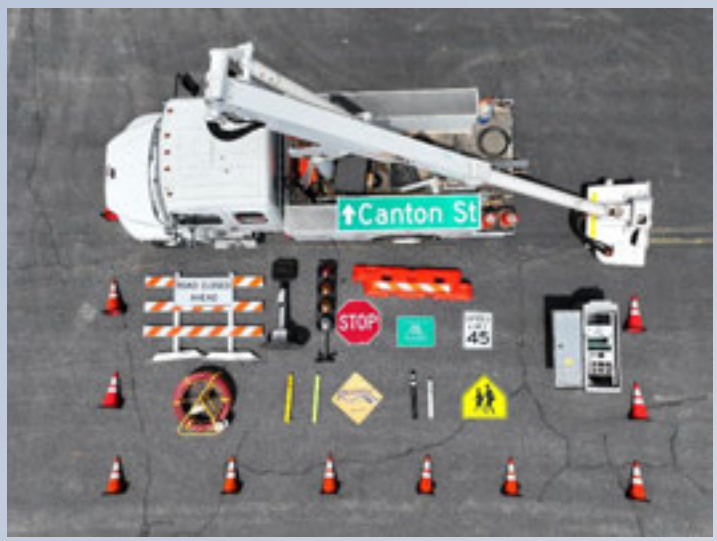
TRANSPORTATION MASTER PLAN

CITY OF ROSWELL



December 2023

EXECUTIVE SUMMARY

The Transportation Master Plan (TMP) for the City of Roswell serves as a comprehensive and periodically updated guide for the city's transportation future. First established in 2006 and currently in its sixth update and first major update in over a decade, **the plan prioritizes the vision of making Roswell the Number One Family Community in America.** It focuses on challenges such as traffic congestion, cut-through traffic, and safety, all aiming to provide a balanced and proactive approach.

The plan began with data gathering and an overall assessment of existing conditions and inventory, using data from various sources, including the 2040 Comprehensive Plan and the 2020 Census. It establishes a baseline understanding of the current transportation system to identify issues like traffic congestion, crash data, and gaps in our bicycle and pedestrian network.

With that information staff conducted public outreach in 2022, staff held public meetings to obtain input from our residents and stakeholders on what goals and improvements the City should pursue over time. This included presenting maps and exercises to best extract the opinions staff needed to hear to best guide our plan.

Moving forward in 2022-2023, staff looked at the needs assessment and analyzed transportation projects to support mobility and accessibility through 2050, linking with the Comprehensive Plan and the Capital Improvement Program (CIP). The assessment considers future transportation demand, congestion levels, economic activity, and accessibility for people with mobility limitations. The assessment also looked at more detailed analysis on cut-through traffic that impacts our roadways and residents. The City was able to purchase anonymous cell phone tracking data to help identify key routes external (non-residents) commuters used in Roswell each workday. This helped determine what cut-through traffic was actually present using a data driven process. These tools help better guide future investment to improve safety and reduce speeds on our roads. Also, the City investigated system maintenance by hiring a new contractor to perform a citywide inspection of approximately 350 centerline miles of city maintained roads, aiming to prevent further deterioration and optimize road conditions. This reporting will also help guide new investment to help raise the quality of our pavement citywide.

The TMP also looked at a detailed financial overview that outlines funding sources, including federal, state, and local funding. The Infrastructure Investment and Jobs Act (IIJA) provided substantial federal funds for various infrastructure needs. State funding changes are also explained, and local funding is detailed through the annual Capital Improvement Program. It also provides a recap our city’s recent successes with a City Bond issuance and TSPLOST (Transportation Special Purpose Local Option Sales Tax) referendums.

The TMP’s recommended project list was compiled from reviewing the previously adopted Bicycle and Pedestrian Master Plan, the North Fulton Comprehensive Transportation Plan, previous Transportation Master Plan updates. New input from public meetings as well as citizen

stakeholders including the Transportation Advisory Committee (TAC) in 2022-2023 was also used in guiding the plan's findings.

The projects in the plan are broken out in the following categories:

- Annual Programs (Repaving, Sidewalks, Speed Management, etc.)
- Bicycle/Pedestrian
- Bridges
- Corridor Improvements
- Intersection Improvements
- Roadway Projects / Realignments
- Traffic Calming Enhancements

The plan also emphasizes the importance of addressing funding challenges in transportation infrastructure, highlighting changes in gasoline taxes and the impact of the COVID-19 pandemic on commuting patterns. Recommendations include a scoring methodology for project prioritization based on safety factors, traffic/congestion data, and specific considerations for bicycle, pedestrian, bridge, intersection, corridor improvements, and traffic calming projects.

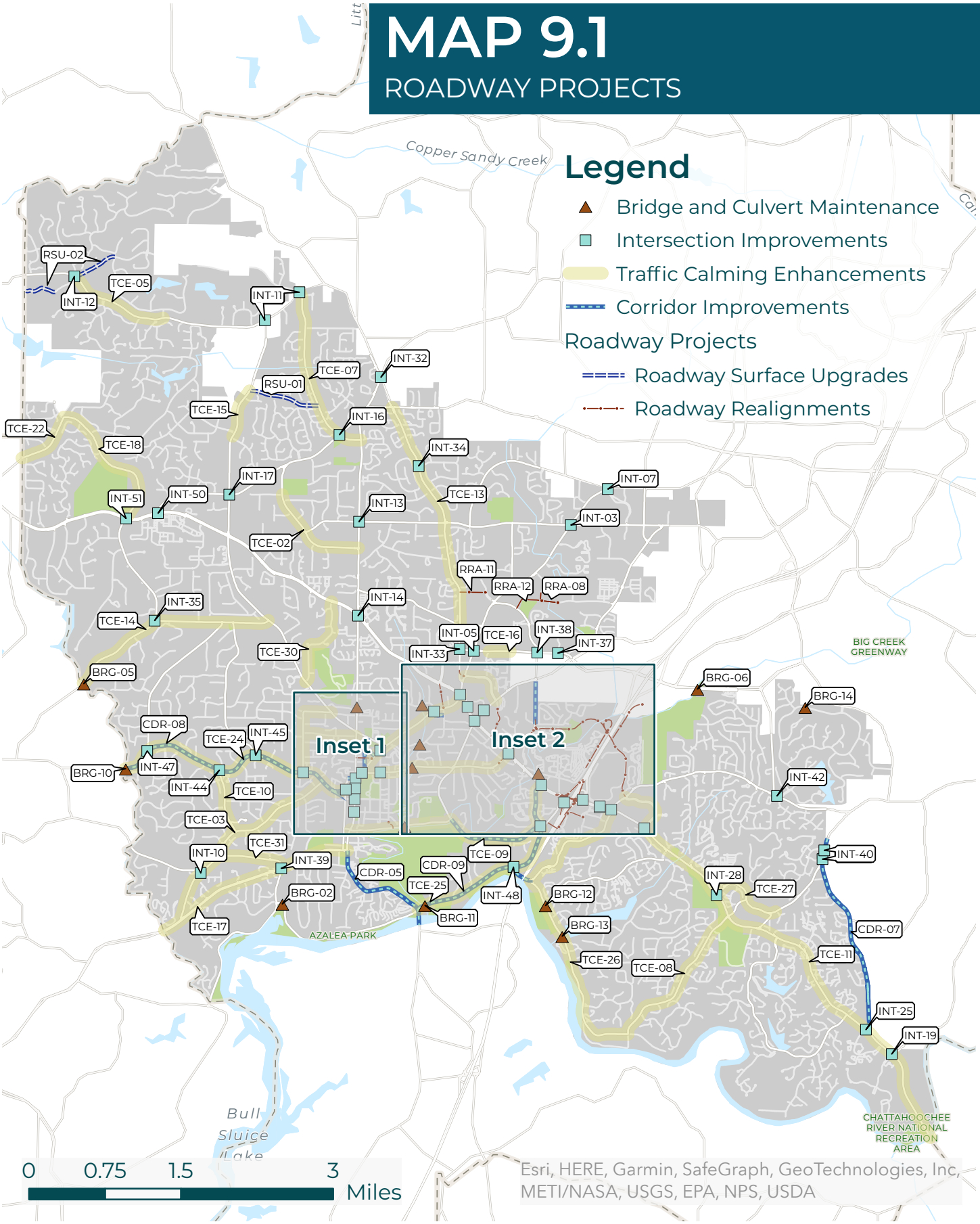
Overall, the plan seeks to provide a well thought out, financially feasible vision for Roswell's transportation future, aligning with the community's goals and addressing the evolving needs of the city.

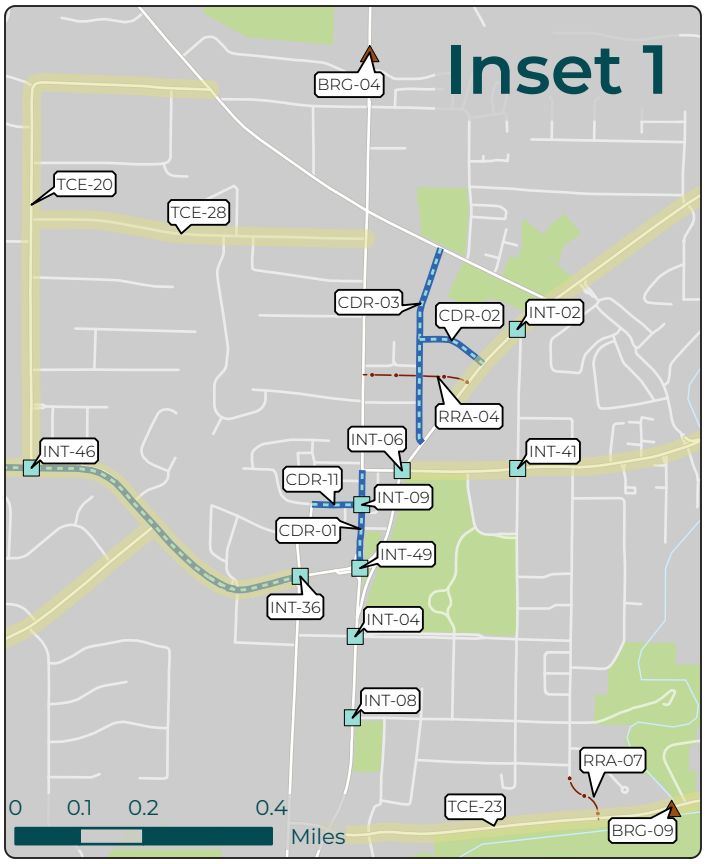
IMPLEMENTATION OF THE TMP:

Implementation of the TMP will require ongoing coordination with staff, our elected officials, and our citizens. Securing funding for these projects over the next 25+ years is paramount and without it, these projects will not be able to move forward in the timeframe they are recommended. Staff will continue to request needed funds based on the plans recommendations in upcoming annual budget cycles, and coordinate with federal, state, and regional partners to pursue external funding opportunities. The expectations also need to be in place that many transportation projects move at their own pace and it may take multiple years for a project to become shovel ready. Many projects require survey, concept development, design/engineering, right-of-way property acquisition, and utility relocation before they can be constructed.

Staff are also working to improve internal best practices to develop a traffic calming program, a more robust repaving program, and improve the ways we inspect projects. RDOT is also exploring the use on internal in-house forces to help perform smaller projects (i.e. sidewalks) to expedite project delivery. The TMP is intended to be a living document and it's anticipated there will be further updates to the plan based on new information, guidance, or policy set by City leadership.

MAP 9.1
ROADWAY PROJECTS





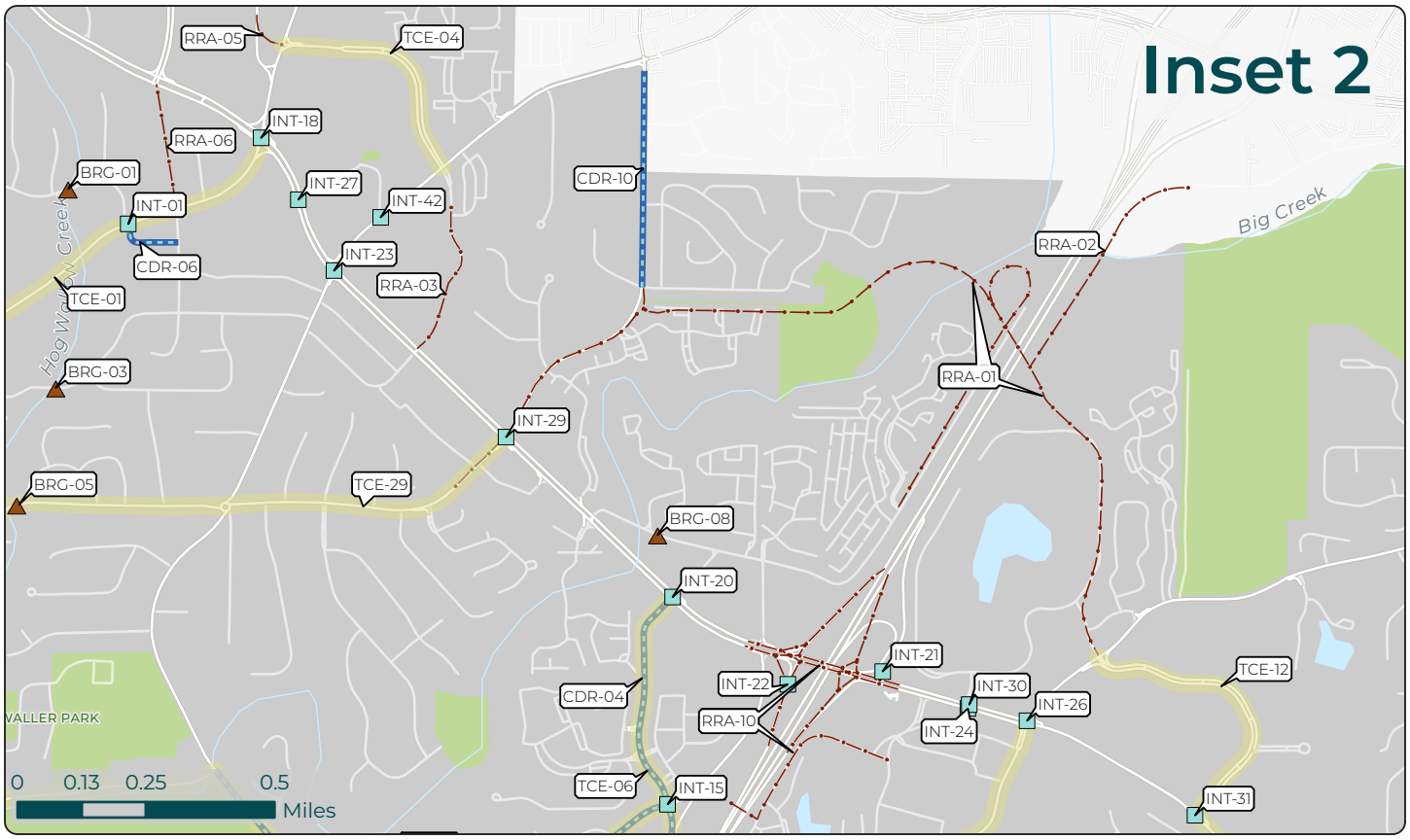
Legend

- Bridge and Culvert Maintenance
- Intersection Improvements
- Traffic Calming Enhancements
- Corridor Improvements

Roadway Projects

- Roadway Surface Upgrades
- Roadway Realignments

Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA



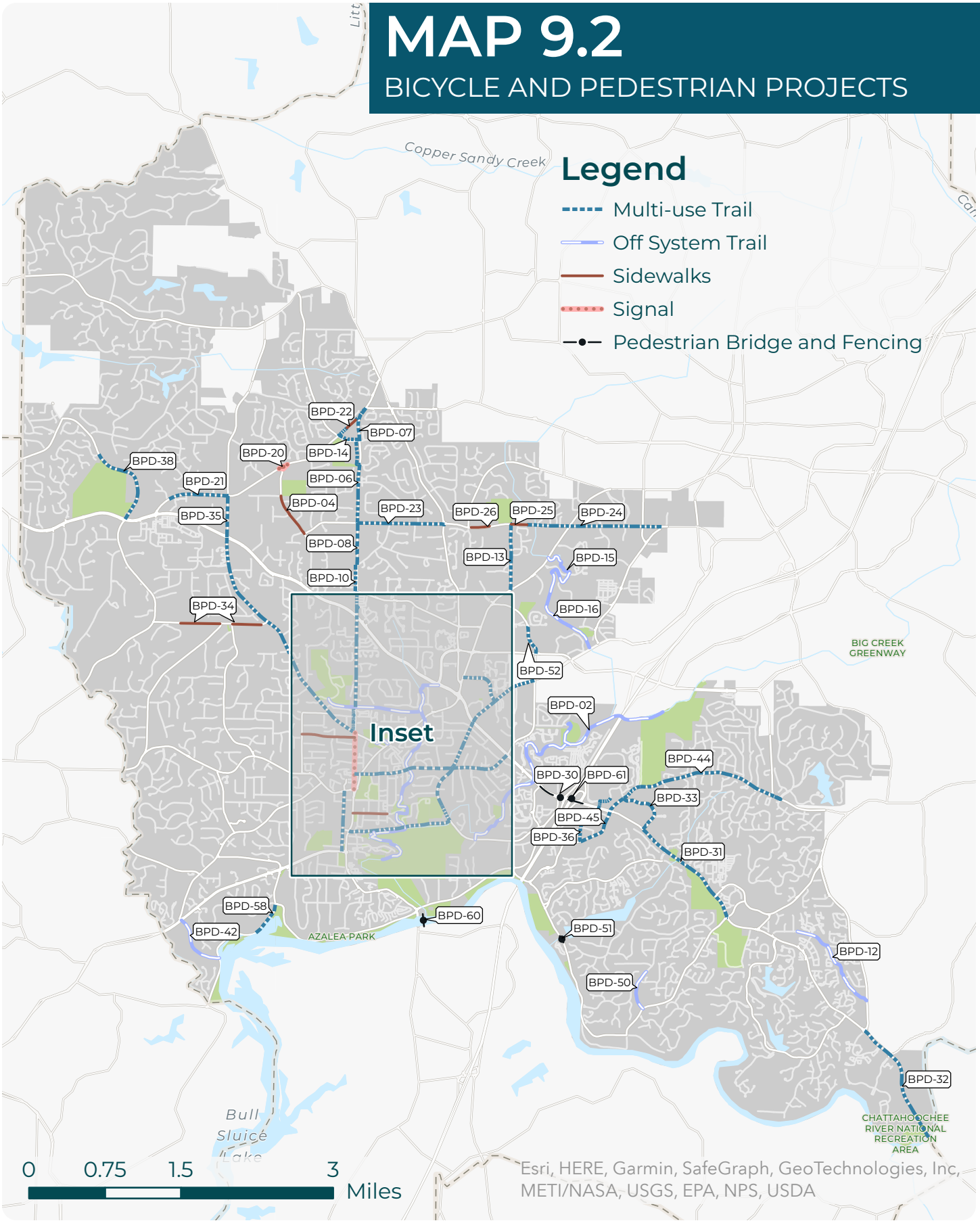
Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Bridges	**BRG-01**	**Alpine Drive – (Culvert)**	Hog Wallow Creek	—	TIER 2
Bridges	**BRG-02**	**Azalea Drive**	Chattahoochee River Tributary	—	TIER 2
Bridges	**BRG-03**	**Charles Place**	Hog Wallow Creek	—	TIER 1
Bridges	**BRG-04**	**Crabapple Road – (Culvert)**	Tributary	—	TIER 2
Bridges	**BRG-05**	**Jones Road**	Willeo Creek	—	TIER 1
Bridges	**BRG-06**	**Mansell Road (EBL)**	Big Creek	—	TIER 2
Bridges	**BRG-07**	**Norcross Street**	Hog Wallow Creek	—	TIER 1
Bridges	**BRG-08**	**Old Holcomb Bridge Road**	Big Creek	—	TIER 1
Bridges	**BRG-09**	**Oxbo Road**	Hog Wallow Creek	—	TIER 1
Bridges	**BRG-10**	**Pine Grove Road**	Willeo Creek Tributary	—	TIER 2
Bridges	**BRG-11**	**Riverside Road**	Big Creek	—	TIER 1
Bridges	**BRG-12**	**Riverside Road**	Chattahoochee River Tributary	—	TIER 2
Bridges	**BRG-13**	**Riverside Road**	Seven Branch	—	TIER 2
Bridges	**BRG-14**	**Roxburgh Drive – (Culvert)**	Big Creek Tributary	—	TIER 2
Corridor Improvements	**CDR-01**	**Canton Street**	SR-9 near Elizabeth Way	Near Webb St / Norcross Street	TIER 1
Corridor Improvements	**CDR-02**	**Cherry Way**	Green Street	Alpharetta Street (SR 9/120)	TIER 2
Corridor Improvements	**CDR-03**	**Green Street**	Alpharetta Street (SR 9/120)	Woodstock Street	TIER 1
Corridor Improvements	**CDR-04**	**Grimes Bridge Road**	Oxbo Road	Dogwood Road	TIER 1
Corridor Improvements	**CDR-05**	**Historic Gateway (SR 9)**	Chattahoochee River	Marietta Highway (SR 120)	TIER 1
Corridor Improvements	**CDR-06**	**Horton Drive**	Alpharetta Street (SR 9/120)	Mansell Circle	TIER 1
Corridor Improvements	**CDR-07**	**Nesbit Ferry Road**	Holcomb Bridge Road (SR 140)	Old Alabama Road (in Johns Creek)	TIER 1
Corridor Improvements	**CDR-08**	**Pine Grove Road**	City Limits at Cobb County	Mimosa Boulevard	TIER 1
Corridor Improvements	**CDR-09**	**Riverside Road**	Rivera Road	Dogwood Road	TIER 1
Corridor Improvements	**CDR-10**	**Warsaw Road Safety Improvements**	Worthington Hills Drive	Just south of Old Roswell Road	TIER 2
Corridor Improvements	**CDR-11**	**Webb Street**	Mimosa Boulevard	Canton Street	TIER 1
Intersection Improvements	**INT-01**	**Alpharetta Hwy (SR 9)**	Alpine Drive / Horton Drive	—	TIER 3
Intersection Improvements	**INT-02**	**Alpharetta Hwy (SR 9)**	Fraser Street	—	TIER 3
Intersection Improvements	**INT-03**	**Alpharetta Hwy (SR 9)**	Hembree Road	—	TIER 1
Intersection Improvements	**INT-04**	**Alpharetta Hwy (SR 9)**	Hill Street / Ramsey Street	—	TIER 2
Intersection Improvements	**INT-05**	**Alpharetta Hwy (SR 9)**	Mansell Road	—	TIER 1
Intersection Improvements	**INT-06**	**Alpharetta Hwy (SR 9)**	Norcross Street	—	TIER 2
Intersection Improvements	**INT-07**	**Alpharetta Hwy (SR 9)**	Upper Hembree Road	—	TIER 2
Intersection Improvements	**INT-08**	**Atlanta Street (SR 9/120)**	Oak Street	—	TIER 3
Intersection Improvements	**INT-09**	**Canton Street**	Webb Street	—	TIER 1
Intersection Improvements	**INT-10**	**Coleman Road**	Willeo Road (west)	—	TIER 3
Intersection Improvements	**INT-11**	**Cox Road**	Etris Road and King Road		TIER 1
Intersection Improvements	**INT-12**	**Cox Road**	Lackey Road / Lum Crowe	—	TIER 3
Intersection Improvements	**INT-13**	**Crabapple Road**	Hembree Road	—	TIER 1
Intersection Improvements	**INT-14**	**Crossville Road (SR 92)**	Crabapple Road	—	TIER 1
Intersection Improvements	**INT-15**	**Grimes Bridge Road**	Dogwood Road	—	TIER 2
Intersection Improvements	**INT-16**	**Hardscrabble Road**	Etris Road	—	TIER 2
Intersection Improvements	**INT-17**	**Hardscrabble Road**	King Road	—	TIER 1
Intersection Improvements	**INT-18**	**Holcomb Bridge Road (SR 140)**	Alpharetta Hwy (SR 9)	—	TIER 1
Intersection Improvements	**INT-19**	**Holcomb Bridge Road (SR 140)**	Barnwell Road	—	TIER 1
Intersection Improvements	**INT-20**	**Holcomb Bridge Road (SR 140)**	Dogwood Road	—	TIER 2
Intersection Improvements	**INT-21**	**Holcomb Bridge Road (SR 140)**	GA 400 NB Ramp	—	TIER 1

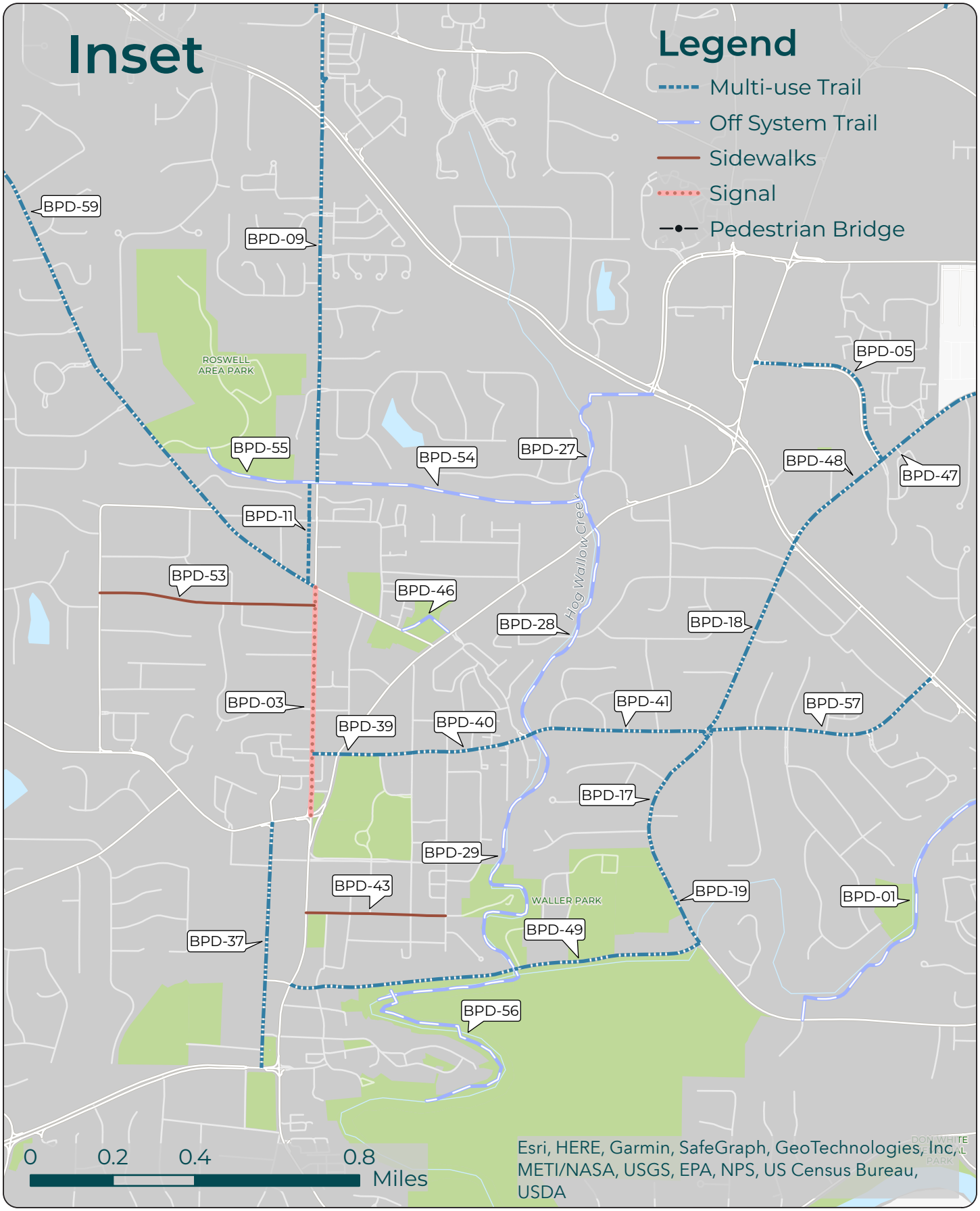
Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Intersection Improvements	**INT-22**	**Holcomb Bridge Road (SR 140)**	GA 400 SB Ramp	—	TIER 1
Intersection Improvements	**INT-23**	**Holcomb Bridge Road (SR 140)**	Grimes Bridge Road/Old Roswell Road	—	TIER 1
Intersection Improvements	**INT-24**	**Holcomb Bridge Road (SR 140)**	Market Boulevard	—	TIER 2
Intersection Improvements	**INT-25**	**Holcomb Bridge Road (SR 140)**	Nesbit Ferry Road	—	TIER 1
Intersection Improvements	**INT-26**	**Holcomb Bridge Road (SR 140)**	Old Alabama Road	—	TIER 2
Intersection Improvements	**INT-27**	**Holcomb Bridge Road (SR 140)**	Old Roswell Place	—	TIER 2
Intersection Improvements	**INT-28**	**Holcomb Bridge Road (SR 140)**	Scott Road	—	TIER 3
Intersection Improvements	**INT-29**	**Holcomb Bridge Road (SR 140)**	Warsaw Road	—	TIER 1
Intersection Improvements	**INT-30**	**Holcomb Bridge Road (SR 140)**	at/near Market Blvd / Market Way	—	TIER 3
Intersection Improvements	**INT-31**	**Holcomb Woods Parkway**	Holcomb Bridge Road (SR 140)	—	TIER 2
Intersection Improvements	**INT-32**	**Houze Road (SR 140)**	Crabapple Road	—	TIER 2
Intersection Improvements	**INT-33**	**Houze Road (SR 140)**	Mansell Road	—	TIER 2
Intersection Improvements	**INT-34**	**Houze Road (SR 140)**	Saddle Creek Drive	—	TIER 3
Intersection Improvements	**INT-35**	**Jones Road**	Bowen Road	—	TIER 3
Intersection Improvements	**INT-36**	**Magnolia Street**	Mimosa Boulevard	—	TIER 3
Intersection Improvements	**INT-37**	**Mansell Road**	Colonial Center Parkway	—	TIER 2
Intersection Improvements	**INT-38**	**Mansell Road**	Warsaw Road	—	TIER 2
Intersection Improvements	**INT-39**	**Marietta Hwy (SR 120)**	Willeo Road	—	TIER 2
Intersection Improvements	**INT-40**	**Nesbit Ferry Road**	Scott Road and Nesbit Lakes Drive	—	TIER 1
Intersection Improvements	**INT-41**	**Norcross Street**	Fraser Street/Forrest Street	—	TIER 3
Intersection Improvements	**INT-42**	**Old Alabama Road**	Old Alabama Road Connector/Roxburgh	—	TIER 2
Intersection Improvements	**INT-43**	**Old Roswell Road**	Old Roswell Place	—	TIER 2
Intersection Improvements	**INT-44**	**Pine Grove Road**	Hightower Road/Waterford Way	—	TIER 1
Intersection Improvements	**INT-45**	**Pine Grove Road**	Lake Charles Road	—	TIER 1
Intersection Improvements	**INT-46**	**Pine Grove Road**	North Coleman Road	—	TIER 1
Intersection Improvements	**INT-47**	**Pine Grove Road**	Shallowford Road	—	TIER 1
Intersection Improvements	**INT-48**	**Riverside Road**	Dogwood Road	—	TIER 2
Intersection Improvements	**INT-49**	**SR 9/120 (Village Center)**	Magnolia Street/Canton Street	—	TIER 2
Intersection Improvements	**INT-50**	**Woodstock Rd (SR 92)**	Hardscrabble Road	—	TIER 1
Intersection Improvements	**INT-51**	**Woodstock Rd (SR 92)**	Mtn. Park / Bowen Road	—	TIER 1
Roadway Realignments	**RRA-01**	**Big Creek Parkway**	Holcomb Bridge Road (SR 140) (west of	Holcomb Bridge Road (SR 140) (east of S	TIER 1
Roadway Realignments	**RRA-02**	**Big Creek Parkway, Phase 3**	Big Creek Parkway	North Point Parkway	TIER 2
Roadway Realignments	**RRA-03**	**Commerce Parkway Extension**	Old Roswell Road	Holcomb Bridge Road (SR 140)	TIER 2
Roadway Realignments	**RRA-04**	**Green Street Connector**	Canton Street	Alpharetta Highway (SR 9/120)	TIER 1
Roadway Realignments	**RRA-05**	**Houze Road Realignment**	Existing Roadway	SR 9/120 at Commerce Parkway	TIER 2
Roadway Realignments	**RRA-06**	**Mansell Road Extension**	Alpharetta Highway (SR 9/120)	Crossville Road (SR 92)	TIER 2
Roadway Realignments	**RRA-07**	**Myrtle Street Extension**	Existing Roadway	Oxbo Road	TIER 3
Roadway Realignments	**RRA-08**	**Old Ellis-Mansell Connector**	Mansell Place	Old Ellis Road	TIER 3
Roadway Realignments	**RRA-09**	**Riverwalk Emergency Access**	Riverwalk Drive	Azalea Drive	TIER 2
Roadway Realignments	**RRA-10**	**SR 400 at Holcomb Bridge Road (SR 140**	SR 400	Holcomb Bridge Road (SR 140)	TIER 1
Roadway Realignments	**RRA-11**	**Sun Valley-Houze Road Connector**	Houze Road (SR 140)	Existing Roadway	TIER 2
Roadway Realignments	**RRA-12**	**Sun Valley-Old Ellis Connector**	Sun Valley Extension	Old Ellis Road	TIER 1
Roadway Surface Upgrades	**RSU-01**	**Kent Road**	King Road	Etris Road	TIER 3
Roadway Surface Upgrades	**RSU-02**	**Lum Crowe Road**	City Limits	City Limits	TIER 3

Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Traffic Calming Enhancements	**TCE-01**	**Alpharetta Highway (SR 9/120)**	Norcross Street	Holcomb Bridge Road (SR 140)	TIER 1
Traffic Calming Enhancements	**TCE-02**	**Chaffin Road**	Coleman Drive	Crabapple Road	TIER 3
Traffic Calming Enhancements	**TCE-03**	**Coleman Road**	Pine Grove Road	Marietta Highway (SR 120)	TIER 1
Traffic Calming Enhancements	**TCE-04**	**Commerce Parkway**	Holcomb Bridge Road (SR 140)	Old Roswell Road	TIER 2
Traffic Calming Enhancements	**TCE-05**	**Cox Road**	Lackey Road	Litchfield Drive	TIER 3
Traffic Calming Enhancements	**TCE-06**	**Dogwood Road**	Holcomb Bridge Road (SR 140)	Riverside Road	TIER 1
Traffic Calming Enhancements	**TCE-07**	**Etris Road**	City Limits	Crabapple Road	TIER 3
Traffic Calming Enhancements	**TCE-08**	**Eves Road**	Riverside Road	Holcomb Bridge Road (SR 140)	TIER 2
Traffic Calming Enhancements	**TCE-09**	**Grimes Bridge Road**	Meadowood Drive	Dogwood Road	TIER 1
Traffic Calming Enhancements	**TCE-10**	**Hightower Road**	Pine Grove Road	Coleman Road	TIER 2
Traffic Calming Enhancements	**TCE-11**	**Holcomb Bridge Road (SR 140)**	Holcomb Woods Parkway	City Limits	TIER 2
Traffic Calming Enhancements	**TCE-12**	**Holcomb Woods Parkway**	Old Alabama Road	Holcomb Bridge Road (SR 140)	TIER 2
Traffic Calming Enhancements	**TCE-13**	**Houze Road (SR 140)**	Houze Way	City Limits	TIER 3
Traffic Calming Enhancements	**TCE-14**	**Jones Road**	City Limits	Woodstock Road	TIER 2
Traffic Calming Enhancements	**TCE-15**	**King Road**	Kent Road	Chaffin Road	TIER 3
Traffic Calming Enhancements	**TCE-16**	**Mansell Road**	Holcomb Bridge Road (SR 140)	City Limits	TIER 3
Traffic Calming Enhancements	**TCE-17**	**Marietta Highway (SR 120)**	City Limits	Alpharetta Highway (SR 9)	TIER 2
Traffic Calming Enhancements	**TCE-18**	**Mountain Park Road**	Woodstock Road (SR 92)	Old Mountain Park Road	TIER 3
Traffic Calming Enhancements	**TCE-19**	**Norcross Street**	Alpharetta Highway (SR 9/120)	Warsaw Road	TIER 2
Traffic Calming Enhancements	**TCE-20**	**North Coleman Road**	Pine Grove Road	Woodstock Road	TIER 2
Traffic Calming Enhancements	**TCE-21**	**Old Alabama Road**	Riverside Road	Holcomb Bridge Road (SR 140)	TIER 1
Traffic Calming Enhancements	**TCE-22**	**Old Mountain Park Road**	Mountain Park Road	City Limits	TIER 1
Traffic Calming Enhancements	**TCE-23**	**Oxbo Road**	Alpharetta Highway (SR 9/120)	Grimes Bridge Road	TIER 1
Traffic Calming Enhancements	**TCE-24**	**Pine Grove Road**	City Limits	Mimosa Boulevard	TIER 1
Traffic Calming Enhancements	**TCE-25**	**Riverside Road**	Dogwood Road	Azalea Drive	TIER 1
Traffic Calming Enhancements	**TCE-26**	**Riverside Road**	Old Alabama Road	Eves Road	TIER 1
Traffic Calming Enhancements	**TCE-27**	**Scott Road**	Holcomb Bridge Road (SR 140)	Old Scott Road	TIER 1
Traffic Calming Enhancements	**TCE-28**	**Thompson Place**	North Coleman Road	Canton Street	TIER 3
Traffic Calming Enhancements	**TCE-29**	**Warsaw Road**	Norcross Street	Holcomb Bridge Road (SR 140)	TIER 1
Traffic Calming Enhancements	**TCE-30**	**Wavetree Drive**	Crossville Highway (SR 92)	Woodstock Road	TIER 1
Traffic Calming Enhancements	**TCE-31**	**Willeo Road**	Coleman Road	Marietta Highway (SR 120)	TIER 2

MAP 9.2

BICYCLE AND PEDESTRIAN PROJECTS




Inset
Legend
Multi-use Trail
Off System Trail
Sidewalks
Signal
Pedestrian Bridge
BPD-59
BPD-09
ROSWELL AREA PARK
BPD-05
BPD-55
BPD-54
BPD-27
BPD-48
BPD-47
BPD-11
Hog Wallow Creek
BPD-53
BPD-46
BPD-28
BPD-18
BPD-03
BPD-39
BPD-40
BPD-41
BPD-57
BPD-17
BPD-29
BPD-43
WALLER PARK
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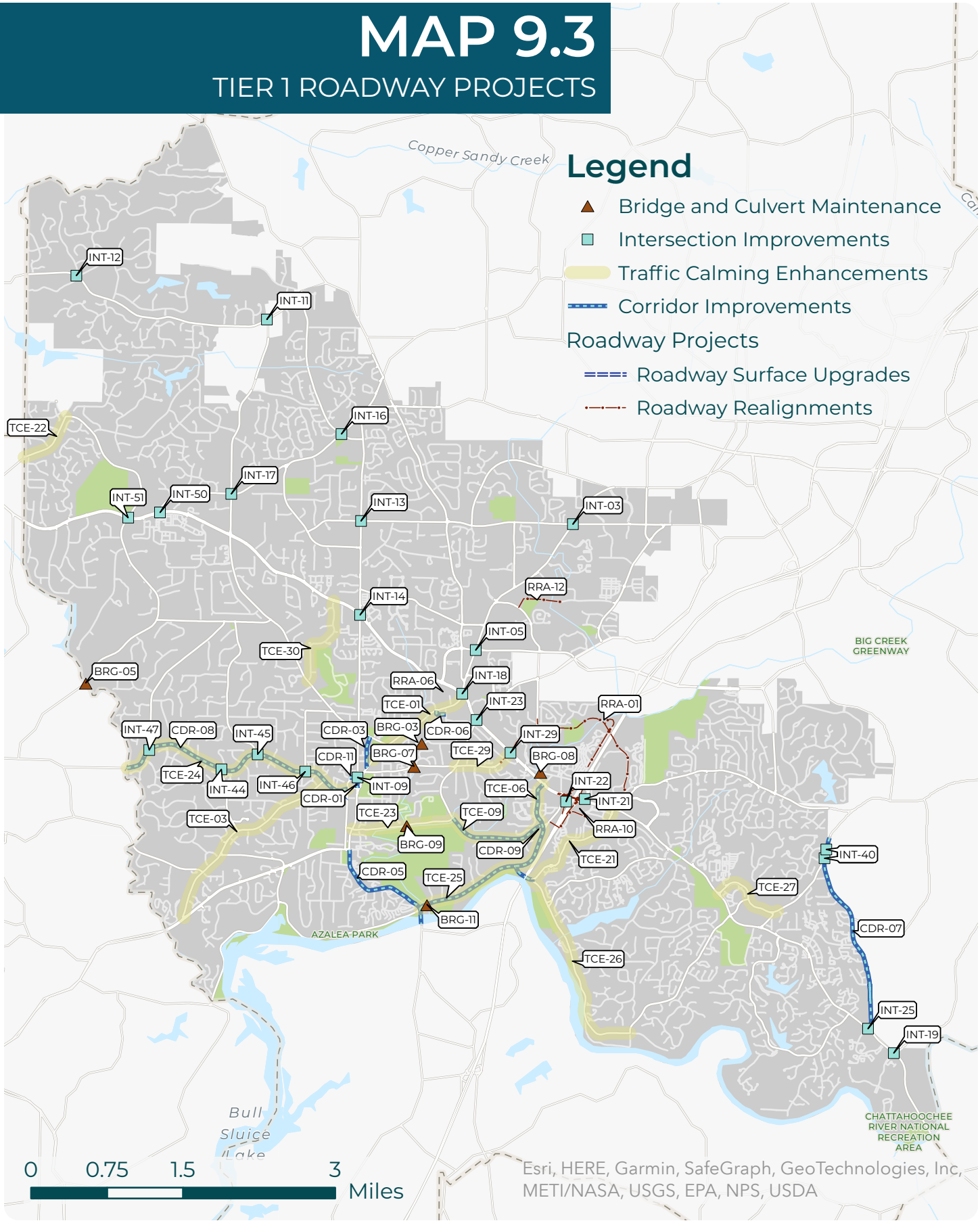
Miles
Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Project Type
BPD-01	**Big Creek (waterway)**	Grimes Bridge Road	SR 140 / Holcomb Bridge Road	TIER 3	Off System Trail
BPD-02	**Big Creek (waterway)**	SR 140 / Holcomb Bridge Road	Big Creek Park	TIER 1	Off System Trail
BPD-03	**Canton Street**	Woodstock Road	SR 9	TIER 1	Signal
BPD-04	**Chaffin Road**	Hembree Road	Coleman Drive	TIER 1	Sidewalks
BPD-05	**Commerce Parkway**	Old Roswell Road	SR 9	TIER 3	Multi-use Trail
BPD-06	**Crabapple Road**	Etris Road	Hembree Road	TIER 3	Multi-use Trail
BPD-07	**Crabapple Road**	Hardscrabble Road	Etris Road	TIER 3	Multi-use Trail
BPD-08	**Crabapple Road**	Hembree Road	Strickland Road	TIER 2	Multi-use Trail
BPD-09	**Crabapple Road**	Houze Way	Planned Off System Trail	TIER 3	Multi-use Trail
BPD-10	**Crabapple Road**	Strickland Road	Houze Way	TIER 3	Multi-use Trail
BPD-11	**Crabapple Road/Canton Street**	Planned Off-System Trail	Woodstock Road	TIER 2	Multi-use Trail
BPD-12	**East Roswell Trail/Champions Green Parkway/Powder Ridge**	Scott Road	Nesbitt Ferry Road	TIER 2	Off System Trail
BPD-13	**Elkins Road**	Alpharetta Highway (SR 9)		TIER 2	Multi-use Trail
BPD-14	**Etris Road**	Hardscrabble Road	Crabapple Road	TIER 3	Multi-use Trail
BPD-15	**Foe Killer Creek**	Elkins Road	Old Ellis Road extension	TIER 3	Off System Trail
BPD-16	**Foe Killer Creek**	Old Ellis Road extension	Old Roswell Road	TIER 3	Off System Trail
BPD-17	**Grimes Bridge Road**	Adult Rec Center (ARC) entrance	Norcross Street	TIER 2	Multi-use Trail
BPD-18	**Grimes Bridge Road**	Norcross Street	Holcomb Bridge Road	TIER 2	Multi-use Trail
BPD-19	**Grimes Bridge Road**	Oxbo Road	Adult Rec Center (ARC) entrance	TIER 2	Multi-use Trail
BPD-20	**Hardscrabble Road**	King Road	Etris Road	TIER 3	Signal
BPD-21	**Hardscrabble Road**	Whittingham Place	King Road	TIER 1	Multi-use Trail
BPD-22	**Hardscrabble Road/Crabapple Road**	Etris Road	Rucker Road	TIER 3	Sidewalks
BPD-23	**Hembree Road**	Crabapple Road	Houze Road	TIER 3	Multi-use Trail
BPD-24	**Hembree Road**	Elkins Road	Old Roswell Road	TIER 2	Multi-use Trail
BPD-25	**Hembree Road**	Hembree Park	Cross of Life Montessori School	TIER 1	Sidewalks
BPD-26	**Hembree Road**	Upper Hembree Road	Tapestry Community Church	TIER 1	Sidewalks
BPD-27	**Hog Wallow Creek**	Alpharetta Highway (SR 9)	Crossville Road (SR 92)	TIER 2	Off System Trail
BPD-28	**Hog Wallow Creek**	Norcross Street	Alpharetta Street (SR 9/120)	TIER 2	Off System Trail
BPD-29	**Hog Wallow Creek**	Oxbo Road	Norcross Street	TIER 2	Off System Trail
BPD-30	**Holcomb Bridge Road (SR 140)**	Dogwood Road	SR-400 SB on/off ramps	TIER 2	Multi-use Trail
BPD-31	**Holcomb Bridge Road (SR 140)**	Holcomb Woods Pkwy	Eves Road	TIER 1	Multi-use Trail
BPD-32	**Holcomb Bridge Road (SR 140)**	Nesbit Ferry Road	Gwinnett County Line	TIER 2	Multi-use Trail
BPD-33	**Holcomb Woods Parkway**	Holcomb Bridge Road	Old Alabama Road	TIER 2	Multi-use Trail
BPD-34	**Jones Road**	Existing Sidewalk	Shallowford Road	TIER 2	Sidewalks
BPD-35	**King Road**	SR 92/Woodstock Rd	Hardscrabble Road	TIER 1	Multi-use Trail
BPD-36	**Market Boulevard**	Old Alabama Road	Kimberly Clark Driveway	TIER 2	Multi-use Trail
BPD-37	**Mimosa Blvd/ Oxbo Road**	Magnolia St	SR 9	TIER 2	Multi-use Trail
BPD-38	**Mountain Park Road**	SR-92/Woodstock Rd	Mountain Park Elementary	TIER 3	Multi-use Trail
BPD-39	**Norcross Street**	Canton Street	Fraser St/Forrest St	TIER 2	Multi-use Trail
BPD-40	**Norcross Street**	Fraser St/Forrest St	Norcross Street Bridge	TIER 2	Multi-use Trail
BPD-41	**Norcross Street**	Norcross Street Bridge	Grimes Bridge Road	TIER 2	Multi-use Trail
BPD-42	**N-S Corridor**	Marietta Highway (SR 120)	Willeo Road	TIER 2	Off System Trail
BPD-43	**Oak St**	SR 9	Myrtle Street	TIER 3	Sidewalks
BPD-44	**Old Alabama Road**	Big Creek Park Driveway	Roxburgh Drive	TIER 1	Multi-use Trail
BPD-45	**Old Alabama Road**	Market Boulevard	Big Creek Park Driveway	TIER 1	Multi-use Trail
BPD-46	**Old Roswell Cemetery Trail**	Woodstock Road	Alpharetta Highway (SR 9)	TIER 1	Off System Trail
BPD-47	**Old Roswell Road**	Commerce Parkway	Warsaw Road	TIER 3	Multi-use Trail
BPD-48	**Old Roswell Road**	Holcomb Bridge Road	Commerce Parkway	TIER 2	Multi-use Trail
BPD-49	**Oxbo Road**	Atlanta Street (SR 9)	Grimes Bridge Road	TIER 1	Multi-use Trail
BPD-50	**Planned Off System Trail**	Eves Road	Eves Cir	TIER 1	Off System Trail
BPD-51	**Riverside Road Pedestrian Bridge**	Near Martins Landing dam	—	TIER 1	Pedestrian Bridge
BPD-52	**Sun Valley Drive**	Mansell Road	Finchely Drive	TIER 3	Multi-use Trail
BPD-53	**Thompson Place**	North Coleman Road	Canton Street	TIER 3	Sidewalks

TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Project Type
BPD-54	**Un-named E-W Creek**	Crabapple Road	Hog Wallow Creek	TIER 3	Off System Trail
BPD-55	**Un-named E-W Creek**	Roswell Area Park	Crabapple Road	TIER 3	Off System Trail
BPD-56	**Vickery Creek**	Oxbo Road	Waterfall by Mill Ruins	TIER 1	Off System Trail
BPD-57	**Warsaw Road**	Grimes Bridge Road/Norcross St round	Holcomb Bridge Road (SR 140)	TIER 2	Multi-use Trail
BPD-58	**Willeo Road**	Near Boardwalk Connection	Azalea Drive	TIER 2	Multi-use Trail
BPD-59	**Woodstock Road**	Canton Street	SR-92/Woodstock Rd	TIER 1	Multi-use Trail
BPD-61	**SR-400 / Holcomb Bridge Road intercha**	Holcomb Bridge Road	n/a	TIER 2	Multi-use Trail
BPD-60	**SR 9 over Chattahoochee River Ped Brid**	Roberts Drive (in Sandy Springs)	Riverside Road/Azalea Drive	TIER 2	Pedestrian Bridge

MAP 9.3

TIER 1 ROADWAY PROJECTS

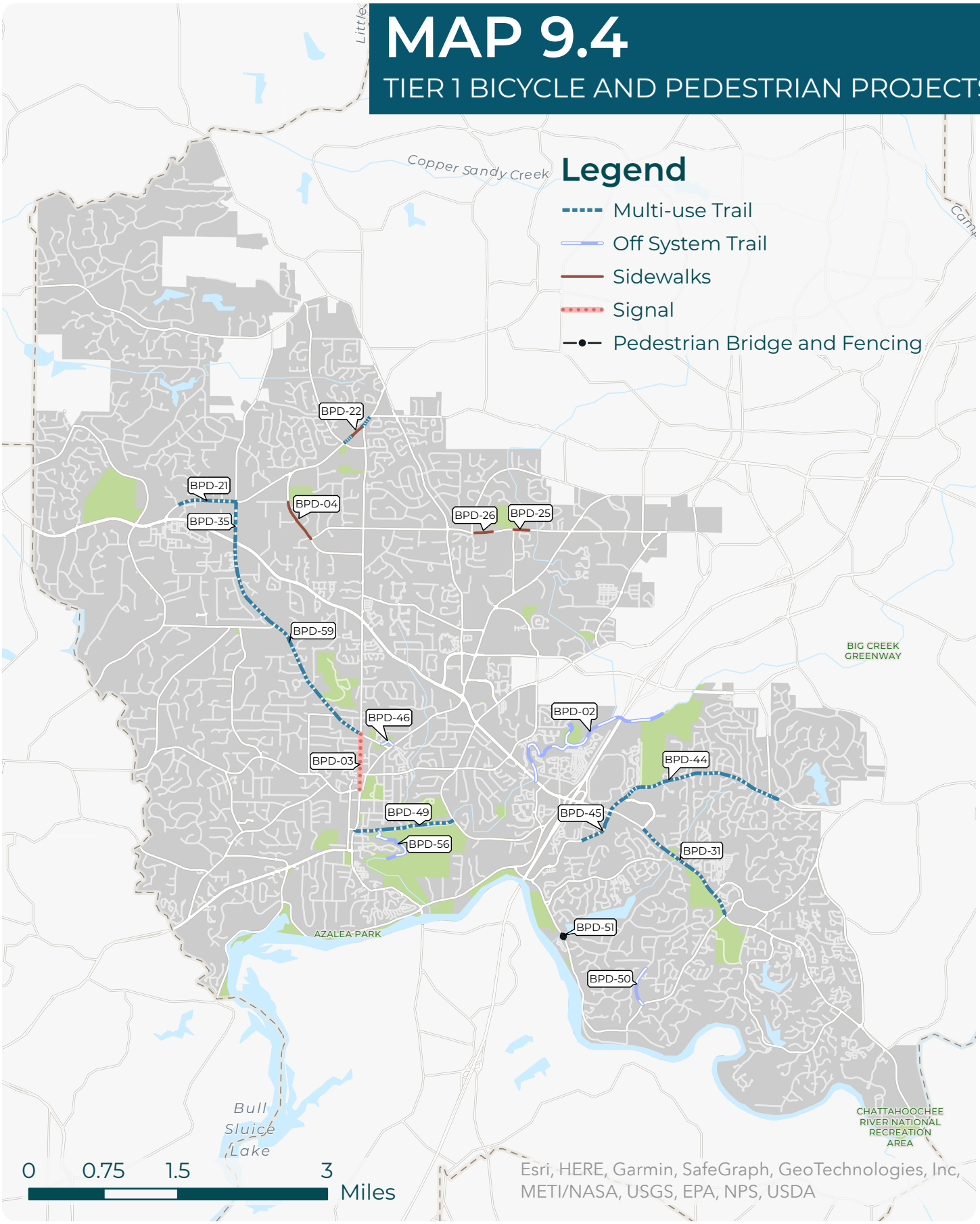


Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Bridges	**BRG-03**	**Charles Place**	Hog Wallow Creek	—	TIER 1
Bridges	**BRG-05**	**Jones Road**	Willeo Creek	—	TIER 1
Bridges	**BRG-07**	**Norcross Street**	Hog Wallow Creek	—	TIER 1
Bridges	**BRG-08**	**Old Holcomb Bridge Road**	Big Creek	—	TIER 1
Bridges	**BRG-09**	**Oxbo Road**	Hog Wallow Creek	—	TIER 1
Bridges	**BRG-11**	**Riverside Road**	Big Creek	—	TIER 1
Corridor Improvements	**CDR-01**	**Canton Street**	SR-9 near Elizabeth Way	Near Webb St / Norcross Street	TIER 1
Corridor Improvements	**CDR-03**	**Green Street**	Alpharetta Street (SR 9/120)	Woodstock Street	TIER 1
Corridor Improvements	**CDR-04**	**Grimes Bridge Road**	Oxbo Road	Dogwood Road	TIER 1
Corridor Improvements	**CDR-05**	**Historic Gateway (SR 9)**	Chattahoochee River	Marietta Highway (SR 120)	TIER 1
Corridor Improvements	**CDR-06**	**Horton Drive**	Alpharetta Street (SR 9/120)	Mansell Circle	TIER 1
Corridor Improvements	**CDR-07**	**Nesbit Ferry Road**	Holcomb Bridge Road (SR 140)	Old Alabama Road (in Johns Creek)	TIER 1
Corridor Improvements	**CDR-08**	**Pine Grove Road**	City Limits at Cobb County	Mimosa Boulevard	TIER 1
Corridor Improvements	**CDR-09**	**Riverside Road**	Rivera Road	Dogwood Road	TIER 1
Corridor Improvements	**CDR-11**	**Webb Street**	Mimosa Boulevard	Canton Street	TIER 1
Intersection Improvements	**INT-03**	**Alpharetta Hwy (SR 9)**	Hembree Road	—	TIER 1
Intersection Improvements	**INT-05**	**Alpharetta Hwy (SR 9)**	Mansell Road	—	TIER 1
Intersection Improvements	**INT-09**	**Canton Street**	Webb Street	—	TIER 1
Intersection Improvements	**INT-11**	**Cox Road**	Etris Road and King Road		TIER 1
Intersection Improvements	**INT-13**	**Crabapple Road**	Hembree Road	—	TIER 1
Intersection Improvements	**INT-14**	**Crossville Road (SR 92)**	Crabapple Road	—	TIER 1
Intersection Improvements	**INT-17**	**Hardscrabble Road**	King Road	—	TIER 1
Intersection Improvements	**INT-18**	**Holcomb Bridge Road (SR 140)**	Alpharetta Hwy (SR 9)	—	TIER 1
Intersection Improvements	**INT-19**	**Holcomb Bridge Road (SR 140)**	Barnwell Road	—	TIER 1
Intersection Improvements	**INT-21**	**Holcomb Bridge Road (SR 140)**	GA 400 NB Ramp	—	TIER 1
Intersection Improvements	**INT-22**	**Holcomb Bridge Road (SR 140)**	GA 400 SB Ramp	—	TIER 1
Intersection Improvements	**INT-23**	**Holcomb Bridge Road (SR 140)**	Grimes Bridge Road/Old Roswell Road	—	TIER 1
Intersection Improvements	**INT-25**	**Holcomb Bridge Road (SR 140)**	Nesbit Ferry Road	—	TIER 1
Intersection Improvements	**INT-29**	**Holcomb Bridge Road (SR 140)**	Warsaw Road	—	TIER 1
Intersection Improvements	**INT-40**	**Nesbit Ferry Road**	Scott Road and Nesbit Lakes Drive	—	TIER 1
Intersection Improvements	**INT-44**	**Pine Grove Road**	Hightower Road/Waterford Way	—	TIER 1
Intersection Improvements	**INT-45**	**Pine Grove Road**	Lake Charles Road	—	TIER 1
Intersection Improvements	**INT-46**	**Pine Grove Road**	North Coleman Road	—	TIER 1
Intersection Improvements	**INT-47**	**Pine Grove Road**	Shallowford Road	—	TIER 1
Intersection Improvements	**INT-50**	**Woodstock Rd (SR 92)**	Hardscrabble Road	—	TIER 1
Intersection Improvements	**INT-51**	**Woodstock Rd (SR 92)**	Mtn. Park / Bowen Road	—	TIER 1
Roadway Realignments	**RRA-01**	**Big Creek Parkway**	Holcomb Bridge Road (SR 140) (west of	Holcomb Bridge Road (SR 140) (east of S	TIER 1
Roadway Realignments	**RRA-04**	**Green Street Connector**	Canton Street	Alpharetta Highway (SR 9/120)	TIER 1

Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Roadway Realignments	**RRA-10**	**SR 400 at Holcomb Bridge Road (SR 140**	SR 400	Holcomb Bridge Road (SR 140)	TIER 1
Roadway Realignments	**RRA-12**	**Sun Valley-Old Ellis Connector**	Sun Valley Extension	Old Ellis Road	TIER 1
Traffic Calming Enhancements	**TCE-01**	**Alpharetta Highway (SR 9/120)**	Norcross Street	Holcomb Bridge Road (SR 140)	TIER 1
Traffic Calming Enhancements	**TCE-03**	**Coleman Road**	Pine Grove Road	Marietta Highway (SR 120)	TIER 1
Traffic Calming Enhancements	**TCE-06**	**Dogwood Road**	Holcomb Bridge Road (SR 140)	Riverside Road	TIER 1
Traffic Calming Enhancements	**TCE-09**	**Grimes Bridge Road**	Meadowood Drive	Dogwood Road	TIER 1
Traffic Calming Enhancements	**TCE-21**	**Old Alabama Road**	Riverside Road	Holcomb Bridge Road (SR 140)	TIER 1
Traffic Calming Enhancements	**TCE-22**	**Old Mountain Park Road**	Mountain Park Road	City Limits	TIER 1
Traffic Calming Enhancements	**TCE-23**	**Oxbo Road**	Alpharetta Highway (SR 9/120)	Grimes Bridge Road	TIER 1
Traffic Calming Enhancements	**TCE-24**	**Pine Grove Road**	City Limits	Mimosa Boulevard	TIER 1
Traffic Calming Enhancements	**TCE-25**	**Riverside Road**	Dogwood Road	Azalea Drive	TIER 1
Traffic Calming Enhancements	**TCE-26**	**Riverside Road**	Old Alabama Road	Eves Road	TIER 1
Traffic Calming Enhancements	**TCE-27**	**Scott Road**	Holcomb Bridge Road (SR 140)	Old Scott Road	TIER 1
Traffic Calming Enhancements	**TCE-29**	**Warsaw Road**	Norcross Street	Holcomb Bridge Road (SR 140)	TIER 1
Traffic Calming Enhancements	**TCE-30**	**Wavetree Drive**	Crossville Highway (SR 92)	Woodstock Road	TIER 1

MAP 9.4

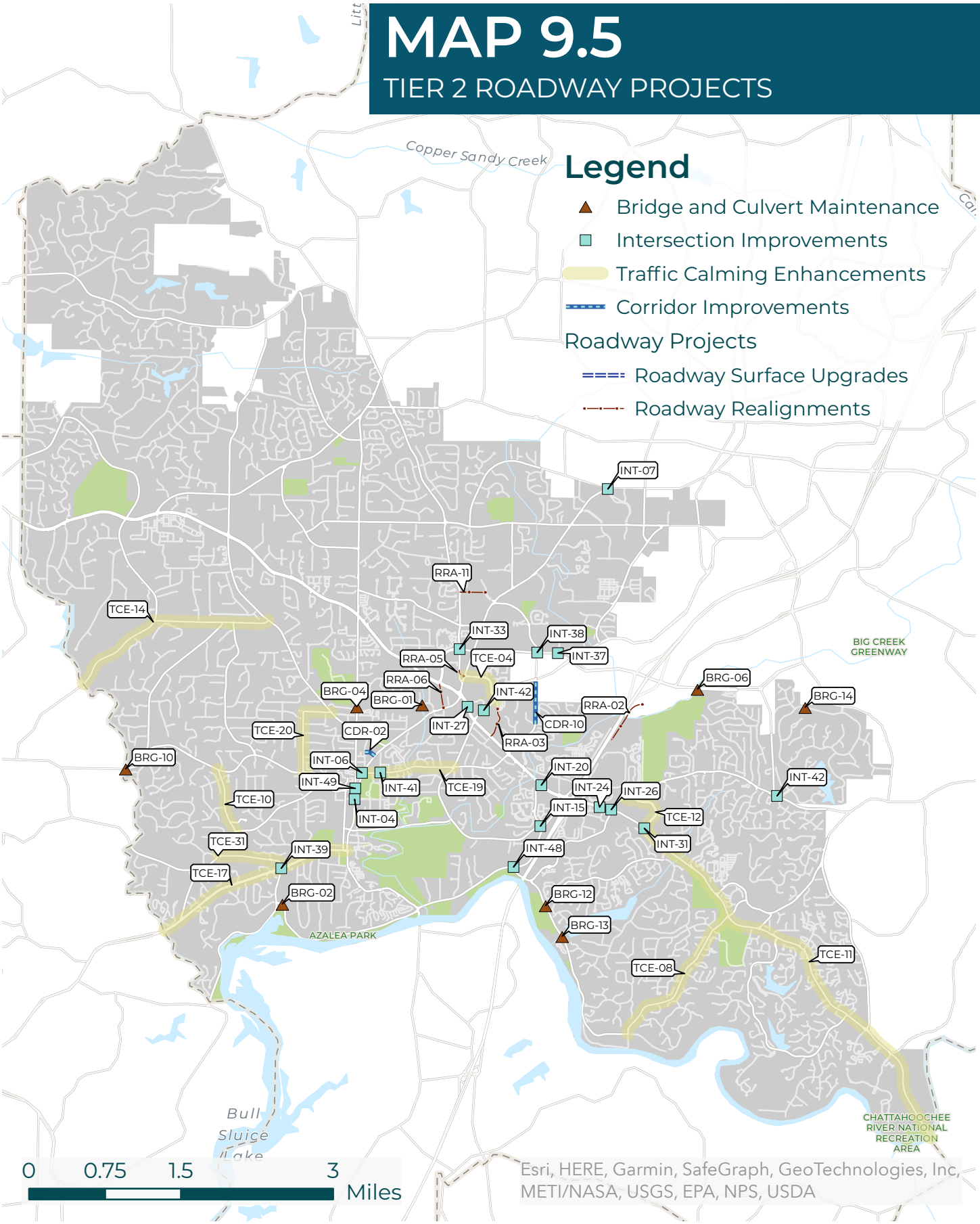
TIER 1 BICYCLE AND PEDESTRIAN PROJECTS



TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Project Type
BPD-02	**Big Creek (waterway)**	SR 140 / Holcomb Bridge Road	Big Creek Park	TIER 1	Off System Trail
BPD-03	**Canton Street**	Woodstock Road	SR 9	TIER 1	Signal
BPD-04	**Chaffin Road**	Hembree Road	Coleman Drive	TIER 1	Sidewalks
BPD-21	**Hardscrabble Road**	Whittingham Place	King Road	TIER 1	Multi-use Trail
BPD-25	**Hembree Road**	Hembree Park	Cross of Life Montessori School	TIER 1	Sidewalks
BPD-26	**Hembree Road**	Upper Hembree Road	Tapestry Community Church	TIER 1	Sidewalks
BPD-31	**Holcomb Bridge Road (SR 140)**	Holcomb Woods Pkwy	Eves Road	TIER 1	Multi-use Trail
BPD-35	**King Road**	SR 92/Woodstock Rd	Hardscrabble Road	TIER 1	Multi-use Trail
BPD-44	**Old Alabama Road**	Big Creek Park Driveway	Roxburgh Drive	TIER 1	Multi-use Trail
BPD-45	**Old Alabama Road**	Market Boulevard	Big Creek Park Driveway	TIER 1	Multi-use Trail
BPD-46	**Old Roswell Cemetery Trail**	Woodstock Road	Alpharetta Highway (SR 9)	TIER 1	Off System Trail
BPD-49	**Oxbo Road**	Atlanta Street (SR 9)	Grimes Bridge Road	TIER 1	Multi-use Trail
BPD-50	**Planned Off System Trail**	Eves Road	Eves Cir	TIER 1	Off System Trail
BPD-51	**Riverside Road Pedestrian Bridge**	Near Martins Landing dam	—	TIER 1	Pedestrian Bridge
BPD-56	**Vickery Creek**	Oxbo Road	Waterfall by Mill Ruins	TIER 1	Off System Trail
BPD-59	**Woodstock Road**	Canton Street	SR-92/Woodstock Rd	TIER 1	Multi-use Trail

MAP 9.5

TIER 2 ROADWAY PROJECTS

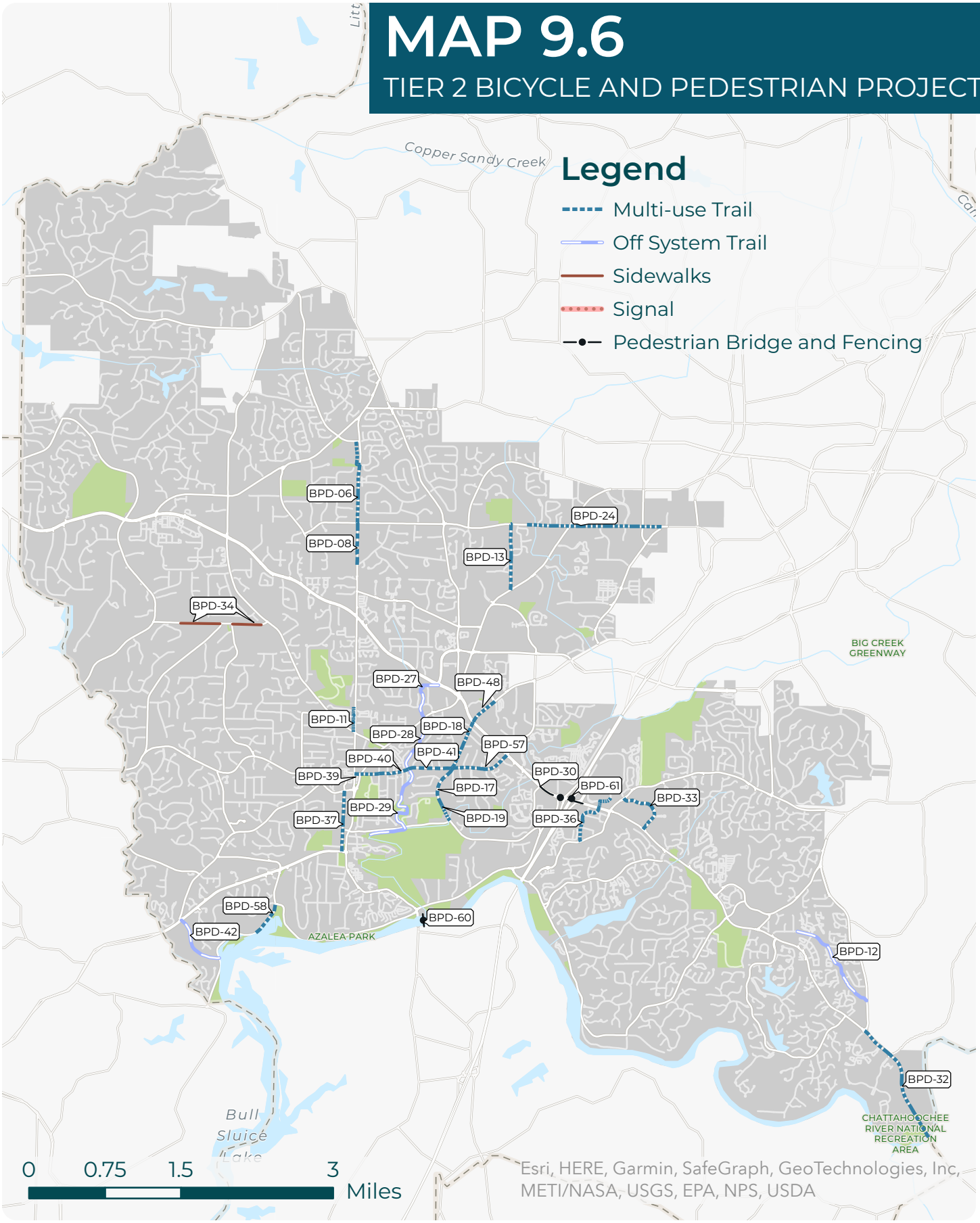


Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Bridges	**BRG-01**	**Alpine Drive – (Culvert)**	Hog Wallow Creek	—	TIER 2
Bridges	**BRG-02**	**Azalea Drive**	Chattahoochee River Tributary	—	TIER 2
Bridges	**BRG-04**	**Crabapple Road – (Culvert)**	Tributary	—	TIER 2
Bridges	**BRG-06**	**Mansell Road (EBL)**	Big Creek	—	TIER 2
Bridges	**BRG-10**	**Pine Grove Road**	Willeo Creek Tributary	—	TIER 2
Bridges	**BRG-12**	**Riverside Road**	Chattahoochee River Tributary	—	TIER 2
Bridges	**BRG-13**	**Riverside Road**	Seven Branch	—	TIER 2
Bridges	**BRG-14**	**Roxburgh Drive – (Culvert)**	Big Creek Tributary	—	TIER 2
Corridor Improvements	**CDR-02**	**Cherry Way**	Green Street	Alpharetta Street (SR 9/120)	TIER 2
Corridor Improvements	**CDR-10**	**Warsaw Road Safety Improvements**	Worthington Hills Drive	Just south of Old Roswell Road	TIER 2
Intersection Improvements	**INT-04**	**Alpharetta Hwy (SR 9)**	Hill Street / Ramsey Street	—	TIER 2
Intersection Improvements	**INT-06**	**Alpharetta Hwy (SR 9)**	Norcross Street	—	TIER 2
Intersection Improvements	**INT-07**	**Alpharetta Hwy (SR 9)**	Upper Hembree Road	—	TIER 2
Intersection Improvements	**INT-15**	**Grimes Bridge Road**	Dogwood Road	—	TIER 2
Intersection Improvements	**INT-16**	**Hardscrabble Road**	Etris Road	—	TIER 2
Intersection Improvements	**INT-20**	**Holcomb Bridge Road (SR 140)**	Dogwood Road	—	TIER 2
Intersection Improvements	**INT-24**	**Holcomb Bridge Road (SR 140)**	Market Boulevard	—	TIER 2
Intersection Improvements	**INT-26**	**Holcomb Bridge Road (SR 140)**	Old Alabama Road	—	TIER 2
Intersection Improvements	**INT-27**	**Holcomb Bridge Road (SR 140)**	Old Roswell Place	—	TIER 2
Intersection Improvements	**INT-31**	**Holcomb Woods Parkway**	Holcomb Bridge Road (SR 140)	—	TIER 2
Intersection Improvements	**INT-32**	**Houze Road (SR 140)**	Crabapple Road	—	TIER 2
Intersection Improvements	**INT-33**	**Houze Road (SR 140)**	Mansell Road	—	TIER 2
Intersection Improvements	**INT-37**	**Mansell Road**	Colonial Center Parkway	—	TIER 2
Intersection Improvements	**INT-38**	**Mansell Road**	Warsaw Road	—	TIER 2
Intersection Improvements	**INT-39**	**Marietta Hwy (SR 120)**	Willeo Road	—	TIER 2
Intersection Improvements	**INT-42**	**Old Alabama Road**	Old Alabama Road Connector/Roxburgh	—	TIER 2
Intersection Improvements	**INT-43**	**Old Roswell Road**	Old Roswell Place	—	TIER 2
Intersection Improvements	**INT-48**	**Riverside Road**	Dogwood Road	—	TIER 2
Intersection Improvements	**INT-49**	**SR 9/120 (Village Center)**	Magnolia Street/Canton Street	—	TIER 2
Roadway Realignments	**RRA-02**	**Big Creek Parkway, Phase 3**	Big Creek Parkway	North Point Parkway	TIER 2
Roadway Realignments	**RRA-03**	**Commerce Parkway Extension**	Old Roswell Road	Holcomb Bridge Road (SR 140)	TIER 2
Roadway Realignments	**RRA-05**	**Houze Road Realignment**	Existing Roadway	SR 9/120 at Commerce Parkway	TIER 2
Roadway Realignments	**RRA-06**	**Mansell Road Extension**	Alpharetta Highway (SR 9/120)	Crossville Road (SR 92)	TIER 2
Roadway Realignments	**RRA-09**	**Riverwalk Emergency Access**	Riverwalk Drive	Azalea Drive	TIER 2
Roadway Realignments	**RRA-11**	**Sun Valley-Houze Road Connector**	Houze Road (SR 140)	Existing Roadway	TIER 2
Traffic Calming Enhancements	**TCE-04**	**Commerce Parkway**	Holcomb Bridge Road (SR 140)	Old Roswell Road	TIER 2
Traffic Calming Enhancements	**TCE-08**	**Eves Road**	Riverside Road	Holcomb Bridge Road (SR 140)	TIER 2
Traffic Calming Enhancements	**TCE-10**	**Hightower Road**	Pine Grove Road	Coleman Road	TIER 2
Traffic Calming Enhancements	**TCE-11**	**Holcomb Bridge Road (SR 140)**	Holcomb Woods Parkway	City Limits	TIER 2
Traffic Calming Enhancements	**TCE-12**	**Holcomb Woods Parkway**	Old Alabama Road	Holcomb Bridge Road (SR 140)	TIER 2
Traffic Calming Enhancements	**TCE-14**	**Jones Road**	City Limits	Woodstock Road	TIER 2
Traffic Calming Enhancements	**TCE-17**	**Marietta Highway (SR 120)**	City Limits	Alpharetta Highway (SR 9)	TIER 2
Traffic Calming Enhancements	**TCE-19**	**Norcross Street**	Alpharetta Highway (SR 9/120)	Warsaw Road	TIER 2
Traffic Calming Enhancements	**TCE-20**	**North Coleman Road**	Pine Grove Road	Woodstock Road	TIER 2

Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Traffic Calming Enhancements	**TCE-31**	**Willeo Road**	Coleman Road	Marietta Highway (SR 120)	TIER 2

MAP 9.6

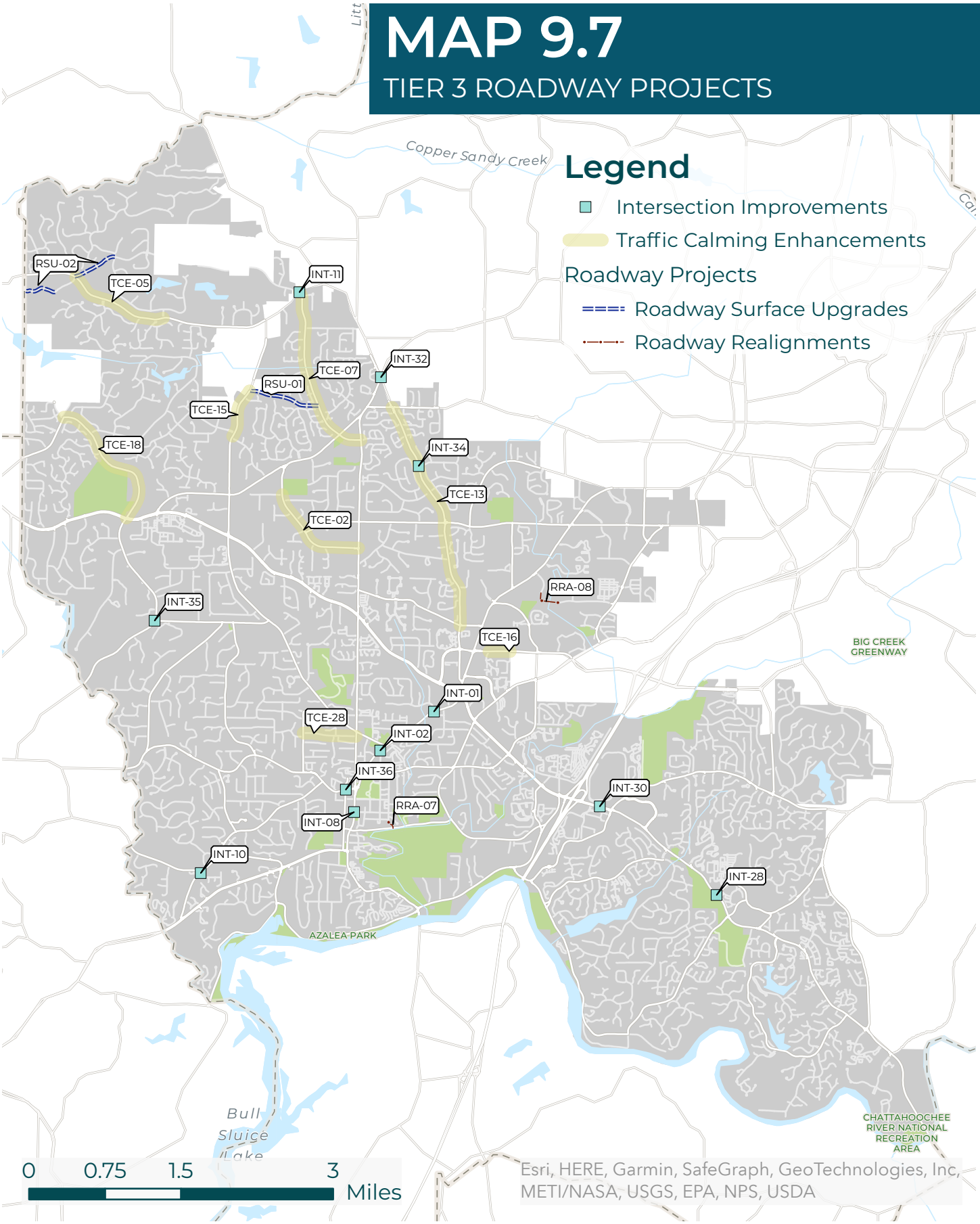
TIER 2 BICYCLE AND PEDESTRIAN PROJECTS



TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Project Type
BPD-08	**Crabapple Road**	Hembree Road	Strickland Road	TIER 2	Multi-use Trail
BPD-11	**Crabapple Road/Canton Street**	Planned Off-System Trail	Woodstock Road	TIER 2	Multi-use Trail
BPD-12	**East Roswell Trail/Champions Green Parkway/Powder Ridge**	Scott Road	Nesbitt Ferry Road	TIER 2	Off System Trail
BPD-13	**Elkins Road**	Alpharetta Highway (SR 9)		TIER 2	Multi-use Trail
BPD-17	**Grimes Bridge Road**	Adult Rec Center (ARC) entrance	Norcross Street	TIER 2	Multi-use Trail
BPD-18	**Grimes Bridge Road**	Norcross Street	Holcomb Bridge Road	TIER 2	Multi-use Trail
BPD-19	**Grimes Bridge Road**	Oxbo Road	Adult Rec Center (ARC) entrance	TIER 2	Multi-use Trail
BPD-24	**Hembree Road**	Elkins Road	Old Roswell Road	TIER 2	Multi-use Trail
BPD-27	**Hog Wallow Creek**	Alpharetta Highway (SR 9)	Crossville Road (SR 92)	TIER 2	Off System Trail
BPD-28	**Hog Wallow Creek**	Norcross Street	Alpharetta Street (SR 9/120)	TIER 2	Off System Trail
BPD-29	**Hog Wallow Creek**	Oxbo Road	Norcross Street	TIER 2	Off System Trail
BPD-30	**Holcomb Bridge Road (SR 140)**	Dogwood Road	SR-400 SB on/off ramps	TIER 2	Multi-use Trail
BPD-32	**Holcomb Bridge Road (SR 140)**	Nesbit Ferry Road	Gwinnett County Line	TIER 2	Multi-use Trail
BPD-33	**Holcomb Woods Parkway**	Holcomb Bridge Road	Old Alabama Road	TIER 2	Multi-use Trail
BPD-34	**Jones Road**	Existing Sidewalk	Shallowford Road	TIER 2	Sidewalks
BPD-36	**Market Boulevard**	Old Alabama Road	Kimberly Clark Driveway	TIER 2	Multi-use Trail
BPD-37	**Mimosa Blvd/ Oxbo Road**	Magnolia St	SR 9	TIER 2	Multi-use Trail
BPD-39	**Norcross Street**	Canton Street	Fraser St/Forrest St	TIER 2	Multi-use Trail
BPD-40	**Norcross Street**	Fraser St/Forrest St	Norcross Street Bridge	TIER 2	Multi-use Trail
BPD-41	**Norcross Street**	Norcross Street Bridge	Grimes Bridge Road	TIER 2	Multi-use Trail
BPD-42	**N-S Corridor**	Marietta Highway (SR 120)	Willeo Road	TIER 2	Off System Trail
BPD-48	**Old Roswell Road**	Holcomb Bridge Road	Commerce Parkway	TIER 2	Multi-use Trail
BPD-57	**Warsaw Road**	Grimes Bridge Road/Norcross St round	Holcomb Bridge Road (SR 140)	TIER 2	Multi-use Trail
BPD-58	**Willeo Road**	Near Boardwalk Connection	Azalea Drive	TIER 2	Multi-use Trail
BPD-61	**SR-400 / Holcomb Bridge Road intercha**	Holcomb Bridge Road	n/a	TIER 2	Multi-use Trail
BPD-60	**SR 9 over Chattahoochee River Ped Brid**	Roberts Drive (in Sandy Springs)	Riverside Road/Azalea Drive	TIER 2	Pedestrian Bridge

MAP 9.7

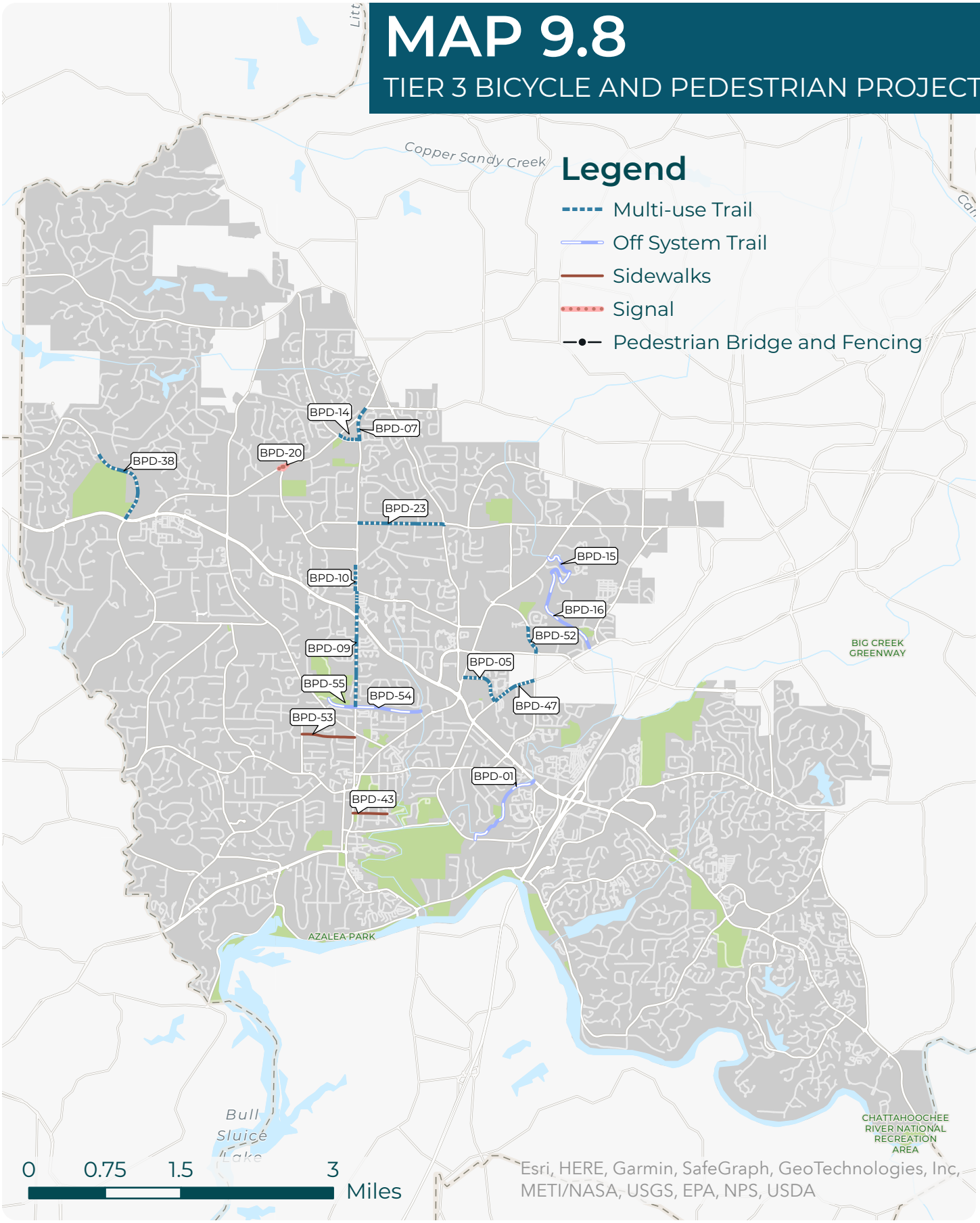
TIER 3 ROADWAY PROJECTS



Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Intersection Improvements	**INT-01**	**Alpharetta Hwy (SR 9)**	Alpine Drive / Horton Drive	—	TIER 3
Intersection Improvements	**INT-02**	**Alpharetta Hwy (SR 9)**	Fraser Street	—	TIER 3
Intersection Improvements	**INT-08**	**Atlanta Street (SR 9/120)**	Oak Street	—	TIER 3
Intersection Improvements	**INT-10**	**Coleman Road**	Willeo Road (west)	—	TIER 3
Intersection Improvements	**INT-12**	**Cox Road**	Lackey Road / Lum Crowe	—	TIER 3
Intersection Improvements	**INT-28**	**Holcomb Bridge Road (SR 140)**	Scott Road	—	TIER 3
Intersection Improvements	**INT-30**	**Holcomb Bridge Road (SR 140)**	at/near Market Blvd / Market Way	—	TIER 3
Intersection Improvements	**INT-34**	**Houze Road (SR 140)**	Saddle Creek Drive	—	TIER 3
Intersection Improvements	**INT-35**	**Jones Road**	Bowen Road	—	TIER 3
Intersection Improvements	**INT-36**	**Magnolia Street**	Mimosa Boulevard	—	TIER 3
Intersection Improvements	**INT-41**	**Norcross Street**	Fraser Street/Forrest Street	—	TIER 3
Roadway Realignments	**RRA-07**	**Myrtle Street Extension**	Existing Roadway	Oxbo Road	TIER 3
Roadway Realignments	**RRA-08**	**Old Ellis-Mansell Connector**	Mansell Place	Old Ellis Road	TIER 3
Roadway Surface Upgrades	**RSU-01**	**Kent Road**	King Road	Etris Road	TIER 3
Roadway Surface Upgrades	**RSU-02**	**Lum Crowe Road**	City Limits	City Limits	TIER 3
Traffic Calming Enhancements	**TCE-02**	**Chaffin Road**	Coleman Drive	Crabapple Road	TIER 3
Traffic Calming Enhancements	**TCE-05**	**Cox Road**	Lackey Road	Litchfield Drive	TIER 3
Traffic Calming Enhancements	**TCE-07**	**Etris Road**	City Limits	Crabapple Road	TIER 3
Traffic Calming Enhancements	**TCE-13**	**Houze Road (SR 140)**	Houze Way	City Limits	TIER 3
Traffic Calming Enhancements	**TCE-15**	**King Road**	Kent Road	Chaffin Road	TIER 3
Traffic Calming Enhancements	**TCE-16**	**Mansell Road**	Holcomb Bridge Road (SR 140)	City Limits	TIER 3
Traffic Calming Enhancements	**TCE-18**	**Mountain Park Road**	Woodstock Road (SR 92)	Old Mountain Park Road	TIER 3
Traffic Calming Enhancements	**TCE-28**	**Thompson Place**	North Coleman Road	Canton Street	TIER 3

MAP 9.8

TIER 3 BICYCLE AND PEDESTRIAN PROJECTS



TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Project Type
BPD-01	**Big Creek (waterway)**	Grimes Bridge Road	SR 140 / Holcomb Bridge Road	TIER 3	Off System Trail
BPD-05	**Commerce Parkway**	Old Roswell Road	SR 9	TIER 3	Multi-use Trail
BPD-06	**Crabapple Road**	Etris Road	Hembree Road	TIER 3	Multi-use Trail
BPD-07	**Crabapple Road**	Hardscrabble Road	Etris Road	TIER 3	Multi-use Trail
BPD-09	**Crabapple Road**	Houze Way	Planned Off System Trail	TIER 3	Multi-use Trail
BPD-10	**Crabapple Road**	Strickland Road	Houze Way	TIER 3	Multi-use Trail
BPD-14	**Etris Road**	Hardscrabble Road	Crabapple Road	TIER 3	Multi-use Trail
BPD-15	**Foe Killer Creek**	Elkins Road	Old Ellis Road extension	TIER 3	Off System Trail
BPD-16	**Foe Killer Creek**	Old Ellis Road extension	Old Roswell Road	TIER 3	Off System Trail
BPD-20	**Hardscrabble Road**	King Road	Etris Road	TIER 3	Signal
BPD-22	**Hardscrabble Road/Crabapple Road**	Etris Road	Rucker Road	TIER 3	Sidewalks
BPD-23	**Hembree Road**	Crabapple Road	Houze Road	TIER 3	Multi-use Trail
BPD-38	**Mountain Park Road**	SR-92/Woodstock Rd	Mountain Park Elementary	TIER 3	Multi-use Trail
BPD-43	**Oak St**	SR 9	Myrtle Street	TIER 3	Sidewalks
BPD-47	**Old Roswell Road**	Commerce Parkway	Warsaw Road	TIER 3	Multi-use Trail
BPD-52	**Sun Valley Drive**	Mansell Road	Finchely Drive	TIER 3	Multi-use Trail
BPD-53	**Thompson Place**	North Coleman Road	Canton Street	TIER 3	Sidewalks
BPD-54	**Un-named E-W Creek**	Crabapple Road	Hog Wallow Creek	TIER 3	Off System Trail
BPD-55	**Un-named E-W Creek**	Roswell Area Park	Crabapple Road	TIER 3	Off System Trail

1.0 INTRODUCTION

The Transportation Master Plan (TMP) is designed to provide the City of Roswell with a well thought out, financially feasible, constructible vision for a future of transportation that has the support of Roswell's citizens and policy makers. The City of Roswell's TMP provides the policy basis for investments and what projects and programs the City wishes to fund to provide transportation services for its citizens. First developed in 2006, this edition represents the sixth update of the TMP. This update builds upon the previous editions and was based on the same values of protecting neighborhoods, preserving and enhancing the City's assets, exploring connectivity options, as well as context-sensitive system impacts.

In this update the overall City goal of making Roswell the Number One Family Community in America was in the forefront. Additional emphasis on traffic calming into the document as well as expanding pedestrian and bicycle facilities were priorities.

Additionally, the Key Findings Report of the Roswell 2040 Comprehensive plan shows that Roswell is facing some of the challenges found by cities across the country such as:

- A major road network that is primarily fixed and built in the late 20th Century
- Changes in demography that may impact travel patterns
- Travel Patterns that cross political boundaries in the region

With these challenges, Roswell will continue to face the issues of traffic congestion, cut-through traffic, and redevelopment throughout the City.

Goals and Strategies

As part of the City's goal to become the Number One Family Community in America, Roswell in 2021 adopted a Strategic Plan (2021-2025) that outlined several key strategic goals for the City to observe moving forward. While several goals can apply to elements of transportation, one of the strategic goals is primarily geared towards transportation.

Key Strategic Goal: Develop a dynamic transportation network that optimizes mobility

Key Objectives

1. Pursue T-SPLOST 1 and 2 Tier I projects
2. Implement key elements of the 2019 Bicycle and Pedestrian Master Plan
3. Determine needs and prioritize funding for citywide intersection improvements
4. Proactively pursue relationships with Georgia Department of Transportation and other regional partners to improve mobility
5. Prioritize funding for road resurfacing and maintenance
6. Pursue "Smart Cities" initiatives through Georgia Tech's Smart City Division and other nationally recognized organizations
7. Begin and complete city projects on time and on budget while communicating progress to the community
8. Prioritize the needs of residents, neighborhoods and businesses in transportation projects
9. Incorporate aesthetics, landscaping and lighting into the design of transportation and mobility-related projects

Strategies

1. ***Find New Connections*** – this is focused on building new local street, sidewalk, or Personal Transportation Vehicle (PTV), network connections to improve connectivity, and in some cases, accepting a higher level of congestion to protect the City's neighborhoods and local character.

