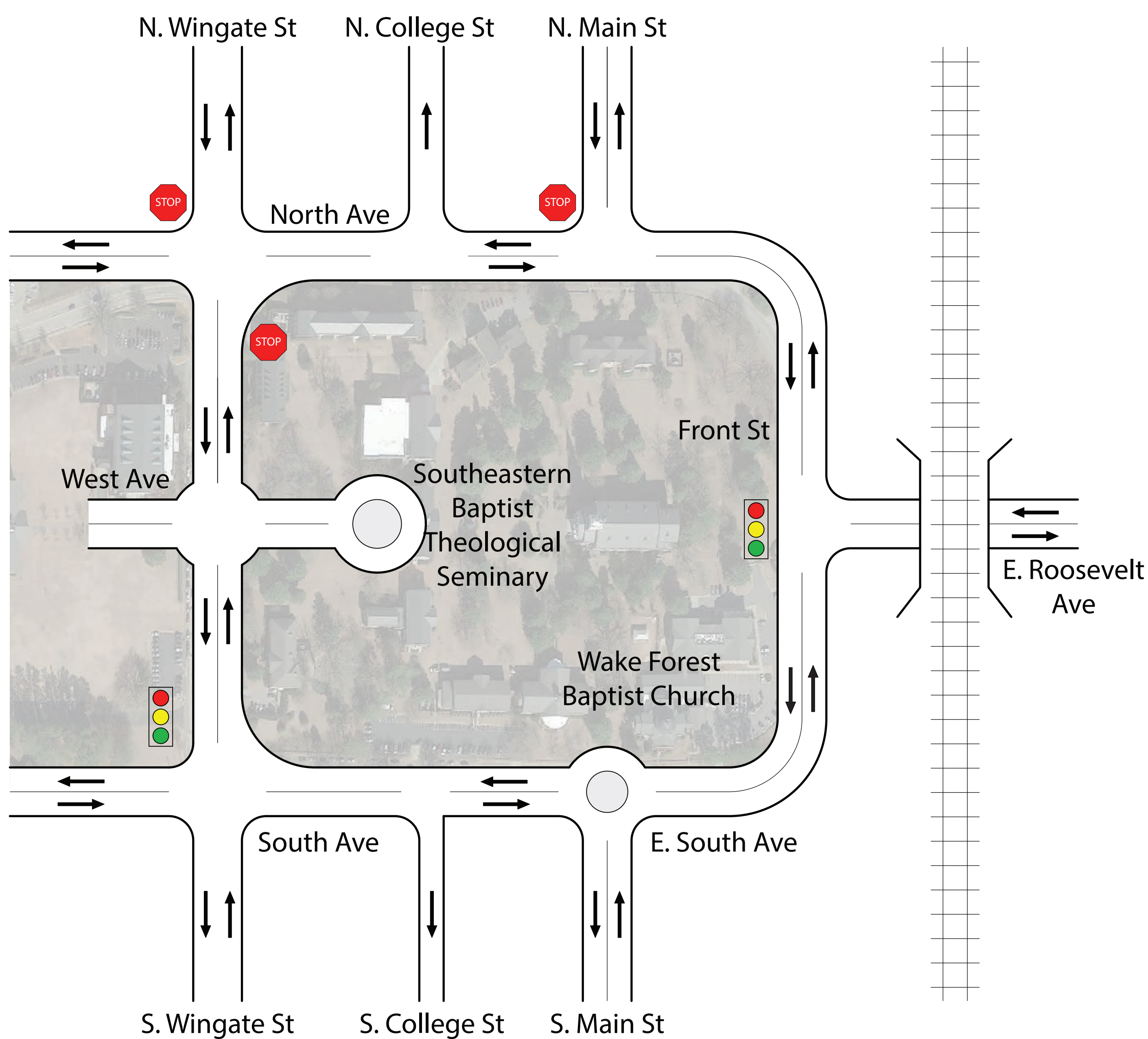
2045 Long Term Improvements

- One-way loop around the seminary for more efficient movement of traffic.
- Adding bike lanes along the loop to plug a crucial gap in the bicycle network.

