Greenville
NORTH CAROLINA

12.8.16

City Council Meeting

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Item 4:

Ordinance requested by Debbie and Jackie James to rezone 2.2609 acres located at the northeastern corner of the intersection of North Greene Street and Martin Street from CDF (Downtown Commercial Fringe) to CH (Heavy Commercial)

Greenville
NORTH CAROLINA

General Location Map

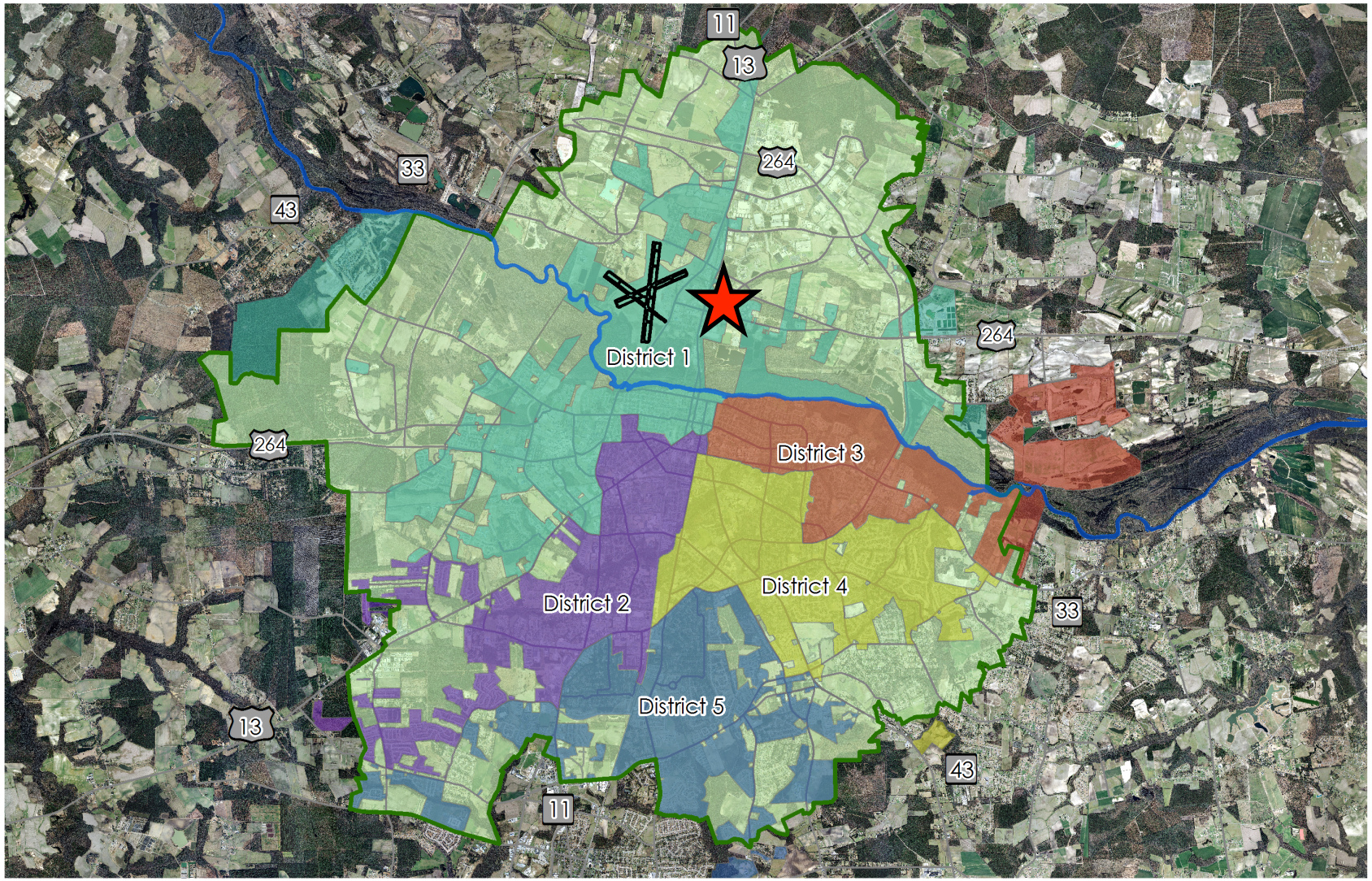
Legend

- Greenville's ETJ
- Tar River
- Pitt-Greenville Airport (PGV)

City Council Voting District

- District 1
- District 2
- District 3
- District 4
- District 5

0 0.5 1 2 3 4 Miles



Greenville
NORTH CAROLINA

Aerial Map (2012)

Legend

- Land Parcels
- Rezonings

N
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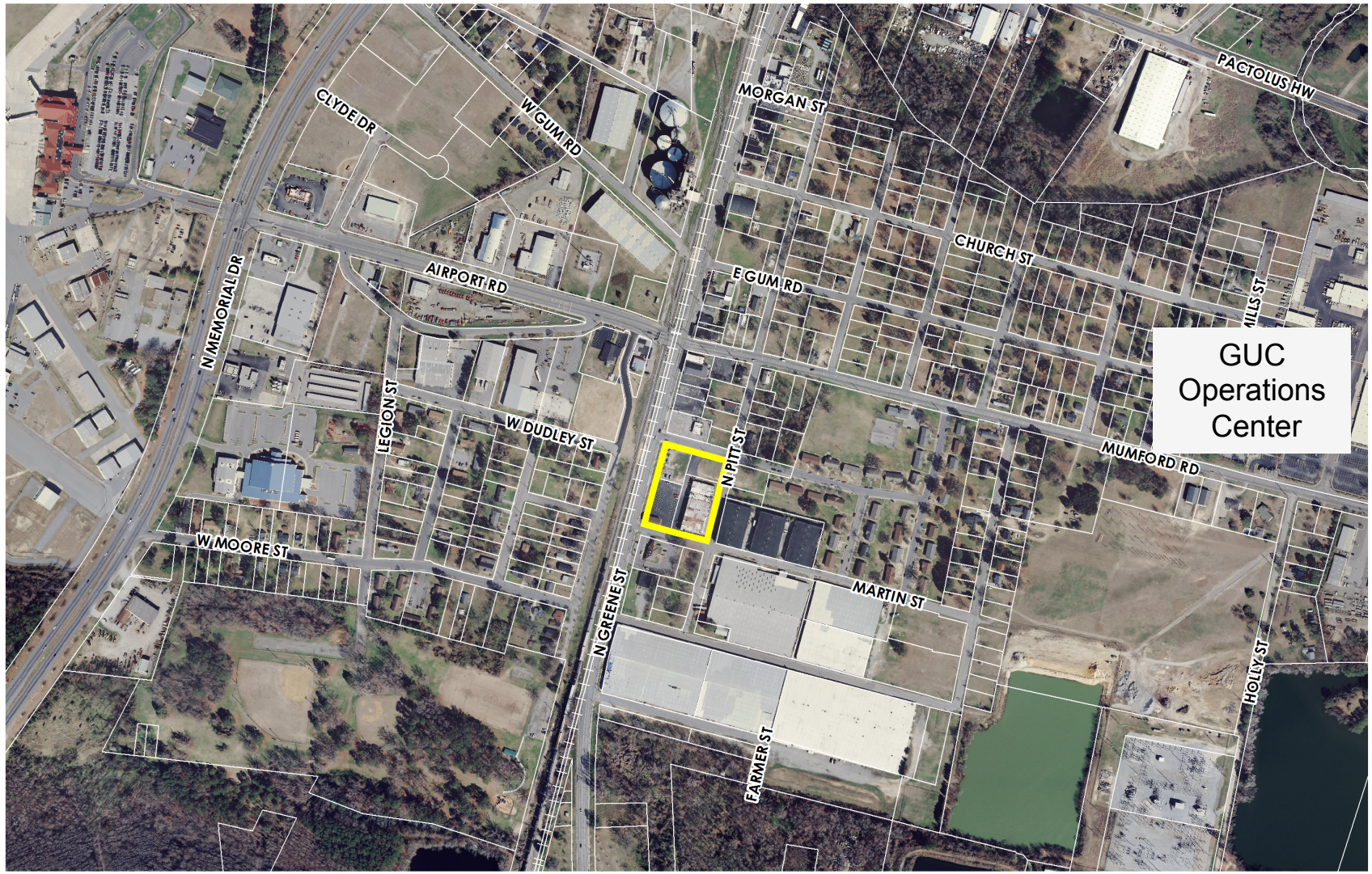
S

0 0.5 1 2 3 4
Miles



Greenville
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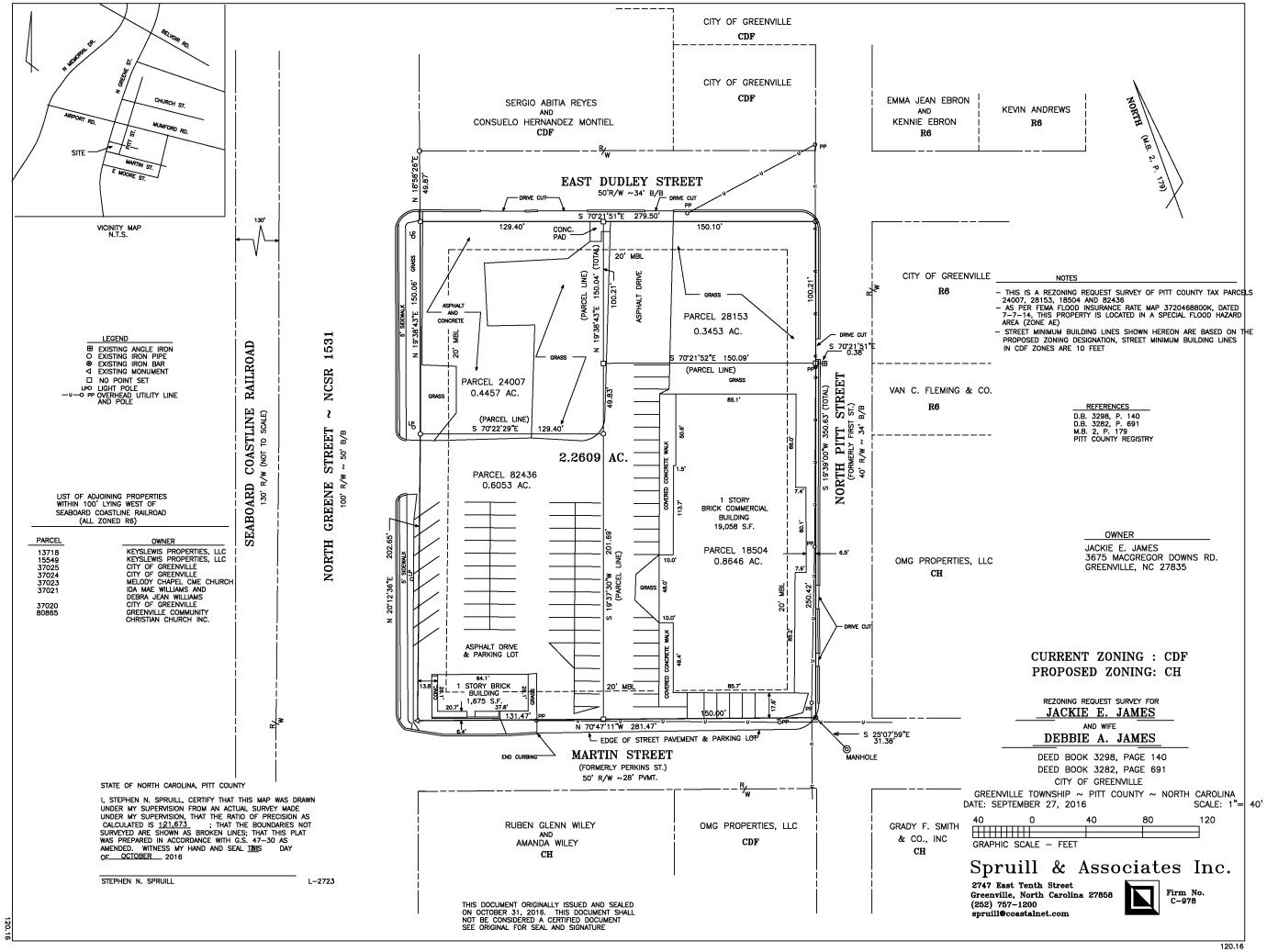
Rezoning Map For