2. ***Link Redevelopment and Transportation*** – support the goal of redeveloping identified areas in the City by planning and requiring a robust network of streets and blocks to organize this development into a walkable and livable pattern.

3. ***Focus on Intersections*** – much of the congestion is located at key intersections and some corridors, simple solutions could include adding needed turn lanes, improved signalization, installation of roundabouts, and other connectivity options near major intersections.

4. ***Complete the Multi-Modal Function of Key Streets*** – this means adding sidewalks and bicycle facilities on the important streets that connect neighborhoods, schools, parks and other destinations. In March 2009, the City Council passed a "Complete Streets" policy that instructed staff to consider all users when roadway facilities were built or significantly upgraded where feasible.

To help focus efforts on these goals and strategies, it is recommended that Roswell focus on three main program areas:

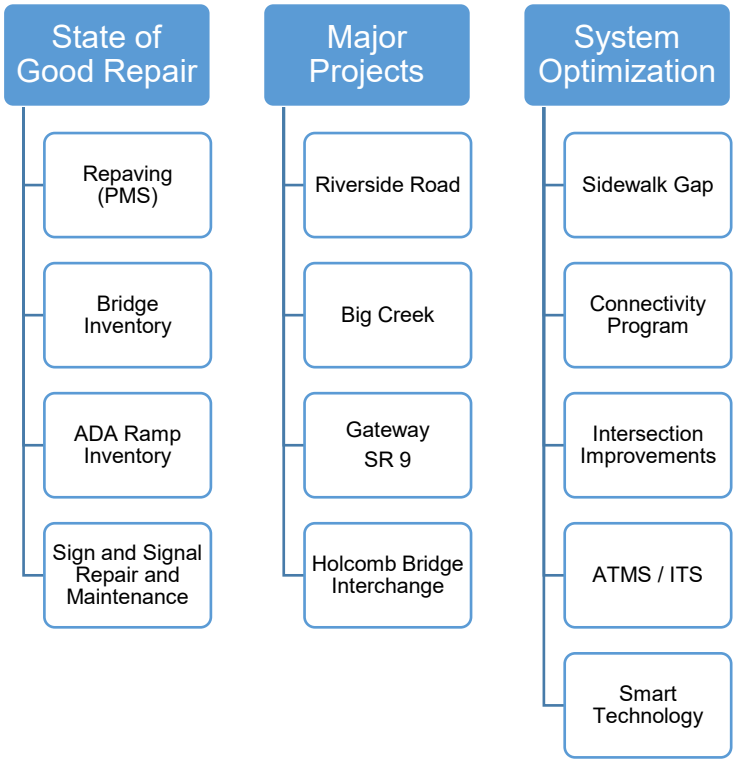


Figure 1.1 – Recommended Transportation Funding Programs

State of Good Repair: This program area focuses resources on maintaining Roswell's existing transportation infrastructure in a safe and working condition.

Major Projects: This program area focuses on large, high profile projects that will provide a significant change to the transportation system of Roswell. These are usually complex, multi-year projects

System Optimization: This program area focuses on smaller scale or intersection projects that help provide connectivity, active transportation or support redevelopment efforts.

Purpose of this Plan

The purpose of the Transportation Master Plan (TMP) is to provide a document that examines all needs and prioritizes them based on stakeholder input. The plan includes all vision-based aspirations that establishes a proactive and balanced approach to Roswell's transportation needs over the next twenty-five years. Of utmost importance is the understanding that this document is a planning based tool providing local decision makers with the ability to make proactive decisions dealing with both development and redevelopment as it occurs, while protecting existing historic resources and neighborhoods.

The importance of vision-based goals and planning policies cannot be overemphasized for this Plan. Since Roswell is in the middle of a dynamically growing region, land use and transportation plans based upon circumstances that are changing will require periodic updates and changes. As long as the goals and policies are based on a community vision of what Roswell is and wants to be, the city's transportation system can continue to serve the needs of the area.

1.1 Relationship to the 2040 Roswell Comprehensive Plan

The *Roswell 2040* Comprehensive Plan established a vision for the City and expressed the City's values. The 20-year plan provides the basis for creation of the City's development regulations and is used as a guide for decision making. Population and employment growth are developed as well as how services and facilities will be developed, maintained, and/or improved to accommodate this future growth. The City was subdivided into nine areas representing the different types of predominant land uses. More detailed information about the Roswell 2040 Comprehensive Plan is available on the City's website.

The TMP contains policies and projects that support the future land uses in the *Roswell 2040* Plan. These policies affect choices for travel modes (i.e. bicycles, pedestrians). By knowing how the City will grow in the future, the Roswell DOT can plan for how the transportation system will need to grow and change to accommodate that growth. The projects in the TMP will help ensure that adequate transportation facilities are in place to support growth.

1.2 Relationship of the TMP to the Capital Improvement Program (CIP)

The Transportation Master Plan is somewhat analogous to the Atlanta Regional Transportation Plan in that the TMP covers long-range projects and programs and serves to feed the Capital Improvement Program, or CIP. The City's CIP represents those projects from all City departments funded for implementation. The transportation projects and programs identified as priorities by the mayor and City Council will be added to the CIP and adopted at the same time as the annual budget. If a project or program is unfunded, it remains in the TMP until such time as it is deemed a priority by the Mayor and Council, funded with local or other sources, or is removed from the TMP. The CIP generally covers the first five years of the TMP and therefore, will represent those short-range priorities identified by the Mayor and City Council.

1.3 Structure of the Plan

The structure of the Transportation Master Plan includes a report on **Existing Conditions** and a comprehensive inventory of the City's transportation infrastructure. This is followed by a detailed **Needs Assessment** that identifies a variety of deficiencies as well as potential projects and programs. Later, the Plan includes a **Financial Plan or Analysis** that identifies resources available to the City over the Plan horizon. Finally, programs and projects are combined in a master list that will be used to develop future investments in the City's transportation infrastructure over the next 25 years.

Projects and programs in the Plan will be grouped into three time periods to better prioritize and stage implementation. The first period covers the first five years (FY 25-29) for development of the CIP. The second period covers the midrange (FY 30-39) for staging of future priorities. The last period covers the long range of the Plan (FY 40-49). Projects in this timeframe have been identified as needed; however, they would require significant work before moving forward. Finally, any of the projects left over after development of the Plan will be compiled into an unpublished "aspirations" list to ensure all potential projects identified during the Needs Assessment are accounted for in some form. Typical projects on this list usually are those that are considered very expensive, would require a significant amount of environmental work, or would need to be vetted with the public prior to moving forward. Ideally, the TMP would be revisited approximately every five years thereafter and refreshed.

1.4 Items Included in the Update

A plan should never be static; plans should remain dynamic, changing to reflect new information or to modify previously reported information. The Transportation Master Plan is no exception. This edition of the TMP includes three new chapters: Safety, Maintenance, and Traffic Calming. Previously this information was included in the Existing Conditions chapter.

The Atlanta Regional Commission (ARC) published their Regional Safety Strategy (RSS) in fall of 2022, which provided a comprehensive safety action plan for local governments in the region to proactively improve safety conditions in their jurisdictions. This plan has been reviewed and been added into this TMP update or referenced accordingly.

Roswell DOT updated a variety of items in the TMP including maps and tables, and project lists. Other major items included in this update include, and revisions of the project listings to reflect current priorities as well remove those projects that have been constructed or rendered obsolete.

1.5 Relationship to the North Fulton Comprehensive Transportation Plan

The North Fulton Comprehensive Transportation Plan (NFCTP), adopted by the City of Roswell in December of 2017, and by the other North Fulton cities in early 2018, is the regional transportation plan for the six North Fulton cities: Alpharetta, Johns Creek, Milton, Mountain Park, Roswell, and Sandy Springs. This plan includes multi-modal transportation improvements for the entire North Fulton region, including those projects that cross jurisdictional boundaries. The plan also prioritizes projects that provide a greater benefit to the entire region rather than solely providing for a specific municipality's best interest. Many of Roswell's TSPLOST (Transportation Special Purpose Local Options Sales Tax) projects that was approved by voters in November of 2016 were recommended by the previous NFCTP that was completed in 2010. It is unknown when the next NFCTP update will occur, further coordination with the other North Fulton cities will need to occur in the years ahead.

2.0 EXISTING CONDITIONS AND INVENTORY

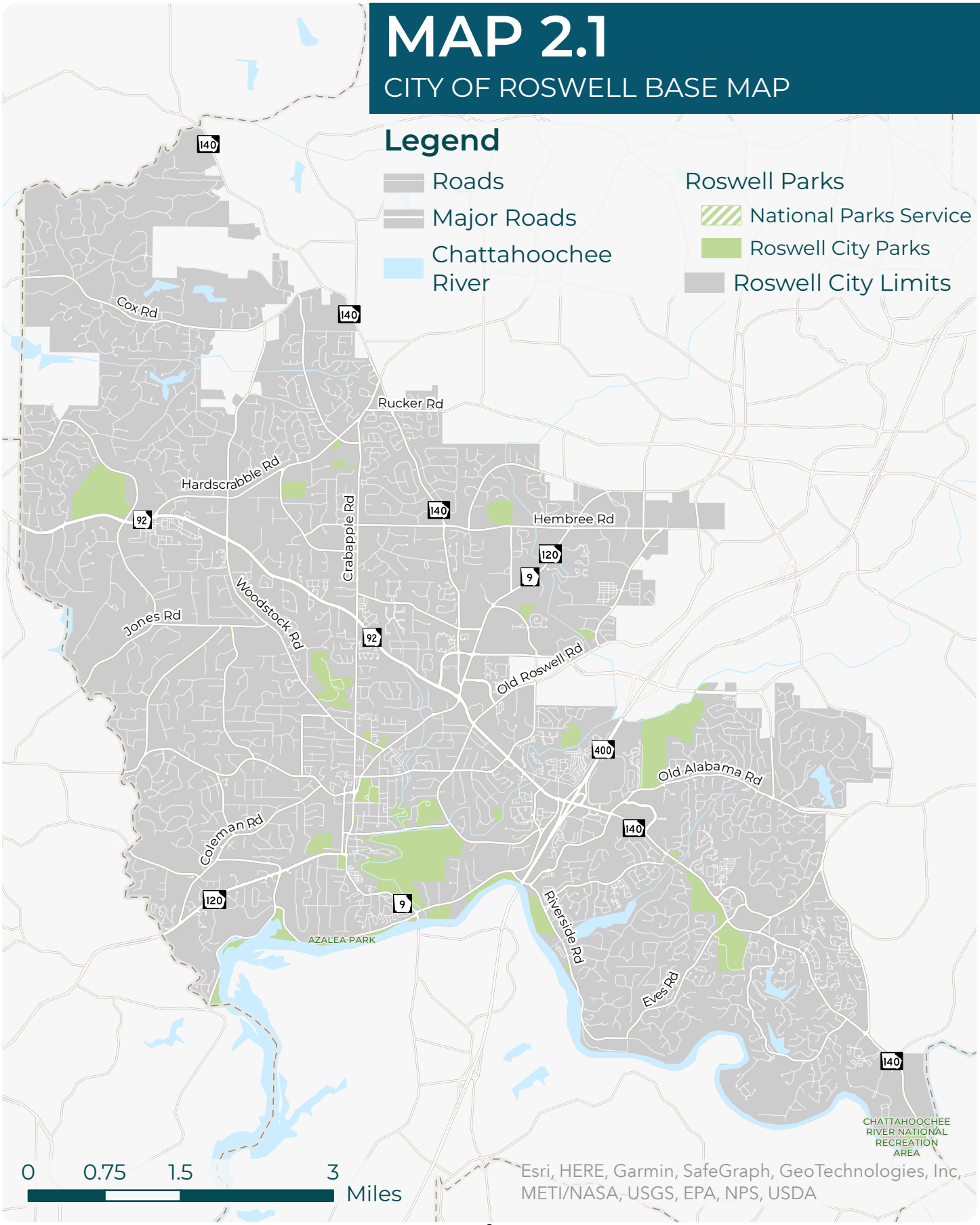
The intent of the transportation inventory and existing conditions is to establish a baseline understanding of the existing roadway network, transit service, bicycle and pedestrian connectivity, and other safety, capacity, and connectivity needs. From the inventory, determinations of future needs can be made based on the projected growth of the City. This glimpse provides a framework for identifying problems such as traffic congestion or sidewalk gaps.

Data gathering for the inventory came from a variety of sources – all of which were either researched externally or created in-house. The City of Roswell's 2040 Comprehensive Plan was recently completed in late 2021 and the United States 2020 Census data has released new statistics in November 2021, which aided the development of this TMP.

The inventory results were developed into spreadsheet files and GIS layers providing a basis for the needs assessment as part of the Master Plan development. Map 2.1 below shows a current city base map, which is this TMP's study area. The summary of the Existing Conditions follows by section.

MAP 2.1

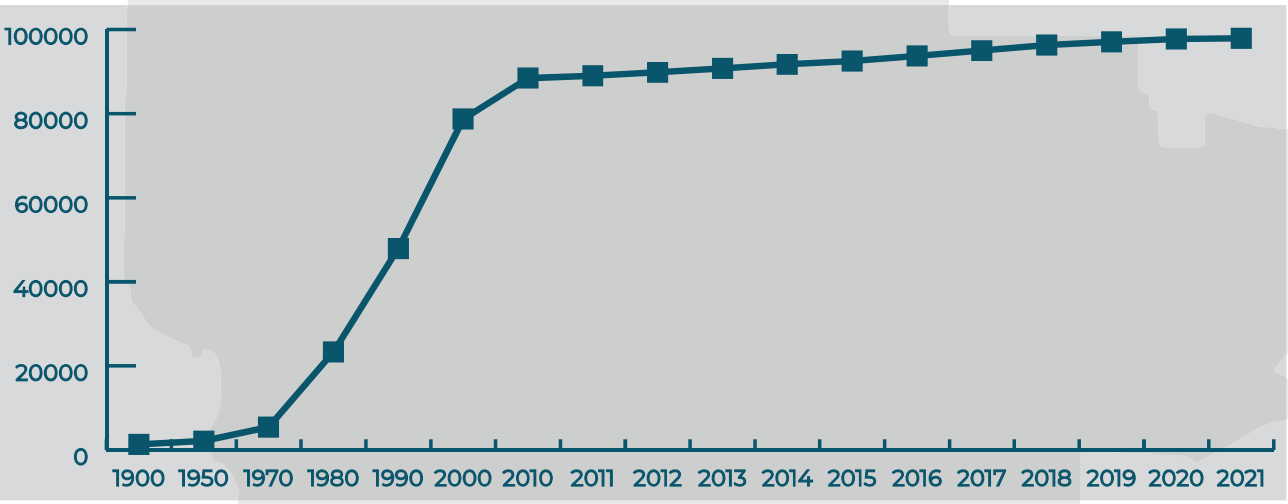
CITY OF ROSWELL BASE MAP



AT A GLANCE

DEMOGRAPHIC PROFILE

92,050 approximate population living within the city limits



2.5% percent of residents who take public transit to work

52.9% percent of residents who drive alone to work

7.4% percent of residents who carppol to work

39.3 average resident's age

24.8% percent of residents 18 and under

14.4% percent of residents 65+

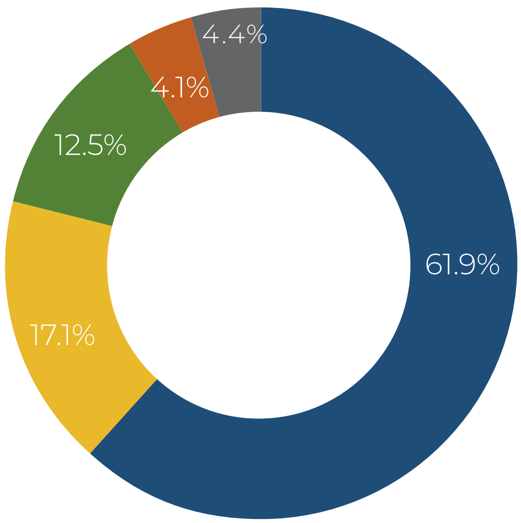
49.6% percent male residents

50.4% percent female residents

0.7% percent of residents who bike to work

34.8% percent of residents who work from home

1.7% percent of residents who walk to work



RACIAL BREAKUP

- White, Non-Hispanic
- Hispanic/Latino
- African American/ Black, Non-Hispanic
- Asian
- Other Races

안녕하세요 Γειά σου hallå xin chào வணக்கம் olá 你好 สวัสดี привет kamusta

17.8%
percent of residents who speak a language other than English at home

93.6%
percent of residents 25 or older with a high school diploma

61.9%
percent of residents with a Bachelor's degree or higher

$111,214
average household income

3.0%
estimated unemployment rate

$408,700
average home value

1980 - 2010
when the majority (71%) of residential buildings were built

97.8%
percent of households with a computer

93.8%
percent of households with broadband Internet

2.2 EXISTING LAND USES

Generally speaking, the City of Roswell epitomizes suburban development centered on use of the automobile, where roadway connectivity is limited and land uses are segregated. This style of development was typical during the 1970's and 1980's. The Georgia 400 expressway was originally opened to traffic in the late 1970's which opened up the northern Atlanta suburbs for growth for decades to come. About 60% of all roadways in the city end in cul-de-sacs, and land uses are not usually mixed. Only recently has the concept of shared uses, or mixed-use development returned to Roswell. Mixed-use development shifts the focus away from the automobile and toward pedestrian and bicycle accessibility of the surrounding area and available transit facilities. The COVID-19 pandemic in 2020 caused disruption in the marketplace and in transportation planning, including decreased transit service and work from home technology. Prior to the pandemic, in the years 2018 and 2019, the City did have increases in redevelopment of properties around the Holcomb Bridge Road interchange, along S.R. 9 and a few residential redevelopments. With rapidly rising real estate costs, developers have sought to seek increased densities and infill style approach intending to yield more homes per acre. Roswell has been mindful in zoning rulemaking to find a balanced approach to growth to preserve the city's character and mobility in our existing transportation network.

The City has over 1,000 acres of land set aside in 13 parks and historic properties. One of the most popular park destinations in the City is the Riverwalk trail system running along the Chattahoochee River. This multi-use trail and bicycle facility attracts residents from Roswell and surrounding jurisdictions. In 2019, the City opened the latest phase of the riverfront corridor, which included a new boardwalk along Willeo Road that has been extremely popular with residents and visitors. In 2022, the voters passed additional bonds to help fund new bike/pedestrian projects but also parks projects.

It is important to note that most of the large parcels of land in Roswell have been developed, but there are several individual vacant parcels scattered around the City. The City is generally "built-out" at a very low density which opens up new opportunities to redevelop aging, underutilized, or declining properties. This plan reviewed land uses in Roswell and categorized these districts into a series of Character Areas. As part of the Existing Conditions section, those Character Areas, their boundaries, and land uses are shown in Table 2.1 below.

TABLE 2.1 - LOCATIONS AND CHARACTERISTICS OF CITY OF ROSWELL CHARACTER AREAS

Planning Area	General Characteristics	Compatible Future Zoning
1 – Estate Residential	Single family residential on large lots; car dependent and usually not walkable	AG-43, RS-87, RS-30, CIV, REC, CON
2 – Suburban Residential	Mostly single family residential on large lots; limited redevelopment opportunities	AG-43, RS-87, RS-30, PRD, CIV, REC, CON
3 – Neighborhood Residential	Traditional suburban-oriented neighborhoods, often in subdivisions; medium to large lots; limited redevelopment opportunities	AG-43, RS-18, PRD, CIV, REC, CON

4 – Active Neighborhoods	Small lot single family homes and multi-family residential areas near commercial areas or commercial roadways	RS-12, RS-9, PRD, CIV, REC, CON
5 – Neighborhood-Serving	Commercial areas near to existing neighborhoods which provide an assortment of relevant restaurants, retail, and services; usually compact, walkable sites located along key intersections	NX, OP, CIV, REC, CON
6 – Commercial Mixed-Use	Future mixed-use, pedestrian friendly corridor with meaningful open space	RS-6, RS-4, RM-3, RX, CX, SH, CC, OR, OP, REC, CON
7 – Major Activity	Future vibrant activity center with transit-oriented development	RS-6, RS-4, RM-3, RX, CX, CC, OR, OP, CIV, REC, CON
8 – Historic Area/ Downtown	Unique cultural asset featuring historic architecture	RM-3, RX, DR, DX, DS, DH, CIV, REC, CON
9 – Industrial/ Flex	Industrial and heavy commercial development; office and business distribution district	OR, OP, IX, IL, CIV, REC, CON
10 – Highway 9	Future mixed-use, pedestrian friendly corridor with signage and street aesthetics to signify entrance into the city	RS-6, RS-4, RM-2, RM-3, RX, CX, SH, CC, CH, OR, OP, IV, CIV, REC, CON
11 – Parkway Village	Future commercial corridor with historic character and pedestrian interparcel connections	RS-9, RS-6, RS-4, R-CC, R-TH, PV, CIV, REC, CON
12 – Holcomb Bridge Road	Future mix of residential, retail and commercial; large multi-use trail network connecting residences with Big Creek Park and the Chattahoochee River	R-TH, RM-2, NX, CX, CC, PV, OR, OP, CIV, REC, CON
13 – Conservation & Greenspace	Protected parkland that serves a major piece of the interconnected trail system of Roswell	REC, CON

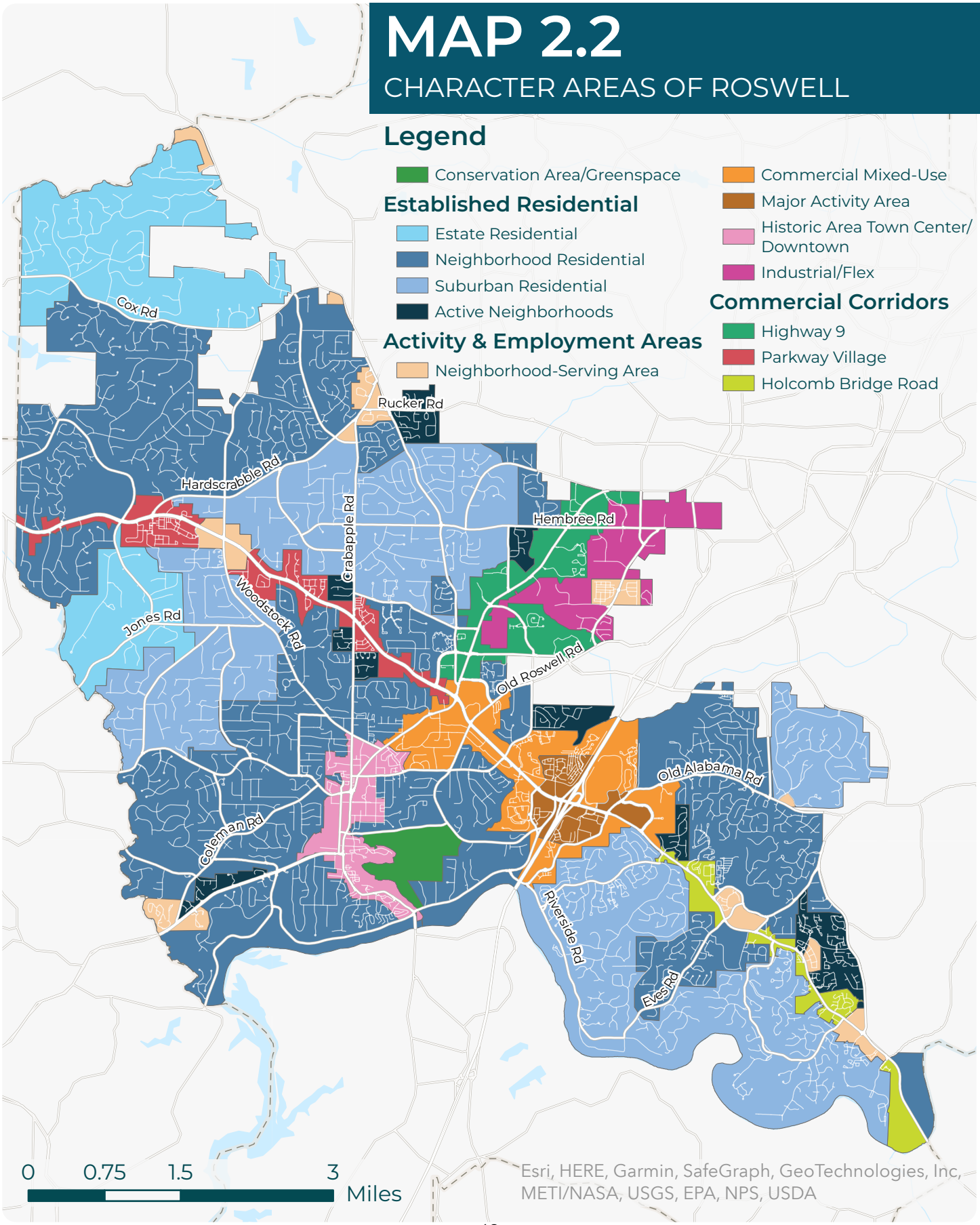
SOURCE: ROSWELL 2040 COMPREHENSIVE PLAN, CITY OF ROSWELL

The City's major employment centers are focused on the areas surrounding the Holcomb Bridge Road (SR 140)/SR 400 interchange, the hospital area and light industrial area along Hembree Road, Alpharetta Highway (SR 9/120) at and north of Mansell Road, along Mansell Road from Alpharetta Highway (SR 9/120)

to Westside Parkway and the city limits, and the area surrounding City Hall in the Historic District. Map 2.2 on the next page shows the Character Areas boundaries mentioned above. Appendix A at the end of the document shows the Existing and Future Land Use Maps for the City of Roswell.

MAP 2.2

CHARACTER AREAS OF ROSWELL



2.3 ROADWAY CHARACTERISTICS

2.3.1 FUNCTIONAL CLASSIFICATION OF STREETS

The classification of streets into a functional hierarchy of road classes is necessary for communication among engineers, administrators, and the public. Functional classification, the grouping of streets by the character of traffic service they provide, is an important transportation planning tool. The five different street classifications (Freeway, Principal Arterial, Minor Arterial, Collector, and Local) are differentiated by many characteristics. The two main considerations in classifying streets functionality are access and mobility. Additional considerations include daily traffic volumes, traffic control conditions, and the character and intensity of roadside development.

Balancing access to property and travel mobility is the goal of establishing a functional classification of streets. Higher classified streets (principal and minor arterials) are primarily intended to provide travel mobility while limiting access. Conversely, lower classified streets (collector and local) are primarily intended to provide access to property and local mobility. Collectors offer a balance between the two functions of access and mobility. A more detailed description of the street classifications is described below. It is important to note that the functional classification can change over time as street and area conditions change or new guidance is issued on the defining parameters.

Freeway

A freeway is a multi-lane controlled access road which only allows access at designated grade-separated interchanges. The primary function of the freeway is the movement of people and goods over long distances at high speeds with a minimum amount of friction from entering and exiting traffic. SR 400/US 19 is the only freeway within Roswell. Bicycles and pedestrians are prohibited on freeways. Most of the trips are longer and high speed and in addition, trucks are encouraged to use these routes.

Principal Arterial

Principal arterials primarily provide major vehicular mobility function and are typically high traffic volume corridors and serve the relatively long trips, second only to freeways. These streets typically limit direct access to property to improve the through movement flow. Principal arterials serve trips between important centers of activity, trips entering and leaving the city, and trips passing through the city. These roads typically have multiple lanes and either a two-way left-turn lane or a raised median. These roads usually carry traffic volumes greater than 7,000 vehicles per day, but generally are routes carrying around 25,000 vehicles per day. Some of these principal arterials roadways include, but are not limited to: Crossville Road (SR 92), Holcomb Bridge Road (SR 140), Marietta Highway (SR 120), and Alpharetta Street/Atlanta Street (SR 9) are examples of principal arterials.

Minor Arterial

The minor arterial street network interconnects with and augments the principal arterial street network. The minor arterial accommodates trips of moderate length at a lower level of travel mobility than principal arterials. These streets provide more access to property than principal arterials. Minor arterials are typically two to four lanes and may include a two-way center turn lane or have a median with periodic turn lane breaks. These roads typically experience traffic volumes between 3,000 and 14,000 vehicles per day, but may have higher traffic. Examples include Crabapple Road, Hardscrabble Road, and Old Alabama Road.

Collectors

Collector streets balance land access and traffic circulation within residential neighborhoods and commercial and industrial areas. Collectors are designed to collect traffic from local streets and channel it onto the arterial streets. Collectors are typically two lanes with turn lanes at key intersections. These roads typically experience traffic volumes between 1,100 and 6,300 vehicles per day, but some may experience higher volumes closer to 10,000 vehicles per day. Examples of collectors are Hightower Road, Martin Road, Houze Way, Chaffin Road, and Mountain Park Road.

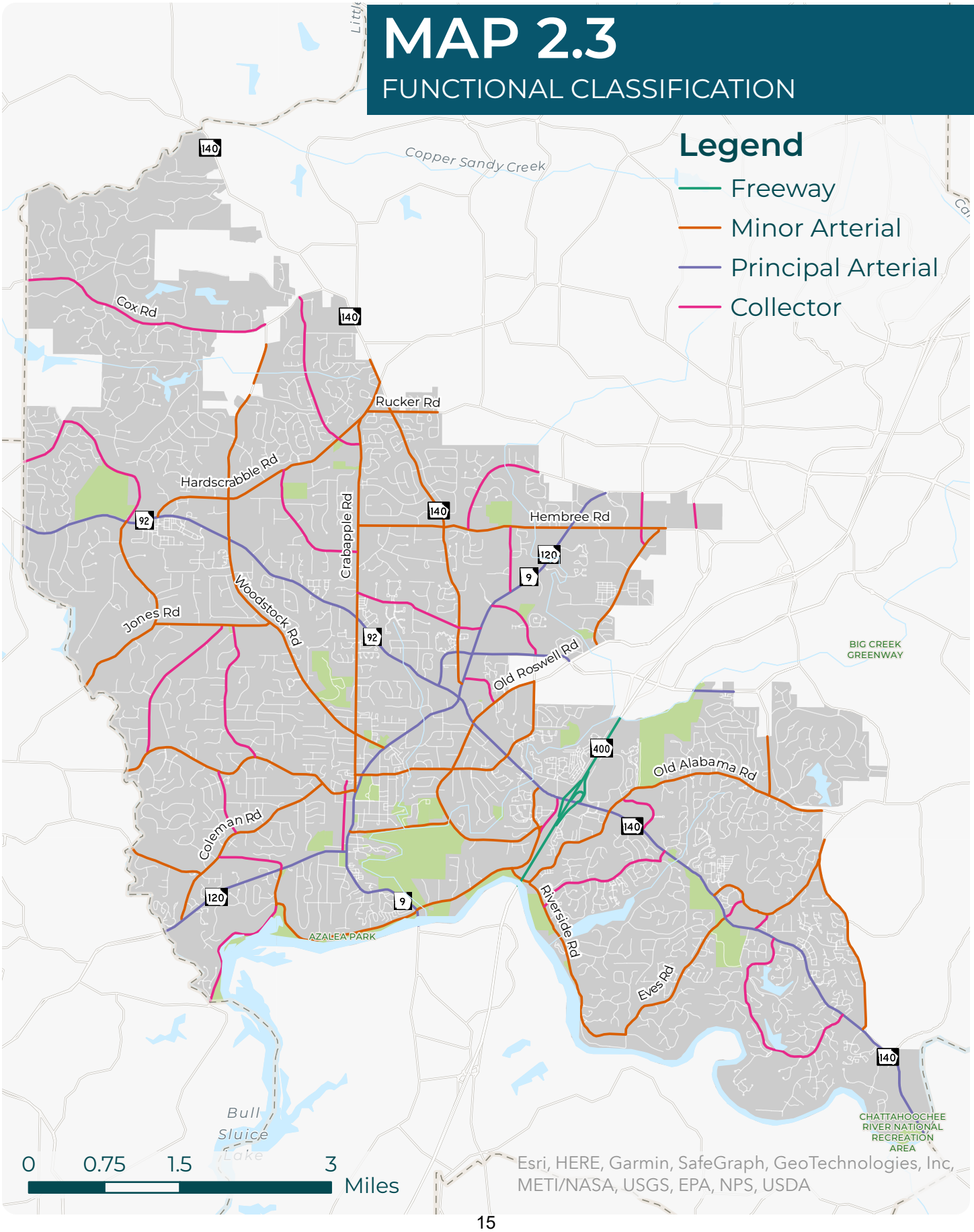
Local

Local streets primarily permit direct access to abutting property and connect to higher classified streets. Local streets typically have very low traffic volumes (<1,000 vehicles per day) and little to no through traffic. Local streets are the lowest classification of streets and include the remainder of the streets in the city.

While “residential street” is not one of the functional classifications of the roadway, many people think that some roads are considered residential in nature – in other words, low impact designs with low traffic volumes. In reality, residential streets can be classified as a collector, minor arterial, or principal arterial. Most residential streets would be classified as local due to the volume of traffic they carry. An example is Hardscrabble Road, which is often referred to as a “residential street” but is functionally classified as a minor arterial based on the function of the road connecting SR-92 and Crabapple Rd.

Map 2.3 on the next page illustrates the street functional classification based on the adopted 2016 Comprehensive Plan. A full list of the streets and their functional classification are included in the Appendix section of this document.

MAP 2.3
FUNCTIONAL CLASSIFICATION



2.3.2 ROADWAY CHARACTERISTICS

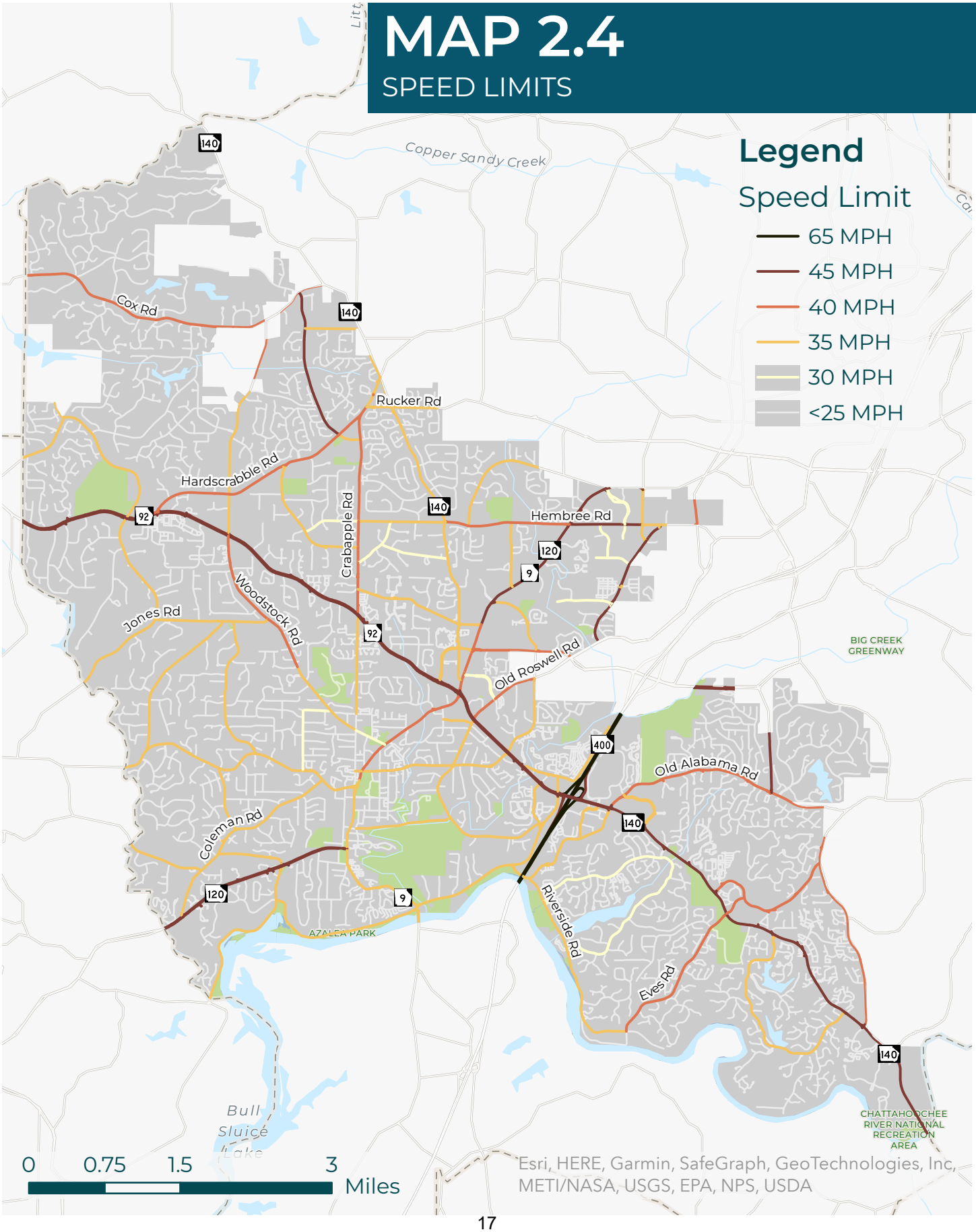
The existing public street network within the city limits consists of roadways on the state roadway system and City-maintained roadways. The public street network totals approximately 350 centerline miles. Of the total mileage, GDOT maintains 3.26 miles of freeway miles (primarily SR 400 including ramps) and maintains about 22.75 miles on the state roadway system. Table 2.2 summarizes the total lane-miles by street functional classification based on the adopted.

TABLE 2.2 - STREET FUNCTIONAL CLASSIFICATION BY TOTAL MILEAGE

Street Type	Mileage	Percentage
Freeway	3.3	1%
Arterial (principal)	21.5	6%
Arterial (minor)	49.7	14%
Collector	24.0	7%
Local	251.5	72%

Posted speed limits for all public roadways within the city limits are adopted by City Council and recorded in *Article 22.6 – Speed Limits Appendix* of the City of Roswell Code. Map 2.4 on the next page illustrates the posted speed limits within the city.

MAP 2.4
SPEED LIMITS



Vehicular Level of Service

The FHWA Office of Operations acknowledges that about 50% of the congestion experienced by motorists happens virtually every day – known as “reoccurring”. This type of congestion occurs when the number of vehicles exceeds the roadway capacity. The other half of congestion is caused by temporary disruptions that take away part of the roadways’ capacity from use otherwise known as “nonrecurring” congestion.

Level of service (LOS) is a quantitative stratification of quality of service. The FHWA Highway Capacity Manual (HCM) divides highway quality of service into six letter grades, “A” through “F,” with “A” being the best and “F” being the worst. The following general statements characterize LOS along urban streets:

> LOS A describes primarily free-flow operations at average travel speeds with minimal delay at traffic signals. Vehicles are completely unimpeded in their ability to maneuver.
>
> LOS B describes reasonably unimpeded operations at average travel speeds. The ability to maneuver in traffic is only slightly restricted and there is minimal delay at traffic signals.
>
> LOS C describes stable operations; however, the ability to maneuver and change lanes in midblock locations may be more restricted than LOS B. At a traffic signal, vehicles typically do not wait for more than one cycle to move through the intersection. LOS C generally ranges from 70 to 85 percent of the overall capacity.
>
> LOS D borders on a range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS D generally ranges from 85 to 100 percent of capacity.
>
> LOS E is characterized by significant delays caused by a combination of adverse traffic progression factors. LOS E means the roadway is at capacity.
>
> LOS F is characterized by extremely low speeds. Intersection congestion occurs at critical signalized intersections, with high delays, high volumes, and extensive queuing. LOS F means the roadway is over capacity.

While it is desirable in urban areas to design for LOS C, many cities and counties have set goals to design for a higher level of delay at LOS D. Beyond that point, at LOS E or F, drivers tend to become frustrated by the amount of delay and road rage can sometimes occur. The best practice is to design for LOS C, but to accept LOS D. Of course, the needs of all modes of travel must be considered and context-sensitive solutions should be considered. Table 2.3 summarizes the characteristics of the level-of-service designations.

TABLE 2.3 – AUTOMOBILE LEVEL-OF-SERVICE CHARACTERISTICS

Level-of-Service	Volume-to-Capacity	Average Travel Speed (mph)
A	< 0.3	>= 35
B	0.3 – 0.49	>= 28
C	0.5 – 0.74	>= 22
D	0.75 – 0.89	>= 17
E	0.90 – 0.99	>= 13
F	> 1.0	< 13

2.3.4 Congestion in the City

Due to limitations on funding in generating this in-house study, not all intersections were analyzed so staff had to focus primarily on intersections located on arterial and collector routes. Some locations that had existing projects or had funding committed were not done. In addition, additional focus on capacity was looked at on a case-by-case basis given widening projects have generally faced resistance by residents who have traditionally preferred smaller less intrusive operational improvements.

52 intersections were modeled by staff and contractor Michael Baker International to determine the level of delay they experience during peak traffic times in the mornings and evenings. Using SYNCHRO modeling software, the analysis shows seconds of delay at the intersection and categorizes the level-of-service based on the stratification listed above. In order to better understand the need to concentrate on congested areas, staff focused on LOS “D”, “E” and “F”.

Capacity or operational improvements were considered on a case-by-case basis, focusing on minimally invasive operational improvements that are preferred by residents over large widening projects.

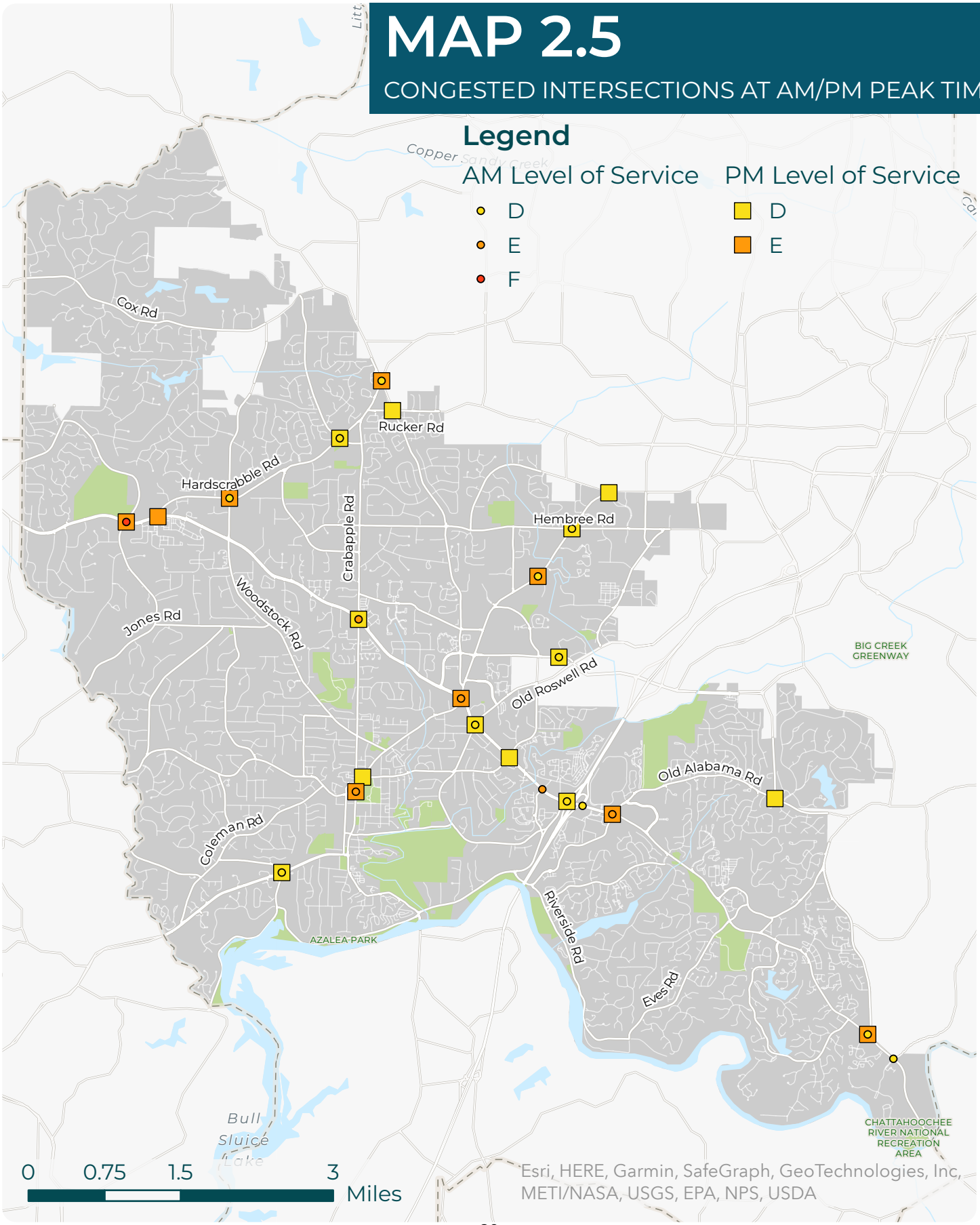
Map 2.5 on the next page shows these intersections.

Studying current congestion levels to plan for projects twenty or thirty years in the future does not yield any beneficial information. To help municipalities better get a gauge on what congestion will look like when they expect their projects to be built, the ARC has produced a regional travel demand model to show what congestion levels will look like through 2060. This model is considered state of the art, and includes estimated population changes, as well as major transportation projects anticipated to be complete by approximately 2040.

Maps 2.6 and 2.7 on the following pages show the anticipated morning and evening peak hours of service for Roswell in 2050.