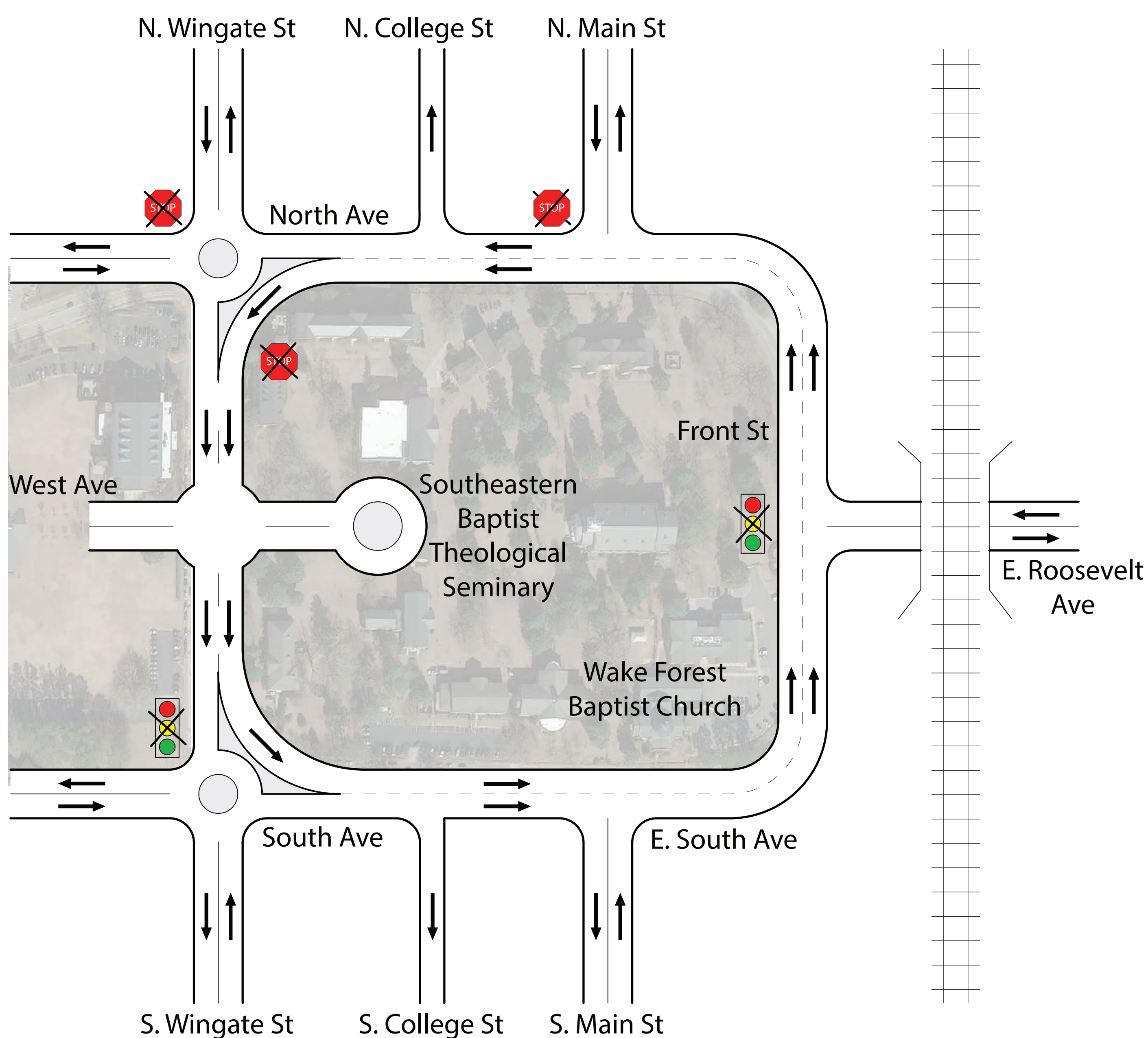


Special Recommendation | One-Way Loop

CURRENT CONDITION Two-way streets with traditional intersections



PROPOSED IMPROVEMENTS One-way loop with right in/right out intersections and traffic circles



Remove Signals at
 1) South Ave. and Wingate St.
 2) Front St. and E Roosevelt Ave

Remove Stop Signs at
 1) N Main St.
 2) N Wingate St.
 3) North Ave

Add Traffic Circles at
 1) N Wingate St and North Ave
 2) S Wingate St and South Ave

All parking spots, sidewalks and accesses can be retained.

Improve traffic flow around the seminary.

Proposed improvements can be tested using temporary barriers and 'Tactical Urbanism'.