Debbie & Jackie James

2.2609 acres



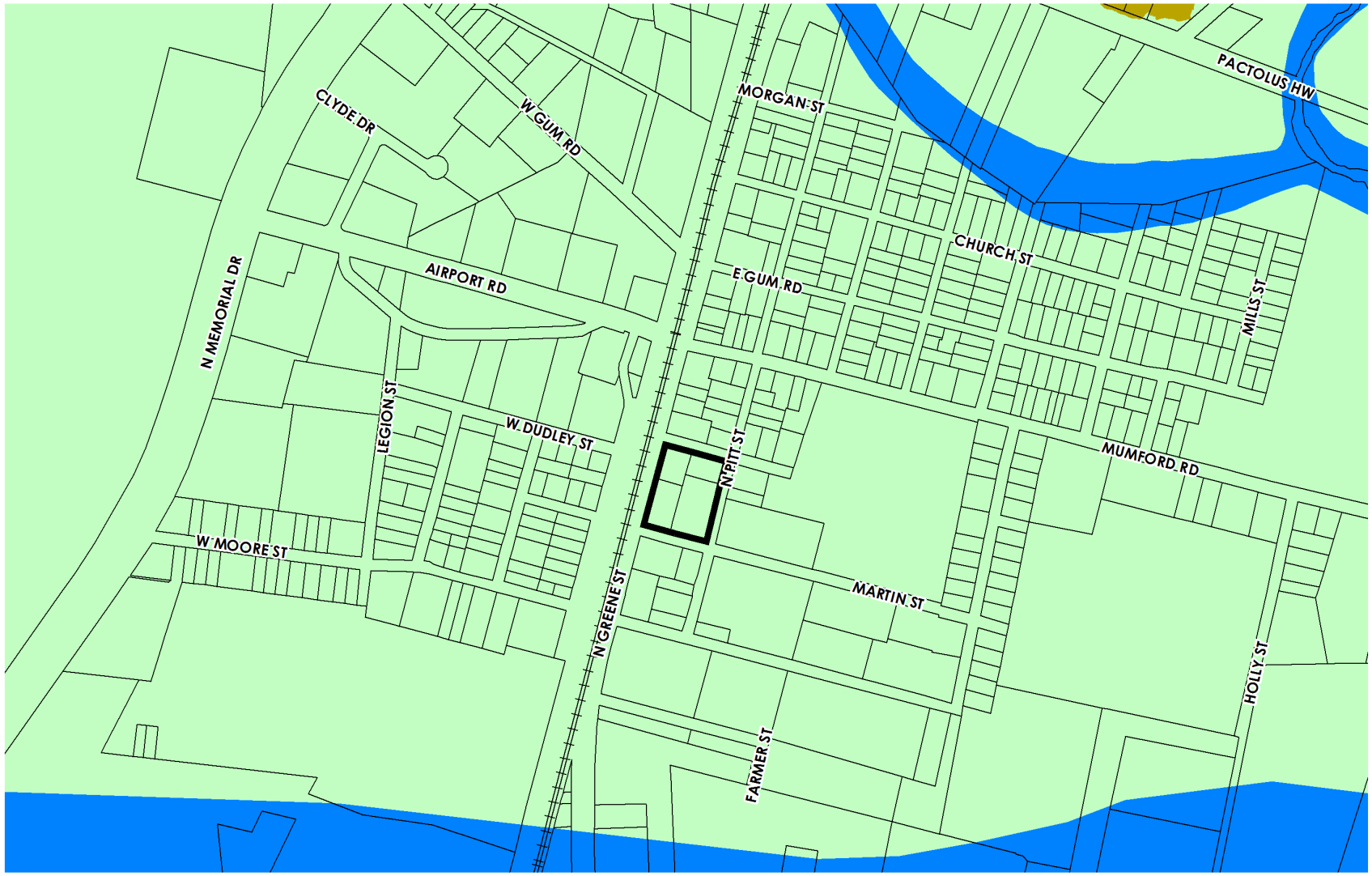
North Greene Street

Greenville
NORTH CAROLINA

Flood Plain Map

Legend

- Land Parcels
- Greenville ETJ
- Rezonings
- A= 100 YR
- AEFW = Floodway
- SHADED X = 500 yr



0 0.5 1 2 3 4 Miles

Greenville
NORTH CAROLINA

Existing Land Use

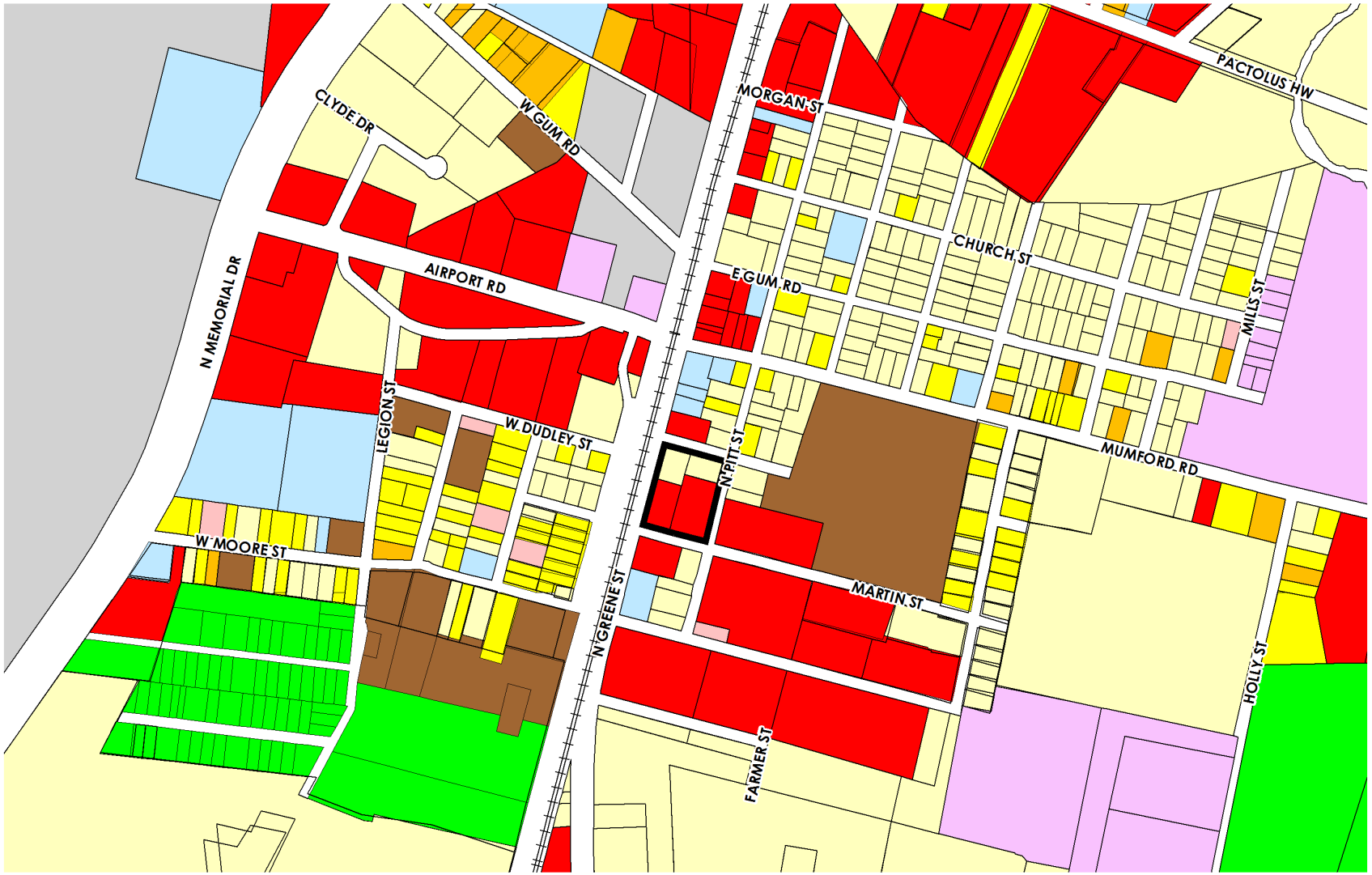
Legend

- Land Parcels
- Greenville ETJ
- Rezonings
- Train Tracks

EXISTING LANDUSE

- Cemetery
- Commercial
- Duplex
- Industrial
- Institutional
- Landfill
- Mobile Home
- Mobile Home Park
- Multi-Family
- Office
- Public Parking
- Recreation
- Single Family
- Utility
- Vacant

0 0.5 1 2 3 4 Miles



Greenville
NORTH CAROLINA

Zoning Map

Legend

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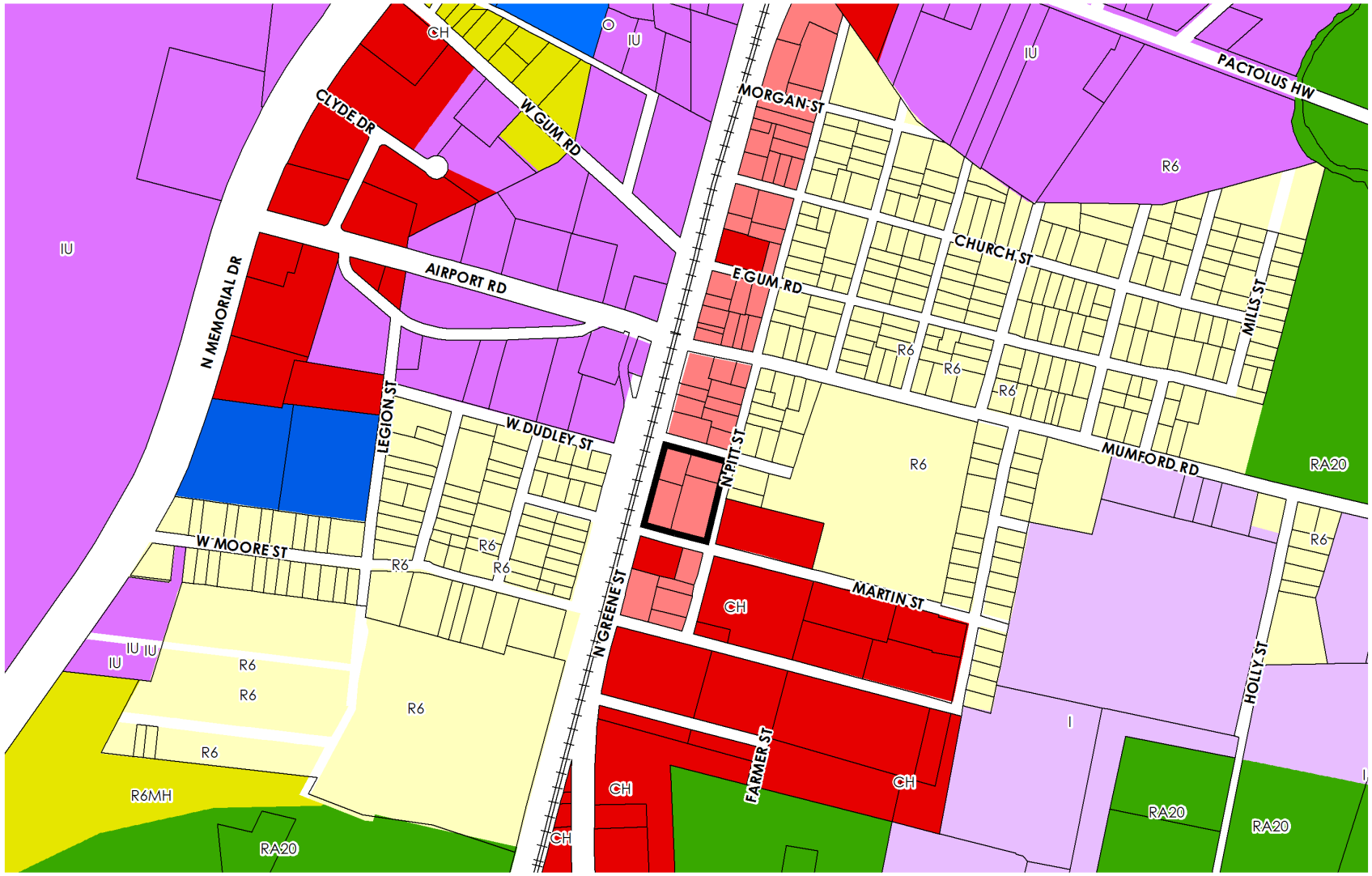
- Rezonings
- CD
- CDF
- CG
- CH
- CN
- MCH
- MCG
- I
- IU
- PIU
- MI
- MO
- MS
- O
- OR
- OR-UC
- R6
- R6A
- R6A-CA
- R6A-RU
- R6MH
- R6N
- R6S
- R9
- R9S
- R9S-CA
- R15S
- PUD
- MR
- MRS
- RA20