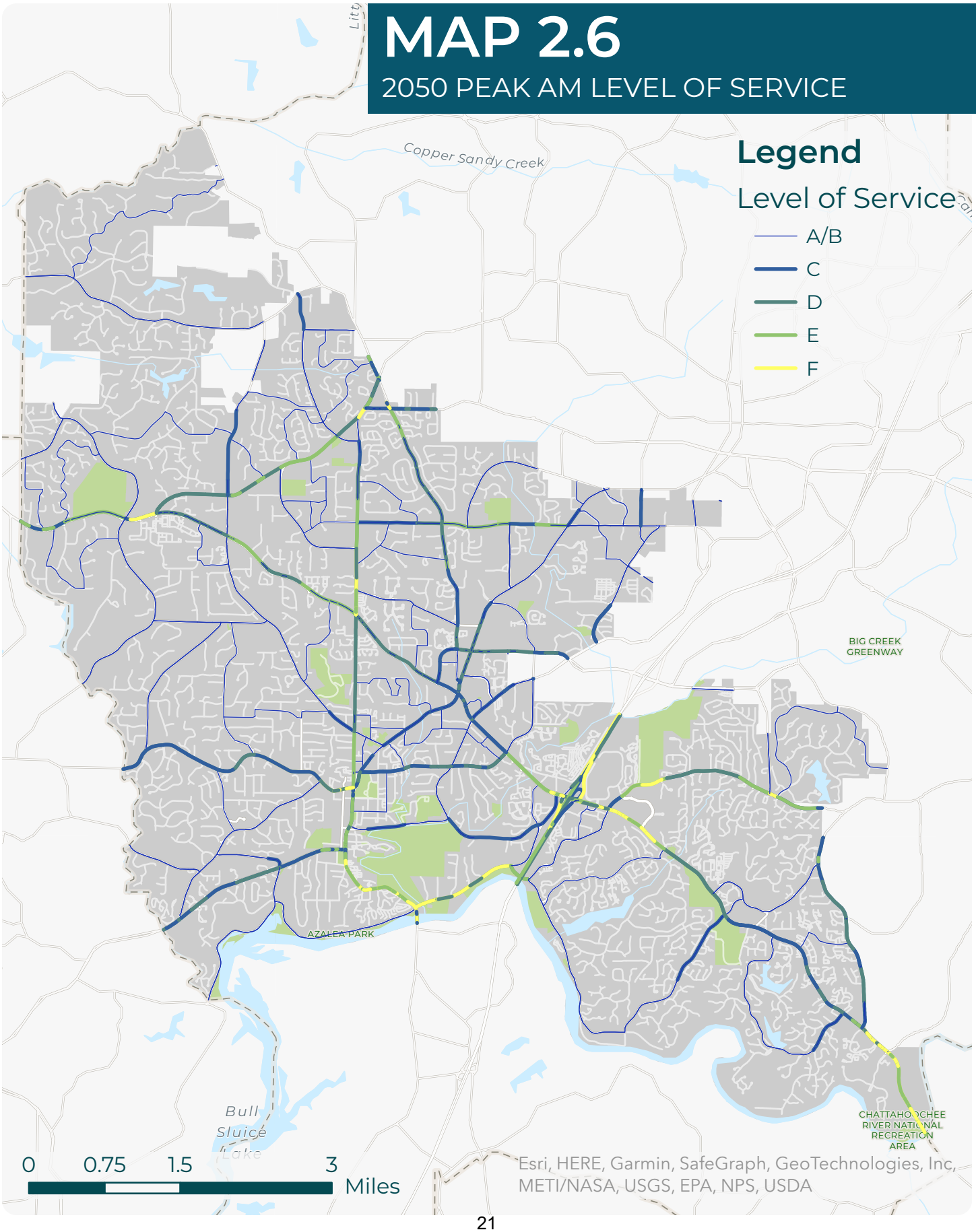
MAP 2.5

CONGESTED INTERSECTIONS AT AM/PM PEAK TIMES



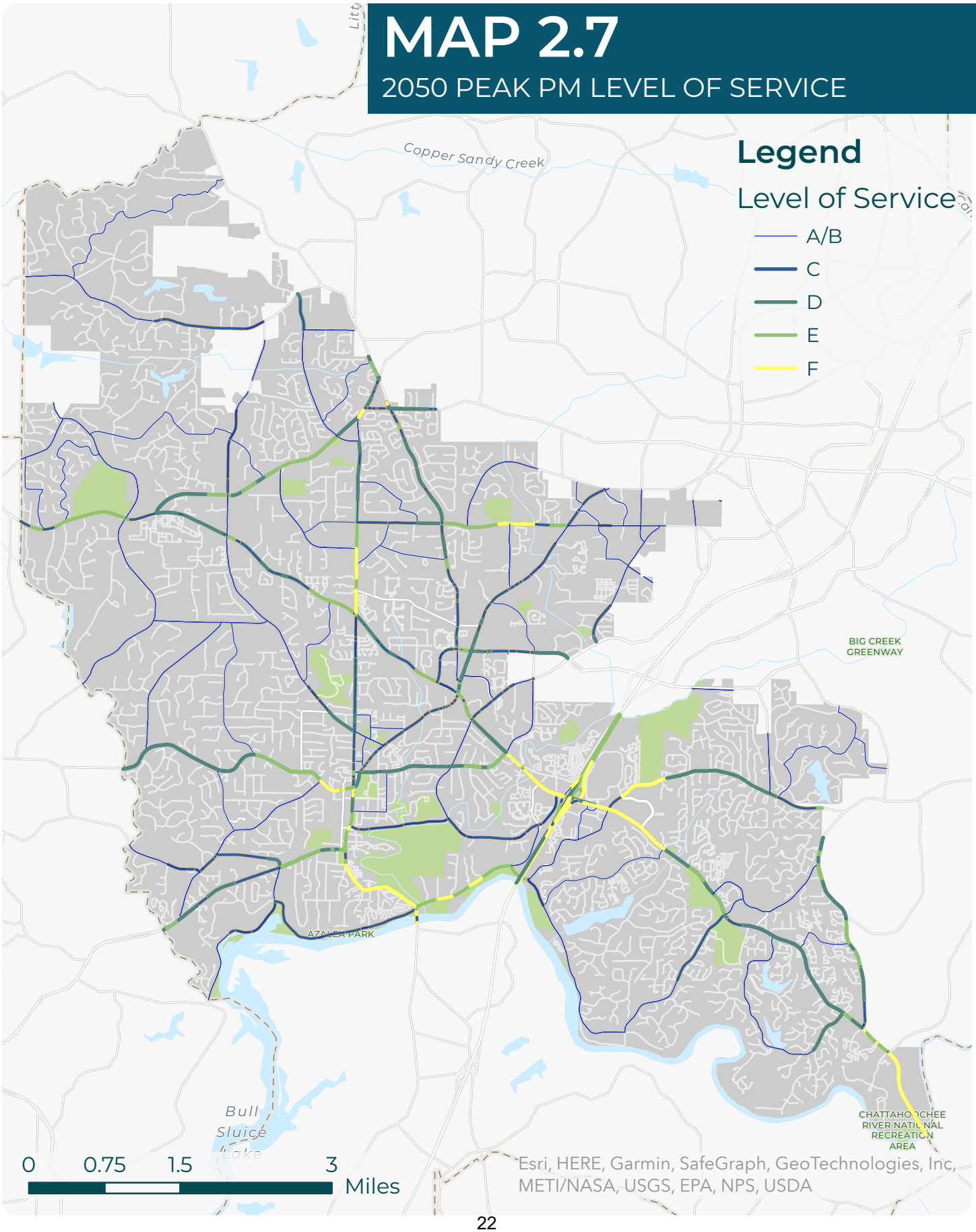
MAP 2.6

2050 PEAK AM LEVEL OF SERVICE



MAP 2.7

2050 PEAK PM LEVEL OF SERVICE

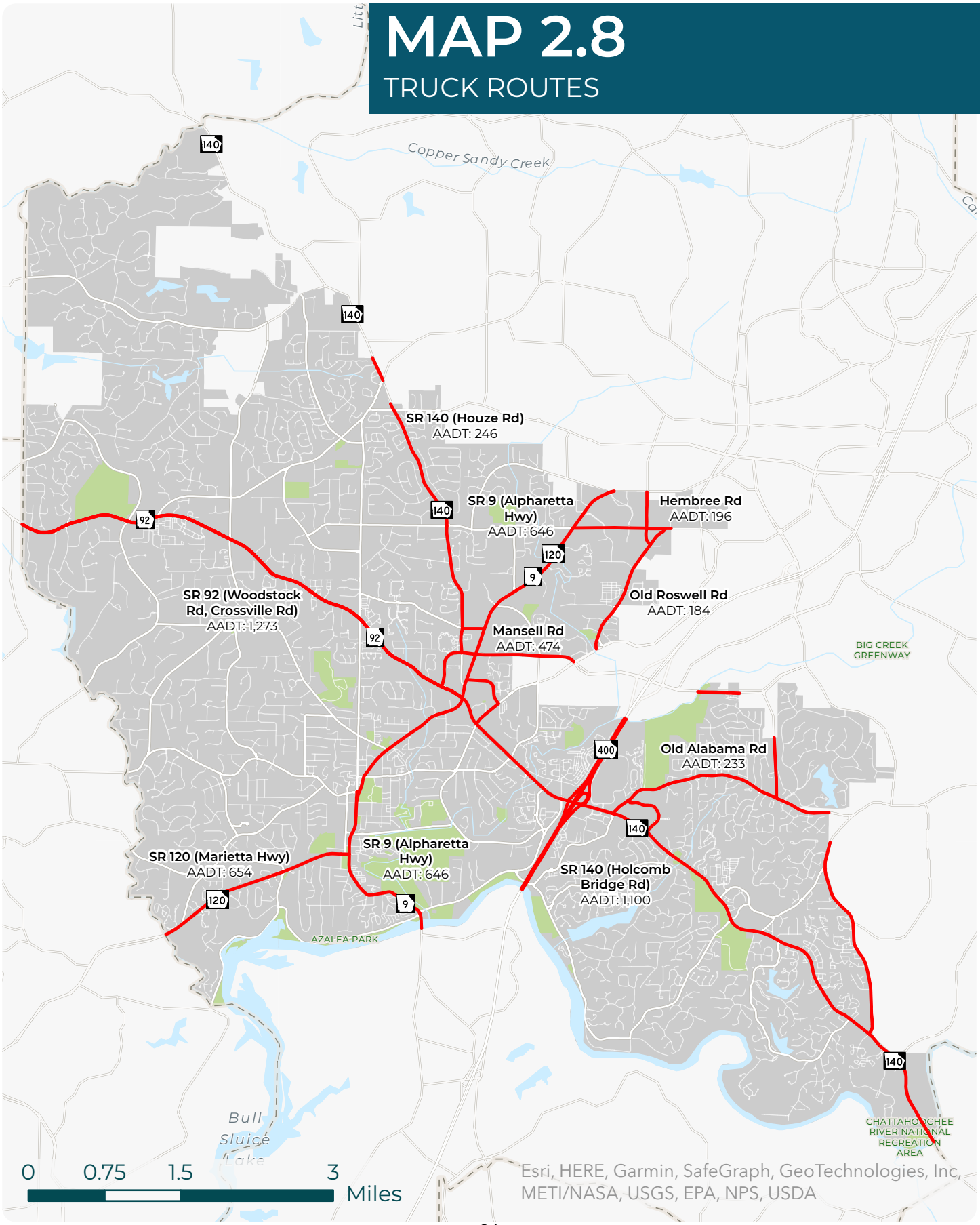


2.4 FREIGHT PROVISIONS

The City prohibits trucks on all streets except those that have designated truck routes. There are 19 designated truck routes specified in City ordinances, primarily on principal and minor arterials. Principal arterials are better equipped to handle truck traffic than lower functionally classified roads because of their 12-foot minimum lane widths, wide intersection turning radii, and thicker road base. These road specifications help to prevent sideswipe damage as well as potholes and other forms of asphalt cracking.

GDOT has two permanent and numerous portable count stations within the city limits where truck percentage is collected annually. In 2021 (latest year available), the count stations indicated truck percentage ranging from two percent to six percent annually. The average truck percentage on collector roads and above throughout the city limits is estimated to be below 2%. Certain corridors experience higher truck volumes than others but are still generally low as Roswell does not have a large distribution hub like other parts of the Atlanta region. Most truck traffic is bound for local deliveries from those key distribution hubs in Gwinnett County, Cobb County, near the Atlanta airport, or in Henry County. Excluding the GA-400 expressway, Holcomb Bridge Road (SR 140) and Crossville Road / Woodstock Road (SR-92) experiences the heaviest average truck volumes throughout the city while Marietta Highway (SR 120) experiences the least. Map 2.8 on the next page illustrates the designated truck routes and 2021 average annual daily (AADT) truck volumes in the city. The truck routes are the state route highway system along with a handful of key roads near areas of Roswell that have higher concentration of commercial or light industry type land uses.

MAP 2.8
TRUCK ROUTES



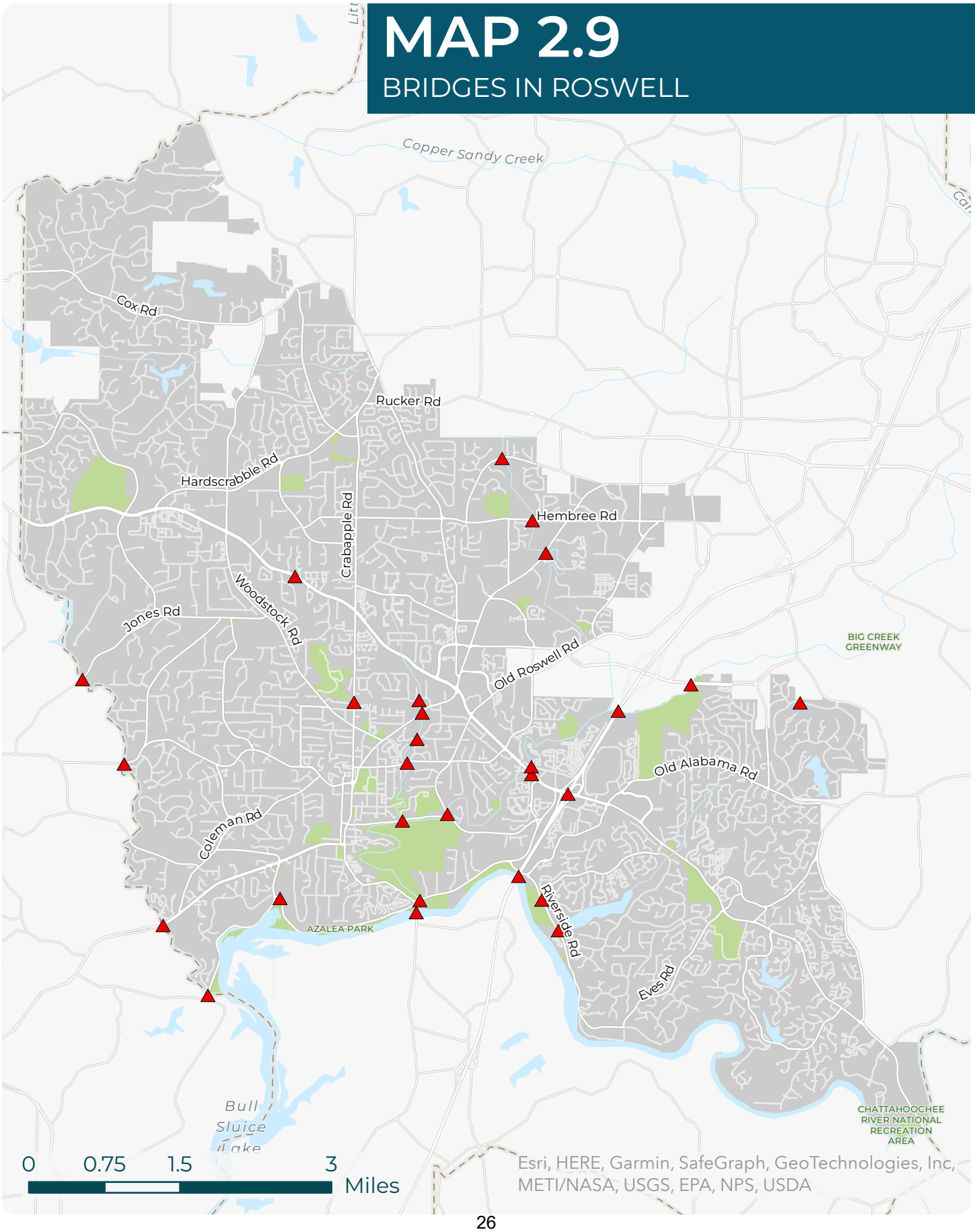
2.5 BRIDGES

Of the 27 bridges or culverts in Roswell, nine are maintained by the State of Georgia, one by Cobb County and 17 by the City. The 17 bridges that are City owned and maintained are listed below and shown on Map 2.9 on the following page. For more information on the City's maintenance activities, including bridges, see the *System Maintenance* chapter.

- Alpine Drive – (Culvert)
- Azalea Drive
- Charles Place
- Crabapple Road – (Culvert)
- Hembree Road
- Grimes Bridge Road
- Jones Road
- Mansell Road (EBL)
- Norcross Street
- Old Holcomb Bridge Road
- Oxbo Road
- Pine Grove Road
- Riverside Road (x3)
- Roxburgh Drive – (Culvert)
- Upper Hembree Road

MAP 2.9

BRIDGES IN ROSWELL



2.6 PEDESTRIAN CHARACTERISTICS

In 2016, the City of Roswell was given an honorable mention as a Walk Friendly Community. In 2020, the City achieved Bronze Status, and will reapply in December 2024.

An in-depth inventory of existing pedestrian facilities was performed in the fall of 2022 as a part of the City's Americans with Disabilities Act (ADA) Transition Plan. This inventory involved extensive field work and while its main goal was to determine if the sidewalk network meets ADA standards, it also provided an up to date inventory. More information on the sidewalk inventory analysis and ADA Transition Plan can be found in Section 2.7 of this document.

This network is used to identify gaps in the sidewalk network in order to help prioritize sidewalk projects and update the sidewalk policy to better reflect the city's sidewalk needs. Staff continue to track and verify quarterly new sidewalks that are periodically installed by developers and update the database accordingly. The sidewalk gap matrix is located on the City of Roswell Transportation website which is updated each year. A current static copy will be included in the appendix based on the October 2023 update by staff.

Pedestrian facilities can be grouped into three types: sidewalk, multi-use path, and trail. The current inventory differentiated between trails and sidewalks, but not multi-use paths. The pedestrian facility types are described below:

> *Sidewalk* – The portion of a street right-of-way designed for preferential or exclusive use by pedestrians. Typical sidewalk width varies from three to six feet. The surface is typically concrete. The sidewalk can be directly behind the curb, or can be offset one or more feet using grass or other material.
>
> *Multi-Use Path* – A facility for bicycles, pedestrians, skaters, wheelchair uses, joggers, and other non-motorized users. The facility may be located outside of the street right-of-way. The surface can be concrete, asphalt, or fine gravel. An example is the path along the Chattahoochee River and Azalea Drive/Riverside Road or the path located adjacent to Holcomb Bridge Road between Fouts Road and Steeplechase Drive.
>
> *Trail* – A facility for pedestrians and joggers located outside of the street right-of-way. The surface can be fine gravel or earth. Some trails follow the path of a creek such as those in Big Creek Park.

The City is incrementally increasing the miles of pedestrian and bicycle facilities with each construction project and repaving project. The City also updated a policy to require developers to install ten (10') foot wide multi-use trail facilities along key commercial corridors, which include Holcomb Bridge Road, State Route 9, and the Crossville Road portion of SR-92 as part of the Hub and Spoke network. A map of the Hub and Spoke is available to view on page 82 of the Bicycle and Pedestrian Master Plan document on the City's website. Multi-use trails are also required on all frontage for any new multi-family housing developments. Additionally, the 2019 Bicycle and Pedestrian Master Plan revised the sidewalk matrix policy scoring criteria used to rank sidewalk gaps across the city.

Walk Bike and Roll to School Roswell

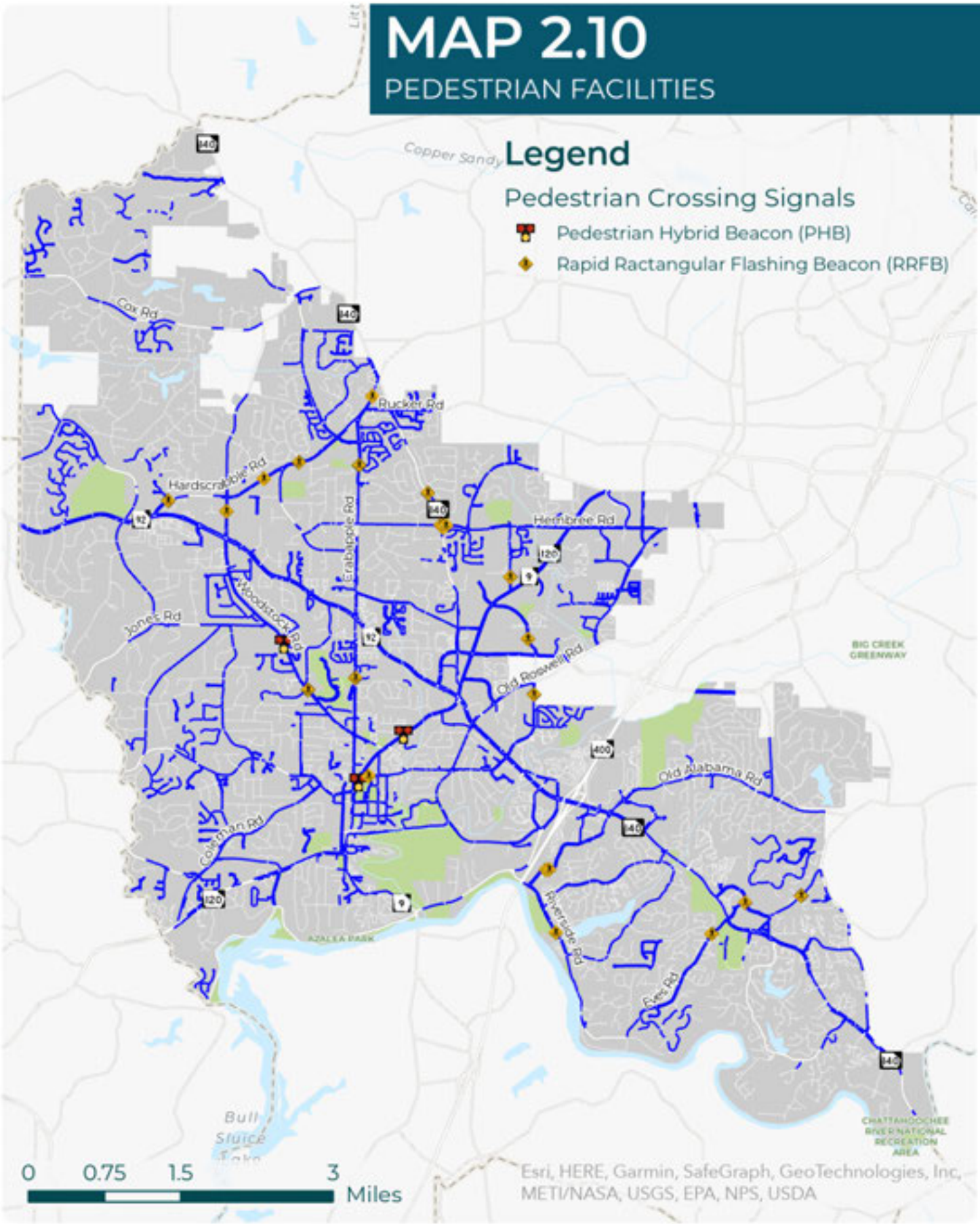
The City promotes the federal initiative of Safe Routes to School by producing maps showing the walking time required for school-aged children to reach each public school, as well as the location of sidewalks. These maps are available to view on the Roswell website as well as in Appendix A.

In November 2022, Roswell residents voted for a $107.6 million bond for Recreation and Parks improvements and connectivity improvements. This included approximately $20 million in funding to go

towards the Bicycle and Pedestrian Master Plan and the Sidewalk Gap Matrix. On August 14, 2023, Mayor and Council voted to approve the following projects for the bond funds (all bond projects are contained within the short-term plan of the TMP project recommendations and maps):

Road Name	From	To	Project Type	Project Description
Chaffin Road	Northgate Trace	Hembree Road	Sidewalk	This project will build a sidewalk along Chaffin Road. Funding for this project will be issued in the second bond issuance, expected 2025.
Etris Road	Hardscrabble Road	Crabapple Road	Multi-Use Path	This project will continue the multi-use path on the north side of the corridor. Survey and Design anticipated to begin Autumn 2023 and later be complete in Winter 2023-2024. Construction anticipated to begin in Winter of 2023-2024.
Hardscrabble Road	Existing sidewalk on north side of the road near Whittingham Place	King Road	Multi-use Path	This project will build a multi-use path along the north side of the corridor. Right-of-Way expected to be complete Autumn of 2023. Construction anticipated to begin in the Winter of 2023-2024.
Hardscrabble Road	Northside Chapel Funeral Directors and Crematory	CVS Pharmacy	Sidewalk	This project will fill the sidewalk gap along the south side of the corridor. Funding for this project will be included in the second bond issuance, expected 2025.
Hembree Road	Hembree Park	Near Montessori School	Sidewalk	This project will build a sidewalk along the north side of the corridor. Funding for this project will be included in the second bond issuance, expected 2025.
Hembree Road	Upper Hembree Road	Tapestry Community Church	Sidewalk	This project build a sidewalk on the north side of the corridor. Funding for this project will be included in the second bond issuance, expected 2025.

King Road	Woodstock Road (SR 92)	Hardscrabble Road	Multi-Use Path	This project will build a multi-use path along the corridor. Survey and Design anticipated to begin Autumn 2023 and later be complete in Winter 2023-2024. Construction anticipated to begin in Summer 2024 assuming no significant right-of-way concerns are uncovered.
Norcross Street	Millbrook Circle	Myrtle Street	Multi-Use Path	This project will build a multi-use path along the south side of the corridor. Funding for this project will be included in the second bond issuance, expected 2025.
Old Alabama Road	Big Creek Park	Wooten Road	Multi-Use Path	Design expected to be complete Autumn 2023 on portion west of Wooten Road. Survey and Design east of Wooten Road out to Roxburgh Drive is anticipated to begin Autumn 2023 and later be complete in Spring of 2024. Construction is anticipated to begin on the portion east of Wooten Road in Autumn of 2024 assuming no significant right-of-way concerns are uncovered.
Oxbo Road	S. Atlanta Street (SR 9)	Grimes Bridge Road	Multi-Use Path	This project will build a multi-use path along the corridor. Survey and Design anticipated to begin Autumn 2023 and later be complete in Spring of 2024. Construction anticipated to begin in Summer of 2024.
Riverside Road	Near Martin Road		Pedestrian Bridge	This project will rehab the pedestrian bridge over Seven Branches Creek on the west side of the corridor. Funding for this project will be included in the second bond issuance, expected 2025.


MAP 2.10
PEDESTRIAN FACILITIES
Legend
Pedestrian Crossing Signals
Pedestrian Hybrid Beacon (PHB)
Rapid Rectangular Flashing Beacon (RRFB)
Cox Rd
Rucker Rd
Hardscrabble Rd
Crabapple Rd
Hembree Rd
Woodstock Rd
Jones Rd
Old Roswell Rd
Old Alabama Rd
Coleman Rd
Riverside Rd
Evans Rd
BIG CREEK GREENWAY
AZALEA PARK
CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA
Bull Sluice
0 0.75 1.5 3 Miles
Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

Rapid Rectangular Flashing Beacon (RRFB)

Rapid Rectangular Flashing Beacons**,** commonly known as RRFBs**,** are a low-cost traffic device to aid pedestrians cross the street where a traditional traffic signal is not warranted.

As part of a pilot study, the City installed its first RRFB adjacent to the intersection of Eves Road and Scott Road in front of Centennial High School. RRFBs are flashing amber LED lights powered with solar energy that are activated with a push button to get motorist's attention to the presence of pedestrians in the crosswalk. The beacon discontinues flashing after a short amount of time. Since the pilot program, the City has installed 22 more RRFBs across the city.

Pedestrian Hybrid Beacon (PHB)

Pedestrian Hybrid Beacons (PHBs) are a traffic control device used to help pedestrians safely cross high-speed roadways at midblock crossings and uncontrolled intersections. They are mounted on overhead mast arms, much like regular traffic signals, and direct traffic to stop so the pedestrian may cross the roadway. Figure 2.1 outlines the light sequence of a PHB.

The City first installed a PHB signal on Alpharetta Street at Vickery Mill Elementary School in late 2016. The second was installed on Alpharetta Street at Elizabeth Way in March 2022 to provide a safer crossing for pedestrians to access Canton Street. A third, replacing the RFFB at Crabapple Middle School, was installed in late 2023.

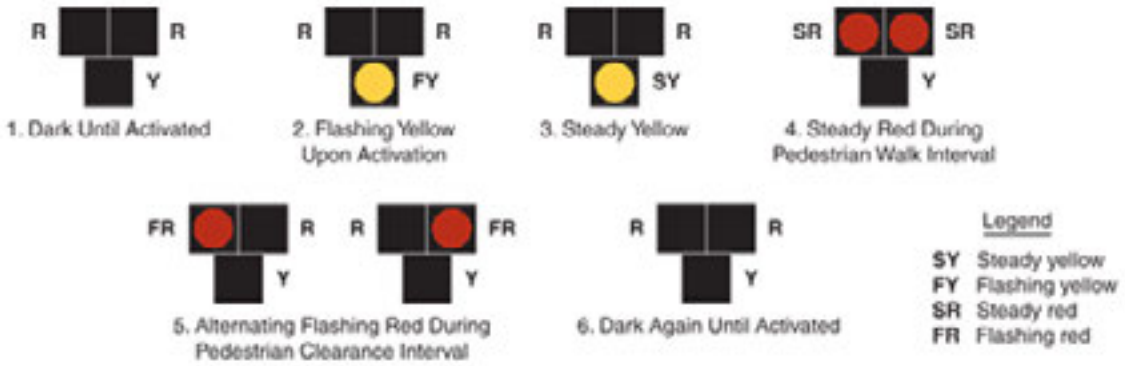


FIGURE 2.1 – LIGHT SEQUENCE OF A PEDESTRIAN HYBRID BEACON

2.7 SIDEWALK INVENTORY ANALYSIS

In 2019, as part of the Bicycle and Pedestrian Master Plan, new recommendations were incorporated into the City's policy for rating and prioritizing sidewalk gaps. Per the adopted policy in 2020, each sidewalk gap was scored based on its proximity (1/4 mile) to public schools, parks, transit stops, and commercial walk-up establishments; existence of a desire path (goat trail); safety issue including excessive vehicle speeds and traffic volumes; part of the Roswell Hub and Spoke Trail System; and whether the connection is a 1st side or 2nd side sidewalk. Project cost estimates also received prioritization, as some larger projects are not feasible given annual funding allotments. In addition, each sidewalk gap was tracked, not scored, potential for future development, and requests from citizens. Sidewalk projects were placed into tiered categories,

with those receiving the highest score placed into Tier 1. Once placed into the tiered category, each sidewalk project has equal opportunity for funding and construction. Sidewalk projects with an estimated cost of less than or equal to $500,000 were deemed eligible for sidewalk connectivity funding; sidewalk projects exceeding this amount will be considered as a stand along project during the annual budget process. As a result of the sidewalk inventory analysis, staff proposed a new sidewalk policy for funding eligibility that incorporates the need for sidewalk connections nearest parks and schools, but prioritizes gaps that display existing pedestrian travel as well as prioritizes connections for economic development. City staff continue to monitor the sidewalk inventory and update it as needed. The updated sidewalk matrix list is located on the City of Roswell's Transportation website. A static copy of the sidewalk gap matrix from October 2023 is included in the appendix of the TMP, however please note staff may not update it in the TMP; please confer the City website for updated copy in the months and years ahead.

ADA Compliance Inventory

In January 2022, Bureau Veritas was contracted by the City to take inventory of all City-owned properties and pedestrian facilities within the public Right of Way (ROW) to identify barriers to accessibility of these facilities as defined by the Americans with Disabilities Act (ADA).

To take inventory of the sidewalks and trails, pathVu's "pathMet" sidewalk profiler was used to record the width, surface roughness, cross slope, running slope, and level changes of the sidewalk segments using GPS, cameras, lasers, and sensors. Hazards that could not be picked up by the sensors of their machines were recorded subjectively by their technicians. This data was then compiled to create a Route Accessibility Index (RAI), which was used to prioritize which segments of sidewalk need to be replaced.

The curb ramp assessment was completed with pathVu's "curbMet" assessment tool, which collected running slope, cross slope, width and length dimensions, flare information, the presence of a detectable warning, damage, and obstructions. These factors were compiled into a "score" to provide a general usability rating to prioritize which ramps require replacing.

The completed ADA Transition Plan was completed in 2023 and is posted on the City's website for review by the public, located here: https://www.roswellgov.com/residents/ada-information

Federal Adoption of Public Right-of-Way Accessibility Guidelines (PROWAG)

In August 2023, the U.S. Access Board concluded its rulemaking and published the Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, commonly referred to as PROWAG. These guidelines address a significant gap in the regulatory framework for implementing the Americans with Disabilities Act of 1990. PROWAG provides accessibility guidelines for many critical elements of the public right-of-way, including:

- Pedestrian access routes along streets, sidewalks, and shared-use paths
- Alternate pedestrian access routes during construction
- Curb ramps and blended transitions
- Detectable warning surfaces
- Pedestrian signal phase timing
- Accessible pedestrian signals and pedestrian pushbuttons
- Pedestrian crossing islands
- Roundabouts and channelized turn lanes
- At-grade rail crossings
- Transit stops and shelters

- Accessible on-street parking
- Passenger loading zones
- Signs
- Street furniture

2.8 BICYCLE CHARACTERISTICS

The City of Roswell is proud to be designated a **Bicycle Friendly Community** by the League of American Bicyclists at the Bronze level. Roswell was the first city in Georgia that was so designated, and in 2021 our designation was again renewed to make us the longest running designation in Georgia. The City was originally awarded this designation in 2006 based on engineering investments, construction of new facilities, and existing events and activities. The League of American Bicyclists recognizes communities for their efforts to promote bicycling and improve riding conditions. The designation is based on five categories include engineering, education, encouragement, enforcement, and evaluation.

The City is a leader in Georgia in promoting and improving bicycle conditions on city streets. The City's Transportation Department continues to regularly meet with our local advocacy group, Bike Roswell to share ideas and increase awareness for bike programs and projects. City staff continues to review current inventory including: bicycle lanes, bicycle-friendly shoulders, and paved shoulders. Each of these facility types is described below:

Bicycle Lane – A portion of a street adjacent to vehicular traffic designated by striping, posted signs, and pavement markings for the preferential or exclusive use of bicyclists. Bicycle lanes are a minimum of 4-feet wide as measured from the edge of pavement to the edge of the vehicle travel lane, and is required to be a smooth surface. An example of a bike lane is along Willeo Road, north and south of Marietta Highway (SR 120).

Bicycle-Friendly Shoulder - A portion of a street adjacent to vehicular traffic designated by striping that accommodates bicyclists. Bicycle-friendly shoulders can vary but are generally a minimum of 2-feet wide as measured from the edge of pavement and required to be a smooth surface. An example of a bicycle-friendly shoulder is along Woodstock Road south of SR 92.

Paved Shoulder – A paved portion of a street adjacent to the travel way. While not specifically designed for bicycle use, they may be used by bicyclists. Paved shoulders are defined by a minimum width of 6 inches up to 2 feet. An example of a paved shoulder is along Bowen Road.

In 2020, the Atlanta Regional Commission updated the Regional Bicycle and Pedestrian Plan. This plan included a regional trail vision shown in Figure 2.2 below.

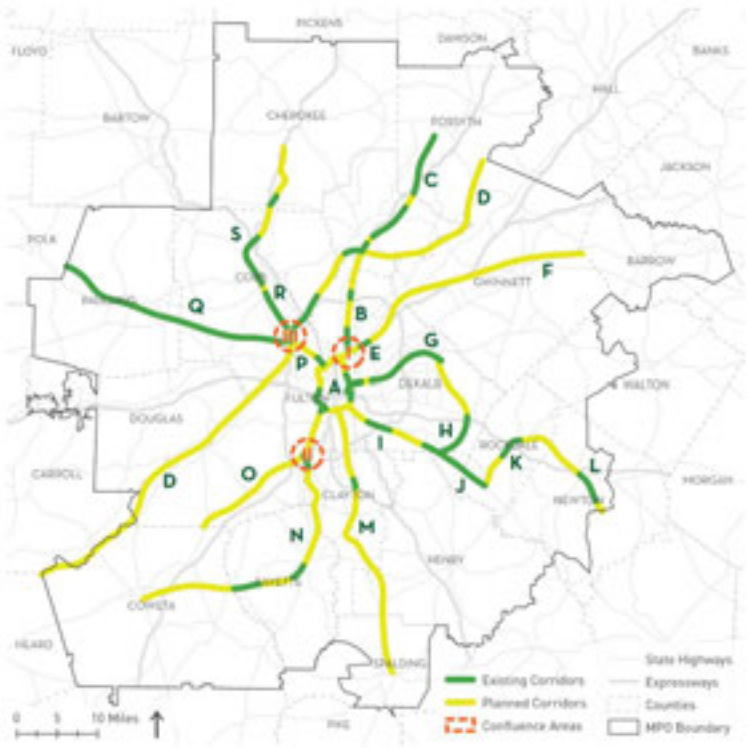


FIGURE 2.2 – ARC REGIONAL TRAIL VISION (SOURCE: ATLANTA REGIONAL COMMISSION)

As shown in Figure 2.2, Roswell is at the confluence of the Big Creek Greenway and PATH 400 regional trails. Most of the regional trail system exists in Roswell with the following three gaps:

- Connection between existing Riverside Trail/Old Alabama Trail and Big Creek Greenway
- Connection across the Chattahoochee River to Sandy Springs
- Connection from west end of Riverside Trail across Willeo Creek to Cobb County

Since the publication of the ARC's regional trail vision, the gap across Willeo Creek was filled with the completion of the Willeo Road Bridge. Additionally, the gap from the Big Creek Greenway will be filled following the completion of the multi-use trail along Riverside Road, which is anticipated to be complete in the spring of 2024.

As of 2021, Roswell's overall bicycle network consisted of 28.38 miles of bicycle lanes, 44.02 miles of bicycle-friendly shoulders, and 26.09 miles of paved shoulders. The City is incrementally increasing the mileage of bicycle facilities with each construction project and repaving project. Map 8 on the next page illustrates the existing bicycle network in the city.

Bike Boxes

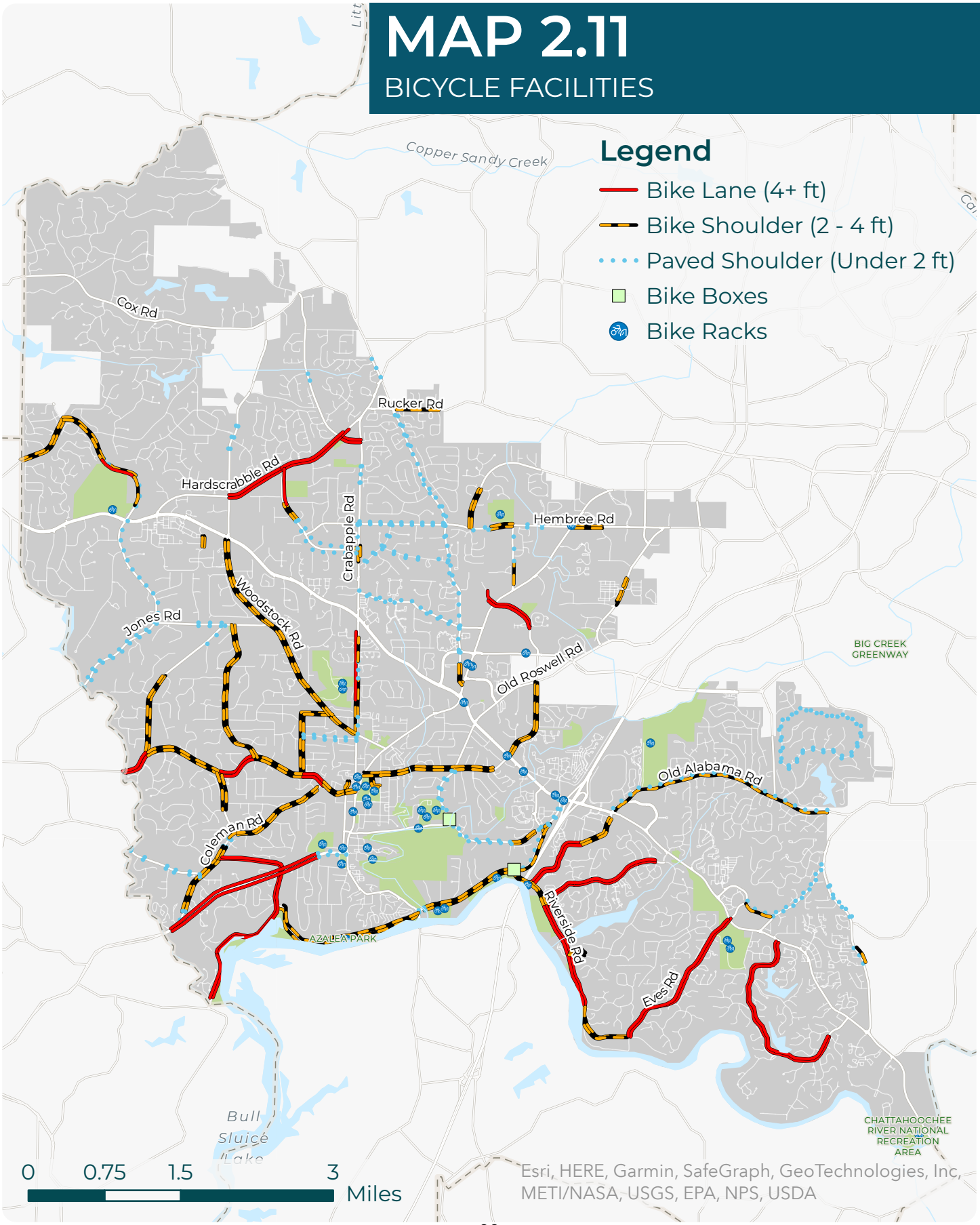
In 2009, the City installed the first “bike box” in Georgia at the intersection of Riverside Road and Dogwood Road. Bike boxes are designated spots where cyclists can wait at the front of the queue line for traffic lights, making them more visible to motorists stopped at the intersection. The bike box has a narrow green lane that leads cyclists up to the box and guides them in making turns. In addition, a push button activates the traffic signal so bicyclists do not have to wait for a vehicle to trigger the signal. The city has since added a bike box on Grimes Bridge Road eastbound at Oxbo Road.

Bike Parking

The Mayor and City Council identified funding for a Bicycle Rack Program in the FY 2013 budget. RDOT Staff developed a conceptual program based on previous guidance that included the approved green “R”-style rack. Staff developed a survey that was available during early 2013 asking citizens where they thought racks should be placed throughout the City. The top three answers were the Canton Street area, City parks, and major commercial areas. Staff developed a Tier based system for implementation focusing on Canton Street and the City parks. The racks included in the Canton Street area were painted black to blend with the surrounding streetscape elements.

For every vehicle, bike parking uses ten times less space than car parking, and the cost to build is anywhere from 30 to 300 times less. One study found that bike parking brought in five times the revenue of car parking; another found that customers who biked and walked to local businesses spent more money overall than those who drove there.

MAP 2.11
BICYCLE FACILITIES



2.9 Personal Transportation Vehicles

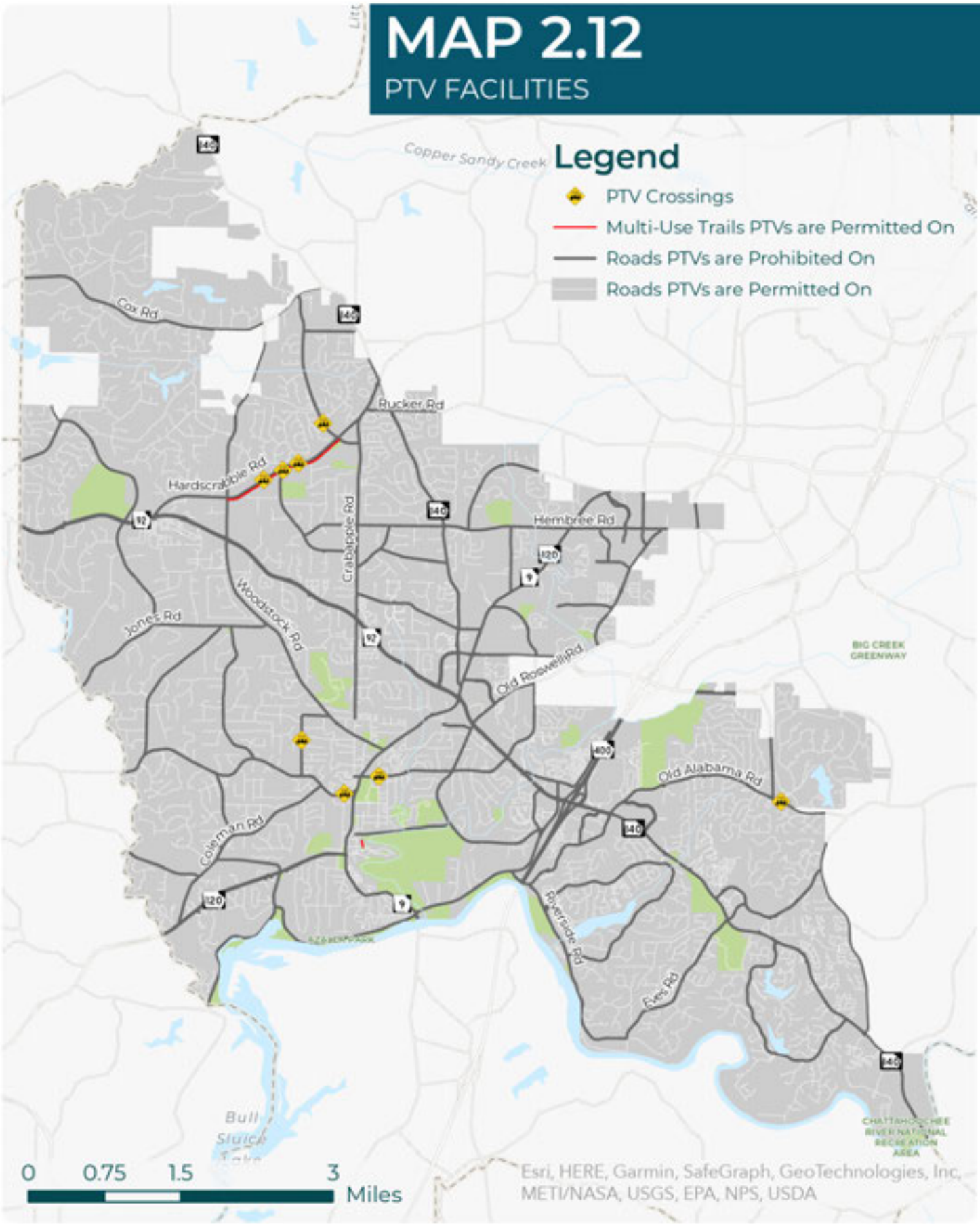
Passed in July 2015, the Personal Transportation Vehicles (PTV) ordinance allows registered vehicles to operate on any city street with a posted speed limit of 25 mph or lower. Prior to the ordinance, golf carts and other PTVs were only allowed on roadways within designated Golf Course Communities. While the passing of this ordinance significantly increases the number of streets that allow for golf cart use, many of these are within subdivisions bordered by higher speed roadways, limiting golf cart users' connectivity to other locales within the City. Residents are able request crossings over higher speed roadways as well as multi-use path access for approval and designation by Mayor and Council. Map 2.12 on the next page displays the existing street network for PTV access.

In May 2016, Mayor and Council authorized PTVs to cross Old Alabama Road to connect Pine Bloom Drive and Roxburgh Drive, and to cross Chaffin Road at the mid-block pedestrian crossing. This also authorized PTV access to the Hardscrabble multi-use trail upon its completion.