N W E S

0 0.5 1 2 3 4 Miles



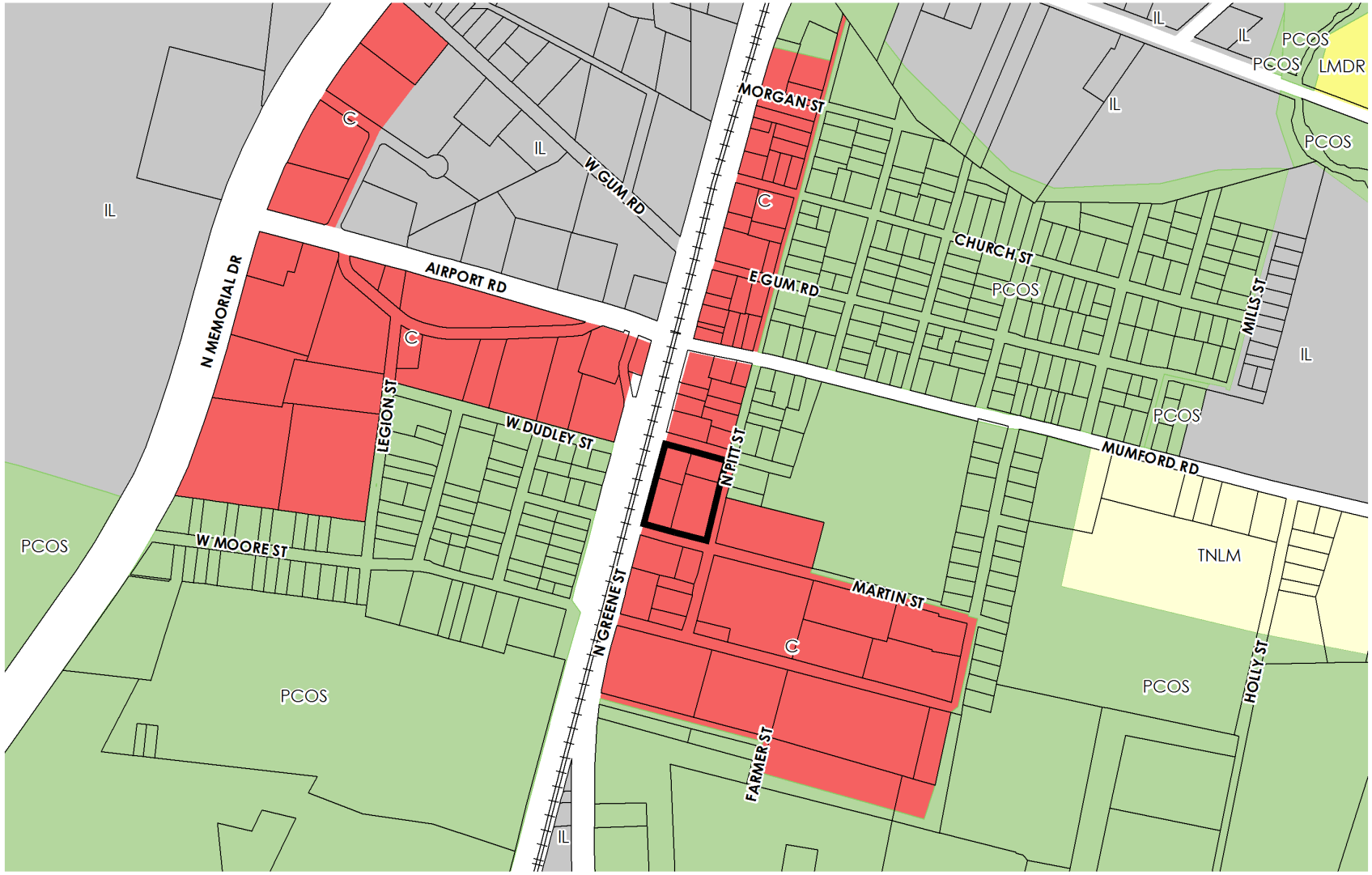
Greenville
NORTH CAROLINA

Future Land Use & Character Map

Legend

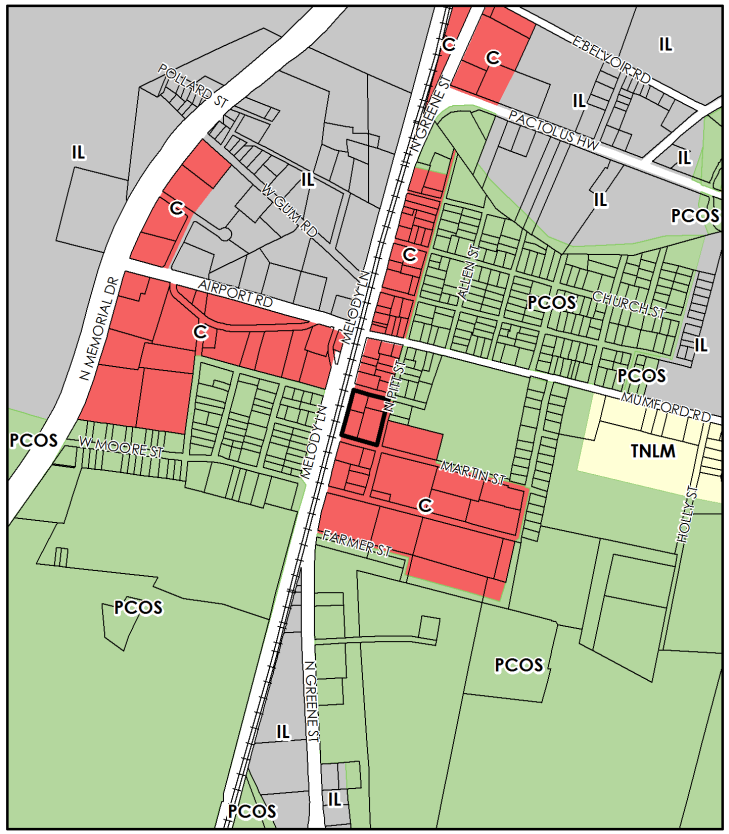
- Land Parcels
- Rezonings
- Train Tracks
- Greenville ETJ
- PCOS - Potential Conservation and Open Space
- UC - Uptown Core
- UE - Uptown Edge
- MUHI - Mixed Use, High Intensity
- MU - Mixed Use
- C - Commercial
- OI - Office and Institutional
- UN - Uptown Neighborhood
- TNMH - Traditional Neighborhood, Medium to High Density
- TNLM - Traditional Neighborhood, Low to Medium Density
- HDR - Residential, High Density
- LMDR - Residential, Low to Medium Density
- UI - University Institutional
- MC - Medical Core
- MT - Medical Transition
- IL - Industrial / Logistics

0 0.5 1 2 3 4 Miles



Greenville
NORTH CAROLINA

Future Land Use & Character Map



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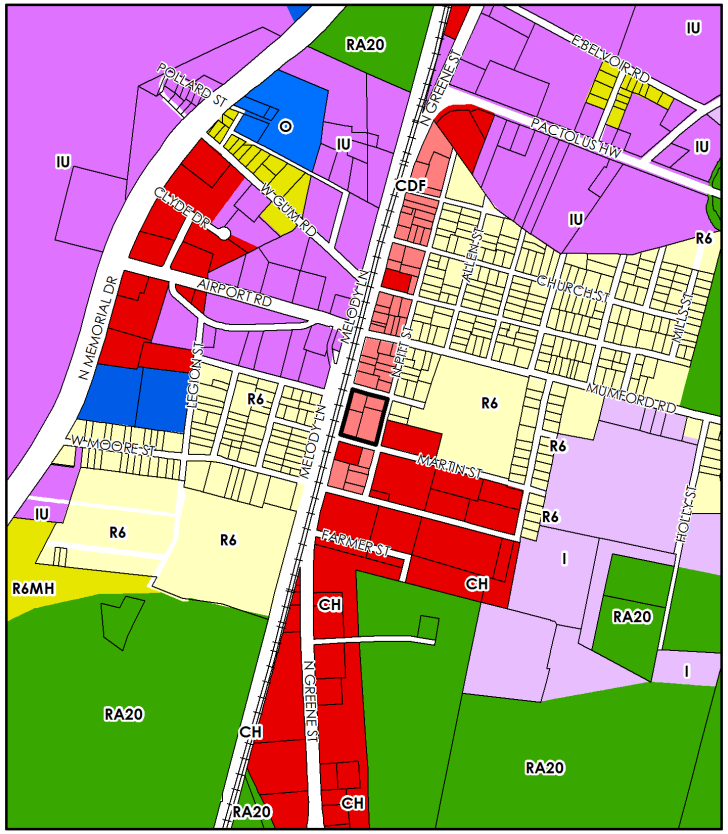
Zoning Map



Legend

Land Parcels
Rezonings
CD
CDF
CG
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MCH
MCG
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PIU
MI
MO
MS
O
OR
OR-UC
R6
R6A
R6A-CA
R6A-RU
R6MH
R6N
R6S
R9
R9S
R9S-CA
R15S
PUD
MR
MRS
RA20

Greenville
NORTH CAROLINA

Item 5:

Ordinance requested by Hart Trust c/o Don Parrott to rezone 1.7619 acres located at the northwestern corner of the intersection of Davenport Farm Road and Frog Level Road from O (Office) and CN (Neighborhood Commercial) to R6A (Residential [Medium Density Multi-family]) for Tract 1 and from R6A (Residential [Medium Density Multi-family]) to O (Office) for Tract 2

Greenville
NORTH CAROLINA

General Location Map

Legend

- Greenville's ETJ
- Tar River
- Pitt-Greenville Airport (PGV)

City Council Voting District

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- District 3
- District 4
- District 5

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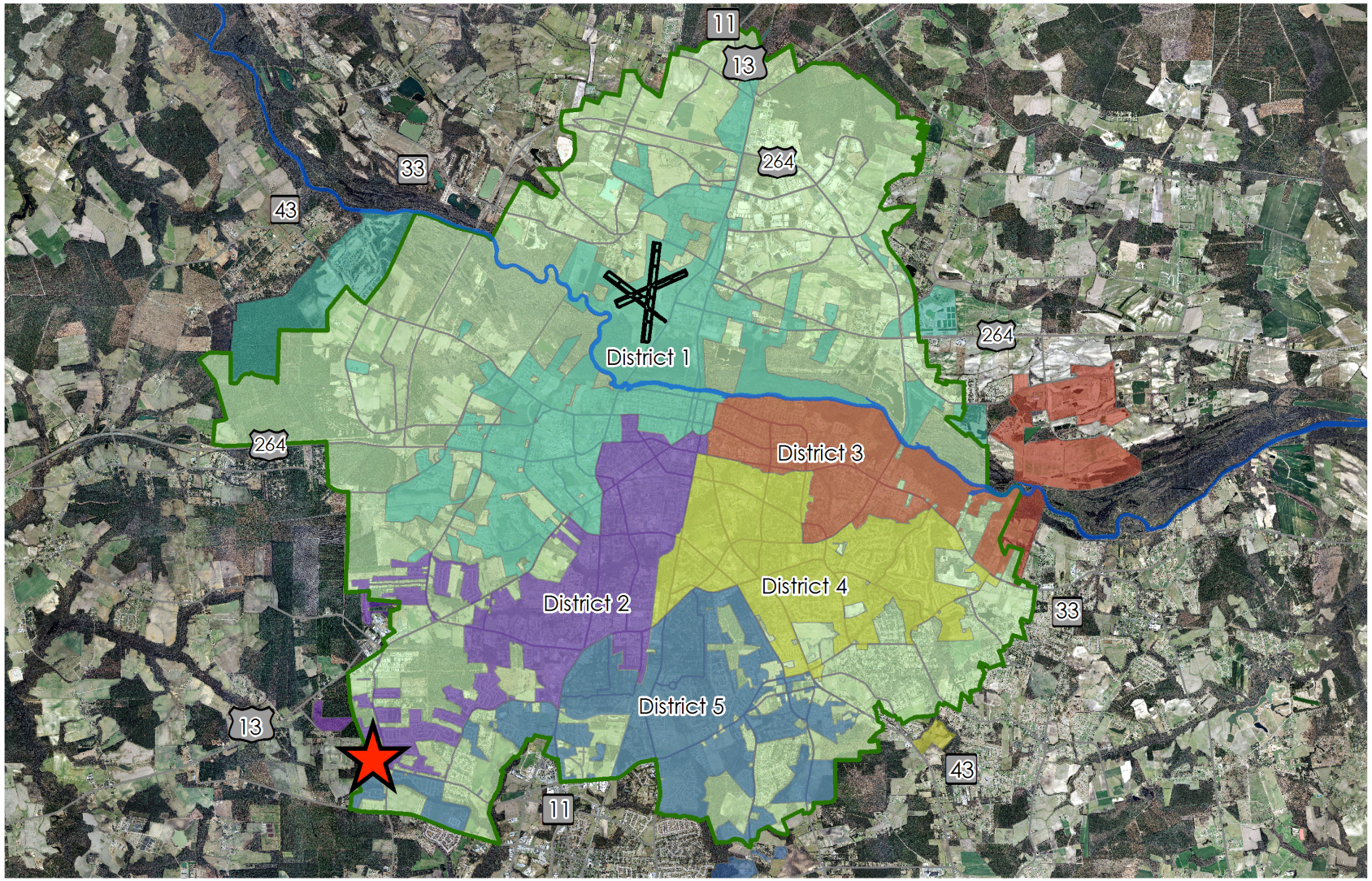

Greenville
NORTH CAROLINA

Aerial Map (2012)

Legend

- Land Parcels
- Rezonings

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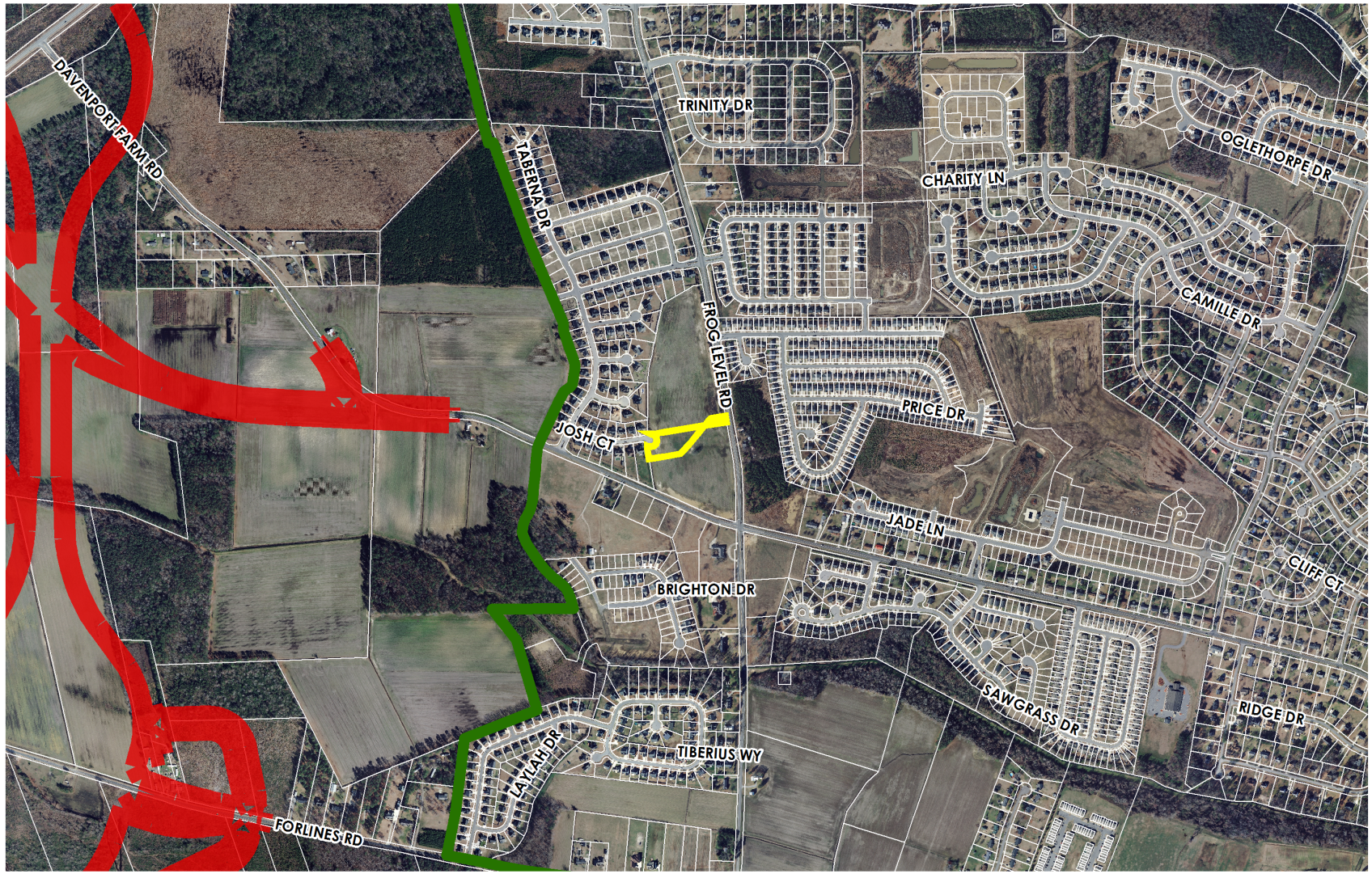

Greenville
NORTH CAROLINA

Rezoning Map For

Hart Trust c/o

Don Parrott

1.7619 acres

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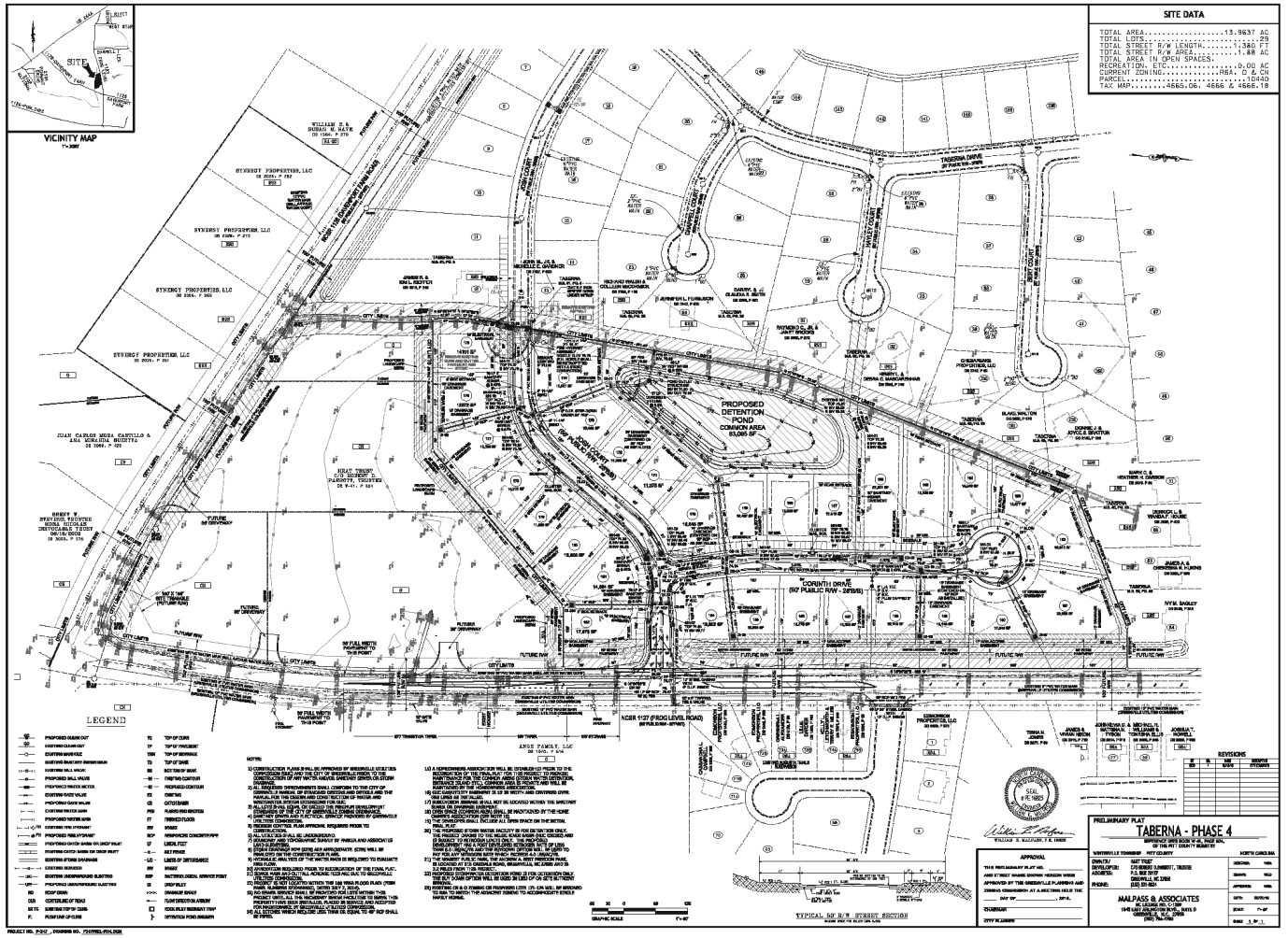
NORTH CAROLINA

Approved PP
Taberna – Phase 4

Lots 154-181



Frog Level Road

Greenville
NORTH CAROLINA

Activity Centers

Legend

- Land Parcels
- Rezonings
- Greenville ETJ
- Neighborhood Activity Center
- Community Activity Center
- Regional Activity Center
- Employment Center

0 0.5 1 2 3 4 Miles

Greenville
NORTH CAROLINA

Existing Land Use

Legend

- Land Parcels
- Greenville ETJ
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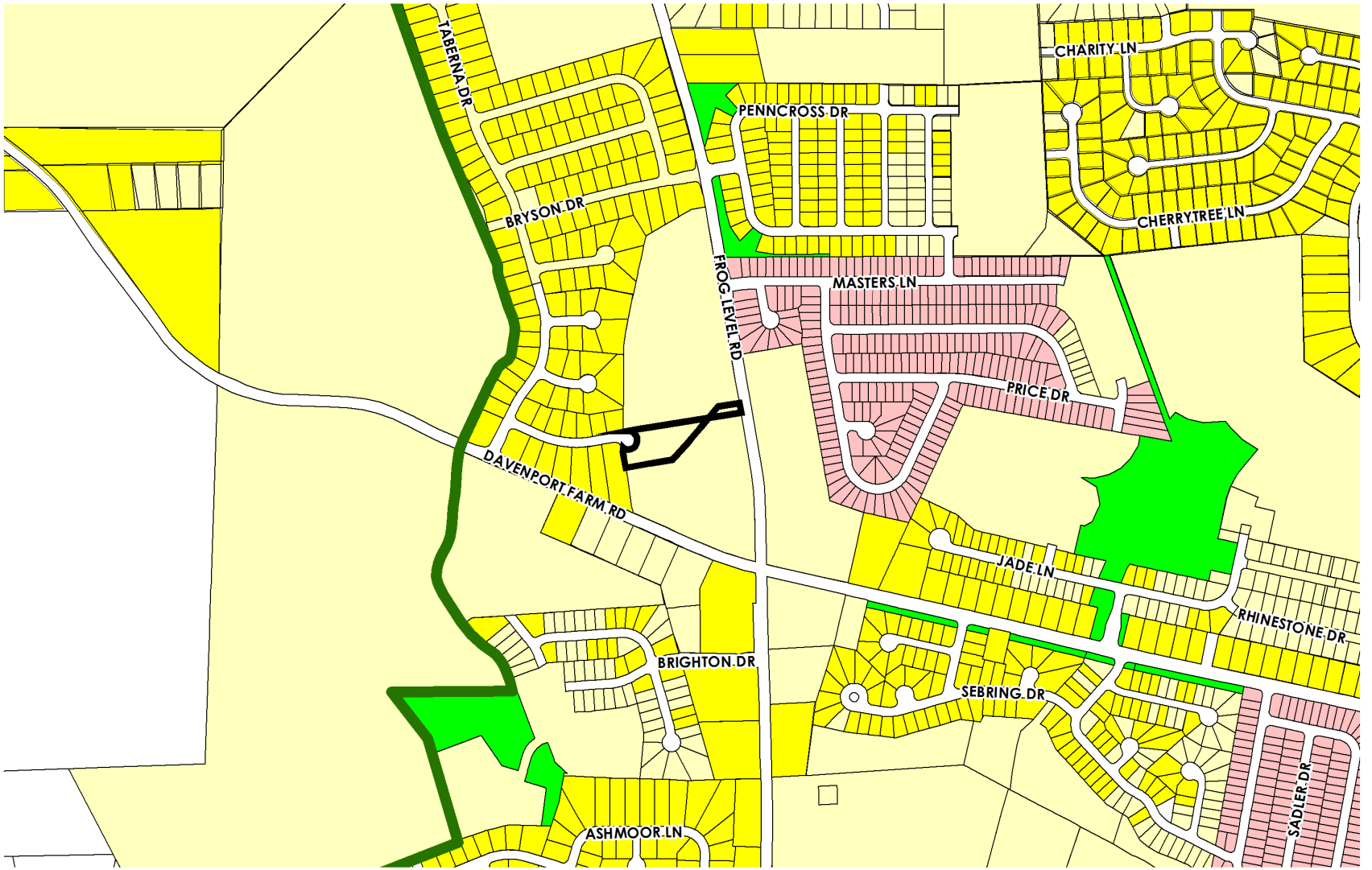