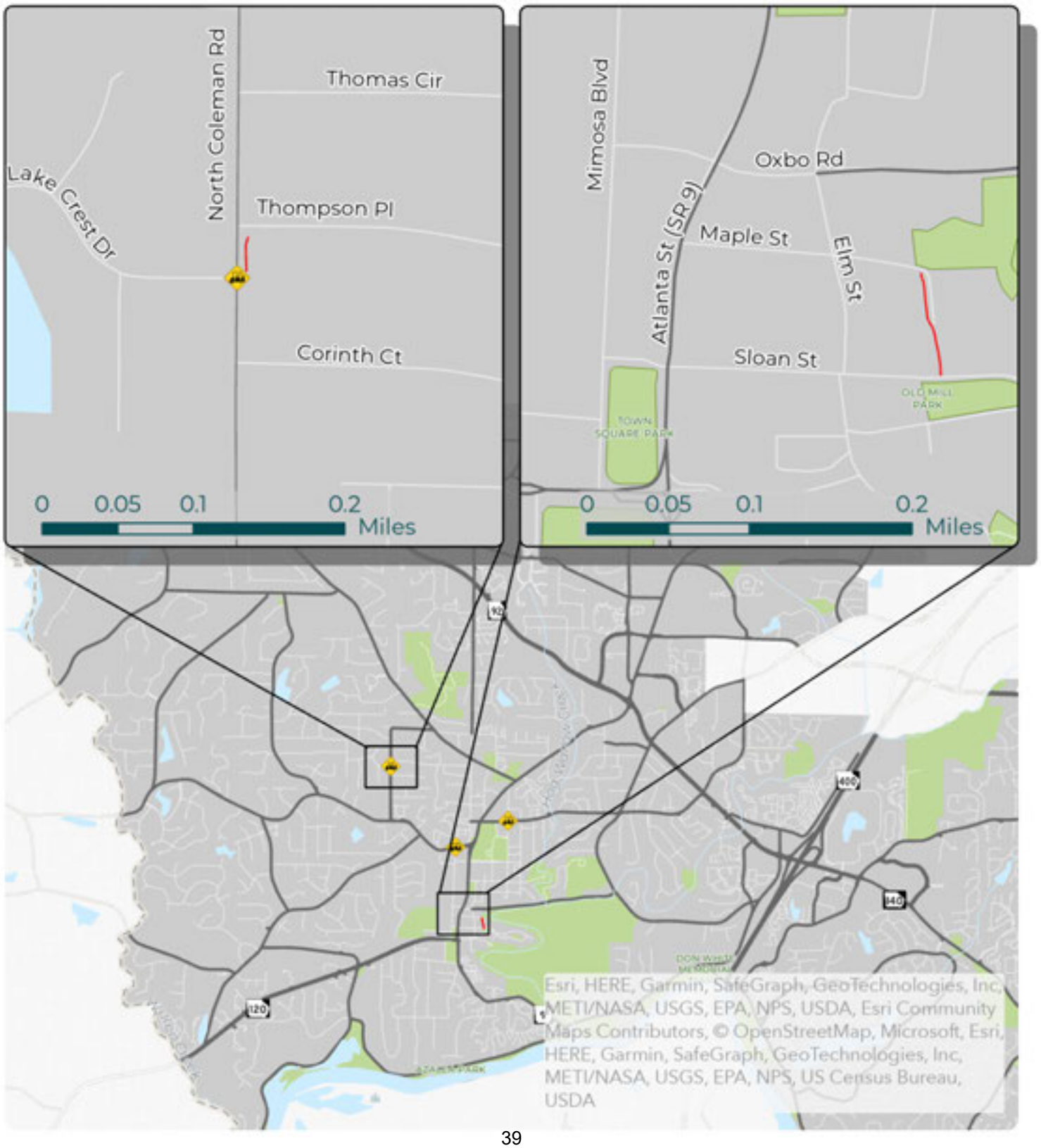
In May 2020, Mayor and Council authorized PTVs to cross North Coleman Road at Lake Crest Drive, and to use the newly constructed multi-use trail to access Thompson Place.

In September 2023, Mayor and Council authorized six new PTV crossing sites and designated the asphalt pathway between Maple and Sloan Streets as being PTV accessible.

PTV Crossing	From	To
Atlanta Street (SR9)	Oxbo Road	Oxbo Road
Chaffin Road	Multi-use Path	Multi-use Path
Etris Road	Edenwilde Drive	Magnolia Crescent Drive
Hardscrabble Road	Chaffin Drive	Multi-use Path
Hardscrabble Road	Wexford Club Drive	Multi-use Path
Magnolia Street	Mimosa Boulevard	Mimosa Boulevard
Multi-use Path	Sloan Street	Maple Street
Norcross Street	Forrest Street	Fraser Street
North Coleman Road	Lake Crest Drive	Thompson Place
Old Alabama Road	Roxburgh Drive	Pine Bloom Drive


MAP 2.12
PTV FACILITIES
Legend
PTV Crossings
Multi-Use Trails PTVs are Permitted On
Roads PTVs are Prohibited On
Roads PTVs are Permitted On
Copper Sandy Creek
Cox Rd
Rucker Rd
Hardscrabble Rd
Crabapple Rd
Hembree Rd
Woodstock Rd
Jones Rd
Old Roswell Rd
Old Alabama Rd
Coleman Rd
Riverside Rd
Evers Rd
BIG CREEK GREENWAY
CHATTAHOOCHEE RIVER NATIONAL RECREATION AREA
Bull Sluice
0 0.75 1.5 3 Miles
Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

MAP 2.12
PTV FACILITIES (INSET)



2.10 Electric Vehicle Infrastructure

In response to the growing demand for infrastructure, a number of public electric charging stations have been installed in the city. The City itself has installed chargers at City Hall, East Roswell Park and Roswell Area Park. Additional privately installed chargers as of November 2022 are located at:

- Regal Nissan on Holcomb Bridge Road
- Double Tree by Hilton Hotel on Holcomb Bridge Road
- BiasCorp on Old Alabama Road
- Roswell Mitsubishi on Alpharetta Highway
- 14 Stations at United BMW on Alpharetta Highway
- 3 stations at Georgia Power on Wills Road
- GM Dealership on Alpharetta Highway

Map 2.13 on the next page shows the location of all public chargers in the City as of October 2023.

Regional Transportation Electrification Plan

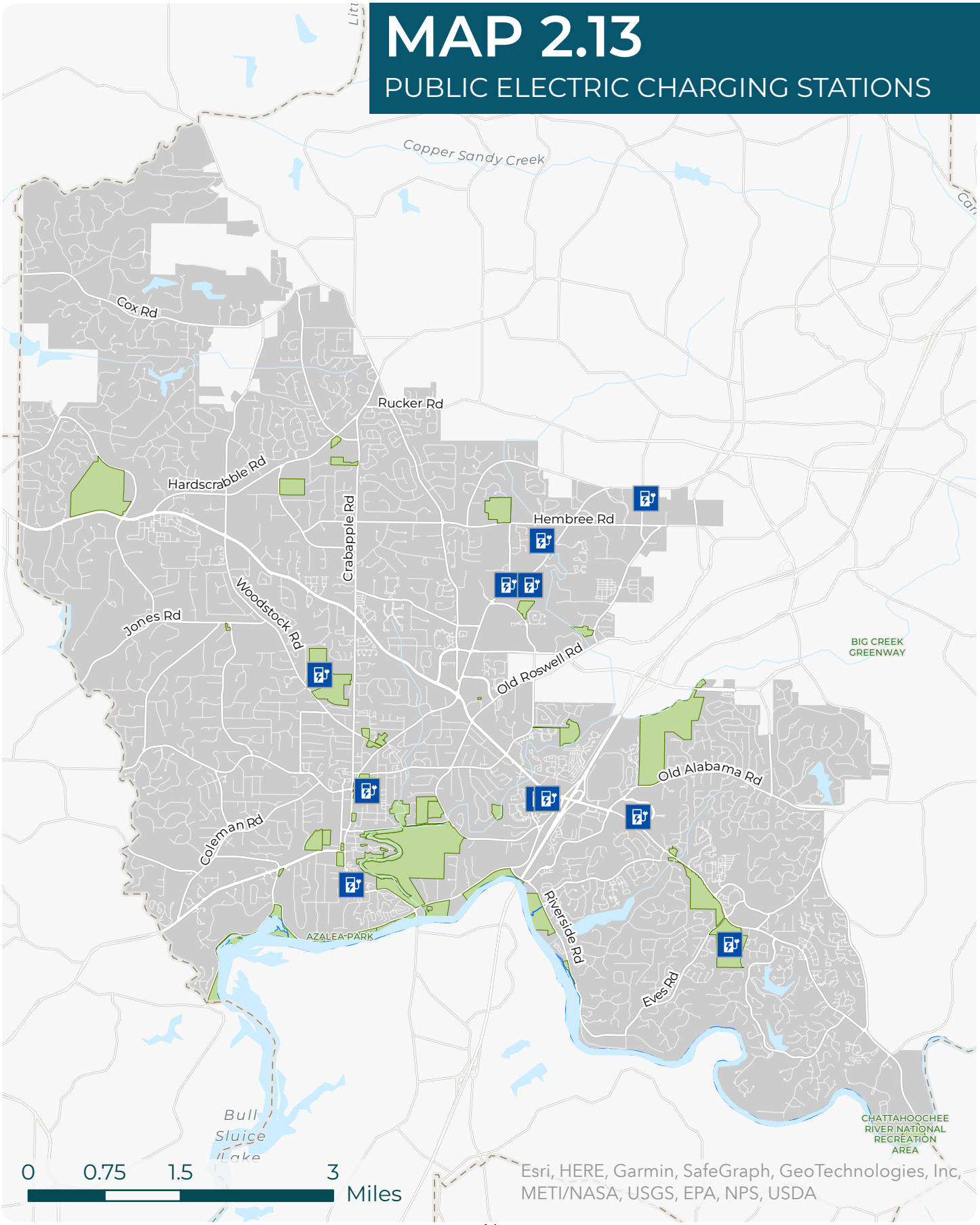
The Atlanta Regional Commission (ARC) has begun working on a Regional Transportation Electrification Plan (RTEP) to equitably accelerate the adoption of EVs, reduce transportation-related greenhouse gas emissions, and position the region's workforce to support the resulting investments. This plan is anticipated to be complete in Spring of 2024.

The ARC has also been working with Racetrac, Inc. and Volta Charging to create a Regional Charging and Fueling Infrastructure (CFI) grant application to request $14.8 million in federal funding to add 8-10 DC Fast Charging stations along the alternative fuel corridors, and Level 2 chargers at up to 100 commercial businesses that will be available free of charge.

Roswell should continue to explore opportunities and encourage private business to consider electric vehicle charging locations wherever possible. This may include additional locations at hotels or other commercial centers where shopping or dining is prevalent. Community Development and Economic Development staff within the City may also develop plans with guidance from the Mayor and Council to seek out new opportunities with future development.

MAP 2.13

PUBLIC ELECTRIC CHARGING STATIONS



2.11 PUBLIC TRANSPORTATION

The residents of Roswell are served by three MARTA bus routes within the city limits. The existing MARTA bus service can be described as follows:

Route 85 (Roswell/Mansell Road) starts at the MARTA North Springs rail station traveling north on SR 400 exiting at Northridge Road, travels north along Atlanta Street (SR 9) from the Chattahoochee River, past City Hall, through the Holcomb Bridge Road (SR 140) intersection and then east along Mansell Road to the MARTA Park/Ride lot at the Mansell Road/SR 400 interchange.

Route 142 (East Holcomb Bridge Road) starts at the Mansell Road Park & Ride Lot and travels south on Georgia 400 to Holcomb Bridge Road. The route runs east on Holcomb Bridge Road to Spalding Road and River Exchange Drive in Sandy Springs, then returns west. Passengers can transfer to bus routes at the Mansell Road Park & Ride Lot to connect to the North Springs Transit Station or other parts of North Fulton served by existing bus service.

Route 185 (Alpharetta/Holcomb Bridge Road) starts at the MARTA North Springs rail station traveling north on SR 400 exiting at Holcomb Bridge Road. During peak hours, the bus travels east along Holcomb Bridge Road (SR 140), turns right on Market Way, then makes a left on Market Boulevard, and turns west on Holcomb Bridge Road. During off-peak hours, the bus exits SR 400 and proceeds west on Holcomb Bridge Road, travels north along Alpharetta Highway (SR 9/120) through Alpharetta to Windward Parkway, terminating at the Windward Park/Ride lot at the Windward Parkway/SR 400 interchange.

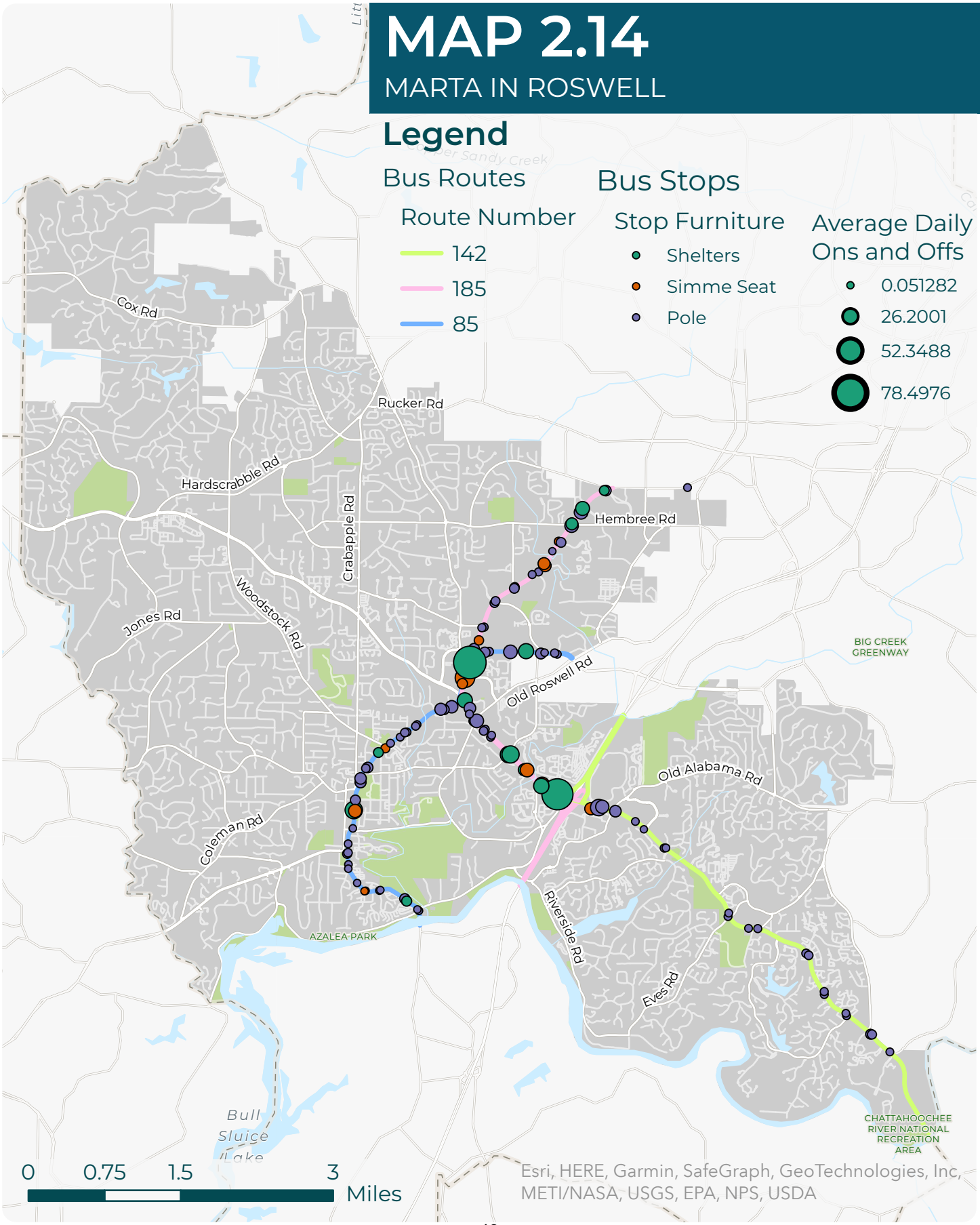
Map 2.14 on the next page illustrates the three MARTA bus routes and stops within the City.

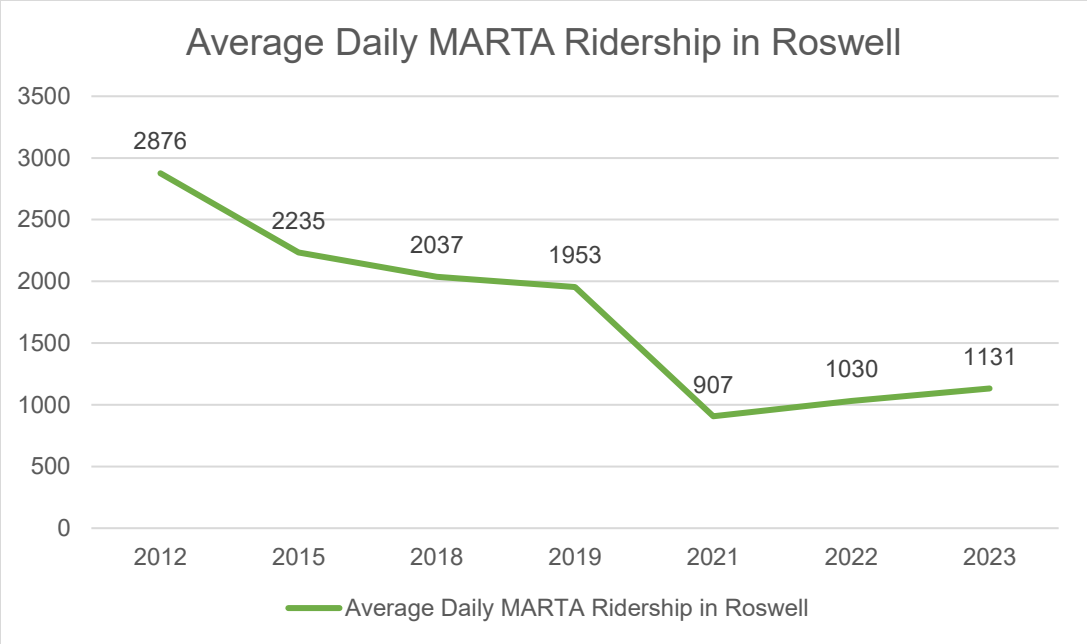
The three bus routes currently operate with 40-minute headways during peak hour on weekdays (60-minutes on the weekends) and 40-minute headways during off peak hours. The time of MARTA service is approximately 5:30 am until 12:30 am.

Looking back at historically ridership data provided by MARTA in 2012, from August 2012 and December 2012, the average weekday boarding's (including on and off) at bus stops within the City was 2,876. Between December 2017 and April 2018, the average weekday boarding's at bus stops within Roswell was 2,037 (including on and off). During similar period of 2021 the average daily weekday count of ons and offs was 913, which the decline was exacerbated by the COVID-19 pandemic and reduced service. Between December 2021 and April 2022, ridership went up slightly to 1,030 and have again climbed to 1,131 in 2023. The ridership trends between 2012 and 2023 indicates a 60% decline in bus ridership based on MARTA data.

MAP 2.14

MARTA IN ROSWELL



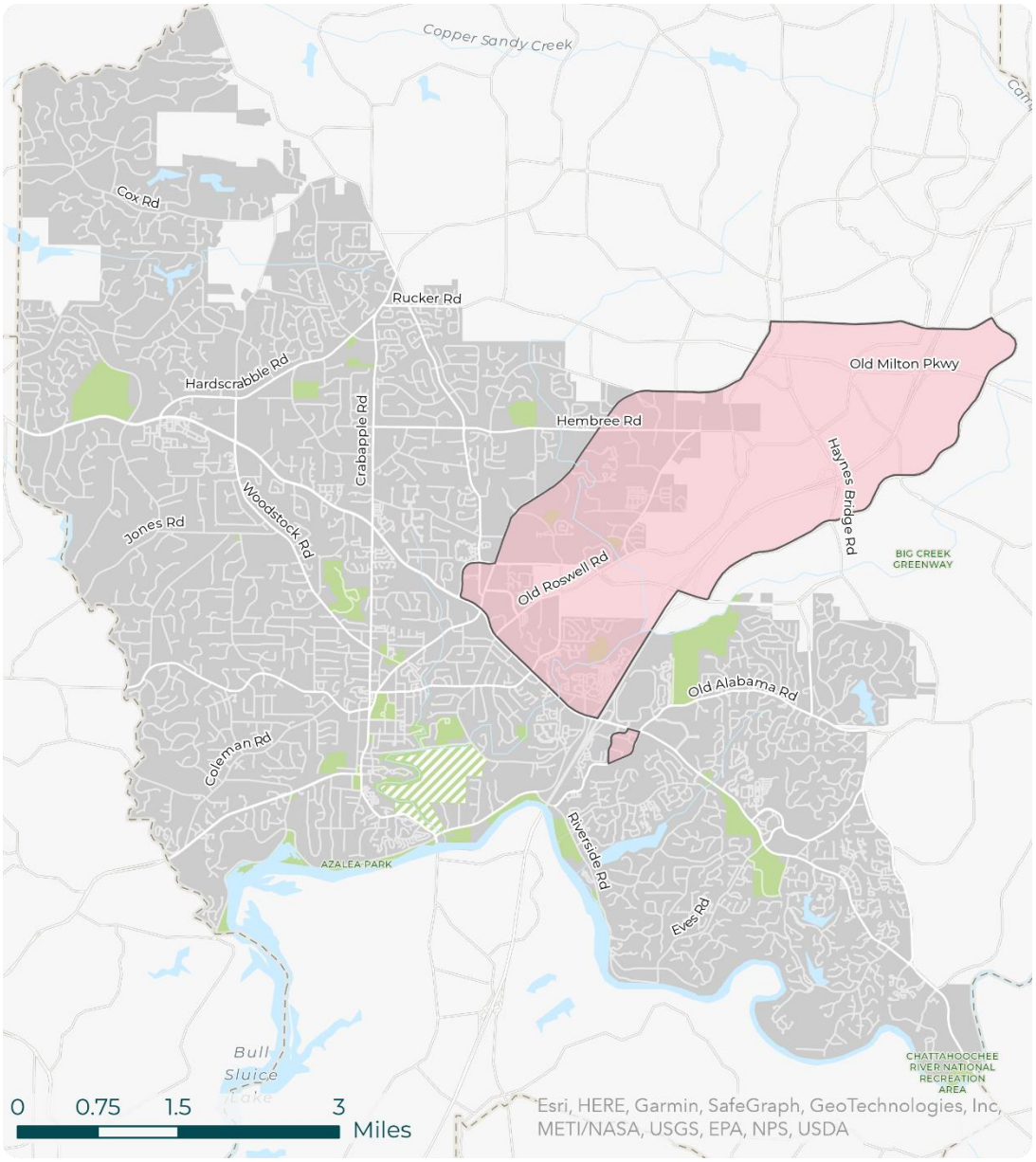


There are no park and ride lots in the city limits of Roswell. The closest location is the Mansell Road Park/Ride lot. This lot is located in the southwest quadrant of the Mansell Road/SR 400 interchange. In addition to Route 85, MARTA bus Route 140 (North Point/Mansell) provides service at the Park/Ride lot towards the MARTA North Springs rail station and service along North Point Parkway next to the North Point Mall.

2.11.1 MARTA REACH

From March to August 2022, MARTA partnered with Georgia Tech to roll out a 6-month pilot program of an on-demand rideshare service known as "**MARTA Reach**", where passengers could use an app to request transportation from their location to a MARTA bus stop or train station and vice versa. The service ran 6:00 am – 7:00 pm, Monday through Friday, at the cost of $2.50 with the ability to transfer to bus or rail. While service areas originally were focused in West Atlanta, Decatur, and Northeast Clayton County, a North Fulton service Area was added May 30 to provide connections in Roswell and Alpharetta.

MARTA and Georgia Tech analyze the results of the program earlier in 2023 and are working to determine how to best implement the program with the upcoming bus network redesign, with an update expected before Spring of 2024.



MARTA REACH NORTH FULTON SERVICE AREA (SOURCE: MARTA)

A review of transit on/off data provided by MARTA reveal that all current stops that meet MARTA's threshold for a shelter and/or seat currently have those facilities. In 2022-2023 MARTA added three new bus shelters on SR-9 near North Fulton hospital and two on SR-140/Holcomb Bridge Road at Warsaw Road and at Dogwood Road. The most heavily utilized stops within the City of Roswell still remain these locations:

- The Wal-Mart at Mansell Road and Warsaw Road
- Along SR-9/SR-140/Alpharetta Highway between Mansell Road and Holcomb Bridge Road/Crossville Road (SR-92) where routes #85/#185 temporarily merge
- At the Holcomb Bridge Road and S.R. 400 interchange

Two of the three existing MARTA bus routes (routes #85 / #185) are utilized regularly and serve the immediate areas along the routes; however, there are no fixed bus routes serving either the area west of SR 9 or the area along Old Alabama Road. A latent demand for transit service likely exists in additional areas of the City.

The pattern of development west of SR 9, or in areas away from transit routes, might be more suitable for a flex-service operation which provides flexible service with service to specific locations at fixed time, but does not have an exact route. Roswell will continue to track MARTA's process on this effort as their plans develop in 2024.

2.11.2 Paratransit

MARTA operates a paratransit service called "**MARTA Mobility**." This service is a reservation service that provides ADA complementary service to eligible persons with disabilities who are unable to board, ride or disembark from an accessible vehicle in MARTA's regular bus or rail service. The service is available from 5:00 am to 12:30 am seven days a week, including holidays, at a cost of $3.50 per person one-way. This service is restricted to the ADA-designated service areas in Fulton, DeKalb, and Clayton Counties along a ¾- mile corridor along any MARTA bus route or within a ¾-mile radius of any MARTA rail station. MARTA Mobility makes an average of 526 distinct trips a month throughout the entire service area. Finally, there appears to be latent demand for paratransit service in Roswell. This is evidenced by transit dependent residents (i.e. seniors, those without an automobile), living outside the MARTA bus service area.

2.12 Fulton County Transit Master Plan

In 2017, the Mayors of the 14 cities outside of Atlanta and the Fulton County Commission affirmed that a plan was needed to determine potential expansion of transit services in Fulton County. The Mayors and County approached ARC to help fund and manage the Fulton County Transit Master Plan, a collaboration of Fulton County, ARC, MARTA, and the 14 participating cities.

This effort first included a robust public engagement process to understand each community's and the County's transit priorities. For North Fulton County, the following order of priorities was determined through discussions with community leaders and public input:

- Provide faster, more reliable mobility and mitigate congestion
- Provide greater access to employment centers and destinations
- Enhance transportation options and access
- Catalyze economic development, investment, and placemaking
- Establish a framework for greater regional connectivity
- Maximize the return on investment

Using this input, the consultant team identified and confirmed the major activity centers to connect via future transit investments. To connect these activity centers, priority corridors were identified and presented as a first cut into potential transit recommendations. The priority corridors identified were:

- Georgia 400/SR 19
- I-285
- Holcomb Bridge Road/SR 92
- Old Milton Parkway
- SR 141
- Windward Parkway
- Segments of SR 9
- Johnson Ferry Road/Abernathy Road

The Transit Master Plan has also defined a market-based vision for the future of transit in Fulton County and four potential implementation scenarios that align to various levels of funding. The market-based scenario is a vision and projection that identifies the appropriate mode of transit along the priority corridors that connect Fulton County's employment and activity centers, determined through extensive data analysis, needs assessment, and community input. The corridors were identified through public input and analyzed regarding their level of congestion and need, transit feasibility, and guiding principles established by community leaders and residents.

The four scenarios illustrate the degree to which the market-based plan could be implemented at various funding levels, if Fulton County and its cities chose to self-fund the improvements primarily by a 40-year transit sales tax. While a transit sales tax was used to establish potential funding levels, it is not assured that future transit improvements will be funded or under what timeframe. Any progress toward implementation of the transit plan will require modifications to state law to allow for a funding mechanism of at least 20 to 40 years, a likely referendum of Fulton County voters, identification of the implementation agency and operator for transit services, and additional design and engineering.

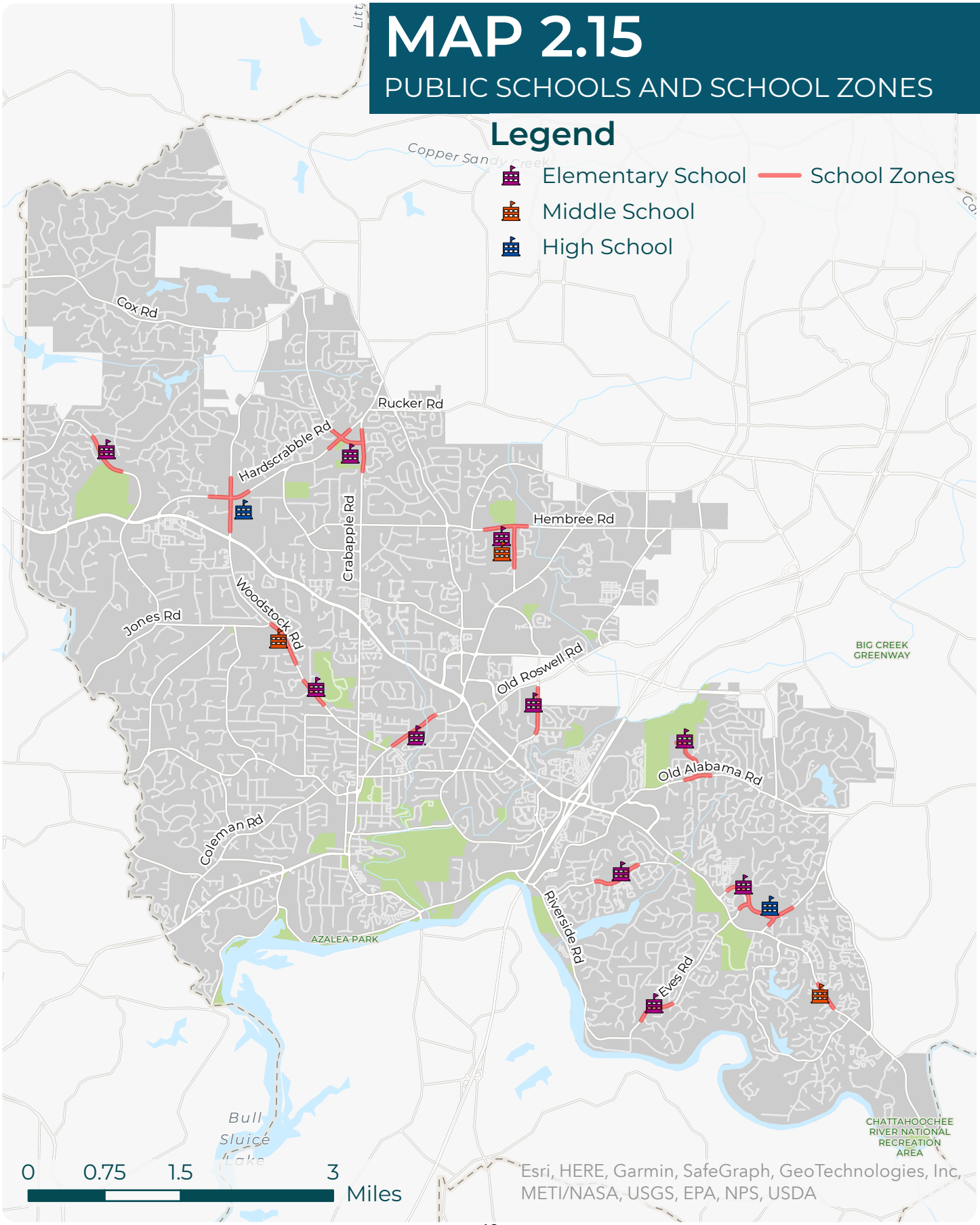
2.13 SCHOOL ZONES

The City of Roswell has a total of 15 public schools – ten elementary, three middle, and two high – and 13 private schools. Schools zones with time of day speed limit restrictions exist for each of the 15 public schools within the city. The most recent school zone was established in September 2021 for the relocation of Crabapple Middle School. Each of the school zones includes signage to alert drivers to the presence of school children and a reduced speed limit for a specified zone during the morning and afternoon periods. Currently, the city's speed limit ordinance regulates and enforces each of the school zone locations and reduced speed limits. While up to police discretion, in general, speeding in school zones can lead to higher fines for the driver. In January 2020, Mayor and Council approved adding speed cameras within the Vickery Mill Elementary school zone, along SR-9. Cameras were also added on Holcomb Bridge Road near Holcomb Bridge Middle School to promote safety. Staff continue to look at adding pedestrian signals as funding allows. Presenting two Pedestrian Hybrid Beacons (PHB) are in operation o SR-9 in front of Vickery Mill Elementary School and on Woodstock Road in front of Crabapple Middle School. Rectangular Rapid Flashing Beacon (RRFB) signals have also been installed at other schools including, Roswell North Elementary and River Eves Elementary, and near Sweet Apple Elementary.

Map 2.15 on the next page displays the existing schools and school zones within the City of Roswell.

MAP 2.15

PUBLIC SCHOOLS AND SCHOOL ZONES

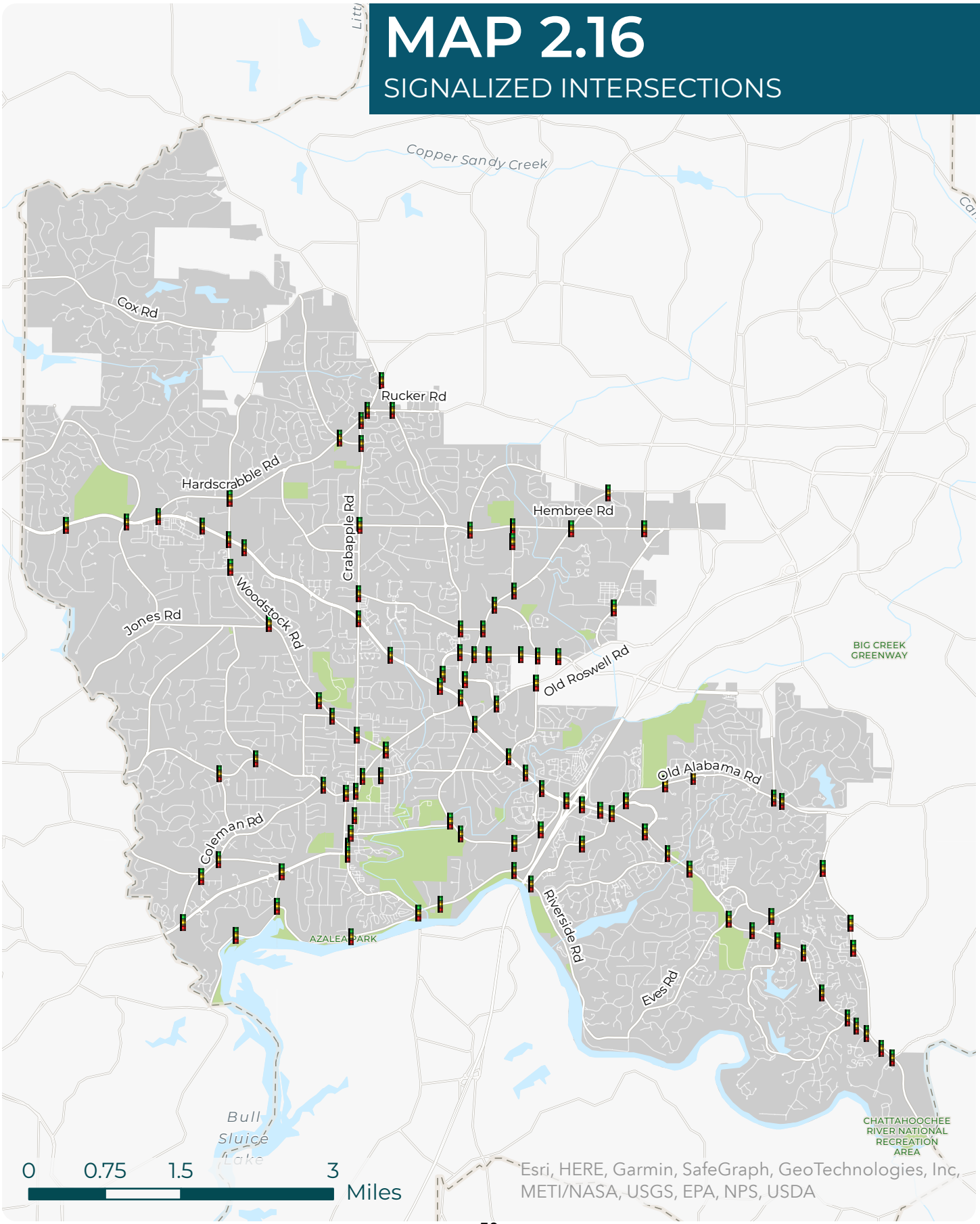


2.14 INTERSECTIONS

There are currently 103 signalized intersections within the city limits. Nearly all of the traffic signal displays are LED heads thereby reducing the city's annual electricity cost. As of 2023, the majority of the intersections have countdown pedestrian (CDP) signal heads, which provide a visual timer to countdown the amount of time remaining for a user to cross the street. The city maintains all of the traffic signals in the City.

MAP 2.16

SIGNALIZED INTERSECTIONS



The remaining intersections within the city are controlled by stop signs or roundabouts. Most intersections are side-street stop-controlled, but there are a number of all-way stop-controlled intersections as well. There are currently six roundabouts located at the following locations:

- Grimes Bridge Road and Warsaw Road/Norcross Street
- Old Roswell Road at the Encore Townhome development (north of Old Ellis Road)
- Houze Road (SR 140) and Hembree Road
- Hardscrabble Road and Chaffin Road
- North Coleman Road mini roundabout
- Old Alabama Road at the RiverWalk Townhome development (north of Riverside Road)

Potential roundabout candidate locations have been identified with some proceeding with design while others remain in the conceptual stage. Table 2.4 below shows the list of potential roundabouts and their current status. Further concept analysis will need to be done before any roundabout is selected as the final alternative. The Mayor and Council will also provide guidance before an alternative is chosen on future projects.

Intersection	Current Traffic Control	Status
Coleman Road at Willeo Road (west)	Signal	Concept; Unfunded
Crabapple Road at Hembree Road	Signal	Concept; Unfunded
Grimes Bridge Road at Dogwood Road/Old Dogwood Road	Signal	Concept; Unfunded
Hardscrabble Road at King Road	Signal	Concept; Unfunded
Houze Road (SR 140) at Houze Way	Signal	Concept; Unfunded
Houze Road (SR 140) at Saddle Creek Parkway	Side Street STOP	Concept; Unfunded
Nesbit Ferry Road at Scott Road	Signal	Concept; Unfunded
Norcross Street at Frazier Street/Forrest Street	Signal	Concept; Unfunded
Pine Grove Road at North Coleman Road	Side Street STOP	Concept under review via TSPLOST 2 project
Pine Grove Road at Hightower Road	Signal	Concept under review via TSPLOST 2 project
Pine Grove Road at Shallowford Road	Side Street STOP	Concept under review via TSPLOST 2 project

Riverside Road east of SR 9	N/A	In Design; part of Historic Gateway project
Riverside Road at Dogwood Road	Signal	Roundabout concept not selected within TSPLOST project based on input from TAC
SR 9/Atlanta Street at Chattahoochee/King Streets	Side Street STOP	In Design; part of Historic Gateway project
SR 9 at Jones Street	Side Street STOP	In Design; part of Historic Gateway project
Woodstock Road at Roswell Area Park Entrance	Signal	Concept; Unfunded

TABLE 2.4 – POTENTIAL ROUNDABOUT CANDIDATE LOCATIONS

2.15 AUTOMATED TRANSPORTATION MANAGEMENT SYSTEMS (ATMS)

Automated Transportation Management Systems, or ATMS, uses advanced technology such as an adaptive coordinated traffic signal system, traffic monitoring (CCTV) cameras, and pre-trip and en-route traveler information to improve travel conditions. ATMS maximizes the efficiency of the existing roadway and helps reduce the time required to clear incidents from the roadway. In addition, the City has access to GDOT's 511 System allowing travelers to check traffic conditions prior to beginning their trips and enabling informed travel route decisions to be made. ATMS can be implemented for a fraction of the cost of road widening. The benefits of ATMS are better travel information, quicker incident clearance, fewer traffic jams and improved traffic flow, safer travel, improved air quality, and energy savings.

The City of Roswell collaborates with, Gwinnett County, Sandy Springs, Alpharetta, and the Georgia Department of Transportation to improve traffic coordination and management where corridors cross-city limits. The project was completed in 2013. In 2015, the City brought online ATMS improvements along Holcomb Bridge Road (SR 140) from Barnwell Road to SR 9, and SR 92 from SR 9 to the Cobb County line.

2.16 DEVELOPMENT POLICIES

2.16.1 UNIFIED DEVELOPMENT CODE

The City of Roswell engaged a team of planning and zoning consultants to prepare a Unified Development Code (UDC). It replaced the previous zoning ordinance, subdivision regulation, and other scattered ordinances, rules and regulations and combines them into one master regulatory document. In order to position itself for growth that improves Roswell's quality of life, preserve its historic character, and fulfills the community vision, the UDC addresses the following goals:

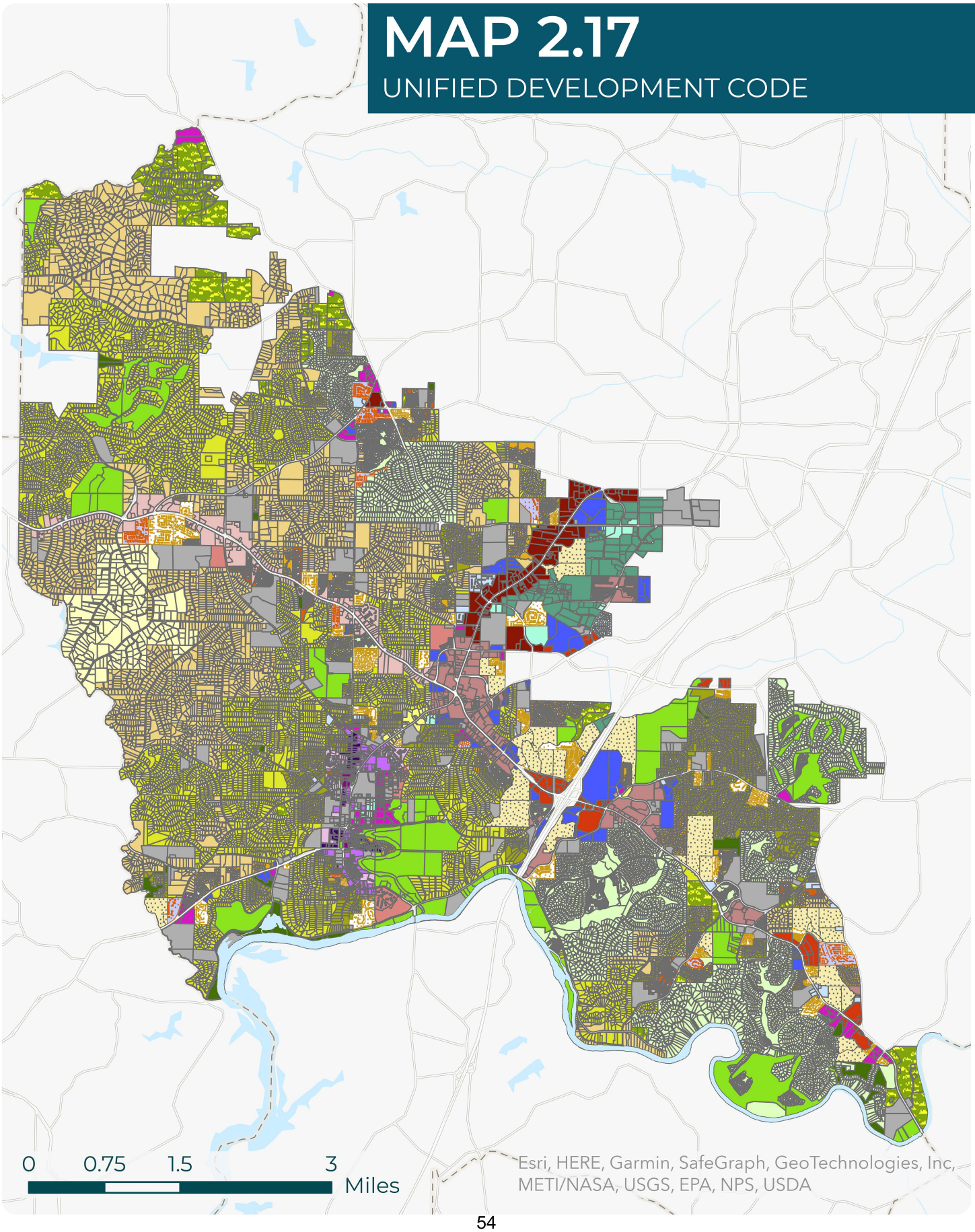
- Preserve the character of the City's existing historic districts
- Protect existing neighborhoods citywide
- Shape redevelopment along the City's corridors in a way that improves aesthetics and increases housing options and services for the City's aging population
- Enhance the design quality of new development citywide

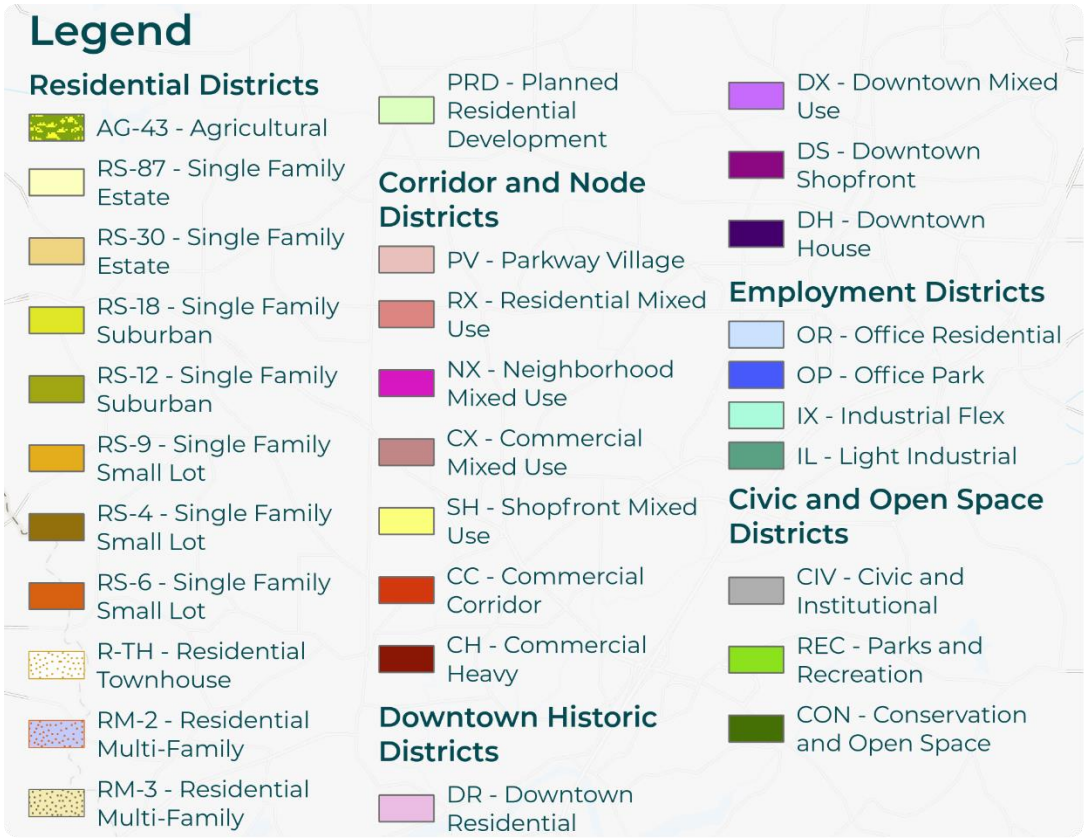
- Incorporate best practices in stormwater management and environmental protections
- Support multimodal transit, progressive parking standards and “complete streets” concepts
- Improve the quality of new public spaces in redevelopment sites
- Promote public safety and emergency vehicle response
- Incorporate existing City initiatives such as Imagine Roswell, the Strategic Economic Development Plan, the Historic Gateway Master Plan, and other planning efforts

Map 2.17 on the next page shows the Unified Development Code for the City of Roswell.