Greenville
NORTH CAROLINA

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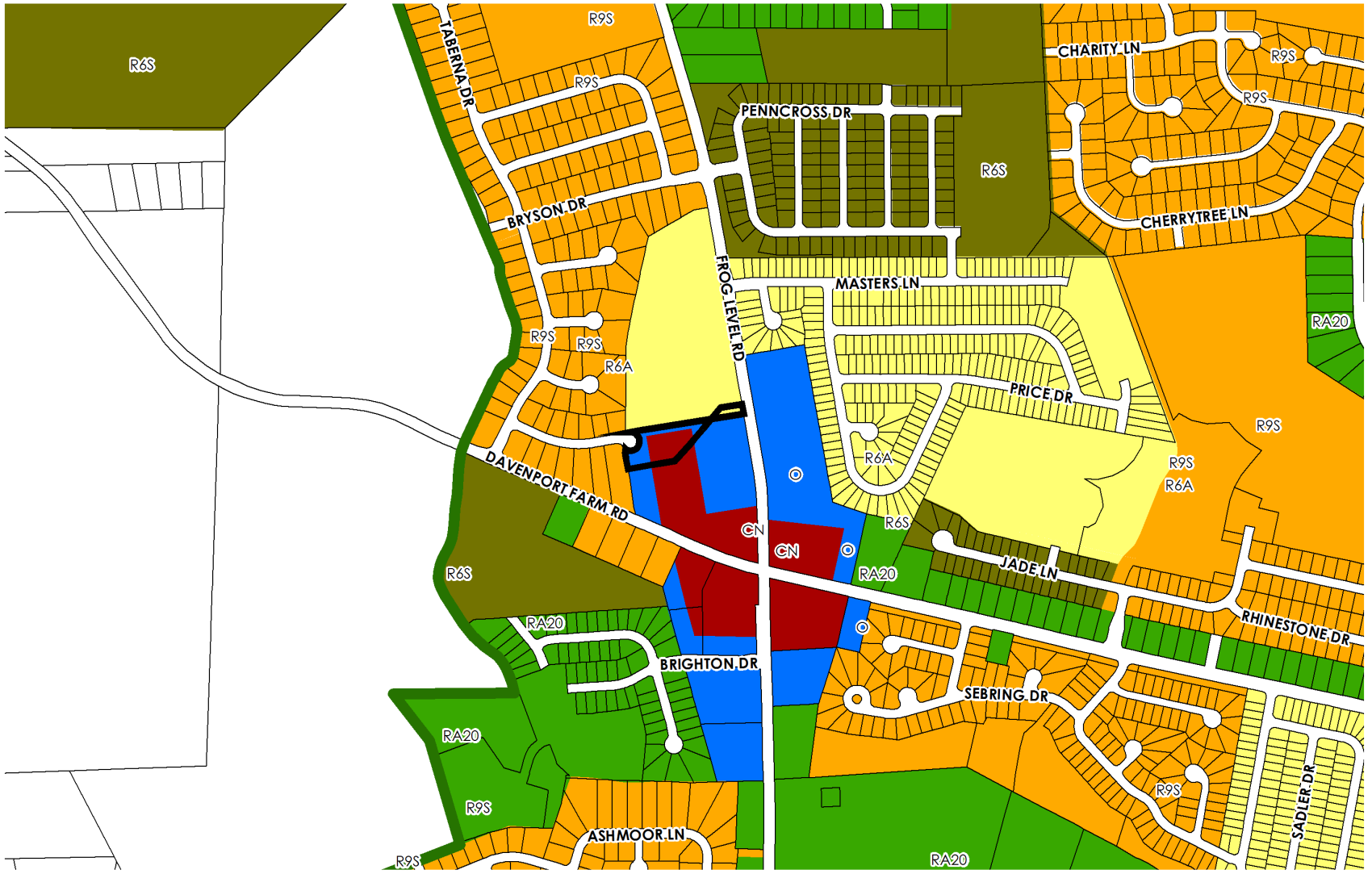
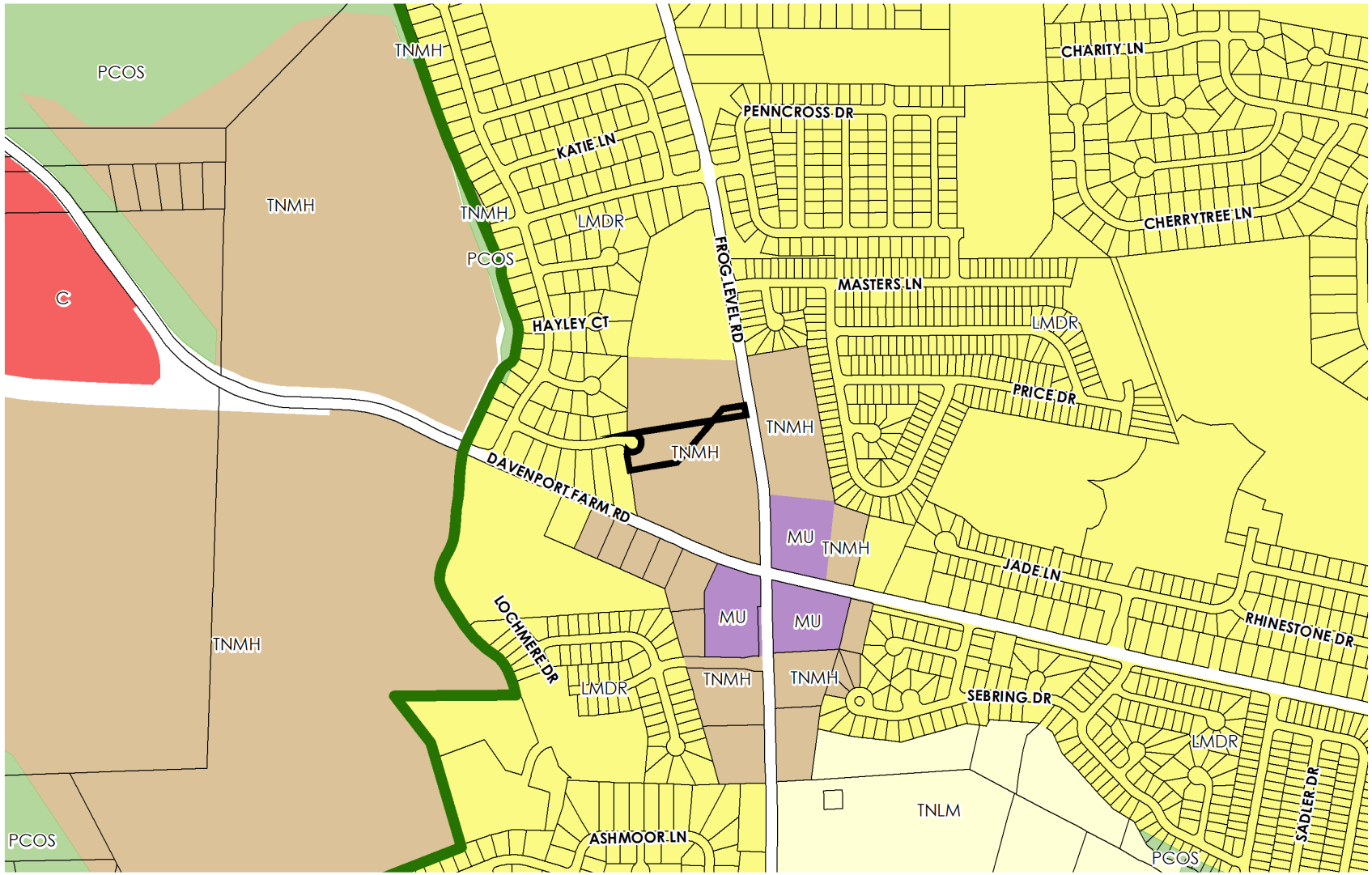


Greenville
NORTH CAROLINA

Future Land Use & Character Map



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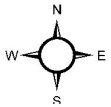

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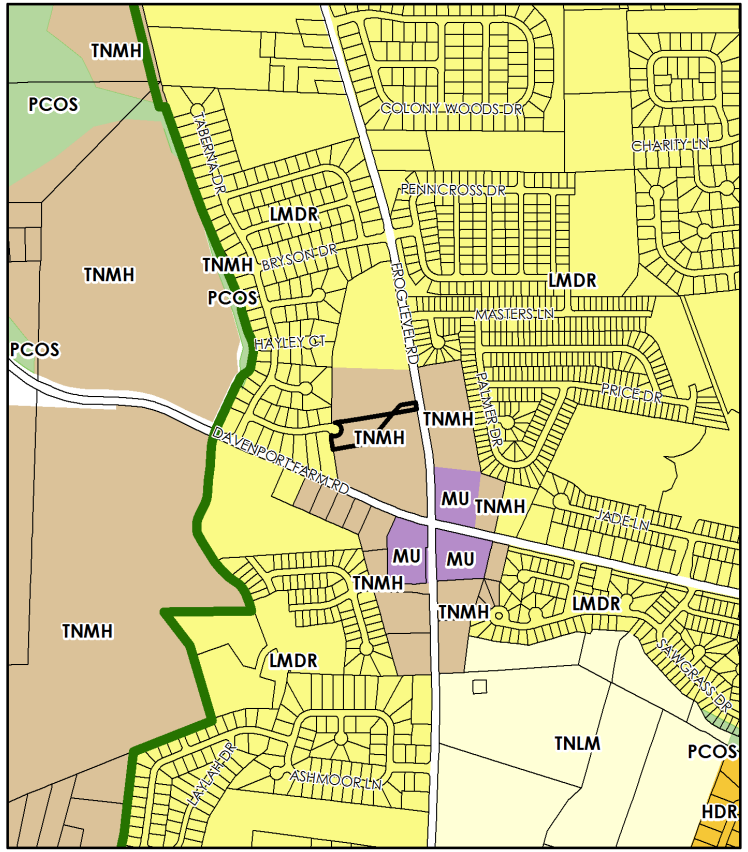
Greenville
NORTH CAROLINA

Future Land Use & Character Map



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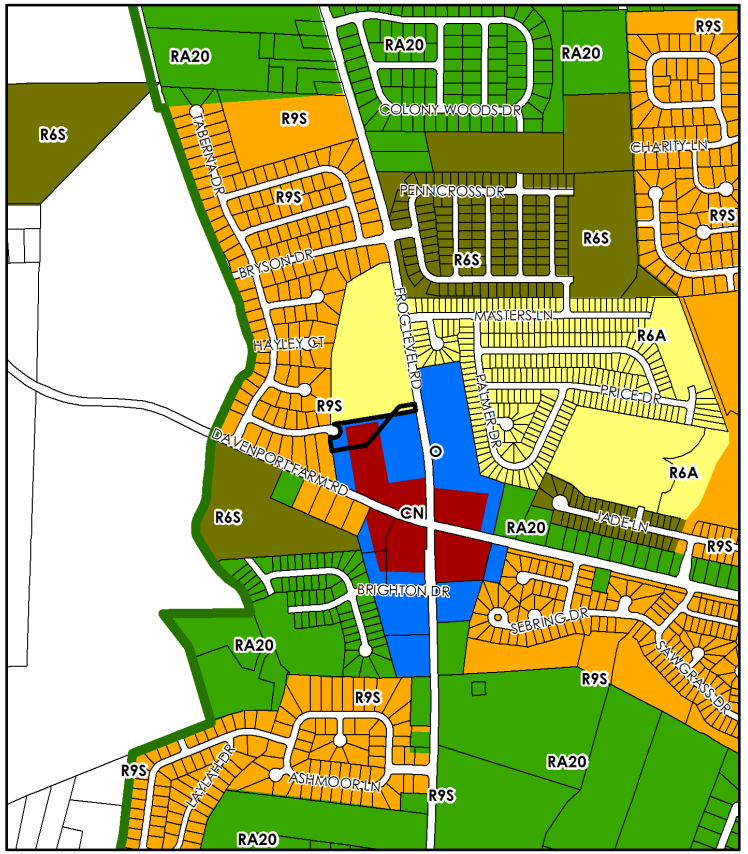
Zoning Map



Legend

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R6N
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R9S
R9S-CA
R15S
PUD
MR
MRS
RA20

Greenville
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Item 6:
Ordinance to amend the Zoning Ordinance to add placement and aesthetic review criteria for distributed antenna systems (DAS)

This text amendment application proposes to amend Title 9, Chapter 4 as summarized as follows:

- Sec. 9-4-22, Add a definition for DAS;
- Sec. 9-4-22, Amend the definition of Public Utility or Use to exclude DAS from definition;
- Sec. 9-4-78, Add DAS to Table of Uses, by right, in all nonresidential zoning districts;
- Sec. 9-4-104(Q), Add DAS to list of heading.

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Sec. 9-4-104, Add placement and aesthetic review criteria for distributed antenna systems (DAS) as summarized as follows:

DAS in right-of-way, on city owned infrastructure, on GUC owned infrastructure and/or on city property **in any non-residential district, except CD district**:

- 35 ft maximum height, including the antenna;
- Ground-mounted equipment cannot reduce sidewalks to a width less than 5 ft; and
- Location must not restrict sight triangles of roadway intersections or driveways.

DAS in right-of-way, on city owned infrastructure, on GUC owned infrastructure and/or on city property in **CD (Downtown Commercial) district**:

- 25 ft maximum height including the max. antenna of 6 ft;
- Ground-mounted equipment is not allowed;
- Support poles cannot reduce sidewalks to a width less than 5 ft;
- Location must not restrict sight triangles of roadway intersections or driveways; and
- DAS painted to match posts.

Consistency Review

The proposed Zoning Ordinance Text Amendment is in compliance with three Horizons 2026: Greenville's Community Plan:

Chapter 4, Growing the Economy Policy 4.1.4:
"Support a Positive Business Climate."

Continue to market Greenville's excellent business climate. Where appropriate, promote flexibility in development regulations to ensure a business climate that encourages growth and expansion. Support business growth, expansion, and retention through strategic public improvements. Ensure land use regulations align with industry needs.

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Planning and Zoning Commission Recommendation, 11/15/2016:

The Planning and Zoning Commission unanimously approved a motion to recommend approval of the proposed text amendment.

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Item 7:
Ordinance Amending Chapter 2 of Title 6 of the Greenville City Code Relating to Distributed Antenna Systems Equipment

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NORTH CAROLINA

Right of Way Management Ordinance

- Complements the Zoning Ordinance

Greenville
NORTH CAROLINA

Distributed Antenna Systems

-or-

-Small Cell Technologies and
-Backhaul Service (links between cell towers)

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Certificate of Public Convenience and Necessity issued by State Utilities Commission

-right to locate in the public ROW

Greenville
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Federal Telecommunications Act and FCC Rules

-Promote competition and

-Rapid deployment of telecommunications technologies

- Embrace new technologies to have these services available to citizens and businesses
- Ensure that safety and aesthetic concerns are addressed

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Public Works Director controls the installation and maintenance of DAS equipment in the City ROW

- Application Process

Factors:

- Structural engineering analysis
- Safety hazard
- Shrouding /camouflaging
- Impact on single property
- Concentration
- Ability to operate and maintain City ROW
- Standard design
- Zoning Ordinance compliance

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Must have permit

- $500 fee
- $250 and penalty

Greenville
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Recommendation:

- Conduct Public Hearing
- Approve Ordinance

Greenville
NORTH CAROLINA

12.8.16

Other Items of Business

Greenville
NORTH CAROLINA

Item 8:
Presentation by the North Carolina Department of Transportation on Safety Improvements at Memorial Drive and West Fifth Street

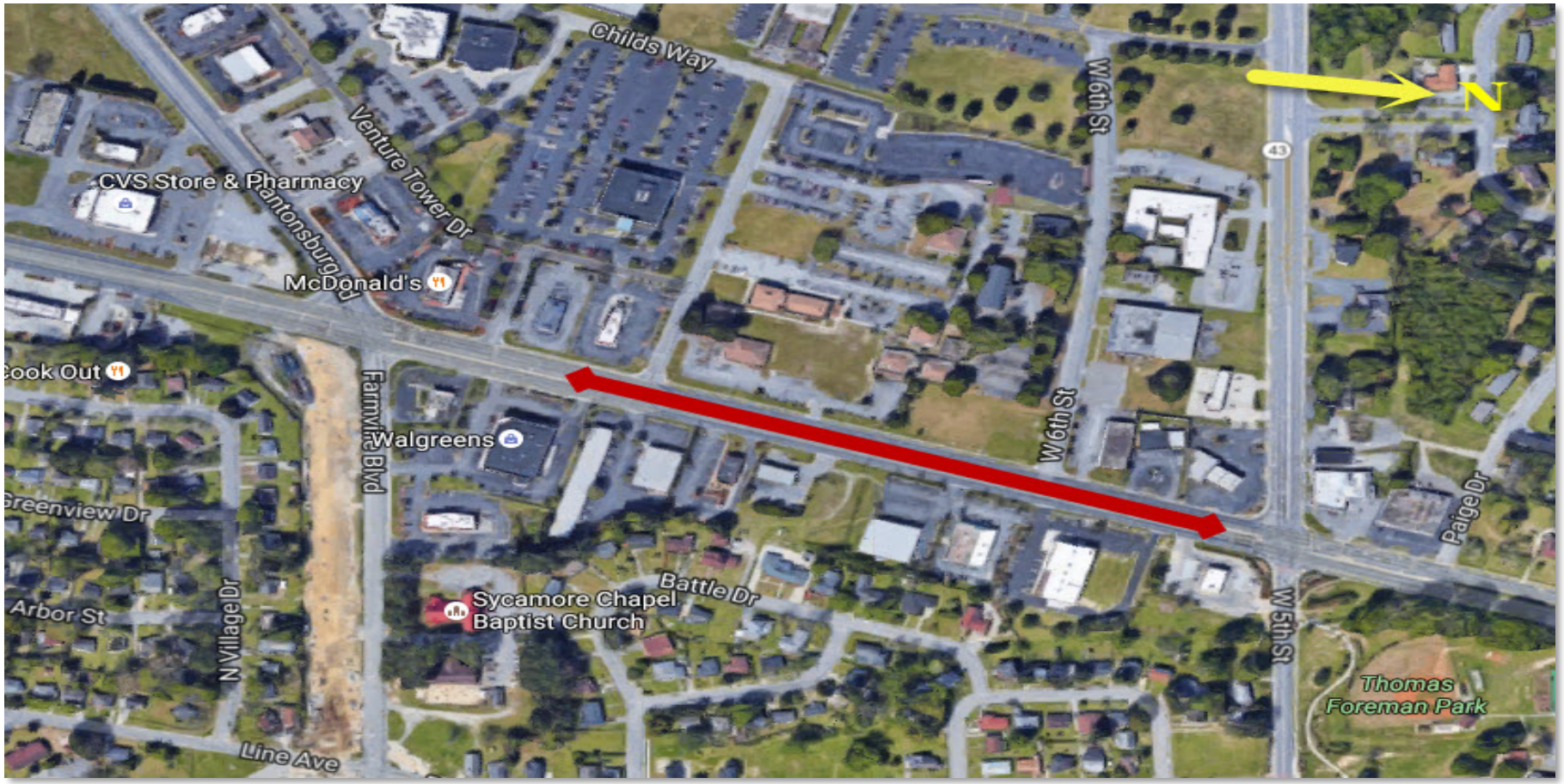
Nothing Compares
NORTH CAROLINA

Safety Improvements on Memorial Drive

from 10th Street Connector to 5th Street

Steve Hamilton, PE, Division Traffic Engineer

Area Map of Memorial Drive



SAFETY IMPROVEMENTS ON MEMORIAL

Issues along Memorial Drive between 10th Street Connector and 5th Street:

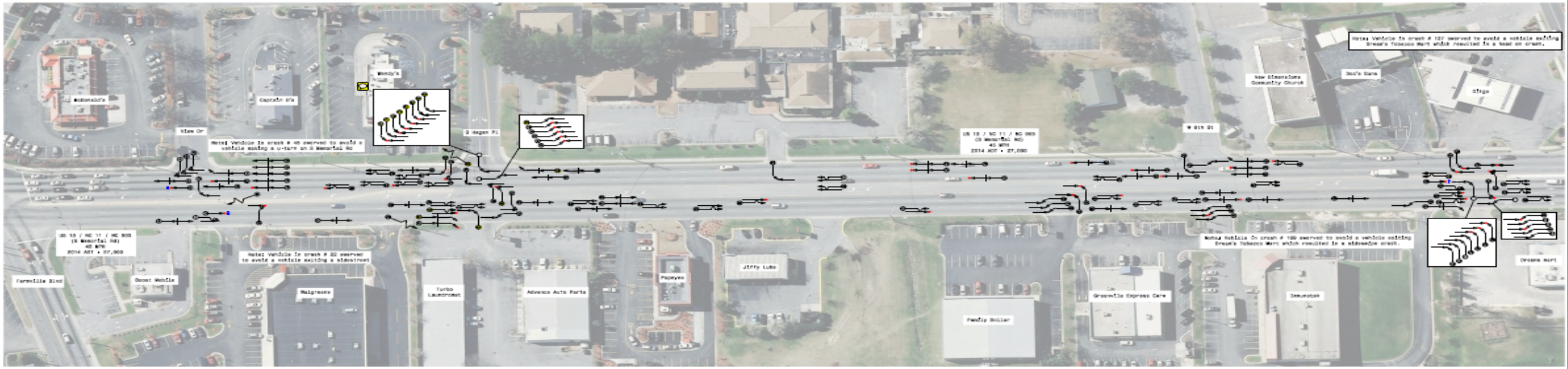
- The intersection of Memorial Drive and O'Hagan Place was identified as a High Hazard location as part of the 2015 Highway Safety Improvement Program (HSIP), and in the 2016 HSIP given a Statewide ranking of 198 up from its 2015 rank of 429.
- This 1,200 ft. section of Memorial Drive is a 7 lane cross-section with a two way center left turn lane.
- The 2014 Average Daily Traffic Volume on Memorial is 27,000.
- In a five year period from August 2011 through July 2016 there were 131 total reported crashes with 51 crashes (40%) involving vehicles crossing through the center turn lane, 8 sideswipes involving vehicles exiting or entering the center turn lane, 39 rear-end crashes, and 1 head-on crash.
- There were two bicycle and one pedestrian crash in this section of Memorial Drive.

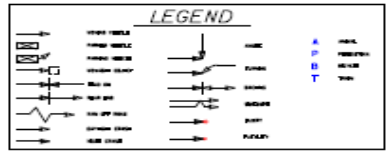
Memorial at O'Hagan Drive NB

Tuesday @ 3:15pm

Collision Diagram along Memorial Drive

Order # 41000042648
US 13 / NC 11/ NC 903
(S Memorial Rd)
Greenville
Pitt County
8/1/11 - 7/31/16





AECOM

Prepared For:
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and SAFETY DIVISION

TRAFFIC SAFETY UNIT

Corrective Action Considered

The countermeasure selected for this section was to replace the existing two way center left turn lane with a raised median based on the Crash Reduction Factors that it provides.

- Left turn and angle crashes 36%
- Sideswipe crashes 21%
- Rear-end crashes 19%
- Head-on crashes 47%

Two options were reviewed:

A single direction channelized U-turn at each end of the new median

A dual direction channelized U-turn about mid-point of the new median

The dual direction was selected because it provided more uniform spacing between crossovers, located the U-turn points outside the vehicle queue from the signals, and could accommodate installation of a traffic signal in the future if warranted.

Selected Crash Reduction Treatment

Selected Crash Reduction Treatment

Median Option
Typical Concrete Median

- Constructed as part of project
- Estimated Project Cost $200,000

Median Option
Typical Landscaped Median

- Plantings would be provided as part of project
- NCDOT would work with city as to type of plantings
- City Would need to execute agreement to maintain after completion of project
- Estimated Project Cost $250,000

TODAYS REQUEST

Council Adopt Resolution in Support of Safety Enhancement Project,

Indicating Preferred Type of Median!

Questions?

Greenville
NORTH CAROLINA

Item 9:
Presentation on Firetower Road and Portertown Road Widening Project by the North Carolina Department of Transportation

Nothing Compares
NORTH CAROLINA

U-5870 / U5785 Firetower Rd and Portertown Rd

NC33 to NC43 Charles Blvd

Bill Kincannon, PE Project Development Engineer

Project Information

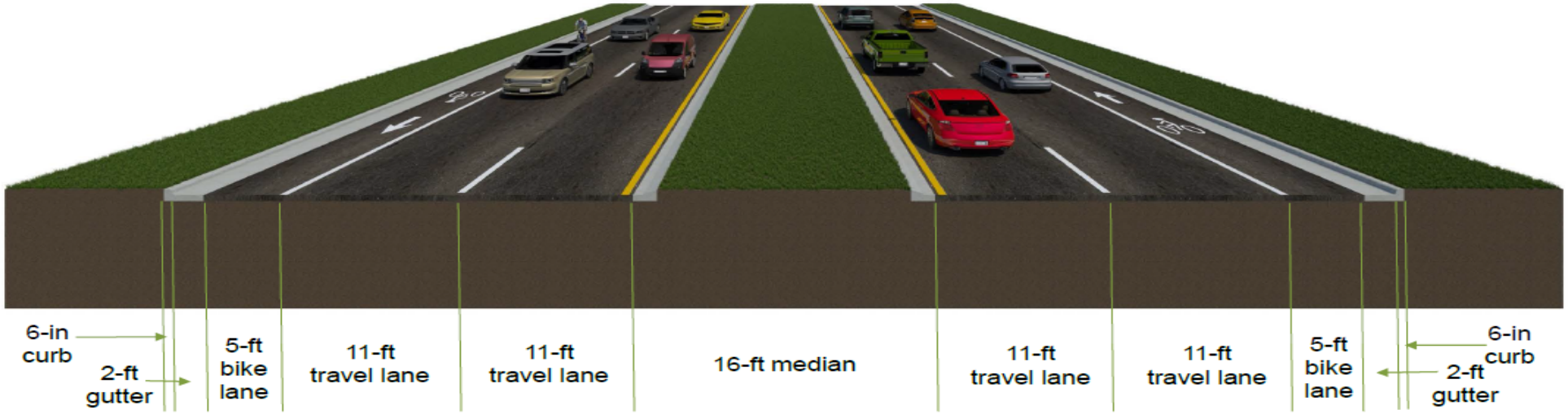
- Project need: relieve congestion on Firetower Road and Portertown Road
- Main purpose:
  - Improve traffic operations
  - Reduce crashes
  - Enhance connectivity
  - Section of Road is considered a Major Thoroughfare needing Improvement on the Greenville Urban Area MPO Comprehensive Transportation Plan

- Both sections part of Prioritization 3.0 Fall 2014 calling for “Widening Existing 2 lane Roadways to Multi-Lane Urban Section Facilities”

• Begin Right of Way Acquisition	Late 2017	$7,029,000
• Begin Utility Relocation	Late 2017	$843,000
• Begin Construction	2019	$22,116,000
• Total Estimated Cost		$29,988,000

Typical Proposed Section

- Four through travel lanes and a 23’ median are needed to accommodate anticipated traffic
- Five-foot bicycle lanes are recommended to safely accommodate bicycle traffic, and are supported by local governments
- The curb and gutter facility minimizes impacts to homes, businesses, and environmental resources compared to a ditch and shoulder facility
- A reduced 16-foot median is proposed to minimize property impacts.