MAP 2.17

UNIFIED DEVELOPMENT CODE




Legend
Residential Districts
AG-43 - Agricultural
RS-87 - Single Family Estate
RS-30 - Single Family Estate
RS-18 - Single Family Suburban
RS-12 - Single Family Suburban
RS-9 - Single Family Small Lot
RS-4 - Single Family Small Lot
RS-6 - Single Family Small Lot
R-TH - Residential Townhouse
RM-2 - Residential Multi-Family
RM-3 - Residential Multi-Family
PRD - Planned Residential Development
Corridor and Node Districts
PV - Parkway Village
RX - Residential Mixed Use
NX - Neighborhood Mixed Use
CX - Commercial Mixed Use
SH - Shopfront Mixed Use
CC - Commercial Corridor
CH - Commercial Heavy
Downtown Historic Districts
DR - Downtown Residential
DX - Downtown Mixed Use
DS - Downtown Shopfront
DH - Downtown House
Employment Districts
OR - Office Residential
OP - Office Park
IX - Industrial Flex
IL - Light Industrial
Civic and Open Space Districts
CIV - Civic and Institutional
REC - Parks and Recreation
CON - Conservation and Open Space

2.16.2 CONNECTIVITY PROGRAM

In 2016, City Council provided funding for a Connectivity Program. The intent of the Connectivity Program is to eliminate the mystery surrounding how and where connections would be desired throughout the city. *In addition, the program suggests where analysis should be done by developers as a requirement of development review for consideration and potential approval.* The program's goal and central tenant is that alternative routes should connect residents to desired services safely.

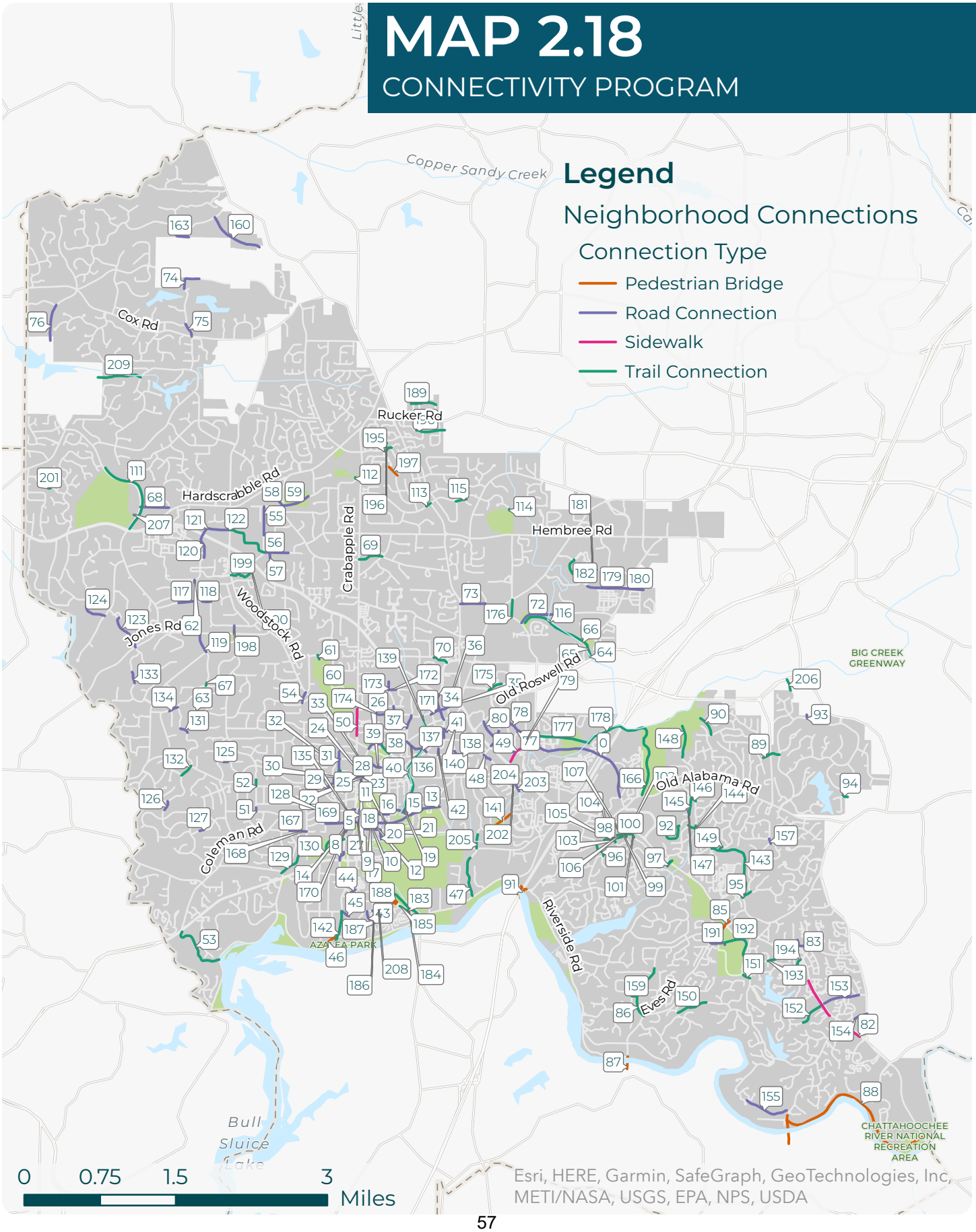
Based upon staff analysis, alternative routes increase safety by reducing trips on the heavier traveled automobile network and thereby reduce the number of accidents. Alternative routes, such as a pedestrian trail, benefit business, residents, and visitors by reducing trip time and cost. In addition, alternative routes can provide a positive complement to the commonly held community desire to live on a cul-de-sac without the negative impact of a road or having to drive to individual destinations. Traditionally, it is common to think about routes to pass through, but in the Connectivity Program it is about how to get to a desired destination.

Desired service areas include work, shopping centers, grocery stores, restaurants, offices, government offices, post offices, utility offices and schools, as well as social and recreational facilities including parks, libraries, historical sites, open spaces, gyms, arts centers, cultural art and adult recreation centers. Subcomponents were identified and connections identified through a two year process and each link should be evaluated for viability and desirability as development is proposed.

The pros and cons of the program are that while it does improve quality of life by reducing trips and accidents, it does involve retrofitting areas of the community that can be expensive. Recent success stories include restriping Elizabeth Way from a one-way to a two-way road and the Eves Road driveway into East Roswell Park. Currently under construction are the Goulding Place-Windy Pines Trail connection, the Oxbo Road One-Way Pair, and Sun Valley Extension, Phase 1, which will provide the city with three new roadways to connect origins and destinations and taking vehicular traffic away from congested roadways and intersections. Specific places that have been studied include Riverwalk, Canton Street and South of Canton Street (SOCA) along Oak Street. New development has provided new shopping areas and focal points as well including Sweet Apple Village and East Village. The City's Livable Center Initiatives (LCI) plans call for expansion and/or redevelopment of several areas of the City including Canton Street, Town Square, Midtown Area and the Historic Gateway corridor.

The Connectivity Program includes an overall "Connections" and "Projects" map identifying a citywide alternative network using existing routes and a projects map of the new neighborhood links for consideration in development. The project list and maps are intended to be living documents to be modified as additional connections are identified through the development process or as appropriate. Map 2.18 on the next page shows the connectivity projects map previously outlined for the City of Roswell for future development to consider or follow.

MAP 2.18
CONNECTIVITY PROGRAM



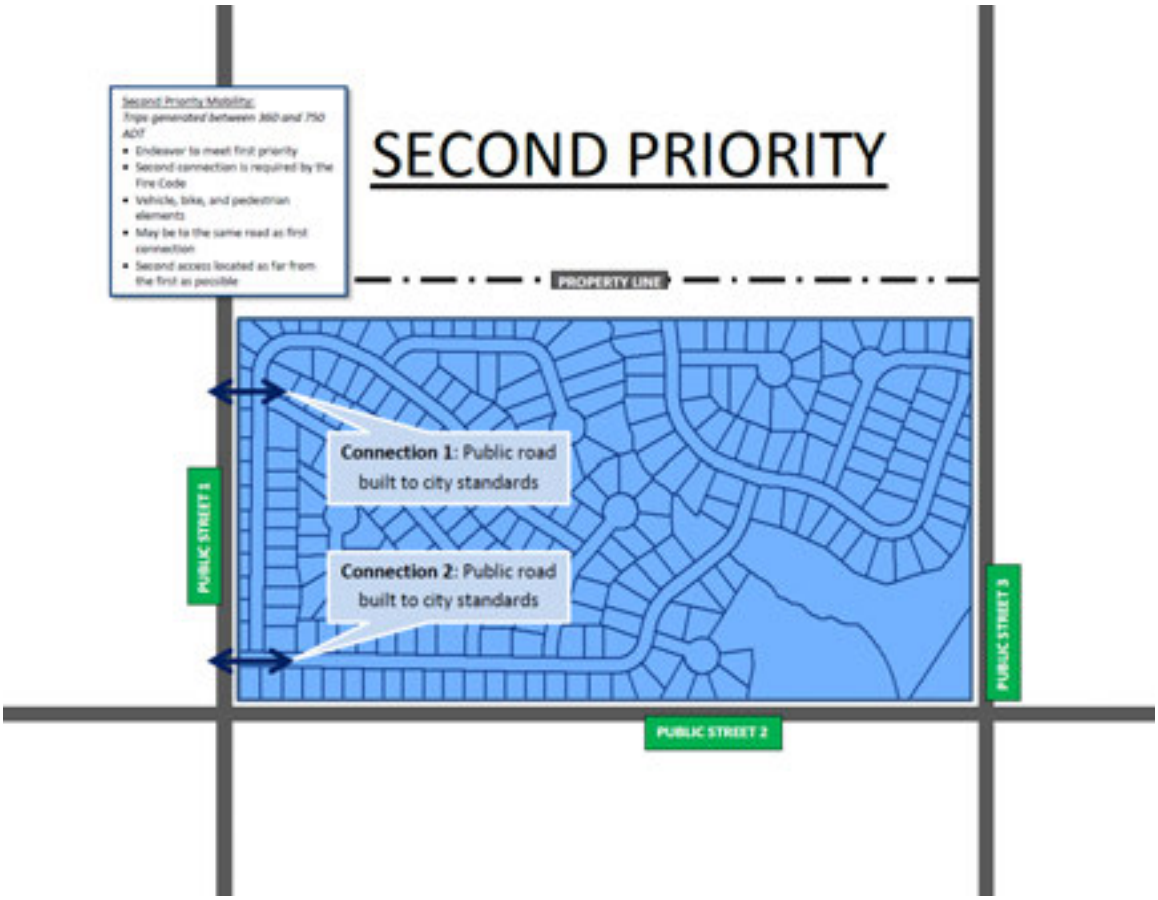
2.16.3 SECOND CONNECTION

Adopted to the UDC in March 2016, the second connection policy requires all new developments to provide two separate roadway connections, ideally on two different roads.

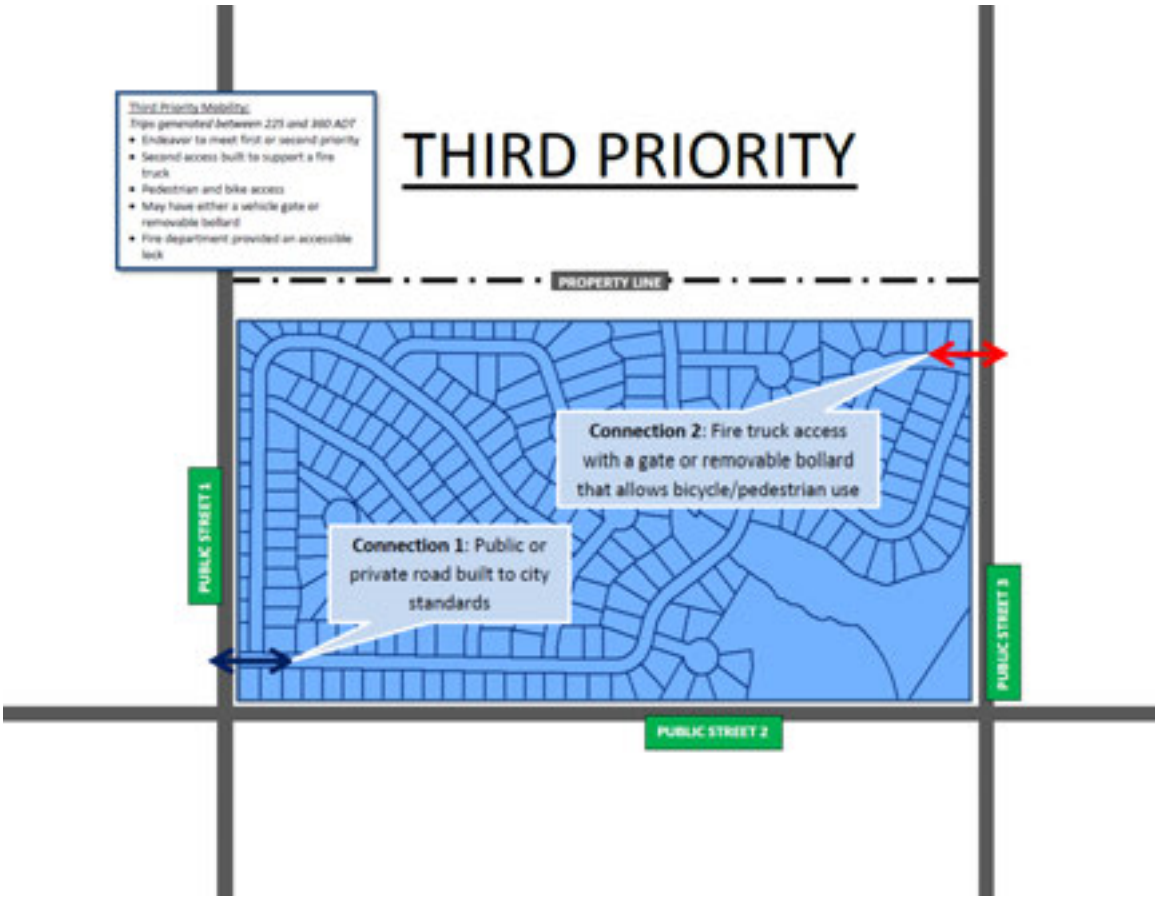
A second road connection significantly improves public mobility and safety, especially during times of heavily congested traffic, fires, flooding, and other emergencies that may block a subdivision's only entrance. Lacking a second entrance also puts physical strain on the pavement at the entrance, resulting in more frequent pavement repairs. In instances when a second road connection is not ideal or feasible, a second connection for PTV's, bicycles, and/or pedestrians may be considered.

FIRST PRIORITY – COMPLETE & USABLE ROAD CONNECTION TO 2ND ROAD

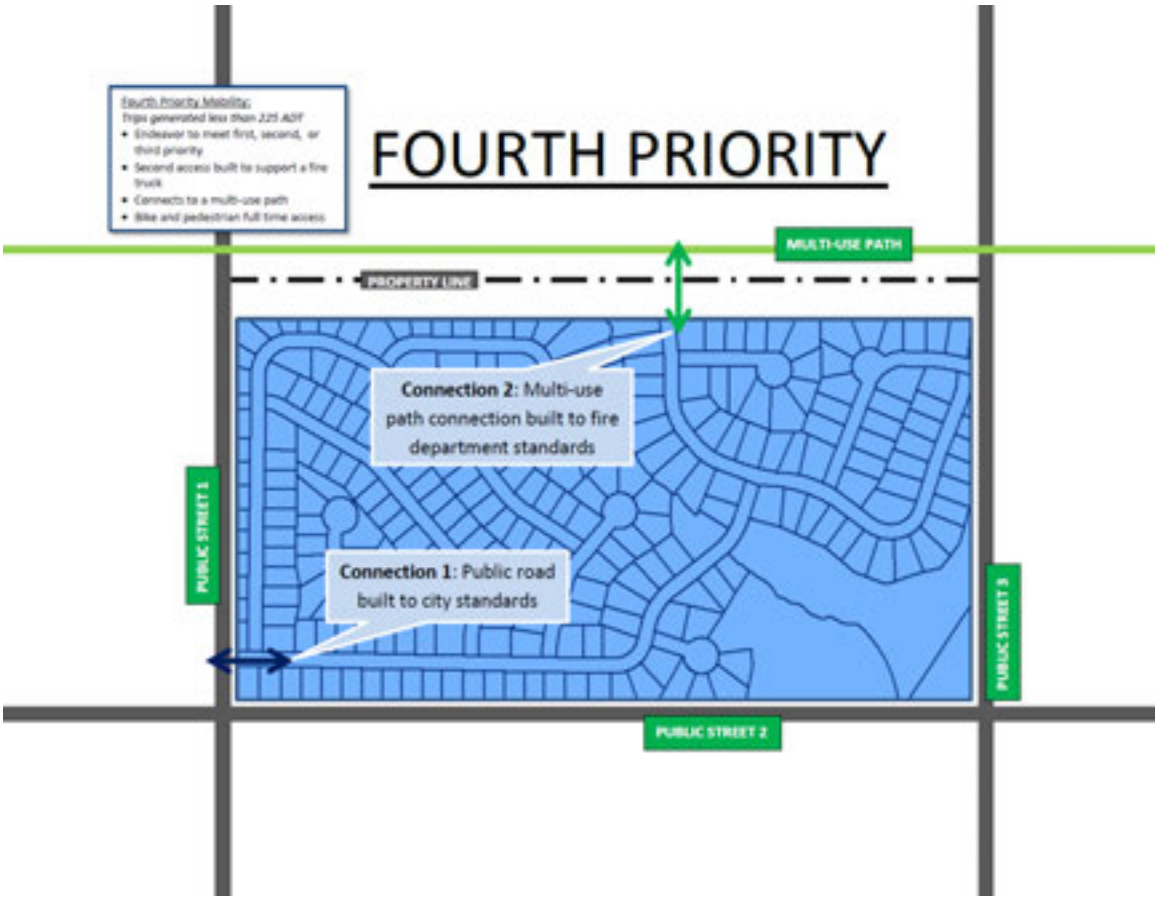
SECOND PRIORITY – COMPLETE & USABLE ROAD CONNECTION ON SAME ROAD



THIRD CONNECTION – FIRE TRUCK CONNECTION ON 2ND ROAD WITH PEDESTRIAN & BICYCLE ACCESS



FOURTH PRIORITY – MULTI-USE PATH CONNECTION WITH FIRE TRUCK ACCESS



This policy on second connections was adopted by the Roswell City Council in March 2016.

2.16.4 CONSTRUCTION SPECIFICATIONS

Section 2 of the *City of Roswell Standard Construction Specification* provides the specifications to potential developers who want to do business with the City of Roswell. These specifications address:

- Minimum right-of-way widths
- Paving and curb specifications
- Maximum permissible grades, vertical and horizontal alignment specifications
- Minimum vertical and horizontal visibility requirements
- Driveway access specifications
- Required bike lane addition to the existing roadway along the property frontage

The Transportation Department along with Community Development and other departments involved in the plan review process are constantly working with developers to help make the City of Roswell a more pedestrian and bicycle friendly community.

In March 2009, the City Council adopted a “Complete Streets” policy. Complete Streets are transportation corridors that accommodate all modes of transportation including bicycles, pedestrians, and transit vehicles. The policy follows the revision of the American Association of State Highway Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities as well as a recommendation from the Atlanta Regional Commission’s Atlanta Region Bicycle and Pedestrian Walkways Plan.

The City of Roswell was the first City in Georgia to adopt a stand-alone Complete Street policy. Currently, there are nearly six miles of Complete Streets in the City with another two miles in design and scheduled for construction in the next 2-3 years. The Mayor and Council set policy for the City and reserve the right to modify a project’s concept based on new information, new cost information to ensure a project remains in budget, or other recommendations by staff.

2.17 LCI Study Areas

The city has two previous Livable Centers Initiative (LCI) Study areas: Roswell Town Center/Atlanta Street and the Midtown Roswell.

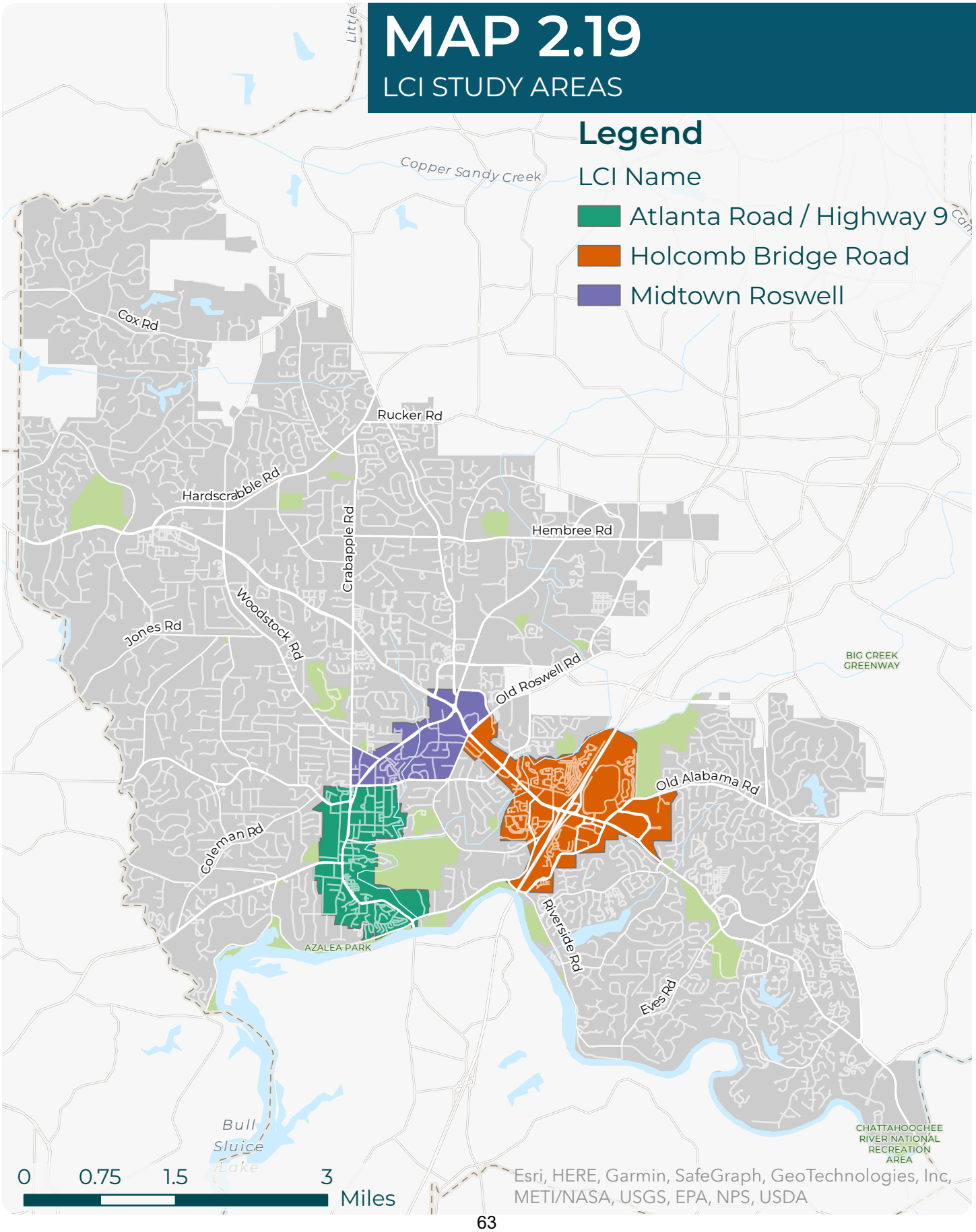
The *Roswell Town Center/Atlanta Street LCI* study was approved in April 2008 and had its five year update completed in 2013. The Atlanta Street corridor from the Chattahoochee River to Norcross Street was studied to identify land use, transportation, and design solutions that will reinvigorate the area and improve the quality of life for Roswell residents and business owners along this historic corridor. Currently, the city is working on a concept, design, and environmental document for a series of projects to remove the reversible lane along the Atlanta Street corridor from the river to Marietta Highway (SR 120). In addition, the project will replace a structurally deficient bridge on Riverside Road over Vickery Creek and improve the intersection of Riverside Road/Azalea Drive and Atlanta Street. Environmental Work is proceeding and in 2016 two agreements were reached with GDOT, FHWA, and the National Park Service regarding various conditions of construction remediation as well as improvements to the NPS property in exchange for necessary ROW. Finally, the five year update led to the development of the Roswell Green project which intends to united City Hall with the Canton Street corridor including reconfiguration of the S.R.9/120-Canton Street-Magnolia Street intersection and inclusion of a pedestrian underpass between Canton Street and the governmental complex.

The *Midtown Roswell Redevelopment Plan* was approved in January 2003 and is now formally incorporated into Roswell’s Comprehensive Plan. Midtown Roswell extends from Norcross Street to just south of Holcomb Bridge Road (SR 140) and is heavily commercialized.

In 2013, the City applied for the Holcomb Bridge Corridor Study to be accepted as a third LCI area from ARC. This designation was granted and the City has been granted an LCI Supplemental Study for the Holcomb Bridge LCI to examine west side of the Holcomb Bridge Road / SR 400 interchange. Map 2.19 on the next page shows the LCI study areas for the City of Roswell.

MAP 2.19

LCI STUDY AREAS



2.18 Transportation Demand Management Strategies

Several commuting options exist in the greater metro area. *Georgia Commute Options* is a service that matches commuters with potential carpool partners and/or to vanpools. *Georgia Commute Options* operates and manages the Regional Guaranteed Ride Home (GRH) Program for commuters using any mode other than driving alone or teleworking for instances when unscheduled events arise. The Atlanta Regional Commission (ARC) in partnership with the Clean Air Campaign and regional Transportation Management Associations (TMAs) operate *Georgia Commute Options* and is funded with federal Congestion Mitigation and Air Quality (CMAQ) funds. Broadly speaking, the program aims to increase transportation efficiency, reduce traffic congestion, and improve air quality. More information on the program can be found at www.gacommuteoptions.com. The City of Roswell does not operate a commuting program.

2.19 Travel Patterns

In 2023, Roswell DOT staff analyzed average daily traffic counts to determine how many vehicles are entering and exiting the City on an average day. The results for 2021 show nearly 234,000 cars enter Roswell daily and over 227,500 vehicles exit Roswell daily. The net difference between entering and exiting each day is 2.7%. While no analysis can show the exact number of vehicles entering/exiting each day, this analysis can provide insight in to how trips are distributed across the transportation network. This in turn provides another input available to staff during the development and selection of projects for the Transportation Master Plan.

Streetlight Insights uses anonymized connected vehicle location data to visualize traffic volumes and patterns. Roswell DOT staff used this program to determine the percentage of traffic traveling through Roswell, whose trips do not start or end within the city limits. Using data from 6:00 AM until 10:00 AM and 3:00 PM until 7:00 PM during the months of September and October 2022, the program modeled what the average traffic volume would be on any given day during this time frame, and what percentage of this traffic would be “cut through traffic”. The streetlight data allowed staff to look at routes and offer potential solutions to likely slow the average traffic speed down. This was important to see how vehicles pass through to reach their destinations that may be outside of Roswell. One key example was how large amount of traffic get to (and across) the Chattahoochee River, which routes are they using to funnel to the SR-9, SR-400, or SR-140 river crossings each weekday. Another core route is how commuters access SR-400 (both north and south) access jobs and which routes in Roswell they use.

Vehicles entering and exiting the City on selected roadway corridors are shown in Map 2.20 on the next page and following that Table 2.5 shows the total inbound/outbound traffic volumes by selected corridors.

MAP 2.20

CUT-THROUGH TRAFFIC

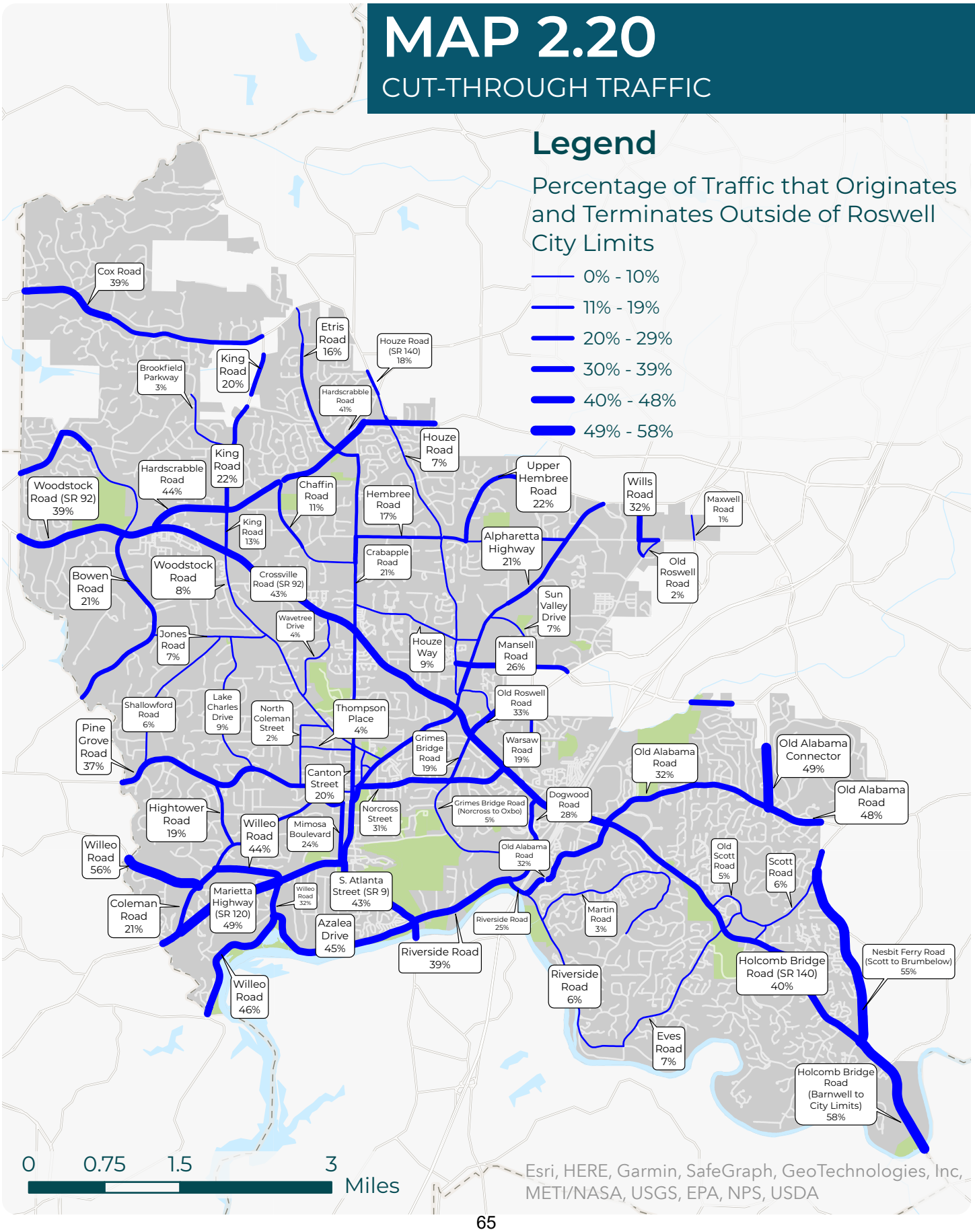


TABLE 2.5 – TOTAL INBOUND/OUTBOUND TRAFFIC VOLUMES BY SELECTED CORRIDOR

LOCATION	INBOUND ADT	OUTBOUND ADT	ORIGIN/ DESTINATION
SR 120 - E. of City Limits	***12,580***	***12,977***	Cobb Co.
Willeo Rd-E. of City Limits	***3,239***	***3,084***	Cobb Co.
Pine Grove Rd-City Limits to Chickering Pkwy	***5,269***	***5,304***	Cobb Co.
Jones Rd-E. of City Limits	***2,798***	***2,916***	Cobb Co.
SR 92 (Woodstock Rd)-City Limits to Bowen/Mountain Park Rd (Estimate Originating from Cobb Co.)	***11,456***	***11,146***	Cobb Co.
SR 92 (Woodstock Rd)-City Limits to Bowen/Mountain Park Rd (Estimate Originating from Cherokee Co.)	***16,810***	***17,120***	Cherokee Co.
Old Mountain Park Rd	***1,614***	***1,524***	Cobb Co.
Cox Rd-City Limits to Lum Crowe Rd	***2,049***	***1,988***	Cherokee Co.
SR 140 (Arnold Mill Rd) - Crabapple Rd to City Lim	***9,080***	***9,180***	Milton
Rucker Rd-SR 140 to City Limits	***7,802***	***7,400***	Alpharetta
Upper Hembree Rd Stratford to City Limits	***2,189***	***2,162***	Alpharetta
SR 9 - Hembree Rd to City Limits	***13,025***	***12,816***	Alpharetta
Wills Rd-SR 9 to Hembree Rd	***3,474***	***3,334***	Alpharetta
Mansell Rd - Warsaw Rd to Old Roswell Rd	***16,461***	***15,762***	Alpharetta
Old Roswell Rd - Warsaw Rd to Commerce Pkwy	***6,077***	***5,972***	Alpharetta
SR 400 NB Inbound/SB Outbound	***23,220***	***24,920***	Sandy Springs
SR 400 SB Inbound/NB Outbound	***13,590***	***14,770***	Alpharetta
Old Alabama Connector	***6,503***	***6,014***	Alpharetta
Ascot Ln (Willow Springs)	***318***	***512***	Johns Creek
Old Alabama Rd-Old Alabama Connector to City Limits	***9,691***	***9,748***	Johns Creek
Nesbit Ferry Rd-City Limits to Scott Rd	***11,119***	***10,421***	Johns Creek
SR 140 (HBR) - City Limits to Barnwell Rd	***26,358***	***25,595***	Gwinnett Co.
SR 9 - City Limits to Riverside/Azalea Rd	***17,810***	***17,015***	Sandy Springs
Willeo Rd - City Limits to Riverside/Azalea Rd	***3,448***	***3,758***	Cobb Co.

** - this figure includes traffic volume from Cobb and Cherokee Counties.

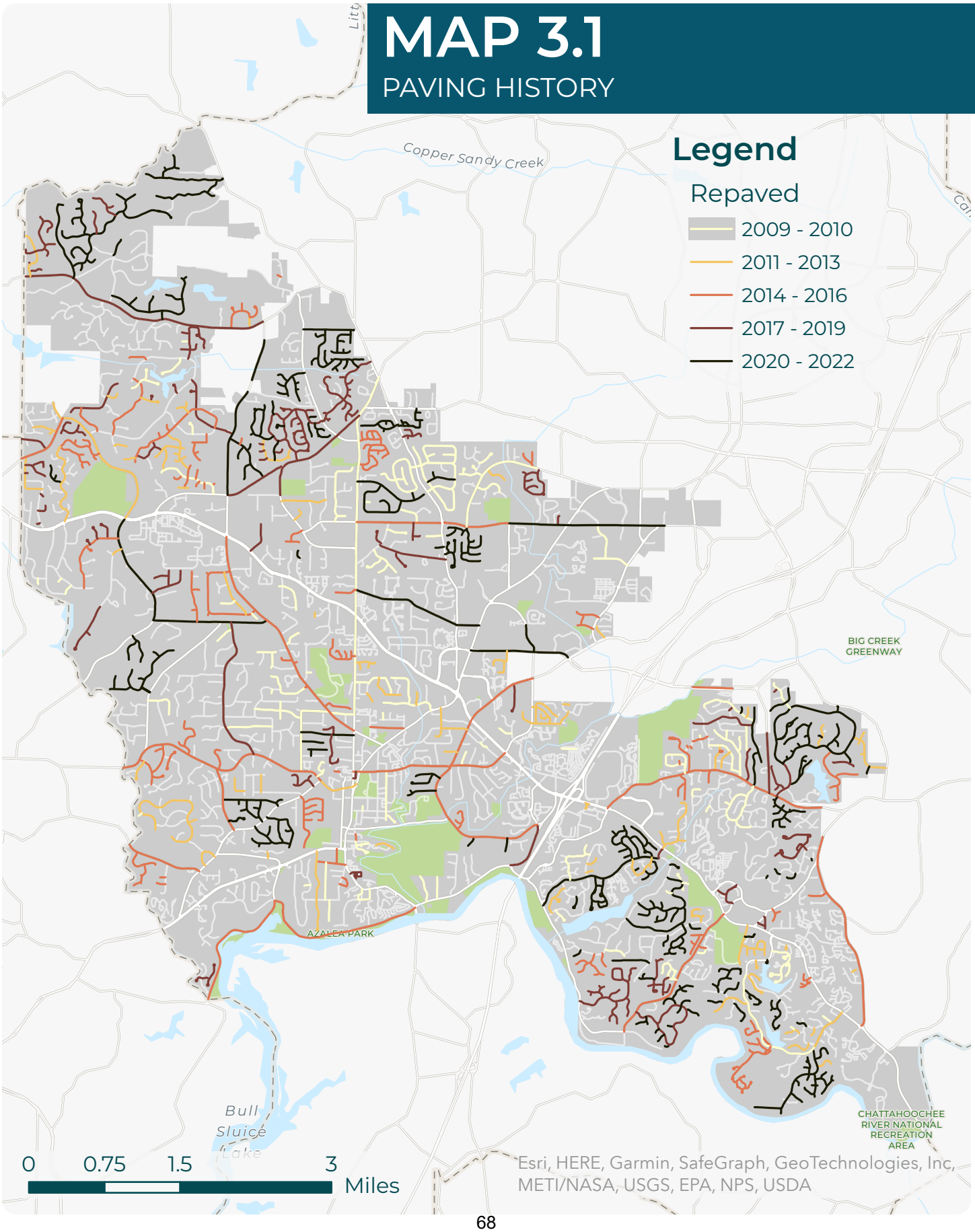
3.0 SYSTEM MAINTENANCE

The City of Roswell maintains approximately 350 centerline miles or 6 million square yards of paved roads. A yearly program is used to maintain these local roadways to ensure the most comfortable, safe and economical roadway surface if possible. Studies have shown that in order to design the best possible road maintenance program it is necessary to properly inventory and evaluate the condition of all roads periodically and use these evaluations to set priorities and chose alternate treatments as needed.

RDOT performs annual inspections of all its local city maintained roads. Using the subsequent conditions evaluation and the assigned budget for maintenance for a given year, a plan is devised that has as its goal to prevent any further deterioration of the roads and reduce the percentage of roads deteriorating to the "bad" category. Maintenance provided during early stages of deterioration, before a sharp decline in pavement condition, can save as much as 50% of future repair costs. In addition, delaying the deterioration of good roads by the use of preventive maintenance practices can be an important future cost saving tool and booster return on investment (ROI). The vast majority of roads in need of maintenance will require milling and resurfacing treatments, most will require some patching work as well. Roads that are in good condition are potential candidates for a rejuvenation treatment that will extend the life of the road for a minimal cost. RDOT's pavement maintenance strategy follows a widely used industry standard of performing preventive maintenance as well as traditional or reactive maintenance.

The City applies a percentage of its road maintenance budget to preventive maintenance such as the use of rejuvenators and patching. Traditionally RDOT submits a budget request of $3 million annually and then receives additional funds from the state (GDOT) in the form of Local Maintenance and Improvement Grants (LMIG). For FY 2019-22 an average of $4.2 million per year has been allocated to road resurfacing and road repairs. City staff also routinely conducts ongoing maintenance (including patching) year round to fix areas with potholes or respond to customer complaints. This additional maintenance has an average annual cost of approximately $150K (material, labor and equipment). Map 3.1 on the following page shows the paving history for the City from 2009-2022.

MAP 3.1
PAVING HISTORY



3.1 Pavement Evaluation

RDOT uses a system of road rating that utilizes the PCI (Pavement Condition Index) methodology, which became an American Society for Testing and Materials (ASTM) standard in 1999. The PCI ranges from zero (worst condition) to 100 (best condition). Following is the list of conditions and corresponding PCI used by the City of Roswell to evaluate its roads:

- Excellent – 85-100
- Very Good – 70-85
- Good – 60-70
- Fair – 50-60
- Marginal – 40-50
- Poor – 25-40
- Very Poor – 0-25

Visual field inspections are performed on each road on a regular basis. This information is then used to calculate the PCI. The PCI is calculated using PAVER, which is a Pavement Management System software, designed for the development of cost effective maintenance and repair alternatives of pavement.

PAVER was developed by the US Corps of Engineers in the late 1970's. It is distributed and supported by American Public Works Association (APWA) and widely used throughout the Country. PAVER divides the areas to be rated into Network, Branches and Sections. Inspections are performed on samples within the Sections. The rating system for the City of Roswell is set up as follows:

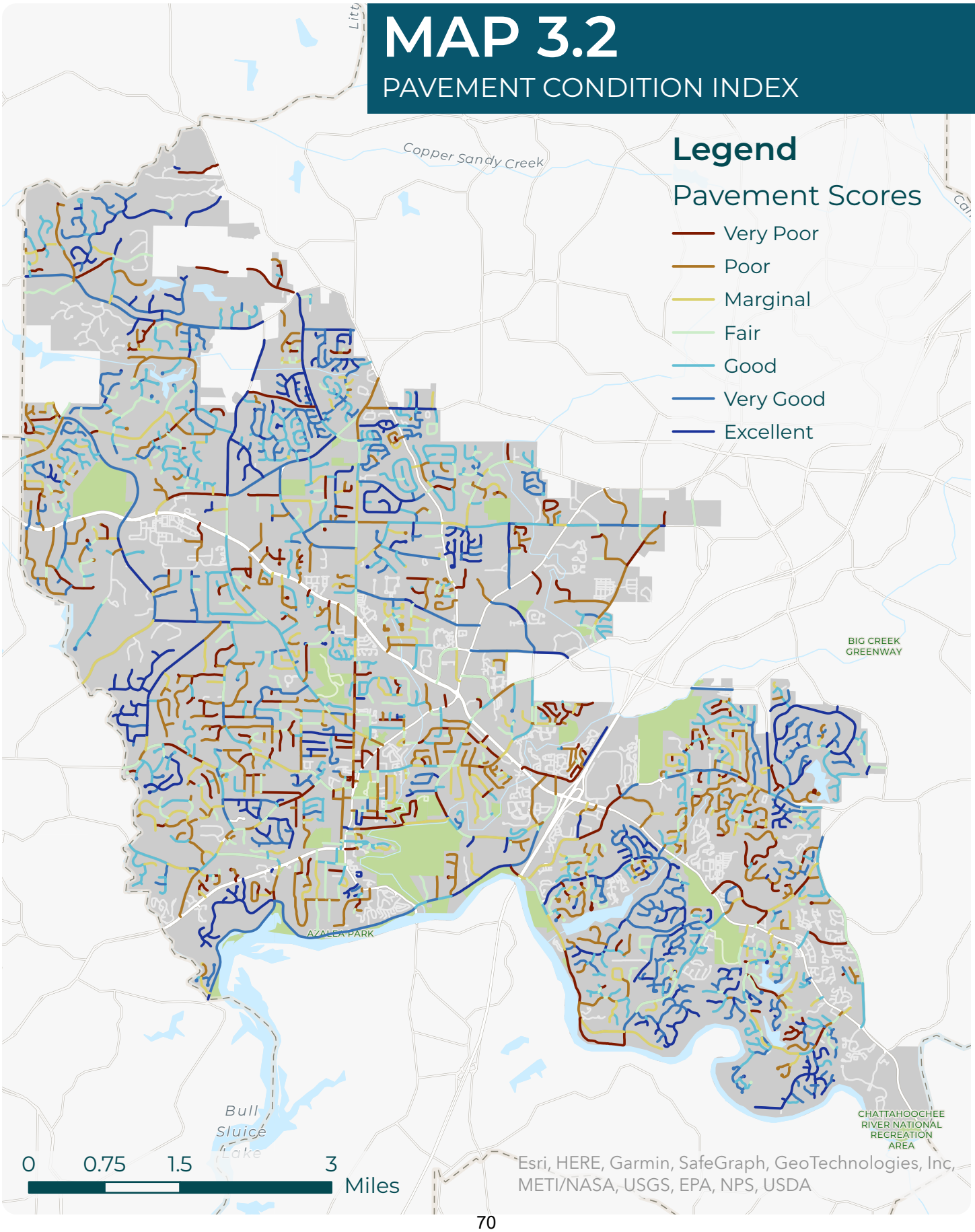
- Network – The entire City
- Branches – Individual roads
- Sections – Areas within each individual road
- Samples – Areas within each section (only random samples are rated)

Samples are pre-determined for the inspector except in the case of the observation of a critical area not included in these samples, such as potholes. The inspector will add that area in Paver as an "additional" sample. Sections serve the purpose of dividing roads that present changes in pavement types, widths or other feature that necessitates separation. In the City of Roswell, most of the branches will only have one section. Figure 3.1 below and Map 3.2 on the following page shows a summary of the output data for 2023.

Figure 3.1 – Roswell DOT Pavement Condition Index (PCI) – 2023

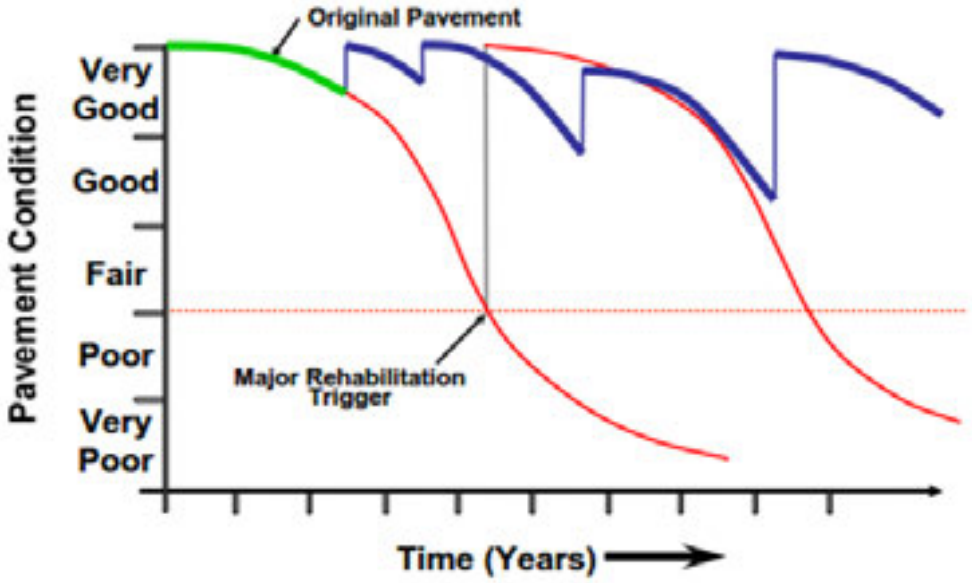
MAP 3.2

PAVEMENT CONDITION INDEX



As shown in Figure 3.1, approximately 56% of roadways in the City are considered to have excellent to good pavement conditions with another 20% in fair or marginal condition. The remaining 24% are in substandard condition using the latest data. By focusing the available resurfacing resources on road segments categorized as poor, very poor, or serious, the City can improve the overall transportation infrastructure and maintain the high level of service the citizens of Roswell expect. Additionally, addressing deteriorating pavement sooner prevents having to reconstruct roadways in the future. The figure below shows the concept of pavement preservation.

Pavement Preservation Concept



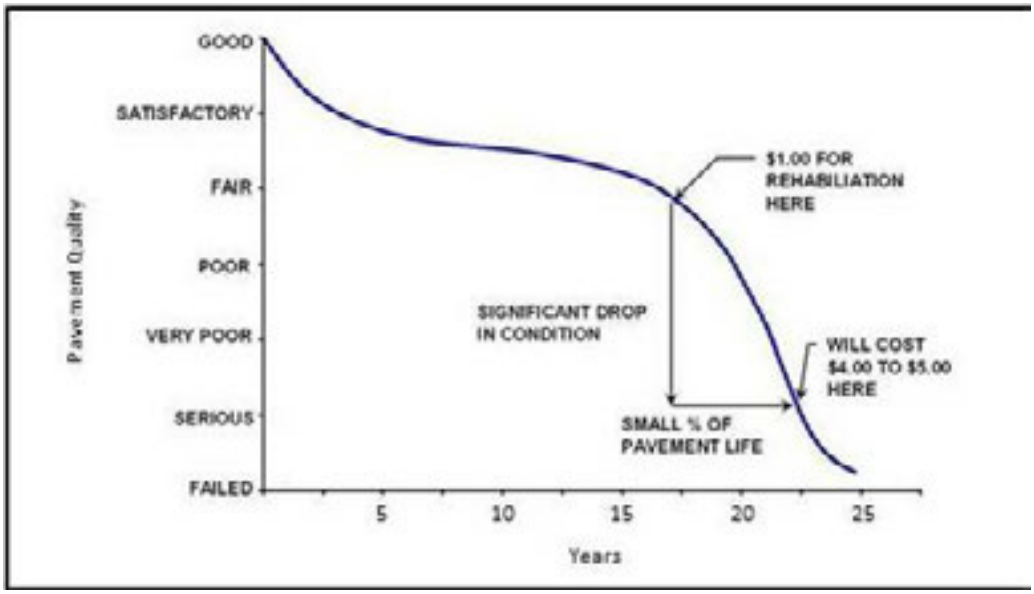
The percentage of “Good” and “Satisfactory” roadways has reduced slightly over the past 2-3 years based mainly on the fact the Department has been focusing on bringing more “Serious” and “Poor” roads up to standard. It is not uncommon to have the number of “Good” roads to rise and fall over multiple years. This can be attributed to a number of factors such as weather, changing traffic patterns, increased truck movement, heavier weighted vehicles, and more focus on the lower ranked roads mentioned above.

In addition to roadways maintained by the City, the Georgia Department of Transportation (GDOT) is responsible for maintaining another 25 miles of roads within Roswell (all state routes). These roads are some of the most heavily traveled in the City with traffic volumes as high as 75,000 vehicles per day on arterials and 190,000 vehicles per day on Georgia 400. Roswell DOT coordinates with GDOT to improve the condition of state routes when able; however, due to limited resources sometimes the city has to step in for minor repairs on the state route.

According to the Federal Highway Administration, every $1 spent on preventative maintenance early in the pavement life is equivalent to $4-5 spent later for resurfacing or replacement. The figure below shows the effects that deferred maintenance can have on overall pavement life. In essence, the longer maintenance is put off, the more expensive it will be to repair the pavement surface.

Pavement Life Cycle Curve

Source: Federal Highway Administration



Roswell DOT is constantly researching innovative ways to make the Pavement Management System more effective and efficient. Some of the steps taken to achieve this goal include:

- The use of Geographic Information Systems (GIS) to map the worst road segments
- Consultation with neighboring cities and counties to learn their methods of pavement management and receive feedback from them on the effectiveness of the City's methodology
- Review summary reports that allow Roswell DOT staff to determine appropriate treatment strategies
- Using the software to estimate pavement life cycles

Based on current funding levels being funded by the Mayor and Council during annual budget cycles, RDOT estimates that all City-owned roads will have a PCI of 70 or higher (Good or Satisfactory categories) within 10 years. It is important to maintain a high PCI level and not allow the City's roads deteriorate to the point of requiring more funding to replace rather than repair roadways. It is important to maintain a certain level of annual funding commitment to resurfacing and repairing the City's roads. Without this commitment, the City will likely pay more in the future to maintain the existing roadway infrastructure. In addition, by spreading the resurfacing over multiple years, it allows the cost to be better managed. If the City chose to repave a larger number of miles each year, the cost to resurface those roads at the end of their useful life may be too steep and the City would be forced to defer needed maintenance.

Finally, it should be noted Roswell DOT looks for ways to expand the uses for certain roadways when resurfacing is taking place. While resurfacing is taking place, the City may be able to make needed curb line adjustments, address and correct drainage issues, provide refuge for pedestrians crossing the roadway, adding ADA compliant sidewalk ramps, or by simply adjusting the new pavement striping, provide bicycle-friendly shoulders or lanes. In addition to this, RDOT crews will also work with the Environmental/Public Works Department to coordinate water line replacement if needed. All of these solutions expand the life of the facility reducing costly expansion improvements in the future and opening more roadway corridors to use by all transportation modes.

3.2 Road Rejuvenation

When funding is available RDOT staff use an emulsion product by the name of “Reclamite” with the purpose of partially penetrating the top layer of pavement and restoring asphalt properties in order to delay oxidation, deterioration, and to extend the life cycle of a roadway. Due to the addition of recycled materials in asphalt, it is recommended that rejuvenation be applied within the first year of pavement life and at five-year intervals thereafter. The benefits of an asphalt rejuvenator are:

- Increasing penetration value of the asphalt cement in the top portion of the pavement, which extends the pavement’s lifecycle.
- Sealing pavement against intrusion of air and water, thereby slowing oxidation, preventing stripping and raveling and protects the pavement in-depth.
- Increasing the durability of the asphalt in the top portion of the pavement by improving the chemical composition of the asphalt cement.

A study performed by RDOT staff on roads previously rejuvenated shows an average life cycle increase of 5 years, which translates into a cost savings of approximately 25% of a typical road maintenance life cycle cost. The cost of rejuvenation is $0.81 per square yard, which is approximately 5% of typical resurfacing costs.

3.3 Bridge Inspections

Of the 27 bridges or culverts in Roswell, nine are maintained by the State of Georgia, one by Cobb County and 17 by the City. The 27 bridges/culverts in Roswell with their rating, ownership, design type and most recently collected Average Daily Traffic counts (ADT) are displayed on Map 3.3 and Table 3.1 on the next two pages.

MAP 3.3
BRIDGE MAINTENANCE

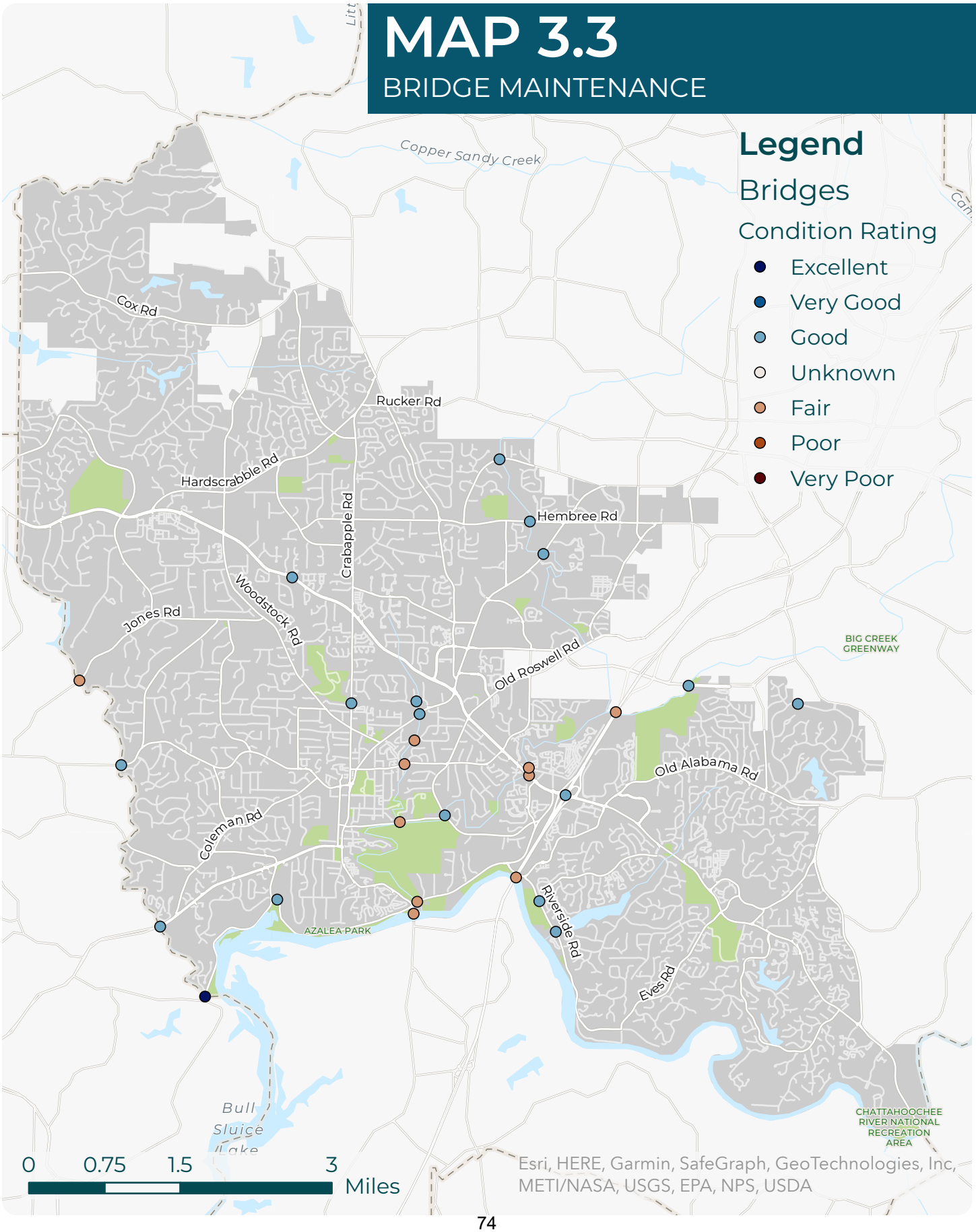


Table 3.1 – Bridge Inventory with ratings

	Roadway	ID No.	Feature Intersected	Rating	Owner	Design	ADT
1	Alpine Drive	121-5249-0	Hog Wallow Creek	Good	COR	Culvert	757
2	Azalea Drive	121-5157-0	Chattahoochee River Tributary (Willeo Rd)	Good	COR	Bridge	9,641
3	Charles Place	121-5130-0	Hog Wallow Creek (Maxwell Rd)	Fair	COR	Bridge	593
4	Crabapple Road	121-0310-0	Hog Wallow Creek (N of Fowler Ave)	Good	COR	Culvert	10,283
5	Grimes Bridge Road	121-5354-0	Big Creek (Oxbo)	Good	COR	Bridge	8,804
6	Hembree Road	121-5332-0	Foe Killer Creek (Streamside Dr)	Good	COR	Bridge	9,629
7	Jones Road	121-5263-0	Willeo Creek (City Limit)	Fair	COR	Bridge	6,166
8	Mansell Road (EBL)	121-5260-0	Big Creek near NP Pkwy	Good	COR	Bridge	16,226
9	Norcross Street	121-0309-0	Hog Wallow Creek (Liberty Lane)	Fair	COR	Bridge	17,951
10	Old Holcomb Bridge Road	121-5133-0	Big Creek (Behind Red Lobster)	Fair	COR	Bridge	4,596
11	Oxbo Road	121-5134-0	Hog Wallow Creek (Dobbs Dr)	Fair	COR	Bridge	6,862
12	Pine Grove Road	121-5296-0	Willeo Creek (Shallowford)	Good	COR	Bridge	10,602
13	Riverside Road	121-0304-0	Big Creek (E of SR 9)	Fair	COR	Bridge	15,301
14	Riverside Road	121-5028-0	Chattahoochee River Tributary (Martin Rd)	Good	COR	Bridge	5,121
15	Riverside Road	121-5029-0	Chattahoochee River Tributary (Martin river Club)	Good	COR	Bridge	3,853
16	Roxburgh Drive	121-5099-0	Big Creek Tributary (Summerfield Dr)	Good	COR	Culvert	979
17	Upper Hembree Road	121-5313-0	Foe Killer Creek (Hembree Farms Pool)	Good	COR	Bridge	4,247
18	Willeo Road	121-5158-0	Willeo Creek (Roundabout)	Fair	County	Bridge	7,034
19	Crossville Road	121-0765-0	Hog Wallow Creek Tributary (Grace Hill)	Good	State	Culvert	49,041
20	Holcomb Bridge Road	121-0085-0	Big Creek (Red Lobster)	Fair	State	Bridge	70,773
21	Holcomb Bridge Road	121-0086-0	SR 400 (US 19)	Good	State	Bridge	67,351
22	SR 120 / Marietta Highway	121-5134-0	Chattahoochee River Tributary (City Limit)	Good	State	Culvert	31,113
23	SR 9	121-0033-0	Chattahoochee River (S of Azalea Dr)	Fair	State	Bridge	32,016
24	SR 9	121-0034-0	Hog Wallow Creek (S of Alpine Dr)	Good	State	Culvert	32,062
25	SR 9	121-0035-0	Foe Killer Creek (Hyundai dealership)	Good	State	Culvert	26,144
26	US 19 / SR 400	121-0125-0	Don White Park/ Chattahoochee River	Fair	State	Bridge	
27	US 19 / SR 400	121-0127-0	Big Creek (GA400 S of Mansell Rd)	Fair	State	Bridge	

All public bridges, regardless of ownership (City/County/State), are inspected by the Georgia Department of Transportation (GDOT) every two years per Federal Law and the City of Roswell receives the reports via the Fulton County Board of Commissioners. The latest round of inspections occurred in 2023. The RDOT Construction and Maintenance Division will act in performing maintenance as outlined and suggested on the inspection reports.

To complement GDOT's biannual inspections, RDOT performs yearly inspections that include the following:

- Inspection of approaches for possible settlement, which could affect the bridge deck.
- Inspection of deck joints and cracks to ensure that they are watertight.
- Inspection of pavement overlay over decking if present.
- Inspection of scuppers, downspouts and weep holes to ensure that they are not clogged as well as any other drainage issues within and around the structure.
- Inspection of guard rails.
- Inspection of handrails and parapet walls.
- Inspection of sidewalks, curb and gutters within and around the structure.
- Visual inspection of any distresses that can undermine the integrity of the superstructure and substructure (cracking and deterioration).
- Inspection of substructure (piers, abutments and piles) to ensure that no debris is accumulated which can cause scouring.
- Inspection of posting signs to ensure that they are visible as well as to ensure that the posting limits are as per requirements listed in the latest GDOT report.

During the 2023 Legislative Session, the Georgia House Transportation Committee voted to advance draft legislation that increases the commercial truck weight limit on Georgia's state and local roads to 90,000 pounds from 80,000. The statewide associations for city and county governments, road safety advocates as well as state departments for transportation and public safety called the heavier loads a threat to public safety, while increasing wear on the state's roadways.

3.4 Guard Rails

The City repairs guardrails on RDOT maintained roads that have been damaged due to accidents. GDOT has said in the past that Georgia suffers from a lack of highly specialized guardrail contractors because it is a profession that carries extended risk and liability. Only a few local contractors do 80 percent of the state's work presently, including all the maintenance and new construction in metro Atlanta. When a collision occurs between a vehicle and a steel guardrail the government agency and the contractor who installed the asset may become entangled in legal actions, which has led to additional challenges for government agencies. To aid the maintenance, GDOT has proactively attempted to recruit contractors from neighboring states to bid on guardrail jobs.

Prior to 2022, there was a backlog of repair work in Roswell but all work was completed and brought up to date between the contract for 2021 and the contract for 2022. The total for those years was $100K. For the FY 2023 budget, the Mayor and City Council authorized an annual budget of $225K for the bridge and guardrail maintenance program.

3.5 Sign Maintenance

Signs are very important for motorist, bicyclist and pedestrian safety, particularly regulatory and warning signs. These signs can fade, be painted over, get knocked down, be stolen, be blocked from view because of vegetation, cease to apply to the current situation, or be dirty. Occasionally, someone may even add signs that are not appropriate or consistent with the control of traffic or driver's needs. Checking the existing

signs against sign inventory can identify any discrepancies and resolve those discrepancies before they contribute to an accident.

Signs should be checked at least twice a year as conditions dictate. Desirable times are after winter and before the start of the school year. This cycle provides for identifying winter damage and blocked visibility due to new vegetation growth. Special reviews should also be conducted after bad storms. During sign checks, it is also desirable to clean dirty signs and refurbish faded or damaged signs. The inspectors should keep a record of all actions taken and recommended.

To maintain an up to date inventory of signs throughout the City, RDOT applies stickers to the backs of every sign installed, comprising of a serial number and the year of installation. Signs installed prior to 2013 feature a yellow sticker, while those installed 2013 or later have a white sticker. Examples of these stickers are shown below.

3.5.1 Sign Retroreflectivity

Sign retroreflectivity refers to the amount of light reflected off the sign and back to the light source. This is extremely important for nighttime traffic safety. The image below shows signs with varying degrees of retroreflectivity.

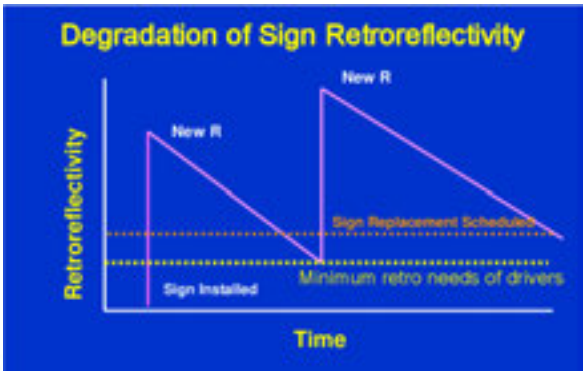
EXAMPLES OF LEVELS OF RETROREFLECTIVITY

Under the Manual on Uniform Traffic Control Devices (MUTCD), it is required that municipalities use a management system to maintain the retroreflectivity of traffic signs at or above the established thresholds shown in the table below. Roswell DOT follows the manufacturer recommended retroreflectivity lifespan of 12 years to ensure they meet the minimum retroreflectivity needs of drivers.

Table 2A-3. Minimum Maintained Retroreflectivity Levels[1]

Sign Color	Sheeting Type (ASTM D4956-04)				
	Beaded Sheeting			Prismatic Sheeting	Additional Criteria
	I	II	III	III, IV, VI, VII, VIII, IX, X	
White on Green	W*: G ≥ 7	W*: G ≥ 15	W*: G ≥ 25	W ≥ 250; G ≥ 25	Overhead
	W*: G ≥ 7	W ≥ 120; G ≥ 15			Ground-mounted
Black on Yellow or Black on Orange	Y*: O*	Y ≥ 50; O ≥ 50			2
	Y*: O*	Y ≥ 75; O ≥ 75			3
White on Red	W ≥ 35; R ≥ 7				4
Black on White	W ≥ 50				—

Notes
[1] The minimum maintained retroreflectivity levels shown in this table are in units of cd/lx/m² measured at an observation angle of 0.2° and an entrance angle of -4.0°.
[2] For text and line symbol signs measuring at least 1200 mm (48 in) and for all sizes of bold symbol signs.
[3] For text and line symbol signs measuring less than 1200 mm (48 in).
[4] Minimum Sign Contrast Ratio ≥ 3:1 (white retroreflectivity ÷ red retroreflectivity)
* This sheeting type should not be used for this color for this application.



3.6 VEGETATION/LANDSCAPING

City staff maintains detention ponds and drainage features in the public right of way. Staff also maintains the vegetation located within the public right of way along many local roads and state routes. The City currently (2022) has a contract with a landscaping company ($48K) to maintain the Hardscrabble Road corridor as well as the Georgia 400 corridor within the city limits. GDOT maintains this area as well, but they only do it once a month, which typically is not sufficient during the summer months. RDOT also has a contract with a tree removal company; the Department spent +/-$35K with this last fiscal year. Another related cost is dumping fees to dump landscaping debris; the Department spent +/-$25K in dumping fees related to landscaping last fiscal year.

Watering is an ongoing challenge because the city does not allow or install irrigation systems within the right of way. The City does not have the staff or equipment to properly water landscaping areas as needed, especially during periods of insufficient rain.

RDOT's maintenance manager has an outline map of mowing activities within the City to help streamline landscaping efforts.

3.7 Snow and Ice management (inclement weather)

During inclement weather events, the City activates its emergency operations center (EOC) which allows relevant staff from all departments (Fire, Police, Transportation and Public Works) to work out of a consolidated space jointly. The City's traffic cameras are used to monitor conditions on the roadways in real-time and allow staff to respond to issues immediately.

Equipment used during inclement weather is inspected and maintained by the Department's Small Engine Technician at three-month intervals during the year and before the winter season start. This maintenance includes calibrating the spreaders as necessary. All vehicles are fully fueled in advance of inclement weather. All equipment is inspected and sand trucks are prepped and loaded with salt and sand mixture three days before the inclement weather is expected. The salt and rock is mixed to GDOT specifications and includes three parts rock to one part salt. Supervisors and operators are trained and retrained at approximately three-month intervals to ensure proper operation of spreaders and plows as well as mixing procedures. During non-winter events that include severe storms or tropical systems staff also prepare tools to respond (i.e. chainsaws, woodchipper, and vehicles) to the event.

Prior to the arrival of inclement weather, needed staff are sometimes sent home to rest 12-24 hours in advance of the storm event. Upon receipt of the first call related to ice and/or snow, all on call personnel respond by meeting at the Hembree facility dressed in safety gear and prepared to begin work. Each sand truck is manned by at least two personnel.

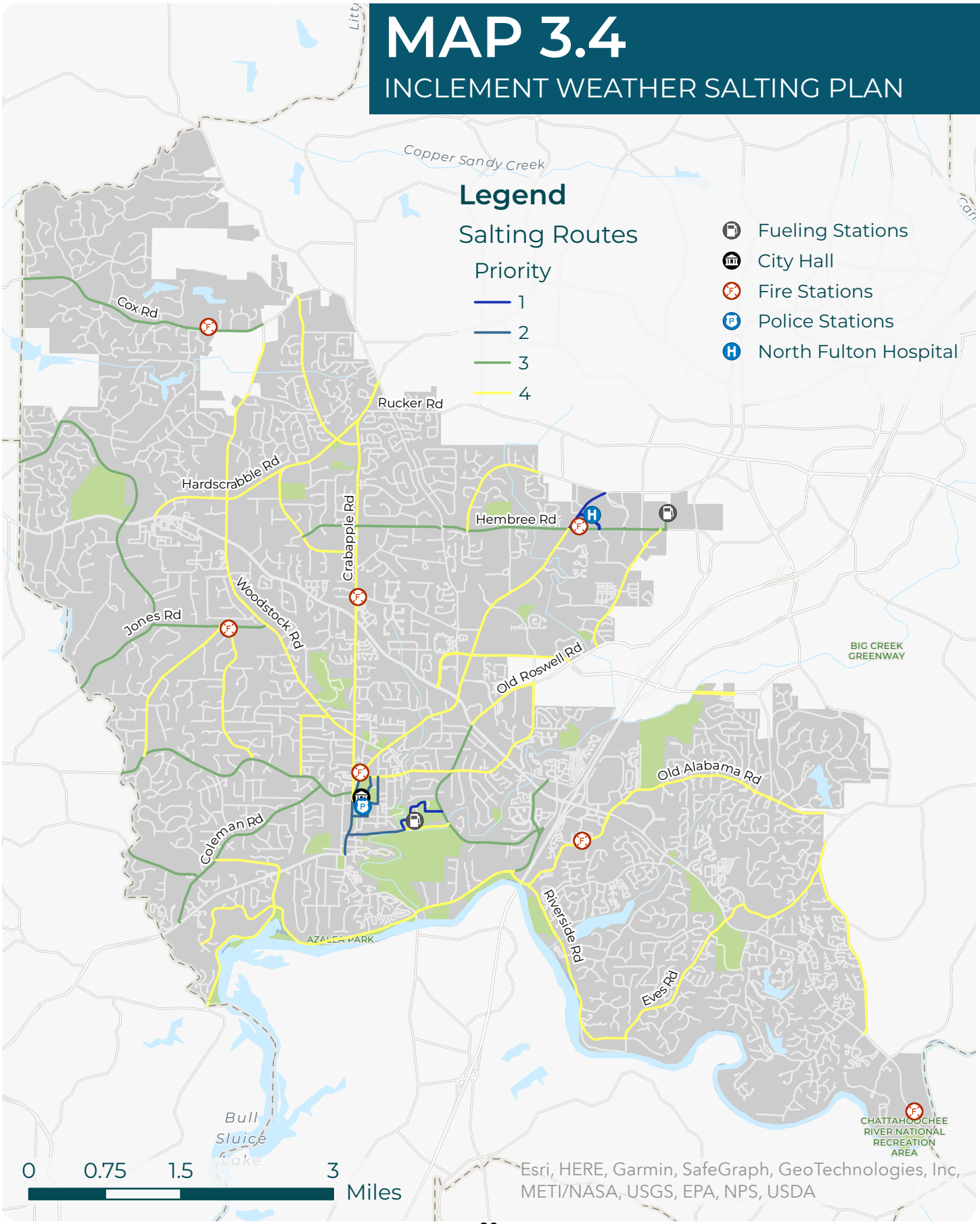
The trucks will apply salt/sand mixture according to the following priority order:

1. All bridges in the city and areas needed to access WellStar North Fulton Hospital.
2. City Hall, Police Department and all Roswell Fire Stations.
3. Building Operations will salt/sand/clear access from the buildings to the edge of the asphalt for both City Hall and the Police Department buildings.
4. Frank Lewis Drive and Cooperative Way so emergency personnel may access City Fuel Pumps. This includes the driveway connecting to the Adult Recreation Center Parking Lot off Grimes Bridge Road.
5. Fire Department will provide limited salt/sand at Fire Stations until Transportation arrives.
6. All main thoroughfares with focus on slick spots and application within a 100 foot approach to stop signs and traffic lights.
7. Inside Subdivisions as needed to support active Police and Fire activities.
8. **Salt/sand will <u>not</u> be applied to private streets, individual driveways or private parking lots.**

Other trucks are used as needed to sand small areas and/or perform quick fixes. Map 3.4 on the following page shows the priority order for treating the roads.

MAP 3.4

INCLEMENT WEATHER SALTING PLAN



4.0 SAFETY

4.1 CRASH ANALYSIS

4.1.1 AUTOMOBILES

Both the City of Roswell Police Department and the Roswell Department of Transportation track traffic accidents and enforcement. In 2022, there were 3,643 reported accidents on public roads in Roswell. This is up from 3,398 accidents in 2021.

INTERSECTIONS

The top 10 accident locations (based on the total number of accidents) in 2022 were:

1. Holcomb Bridge Road (SR 140) @ SR 400 NB – **96**
2. Alpharetta Highway (SR 9/120) @ Holcomb Bridge Road (SR 140) – **84**
3. Holcomb Bridge Road (SR 140) @ Dogwood Rd – **59**
4. Atlanta Street (SR 9) @ Azalea/Riverside – **54**
5. Holcomb Bridge Road (SR 140) @ Old Alabama Road – **53**
6. Holcomb Bridge Road (SR 140) @ SR 400 SB – **44**
7. Holcomb Bridge Road (SR 140) @ Warsaw Road – **44**
8. Crossville Highway (SR 92) @ Crabapple Road – **43**
9. Holcomb Bridge Road (SR 140) @ Grimes Bridge Road/Old Roswell Road – **38**
10. Woodstock Road (SR 92) @ King Road/ Woodstock Road – **36**

The first non–State Route intersection appearing on the list is the intersection of Mansell Road at Warsaw Road and Sun Valley Drive, which ranked 23rd with 16 accidents in 2022.

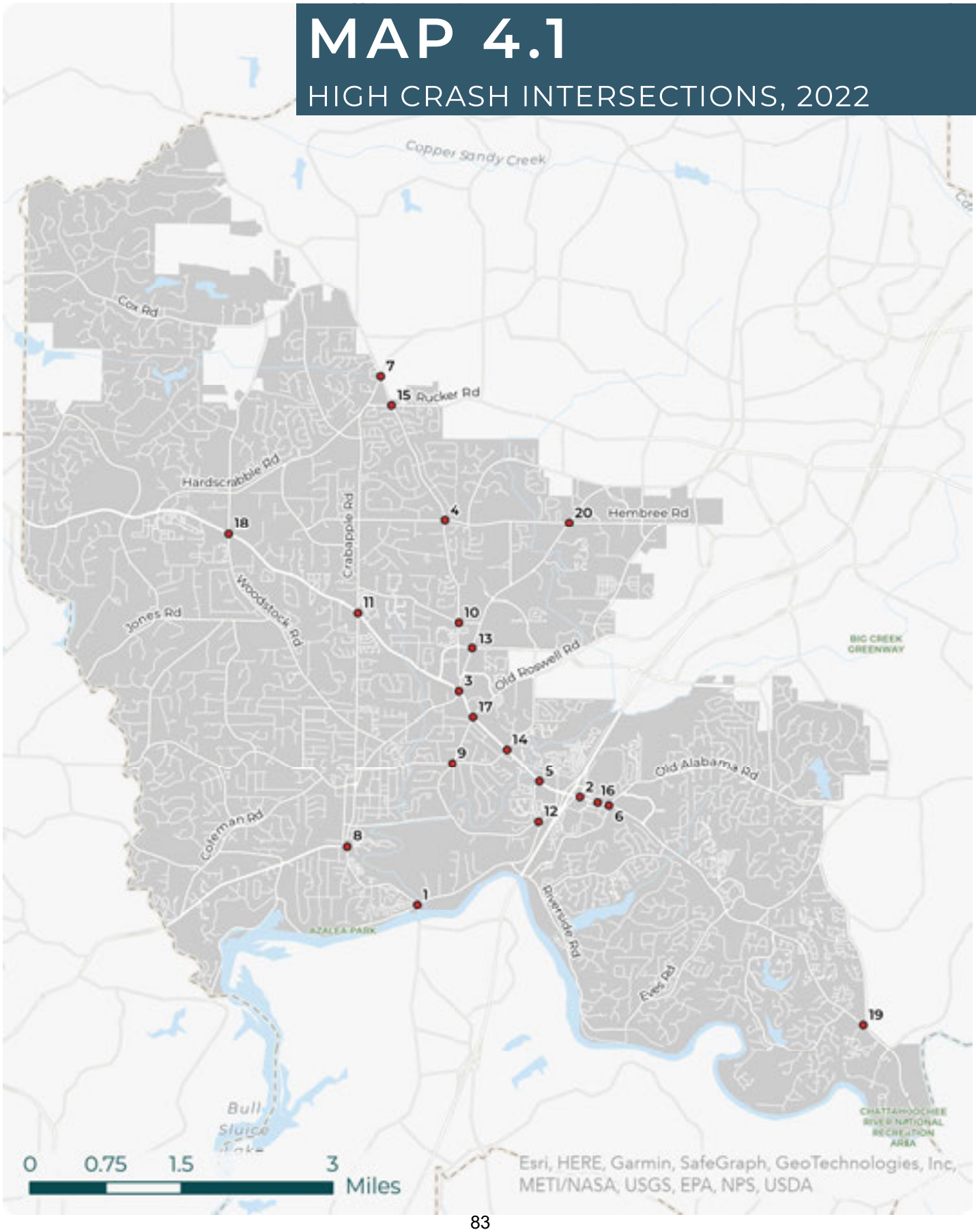
Table 4.1 on the next page takes a different view of the crash data by ranking the top 40 intersections with the highest crashes based on traffic volume rather than only accidents. Map 4.1 shows the same information for the top 20 locations.

Rank & Map No.	Intersection Location	No. of Annual Accidents	EB Daily Entering Volume	WB Daily Entering Volume	NB Daily Entering Volume	SB Daily Entering Volume	Total Daily Entering Volume	Annual Entering Volume	Accident Rate Per 100 Million Vehicles
1	SR 9 @ Azalea/Riverside	54	4,200	6,315	16,840	13,297	40,652	14,837,980	363.9
2	SR 140 @ SR 400 NB	96	30,678	23,655	9,052	14,602	77,987	28,465,255	337.3
3	SR 9 @ SR 92/SR 140	84	22,424	28,369	12,531	14,397	77,721	28,368,165	296.1
4	SR 140 (Houze Rd) @ Hembree Rd	26	3,980	6,662	7,096	8,984	26,722	9,753,530	266.6
5	SR 140 @ Dogwood Rd	59	33,253	34,793	3,720	3,014	74,780	27,294,700	216.2
6	SR 140 @ Old Alabama	53	29,787	21,809	6,222	11,271	69,089	25,217,485	210.2
7	SR 140 (Houze Rd/Arnold Mill) at Crabapple	27	6,376	8,286	9,798	10,775	35,235	12,860,775	209.9
8	SR 9 @ SR 120/Mill St	32	11,660	680	11,629	18,619	42,588	15,544,620	205.9
9	Grimes Bridge @ Norcross/Warsaw	15	9,264	4,793	2,719	4,653	21,429	7,821,585	191.8
10	SR 140(Houze Rd) @ Houze Way	14	2,426	4,485	6,358	7,282	20,551	7,501,115	186.6
11	SR 92 @ Crabapple Rd	43	25,847	23,541	5,815	7,992	63,195	23,066,175	186.4
12	Riverside Rd @ Dogwood Rd	12	6,473	4,913	6,447		17,833	6,509,045	184.4
13	SR 9 @ Mansell Rd	34	8,050	12,173	17,562	13,733	51,518	18,804,070	180.8
14	SR 140 @ Warsaw Rd	44	24,575	33,351	6,117	4,796	68,839	25,126,235	175.1
15	SR 140 (Houze Rd) @ Rucker Rd	19	4,010	7,748	8,058	10,141	29,957	10,934,305	173.8
16	SR 140 @ Market Blvd	34	29,787	23,655	2,324	1,273	57,039	20,819,235	163.3
17	SR 140 @ Grimes Bridge	38	28,582	27,185	3,548	5,760	65,075	23,752,375	160.0
18	SR 92 @ King / Woodstock	36	23,025	27,012	6,925	6,604	63,566	23,201,590	155.2
19	SR 140 @ Nesbit Ferry Rd	26	17,330	20,100	2,478	7,777	47,685	17,405,025	149.4
20	SR 9 @ Hembree	21	6,553	4,945	13,161	14,309	38,968	14,223,320	147.6
21	Hembree Rd @ Wills Rd	9	6,553	6,301	2,025	2,283	17,162	6,264,130	143.7
22	SR 9 @ Hill/Ramsey	16	939	730	15,827	13,993	31,489	11,493,485	139.2
23	SR 9 @ Houze Rd	16	1,263		17,014	13,395	31,672	11,560,280	138.4
24	SR 92 @ Hardscrabble Rd	29	26,894	22,547	1,552	7,915	58,908	21,501,420	134.9
25	Mansell Rd @ Warsaw Rd	16	12,561	14,082	2,655	3,794	33,092	12,078,580	132.5
26	SR 140 @ SR 400 SB	44	35,855	36,673		19,039	91,567	33,421,955	131.6
27	SR 92 Bowen/Mt Park	27	28,407	26,918	3,335	2,887	61,547	22,464,655	120.2
28	Magnolia St @ Mimosa Blvd	8	7,649	7,341	2,520	775	18,285	6,674,025	119.9
29	Old Alabama @ Old Alabama Cnctr	11	9,494	9,804	190	5,718	25,206	9,200,190	119.6
30	Old Roswell @ Warsaw	9	6,043	7,527	4,963	3,827	22,360	8,161,400	110.3
31	King @ Hardscrabble	11	7,263	7,839	7,185	4,926	27,413	10,005,745	109.9
32	SR 140 @ Old HBR	24	33,253	25,639	1,082	2,245	62,219	22,709,935	105.7
33	Crabapple Rd @ Hembree Rd	7	1,439	3,822	7,466	5,702	18,429	6,726,585	104.1
34	Woodstock Rd @ N. Coleman Rd	5	1,991		5,597	6,075	13,663	4,986,995	100.3
35	SR 140 @ Eves Rd	16	21,081	19,487	2,581	1,824	44,973	16,415,145	97.5
36	SR 140 @ Barnwell	17	21,248	22,531	1,469	4,712	49,960	18,235,400	93.2
37	SR 140 @ Martins Landing	15	21,024	21,809	1,751	237	44,821	16,359,665	91.7
38	SR 9 @ Commerce Pkwy	10		1,410	17,014	13,689	32,113	11,721,245	85.3
39	SR 140 @ Holcomb Woods	16	29,787	22,200		2,899	54,886	20,033,390	79.9
40	SR 9 @ Oak St	9		1,072	15,827	13,993	30,892	11,275,580	79.8

TABLE 4.1 – 2022 TOP 40 HIGH ACCIDENT INTERSECTION LOCATIONS BASED ON ACCIDENT RATE

MAP 4.1

HIGH CRASH INTERSECTIONS, 2022



MIDBLOCKS

The top 10 accident corridors (based on the total number of accidents) in 2022 were:

1. SR 140–Old Alabama Road To Holcomb Woods Parkway – **31**
2. SR 9–SR 140 (HBR) To Mansell Rd – **29**
3. SR 9–Riverside To SR 120 – **29**
4. SR 140–Dogwood To Ga 400 Sb – **28**
5. Mansell Rd–SR 9 To Warsaw – **27**
6. SR 140–Grimes To Warsaw – **26**
7. SR 92–Grace Hill To King Rd – **25**
8. SR 92–Mountain Park To Laurel Lake – **23**
9. SR 140–Warsaw To Old Holcomb Bridge – **22**
10. SR 140–Barnwell To County Line – **21**

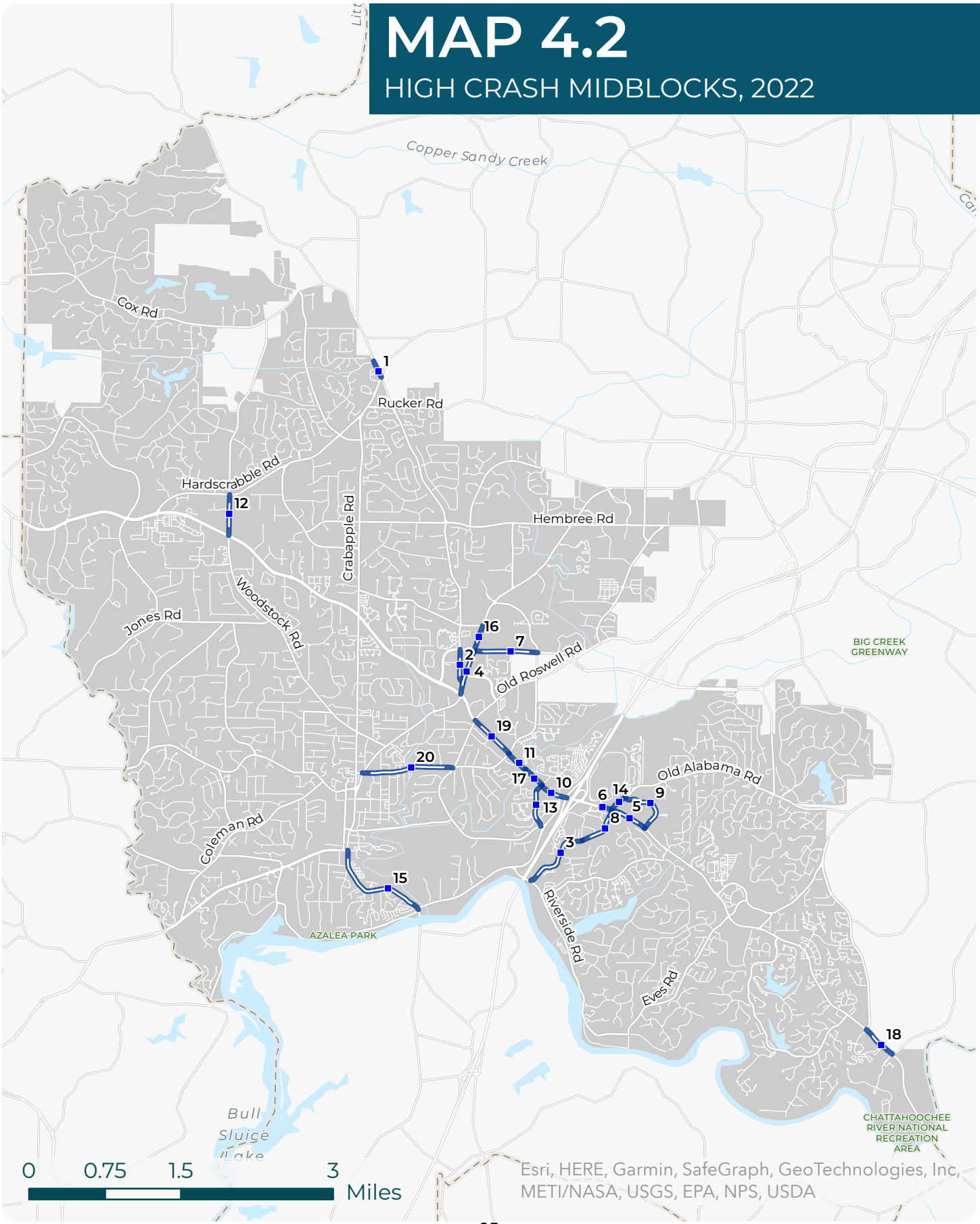
Just like intersections, Table 4.2 shows the crash data by ranking the top 40 midblock locations with the highest crashes based on traffic volume rather than only accidents. Map 4.2 shows the same information for the top 20 locations. Finally, Map 4.3 shows a heat map of ten years of crash data. As can be expected, the highest density of crashes occurred in higher volume and higher speed corridors—namely the state routes, followed by the arterials.