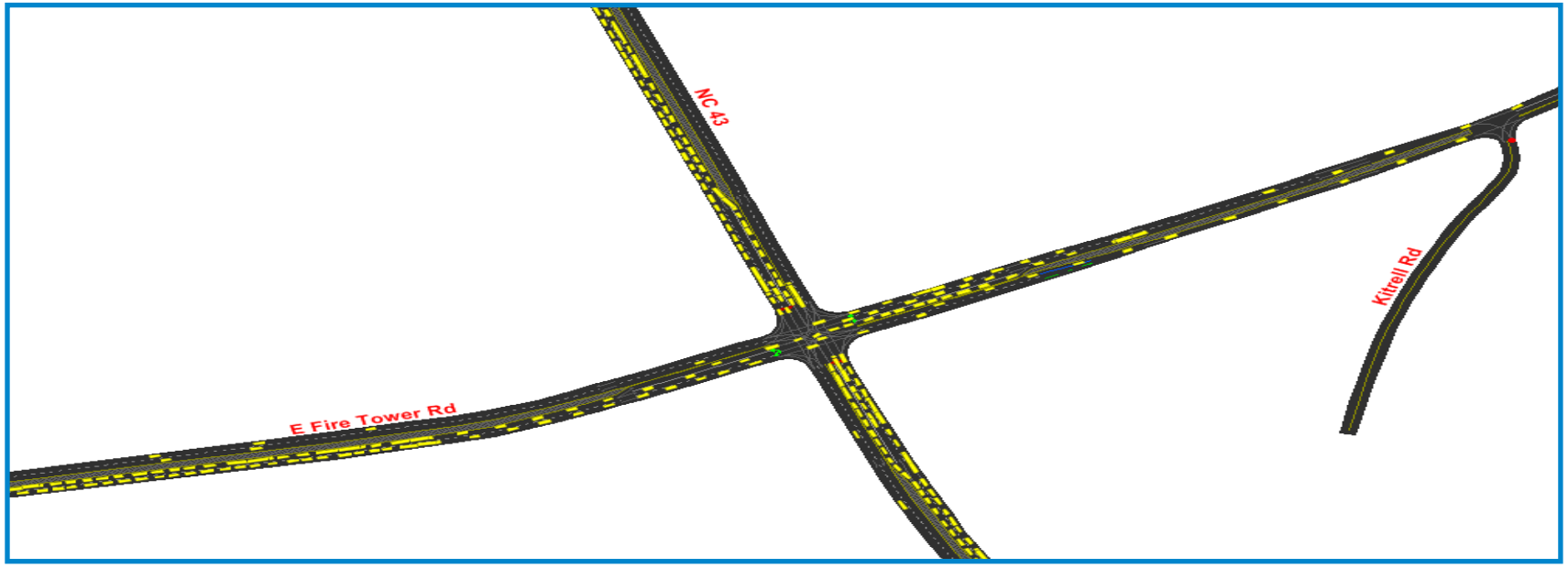
Crashes Within Current Project

Crash Type	# Crashes – Fire Tower Rd	# Crashes – Portertown Rd	Combined Total	Percent of Combined Total
Angle crashes	16	4	20	5%
Fixed object crashes	7	7	14	4%
Head on crashes	3	2	5	1%
Left turn crashes	56	32	88	23%
Run off road crashes	9	26	35	9%
Pedestrian crashes	2	1	3	1%
Rear end crashes	151	22	173	46%
Right turn crashes	12	2	14	4%
Sideswipe crashes	8	6	14	4%
Other	9	5	14	4%
TOTAL	**273**	**107**	**380**	100%
Crash rate (total crashes per 100M vehicle miles)	***589.57***	***370.38***		

2012-2014 statewide crash rate for two-lane undivided urban primary routes = 230.18 crashes per 100M vehicle miles

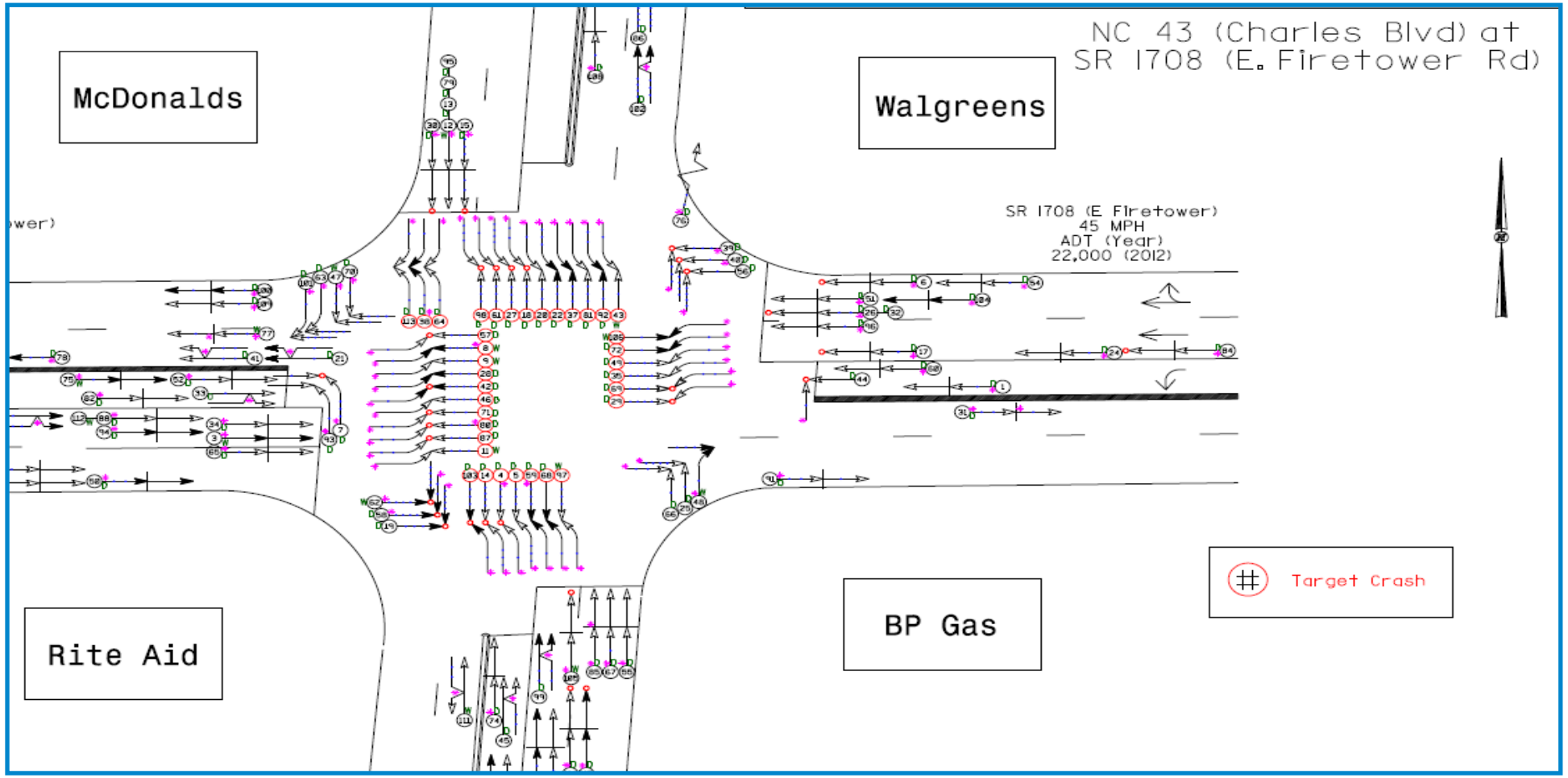
Problems Outside Current Project

- Currently Firetower Road intersections with NC43 and Arlington do not function acceptably most hours of day, with near total gridlock at peak morning and evening hours.
- Firetower just east of Charles currently has about 22,000 average daily traffic, and is expected to have about 33,000 in 2040 design year.
- The Department is proposing to include this section within current project.
- If not included, this section will fail much worse than now simply due to city growth, and a project will need approved and funded almost immediately upon completion of the current project.

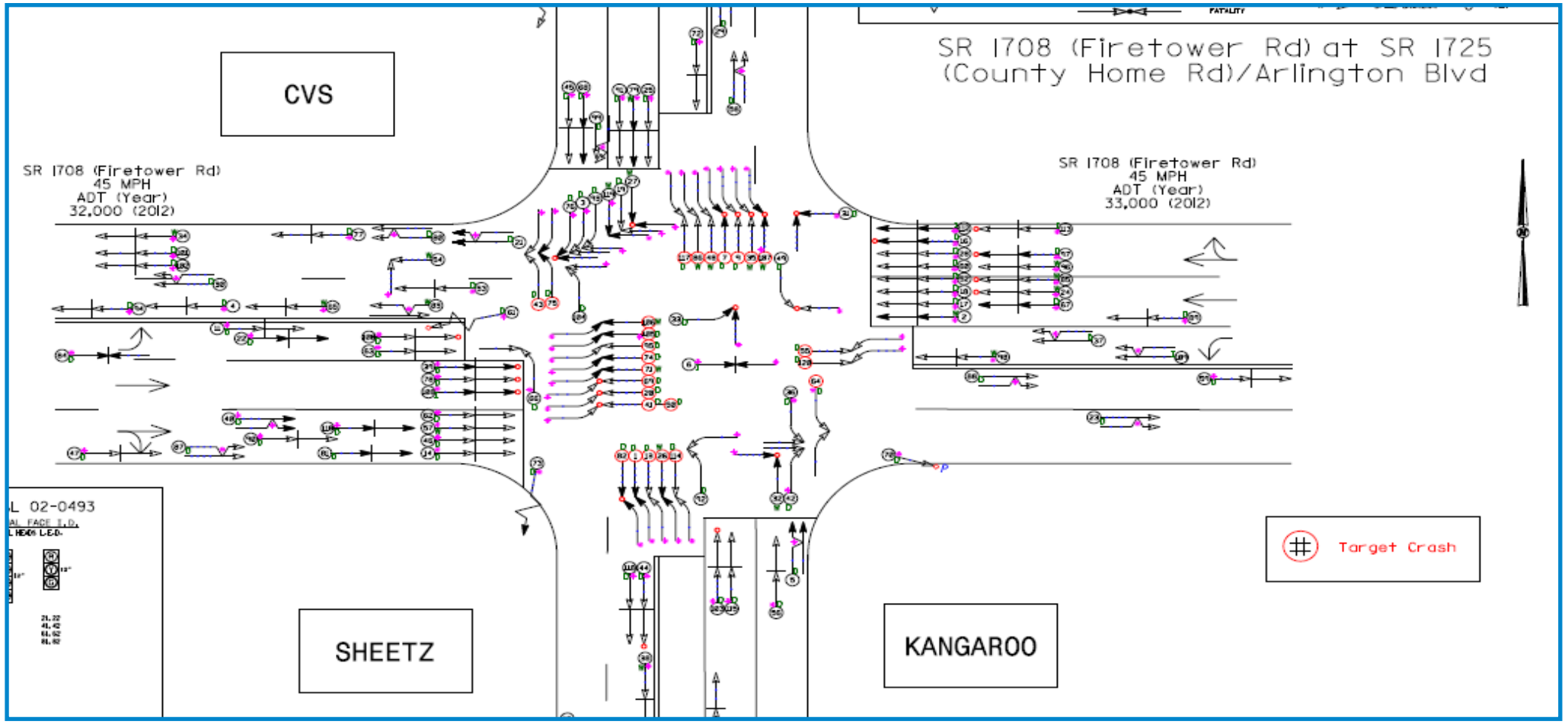


No Build Backups

Firetower Rd at Charles Blvd Crashes



Firetower Rd at Arlington Blvd Crashes



Design Year Delays at Signals
Firetower Road at Charles Blvd

Intersection	Approach	Lane Group	Delay (sec)		LOS	
			AM	PM	AM	PM
SR 1708 (E Fire Tower Road) at NC 43 (Charles Street)	**Overall**		**169.9**	**242.4**	F	F
	NC 43 Southbound	LT	198.2	446.0	F	F
		TH	263.5	235.7	F	F
		TH/RT	281.6	216.2	F	F
	E Firetower Road Westbound	LT	120.8	217.3	F	F
		TH	87.8	117.5	F	F
		TH/RT	93.3	108.8	F	F
	NC 43 Northbound	LT	225.7	346.9	F	F
		TH	211.1	451.9	F	F
		TH/RT	194.6	530.7	F	F
	E Firetower Road Eastbound	LT	255.0	313.7	F	F
		TH	260.7	278.3	F	F
		TH/RT	190.1	245.3	F	F

AM & PM Level of Service F

Proposed Alternative Development Area

• Additional improvements are needed near the intersections of Charles Blvd and Arlington Blvd with Fire Tower Road

• Blue shading on large maps shows area that would be studied for potential improvements

Conventional and Unconventional Solutions

- Conventional - Adding more lanes still result in a failing intersection because:
  - Still have large numbers of traffic with conflicting movements
  - Too many high volume movements competing for green light time – resulting in longer backed up traffic
  - More turn lanes require extended islands further restricting access

- Unconventional – Increased capacity and access
  - Single or dual quadrant roadway, which provides left turns away from the main intersection
  - Median U-turn options restrict left turns at key intersections, providing for turning movements at U-turn bulb-outs away from main intersection
  - Initial study shows several unconventional intersection designs have potential for better level of service for intersections and increased access to commercial properties within corridor
- ***Each alternative design being studied is used successfully in North Carolina***

Questions?

Greenville
NORTH CAROLINA

Item 10:
Presentation on Evans Street Widening Project

Nothing Compares
NORTH CAROLINA

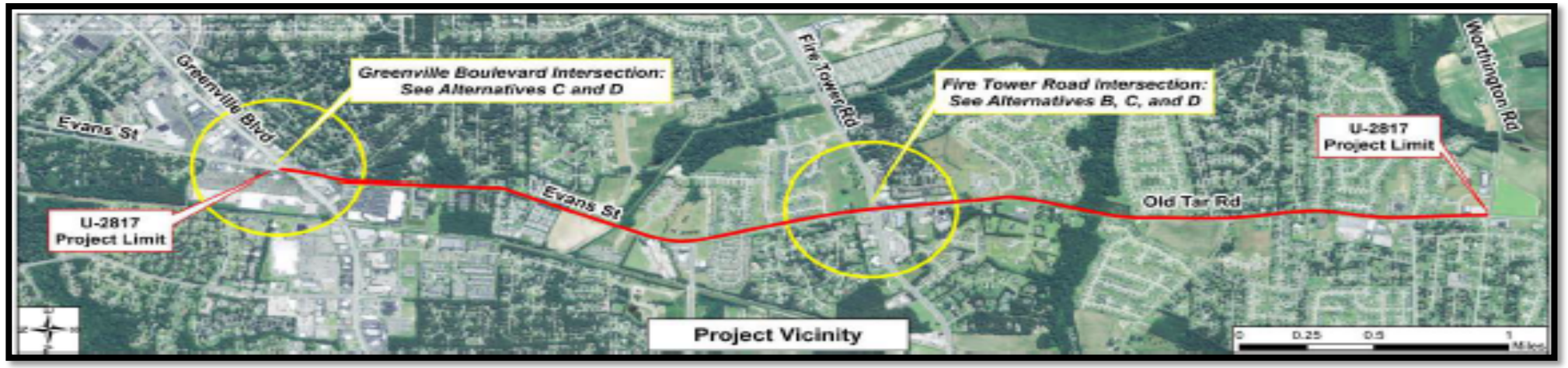
U-2817 Evans Street/Old Tar Road Widening

Greenville Blvd. to Worthington Road

Maria Rogerson, PE, Project Engineer

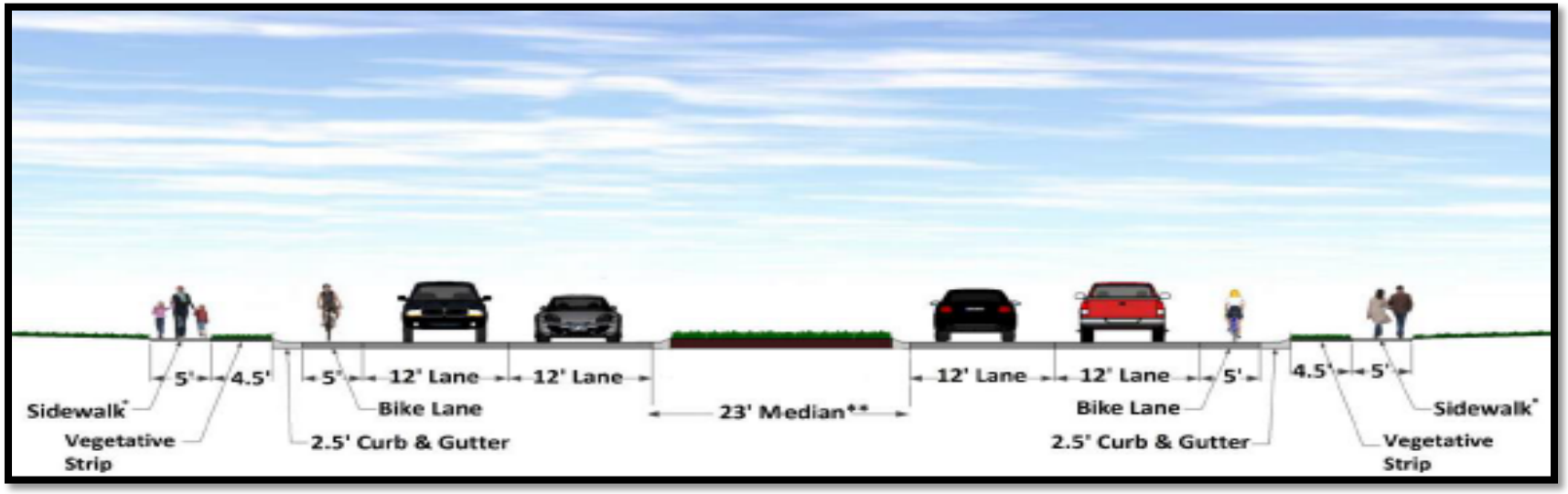
Project Information

- Purpose of the project is to increase capacity and improve traffic flow along Old Tar Road and Evans Street.
- Project is listed on the City of Greenville MPO TIP for 2016-2025
- Section of Road is considered a Major Thoroughfare needing Improvement on the GUAMPO Comprehensive Transportation Plan (5/28/2009)
- Estimated ROW /Utility Cost $14,340,000 FY 19
- Estimated Construction Cost $18,800,000 FY 21



Typical Section

- Four through travel lanes and a 23’ median are needed to accommodate anticipated traffic
- Five-foot bicycle lanes are recommended to safely accommodate bicycle traffic, and are supported by local governments
- The curb and gutter facility minimizes impacts to homes, businesses, and environmental resources compared to a ditch and shoulder facility
- A reduced 16-foot median is proposed just north of Fire Tower Road to reduce property impacts.



Bicycle and Pedestrian Accommodations

- 5-foot bike lanes are proposed
- By providing bicycle lanes and sidewalks for cyclists and pedestrians in the project, improving safety and promoting alternative means of travel is achieved
- Bicycle and Pedestrian accommodations need to be included along Evans/Old Tar, as it's ***a critical link in the larger network*** of bike/ped facilities throughout the City
- City of Greenville and NCDOT have adopted complete streets standards
- Sidewalks and bicycle lanes along the Evans Street corridor are supported in the Greenville Horizons 2026 Plan (Newly adopted Community Plan September 2016) and Greenville Urban Area Metropolitan Planning Organization's 2011 Bicycle & Pedestrian Master Plan
- Greenville Urban Area MPO requested bicycle and pedestrian facilities be included in the project, specifically 5' wide bike lanes

Projects With Current or Proposed Bicycle Facilities

- Existing
  - Regency Boulevard (From NC 11 to Evans Street) 14’ Wide Outside Lanes to Accommodate Cyclists
  - Fire Tower Road (From NC 11 to Cory Road) 14’ Wide Outside Lanes to Accommodate Cyclists
- Proposed
  - U-5785 - Fire Tower Road
  - U-5870* – Fire Tower Road and Portertown Road
  - U-5875 – Allen Rd.
  - U-5921 – Laurie Ellis Rd.

**The State Bicycle Route NC 2 (Mountains to Sea) runs on Fire Tower Road from East 14th Street to Portertown Road.*

Impacts to South Hall Wall and Paramore Berm

- Wall and berm may be impacted
- A minimized typical section is proposed through this area with a narrower median (16’)
- During final design NCDOT will try to minimize/avoid impacts to the berm and wall to the extent possible
- If a section of the wall is impacted, NCDOT will coordinate with the South Hall HOA to ensure that the impacted section of the wall is rebuilt under the construction contract
- Any site distance conflicts with the wall will have to be addressed as designs progress

Example of Wall Construction
Duke University

Existing

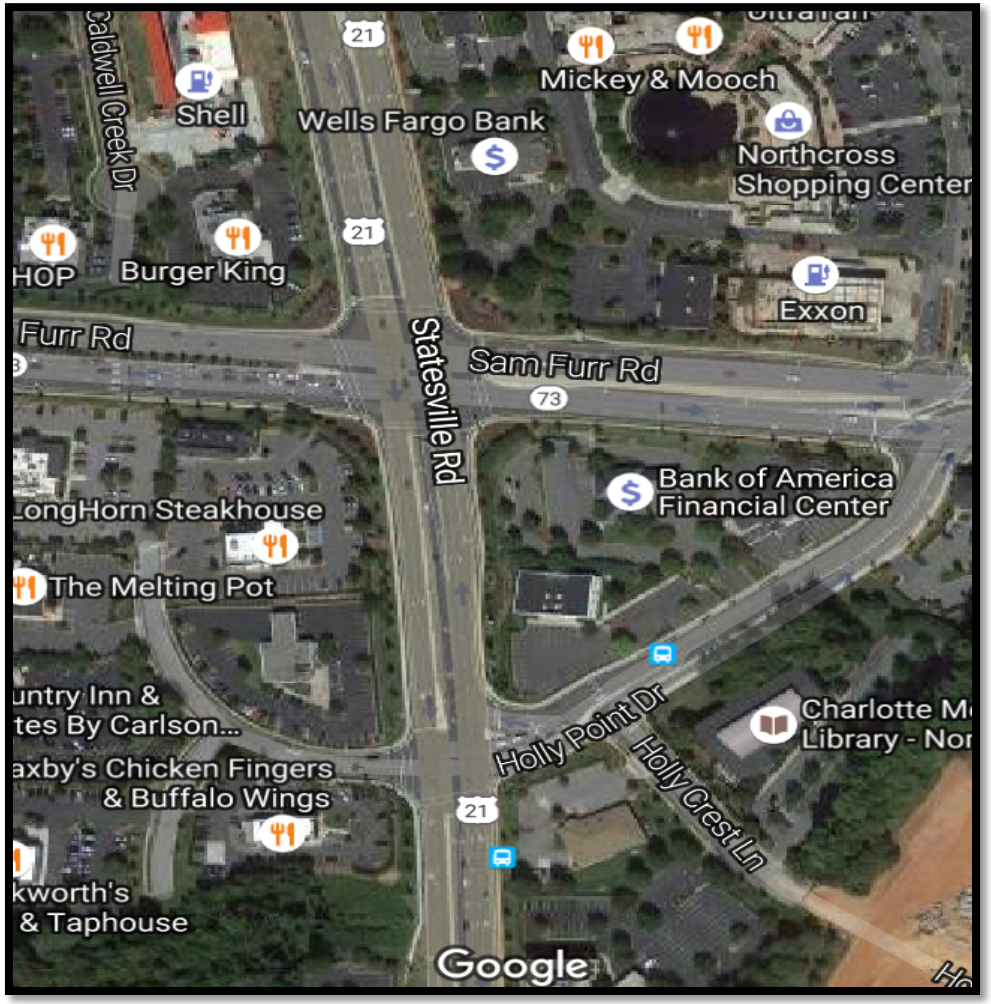
Newly Constructed

Transition from Existing Wall to Newly Constructed

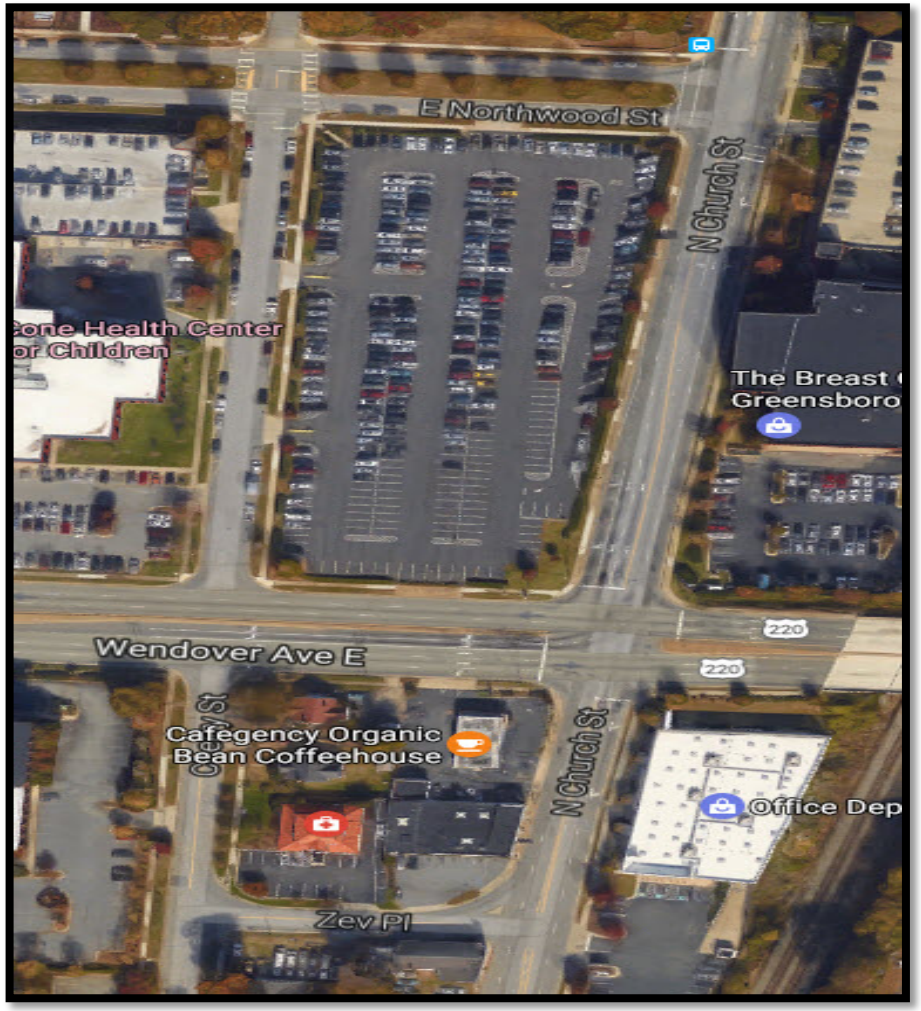
Intersection Improvements

- Because of the high volume of projected traffic at the Old Tar Road/Evans Street intersections with Fire Tower Road and Greenville Boulevard, conventional intersection improvements are being investigated along with other design options.
  - Quadrant roadway, which provides for left turns away from the main intersection
  - Median U-turn options, which restrict left turns at key intersections, providing for those turning movements at U-turn bulb-outs away from the main intersection
  - Conventional intersection improvements, which would add more travel and/or turn lanes to a four-way intersection

Examples of Left Quadrants



Sam Furr Road and Statesville Road in Huntersville, NC



East Wendover and Church St. in Greensboro, NC

Questions?

Greenville
NORTH CAROLINA

12.8.16

City Council Meeting

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