Rank & Map No.	Midblock Location	No. of Annual Accidents	EB Daily Entering Volume	WB Daily Entering Volume	NB Daily Entering Volume	SB Daily Entering Volume	Total Daily Entering Volume	Annual Entering Volume	Segment Length in Miles	Accident Rate Per 100 Million Vehicles-Miles
1	SR 140 (Arnold Mill) - Edenwilde to Crabapple	17			10,911	10,639	21,550	7,865,750	0.18	1200.7
2	SR 140(Houze Rd) SR 9 to Mansell Rd	5			3,568	1,263	4,831	1,763,315	0.32	886.1
3	Old Alabama - Riverside to Market Blvd	8			6,222	4,976	11,198	4,087,270	0.29	674.9
4	SR 9-SR 140(HBR) to Mansell Rd	29			17,562	13,689	31,251	11,406,615	0.45	565.0
5	SR 140-Old Alabama to Holcomb Woods	31	21,080	21,865			42,945	15,674,925	0.38	520.4
6	SR 140-Market Blvd to Old Alabam	14	29,787	34,067			63,854	23,306,710	0.12	500.6
7	Mansell Rd-SR 9 to Warsaw	27	12,604	12,173			24,777	9,043,605	0.63	473.9
8	Old Alabama Rd - Market Blvd to SR 140	8			6,222	4,976	11,198	4,087,270	0.44	444.8
9	Holcomb Woods Pkwy	5			2,658	2,899	5,557	2,028,305	0.56	438.6
10	SR 140-Dogwood To GA 400 SB	28	35,855	34,793			70,648	25,786,520	0.26	417.6
11	SR 140-Warsaw to Old Holcomb Bridge	22	33,253	33,351			66,604	24,310,460	0.23	393.5
12	King Rd SR 92 to Hardscrabble	8			7,446	6,604	14,050	5,128,250	0.41	380.5
13	Dogwood Rd-Grimes Bridge to SR 140	5			3,720	4,942	8,662	3,161,630	0.44	359.4
14	Old Alabama Rd-SR 140 to Holcomb Wds	5			9,494	11,271	20,765	7,579,225	0.19	347.2
15	SR 9-Riverside to SR 120	29			14,962	10,077	25,039	9,139,235	1.05	302.2
16	SR 9-Mansell Rd to Houze Way	8			14,435	13,732	28,167	10,280,955	0.26	299.3
17	SR 140- Old Holcomb Bridge to Dogwood	14	35,855	25,639			61,494	22,445,310	0.22	283.5
18	SR 140-Nesbit Ferry to Barnwell Rd	14	21,248	20,100			41,348	15,092,020	0.35	265.0
19	SR 140-Grimes to Warsaw	26	27,522	29,993			57,515	20,992,975	0.47	263.5
20	Norcross St - SR 9 to Grimes Bridge Rd	6	9,264	8,687			17,951	6,552,115	0.35	261.6
21	Hembree Rd- SR 9 to Wills Rd	8	6,553	5,645			12,198	4,452,270	0.72	249.6
22	SR 9-SR 120 to Magnolia	16			15,827	13,993	29,820	10,884,300	0.60	245.0
23	Nesbit Ferry Rd-HBR to Champions Green Pkwy	12			7,561	7,777	15,338	5,598,370	0.88	243.6
24	SR 140-GA 400 NB to Market Blvd	9	29,787	23,655			53,442	19,506,330	0.19	242.8
25	SR 140-Holcomb Woods Pkwy to Martin Rd	11	21,080	21,865			42,945	15,674,925	0.31	227.8
26	Riverside Rd-SR 9 to Dogwood	11	6,473	6,315			12,788	4,667,620	1.05	224.4
27	SR 140-SR 9 to Grimes	13	28,582	28,369			56,951	20,787,115	0.29	215.7
28	SR 92 - Hardscrabble to Mountain Park	13	26,894	26,918			53,812	19,641,380	0.32	206.8
29	SR 9-Hembree Rd to Upper Hembree	9			10,164	13,273	23,437	8,554,505	0.52	202.3
30	SR 92-SR 9 to Millpond	12	20,175	22,105			42,280	15,432,200	0.39	199.4
31	Azalea Dr-Willeo Dr to SR 9	9	4,200	3,552			7,752	2,829,480	1.67	190.5
32	SR 120 - Spring Dr to Willeo Rd	6	11,660	11,177			22,837	8,335,505	0.39	184.6
33	Riverside Rd - Dogwood to Old Alabama	12	6,579	6,447			13,026	4,754,490	1.44	175.3
34	SR 92-Grace Hill to King Rd	25	25,847	27,012			52,859	19,293,535	0.75	172.8
35	SR 9-Woodstock St to SR 140	15			13,424	12,926	26,350	9,617,750	0.92	169.5
36	Mansell Rd - SR 92 to SR 9	5	6,815	7,851			14,666	5,353,090	0.58	161.0
37	King Rd - Hardscrabble to City Limits	8			4,758	4,496	9,254	3,377,710	1.48	160.0
38	SR 9-Houze Way to Hembree Rd	20			13,161	12,982	26,143	9,542,195	1.35	155.3
39	SR 140-SR 400 SB Ramp to SR 400 NB Ramp	6	30,678	36,673			67,351	24,583,115	0.16	152.5
40	SR 140-Champions Green to Nesbit Fy	19	16,603	16,617			33,220	12,125,300	1.04	150.7

TABLE 4.2 – 2022 TOP 40 HIGH ACCIDENT MIDBLOCK LOCATIONS BASED ON ACCIDENT RATE

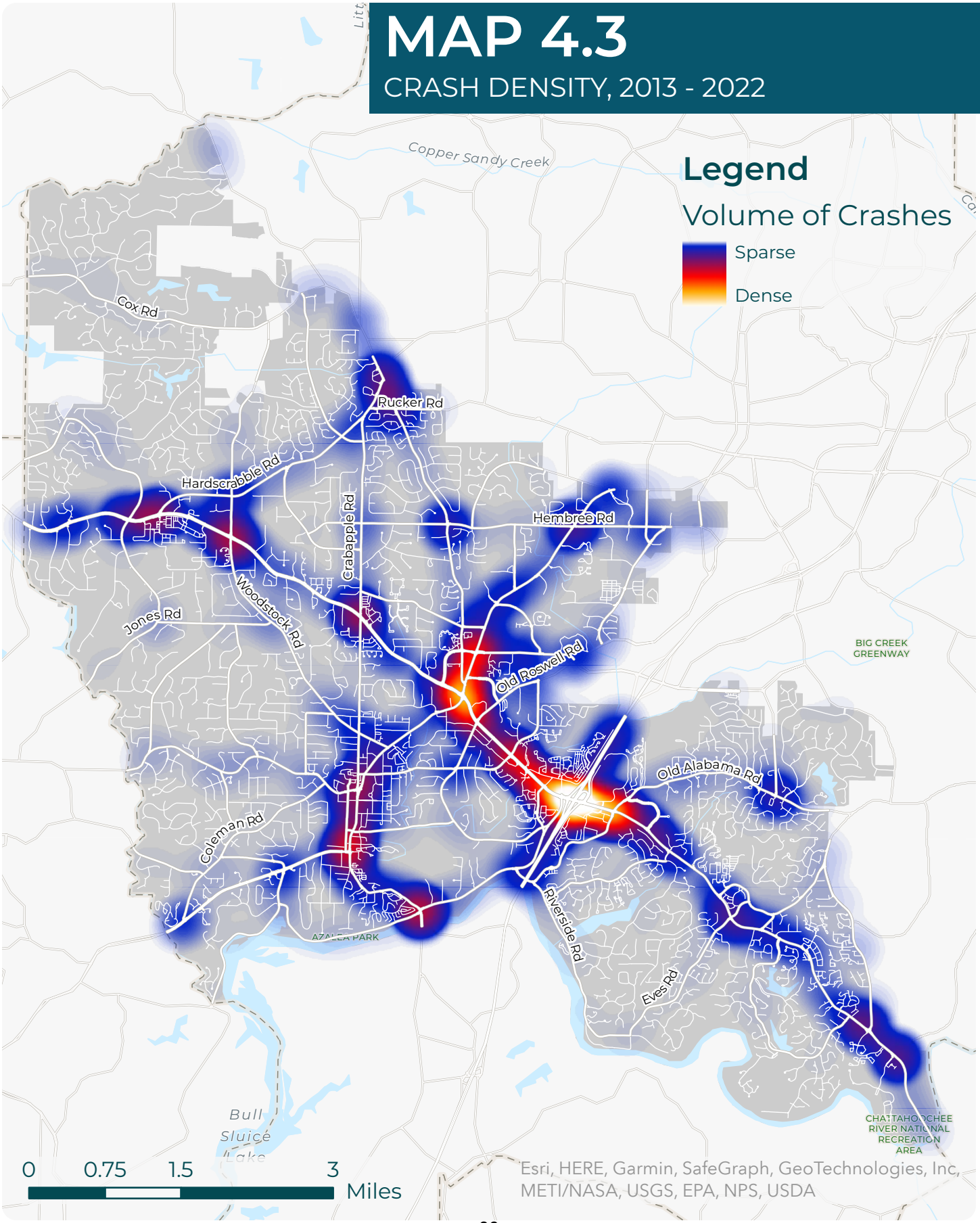
MAP 4.2

HIGH CRASH MIDBLOCKS, 2022



MAP 4.3

CRASH DENSITY, 2013 - 2022



4.1.2 Bicycles and Pedestrians

Each year, Roswell DOT completes an analysis of crashes involving bicycles and pedestrians. The data shows that the accident rate among bicycles and pedestrians has increased over the past ten years. Roswell DOT uses this accident data to better prioritize projects, particularly those that benefit bicycle and pedestrian mobility and safety.

Bicycles

Bicycle accidents have been increasing over the past ten years, and as of 2022 there have been an average of 10 bicycle accidents per year, nearly half (approximately 40%) being the fault of the bicycle operator or a solo crash (i.e. running off the road, hitting an obstruction). About 1 in 7 of these crashes are considered a hit and run; this statistic mimics automobile accidents, which show a similar rate of hit and run instances. Bicycle crashes tend to occur most frequently along the Holcomb Bridge Road (SR 140), Alpharetta Street/Highway (SR 9), and Azalea Road/Riverside Road corridors. Other crash–prone locations within the City are the Historic District, including Canton Street and Norcross Street. Figure 4.1 shows the number of bicycle accidents within the City over the past ten years.

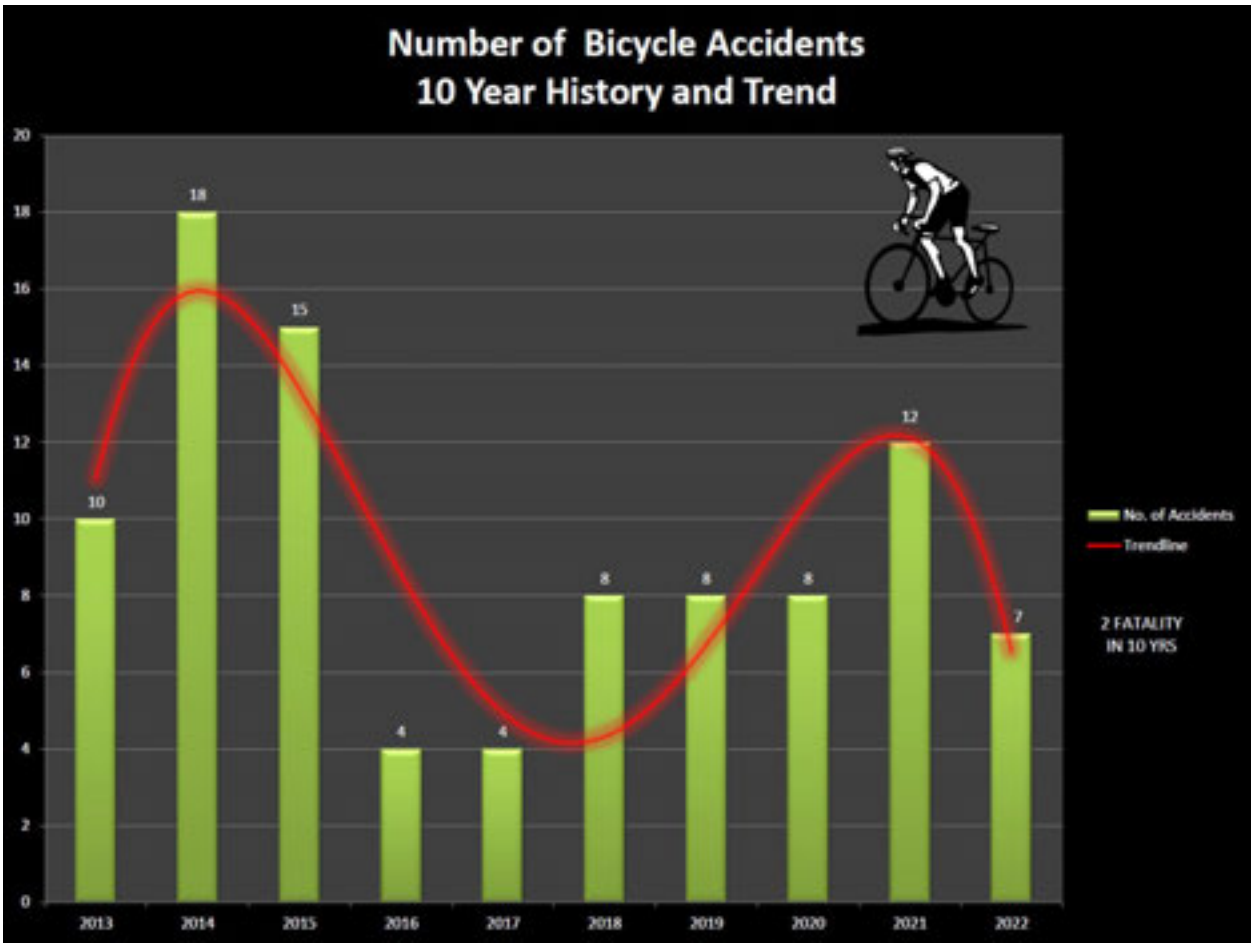
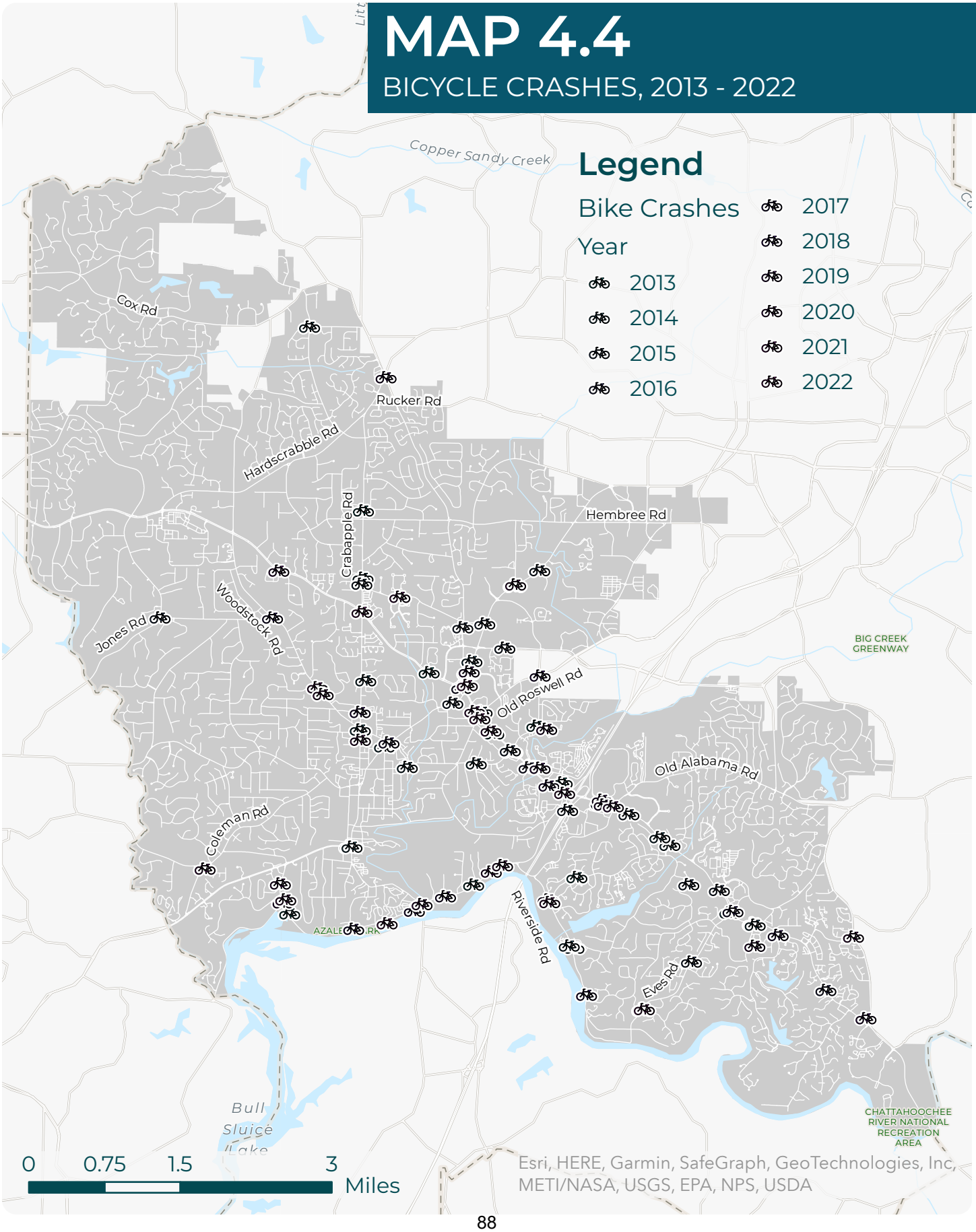


FIGURE 4.1 – NUMBER OF BICYCLE ACCIDENTS PER YEAR

MAP 4.4

BICYCLE CRASHES, 2013 - 2022



PEDESTRIANS

Pedestrian crashes have been slowly declining, occurring on an average of almost 16 pedestrian crashes per year, with about a third of those being the fault of the pedestrian (i.e. illegal crossing). About 1 in 6 pedestrian crashes are considered hit and run, and there was one pedestrian killed in 2022. Pedestrian crashes most frequently occur in the Historic District, Midtown, the Holcomb Bridge Road (SR 140) corridor, and at the Atlanta Street (SR9)/Mansell Road intersection. The lack of a continuous, safe sidewalk network as visualized by the frequent presence of desire paths may be adding to the pedestrian accidents along Holcomb Bridge Road (SR 140). In fact, the highest scoring sidewalk gaps in the sidewalk inventory analysis occur along Holcomb Bridge Road. Figure 4.2 shows the number of pedestrian accidents within the City over the past ten years.

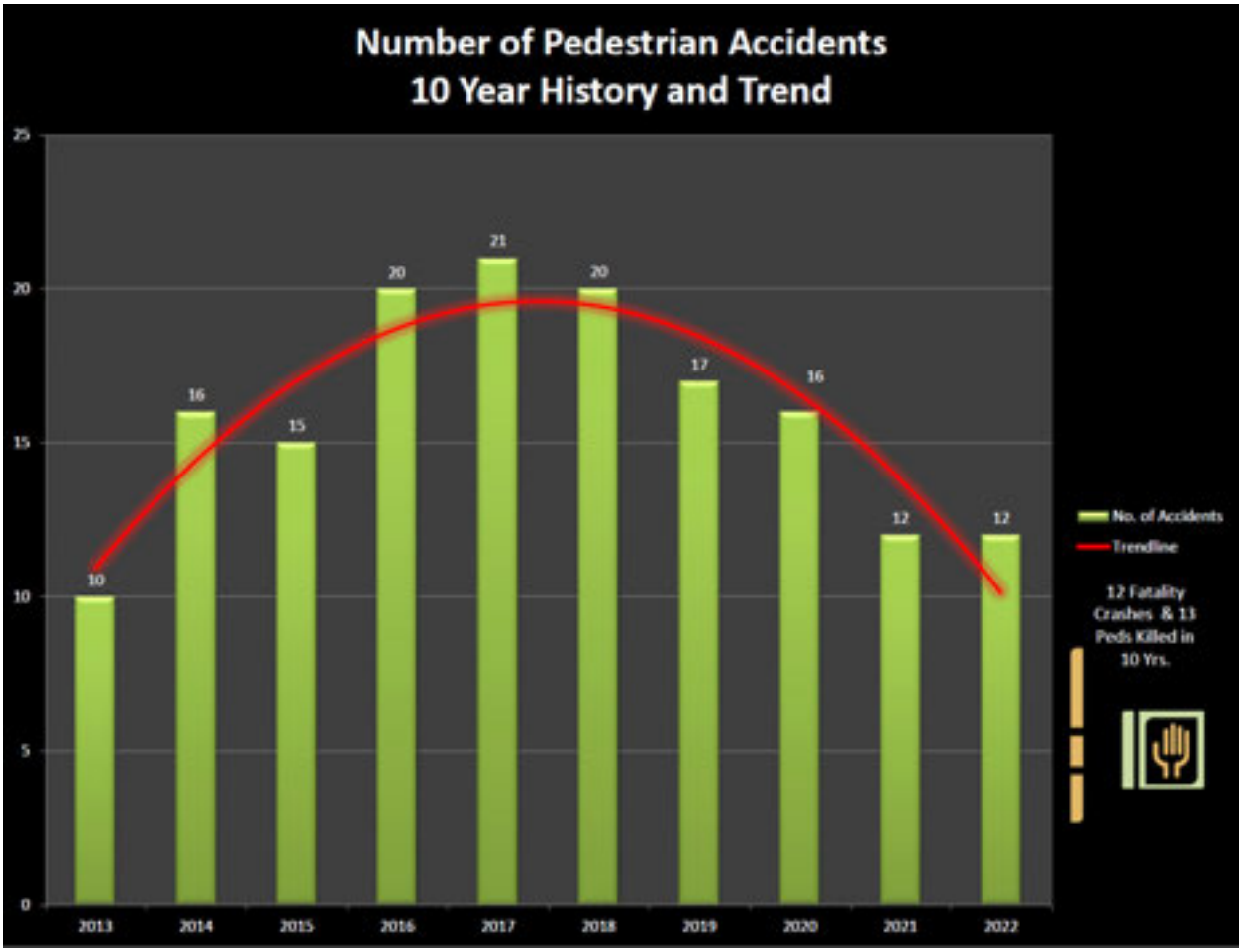
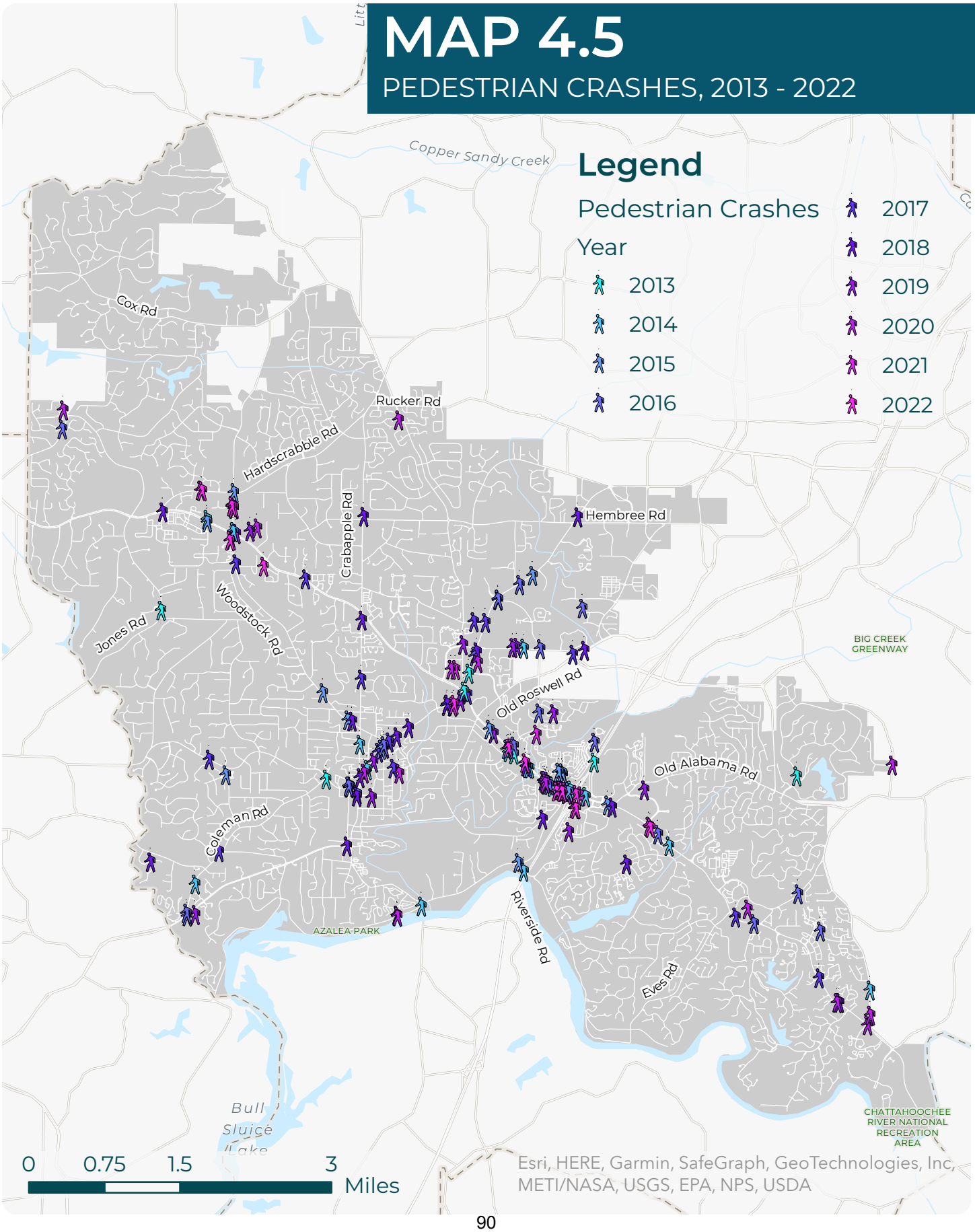


FIGURE 4.2 – NUMBER OF PEDESTRIAN ACCIDENTS PER YEAR

MAP 4.5

PEDESTRIAN CRASHES, 2013 - 2022



4.2 Roswell's Safety Strategy

4.2.1 The Safety Issues

The 2022 update to the Georgia Strategic Highway Safety Plan (SHSP) introduced 10 emphasis areas to look at to improve safety on the State's roads. They are the "top contributing factors of crashes, serious injuries, and fatalities in Georgia."

Roswell Stats–2013–2022:

- **Intersection Related–**3 deaths per year/ 18 serious injuries per year
- **Roadway Departure–**2 deaths per year/ 6 serious injuries per year
- **Pedestrians and Bicycles–**2 deaths per year/ 4 serious injuries per year
- **Older Driver (65+) Related–**2 deaths per year / 7 serious injuries per year
- **Motorcycles–**1 death per year/ 4 serious injuries per year
- **Impairment Related–**1 death per year/ 6 serious injuries per year
- **Young Driver (15–19) Related–**1 death per year/ 7 serious injuries per year
- **Aggressive Driving Related–**1 death per year/4 serious injuries per year
- **Distracted Driving Related–**3 deaths per year/ 11 serious injuries per year

It is important to note, simply looking at the average does not present the full picture. Further detailing of this information will be broken down later in the chapter.

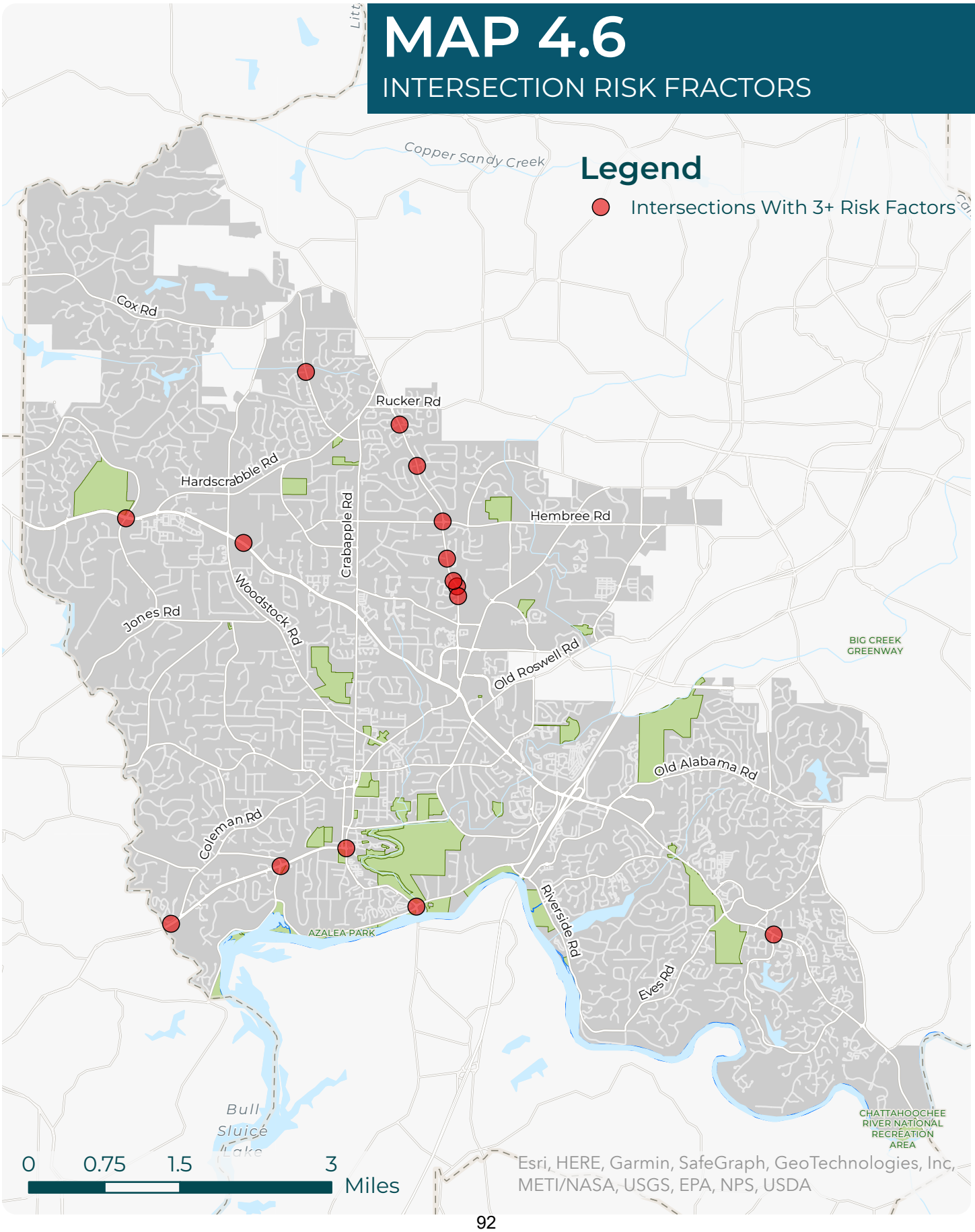
4.2.2 The Locations of the Safety Issues

The Atlanta Regional Commission (ARC) has focused on four of these categories–intersections, roadway departures, pedestrians, and bicycles. They chose these categories because they "present the greatest opportunity to reduce death and serious injury and also represent the most logical areas for equitable infrastructure investments through the Transportation Improvement Program (TIP) and to guide local priorities."

Risk Factors	Values Associated with Increased Risk
Functional class	Urban other principal arterials Urban minor arterials Urban major collectors
Ownership	GDOT
Operating speed	35+ mph on arterial streets 30+ mph on collector and local roads
Observed speed	Larger differences between speed limit and average observed speed
Community context	Lower intensity development
Traffic control	Signalized intersections on principal arterials Uncontrolled or unsignalized intersections on minor arterials and major collectors

TABLE 4.3 INTERSECTION RISK FACTORS

MAP 4.6
INTERSECTION RISK FRACTORS

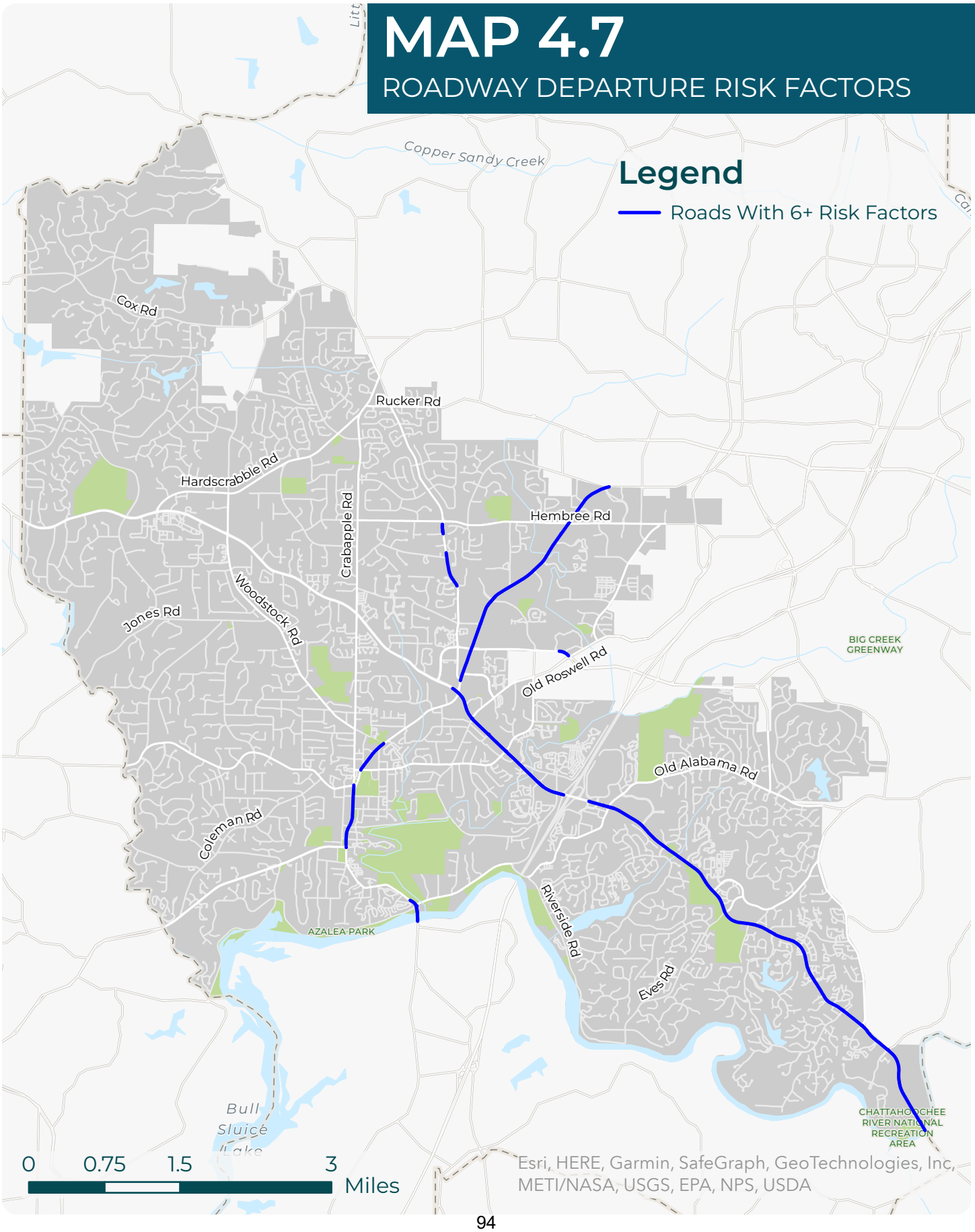


Risk Factors	Values Associated with Increased Risk
Functional class	Urban interstates Rural minor arterials Rural major collectors
Ownership	GDOT
Traffic volume	5,000 – 15,000 vehicles per day
Posted Speed	45+ mph on arterial streets 35+ mph on collector roads
Community context	Rural areas and lower intensity development

TABLE 4.4 ROADWAY DEPARTURE RISK FACTORS

MAP 4.7

ROADWAY DEPARTURE RISK FACTORS

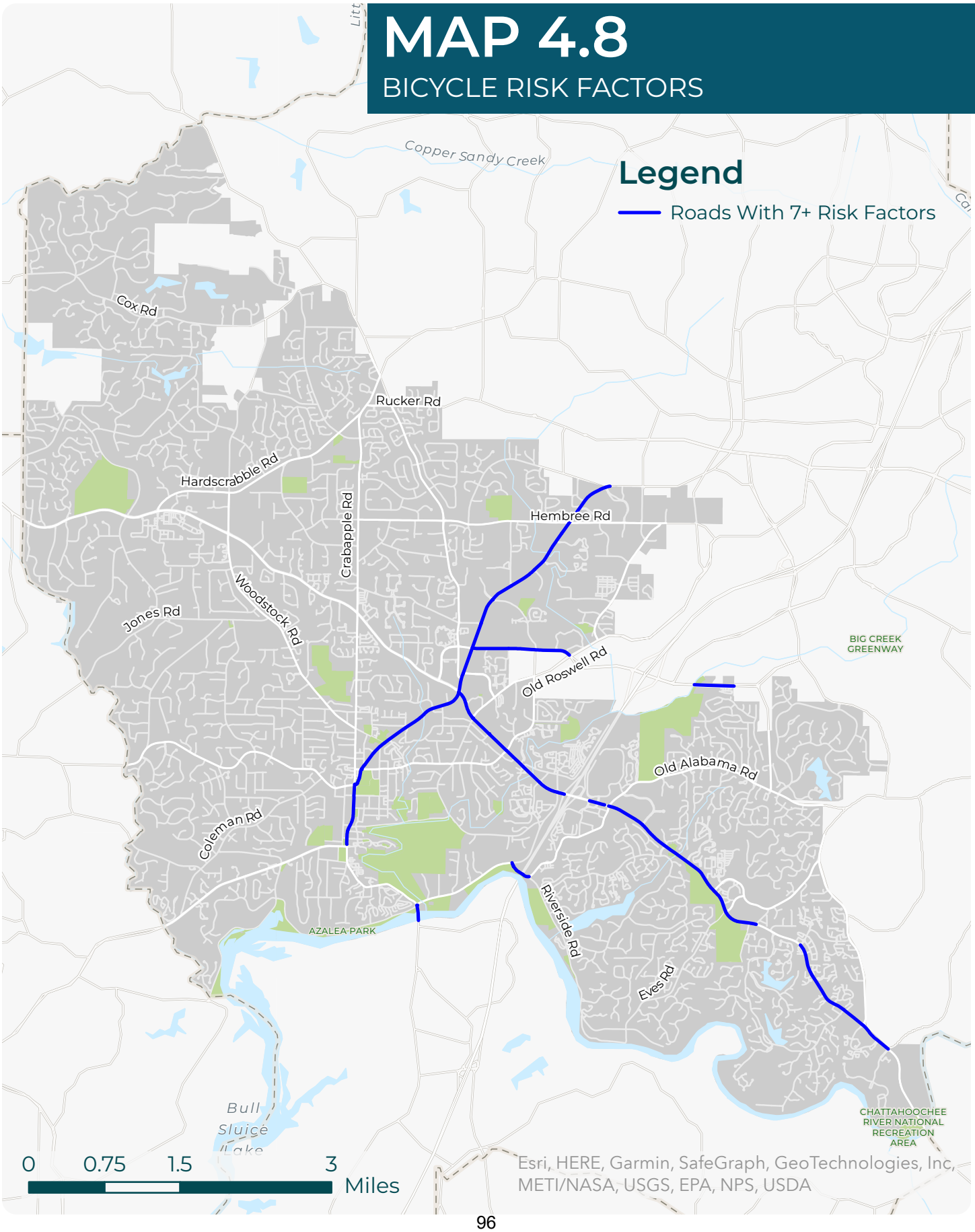


Risk Factors	Values Associated with Increased Risk
Functional class	Urban minor arterials Urban major collectors
Ownership	City County
Traffic volume	20,000+ vehicles per day for GDOT arterials (does not apply to city and county roads)
Number of lanes	2-lane city and county roads 2- or 4-lane GDOT arterials
Community context	Urbanized areas, high population and employment densities, higher intensity development, and high frequency bus service
Socioeconomic status	Bottom 20% of median household incomes and higher median incomes, particularly in tracts with a high population density
Induced demand	Presence of multiuse paths or marked bike lanes

TABLE 4.5 BICYCLE RISK FACTORS

MAP 4.8

BICYCLE RISK FACTORS

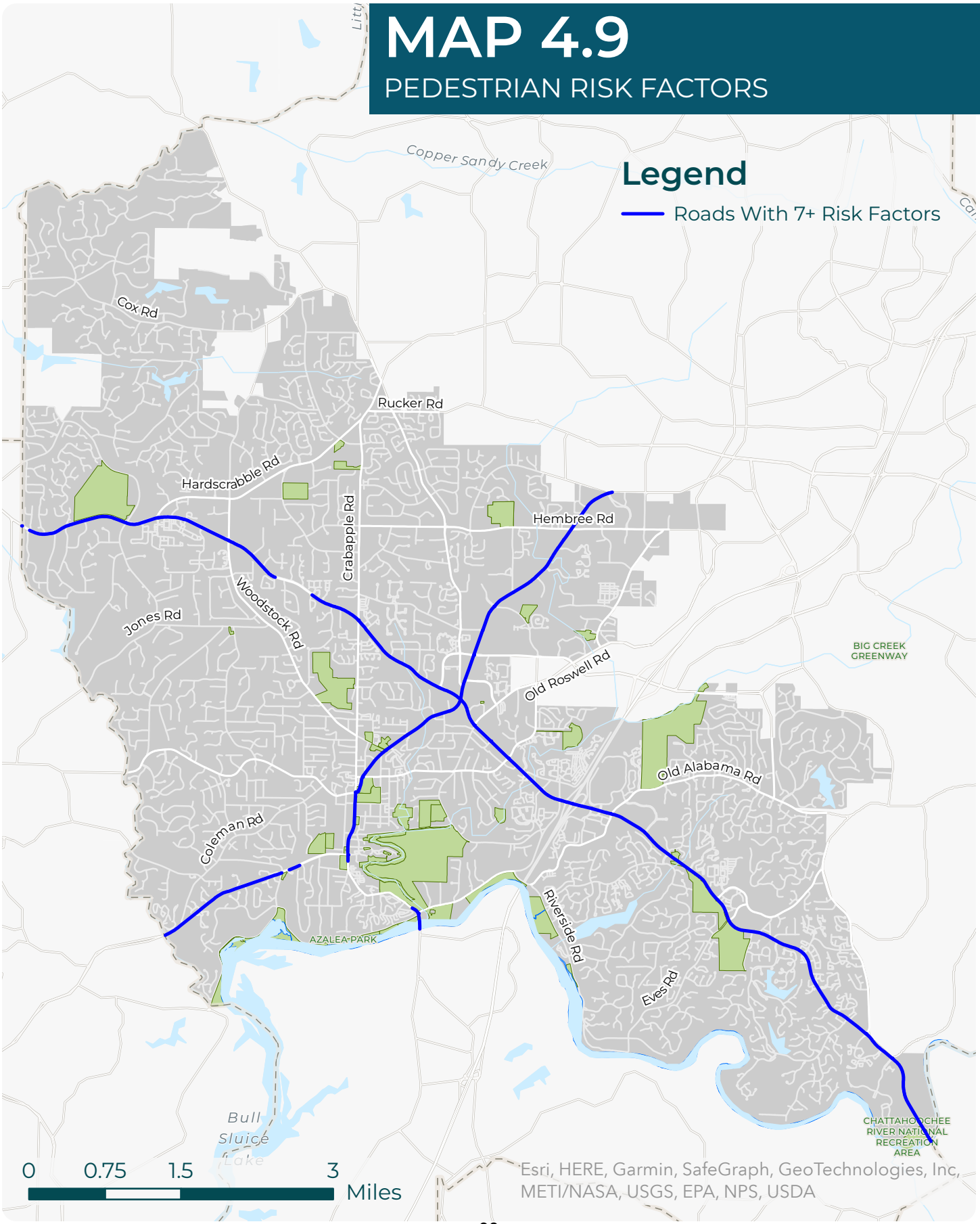


Risk Factors	Values Associated with Increased Risk
Functional class	Urban other principal arterials Urban minor arterials
Ownership	GDOT
Traffic volume	9,000+ vehicles per day
Number of lanes	4+ lanes
Posted speed	35+ mph
Community context	Urbanized areas, high population densities, higher intensity development, and high frequency bus service
Socioeconomic status	Lower average income, higher proportion of population that represents minority and non-white race and ethnicity
Environmental justice score	7+

TABLE 4.6 PEDESTRIAN RISK FACTORS

MAP 4.9

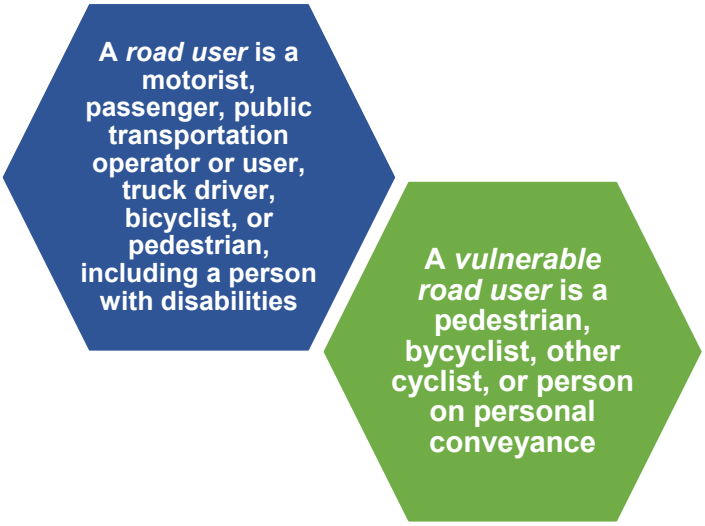
PEDESTRIAN RISK FACTORS



4.2.3 The Solutions

To help improve safety on Roswell's roadways, RDOT is following the Safe System Approach recommended by the US Department of Transportation. (USDOT) It is based on six principles– death and serious injuries are unacceptable, humans make mistakes, humans are vulnerable, responsibility is shared, safety is proactive, and redundancy is crucial–and has five objectives: safer people, safer vehicles, safer speeds, safer roads, and post–crash care.

Under the Infrastructure Investment and Jobs Act, (IIJA) (also referred to as the Bipartisan Infrastructure Law (BIL)) the FHWA defined the terms road user and vulnerable road user, to ensure all projects meet the Department of Transportations's goals of for a safe, accessible, comfortable, equitable, and integrated multimodal transportation network that serves all ages and abilities.



Safe System Principles

Death and serious injuries are unacceptable– The Safe System approach prioritizes in preventing crashes that cause death or serious injury.

Humans make mistakes – People will inevitably make mistakes, but the transportation system can be designed to accommodate for human error to help avoid death and serious injuries.

Humans are vulnerable – The human body can only tolerate so much crash force before serious injury or death occurs. It is vital to design and operate a transportation system that is human–centric and accommodates human vulnerabilities.

Responsibility is shared – Rather than holding only the transportation system users responsible for preventing crashes, the Safe System acknowledges that all stakeholders (transportation system users and managers, vehicle manufactures, etc.) have a shared responsibility to prevent crashes causing fatal or serious injuries.

Safety is proactive – Latent risks should be identified and mitigated proactively, rather than waiting for crashes to occur and reacting afterwards.

Redundancy is crucial – It is important all aspects of the transportation system have improved safety, so should one aspect fail, there will still be safeguards protecting people.

Safe System Objectives

Safer People – Encouraging safe, responsible driving and behavior by transportation system users and creating conditions that prioritize their ability to reach their destination unharmed.

Safer Roads – Designing transportation systems to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.

Safer Vehicles – Expanding the availability of vehicle systems and features that help to prevent crashes and minimize the impact of crashes on all users of the transportation system.

Safer Speeds – Promoting safer speeds in all roadway environments through a combination of equitable context–appropriate roadway design, appropriate speed–limit setting, targeted education, outreach campaigns, and enforcement.

Post–Crash Care – Increasing the survivability of crashes through expedient access to emergency medical care, while creating a safe work environment for vital first responders and preventing secondary crashes through robust traffic incident management processes.

A Comprehensive Approach to Improving Safety

The general roadway safety management process is comprised of three components: planning, implementation, and evaluation.

Planning

Identify problems – collect, manage, and analyze data to identify opportunities to improve safety
Develop countermeasures – develop targeted strategies to address crash–contributing factors
Prioritize projects–develop a balanced portfolio of projects that maximizes return on investment

Implementation

Implement safety projects – design projects, identify funding sources, allocate resources, program projects, and develop a plan to evaluate investments

Evaluation

Estimate effectiveness of projects and programs – perform project–, countermeasure–, and program–level evaluations to understand the safety performance and cost–effectiveness of investments and to inform future decisions

The site-specific and systemic approaches both focus on sites with the highest potential for safety improvement. The difference is how each approach defines "potential for improvement."

The **site-specific approach** defines “potential for improvement” based on site-specific crashes (such as historical crashes, predicted future crashes, or a combination of the two). The site-specific approach can be used to identify and treat high-crash locations such as individual intersections or road segments.

The site-specific approach is reactive in that it addresses sites based on historical safety performance.

The **systemic approach** defines “potential for improvement” based on site- specific risk factors (i.e., geometric and operational attributes known to increase crash risk). Local agencies can use the systemic approach to address safety issues from a system wide risk-based perspective (as opposed to a purely crash-based perspective). The systemic approach focuses on crash types and contributing factors common to many sites across the network and typically involves multiple sites per project. The systemic approach is proactive because it focuses on the presence of risk factors; the sites are not required to have a history of crashes.

The systemic approach is proactive in that it addresses sites based on risk rather than crash history.

Site-specific and systemic safety are complementary and support a comprehensive approach to safety program management.

The primary difference between the site-specific and systemic approach is the order in which screening and diagnosis occur in the planning stage. The site- specific approach starts with network screening to identify sites with potential for safety improvement, followed by diagnosis to identify crash contributing factors at each location of interest. The systemic approach starts with diagnosis at the network level to identify risk factors associated with the focus crash type and focus facility type, followed by screening to identify and prioritize locations with the risk factors.

Proven Safety Countermeasures

The Federal Highway Administration (FHWA) has a collection of countermeasures and strategies that are effective in reducing roadway fatalities and serious injuries, known as the Proven Safety Countermeasures initiative. (PSCi) These work on all road types and address at least one safety focus area.

The key to countermeasure selection is to target the underlying risk factors.

COUNTERMEASURE	HIGH SPEEDS	HIGH TRAFFIC VOLUMES	PERMISSIVE LEFT-TURN PHASING	LIMITED SIGHT DISTANCE	SKEWED INTERSECTION	INTERSECTION ON CURVE
Advance signs	✓			✓		✓
Application of multiple low-cost countermeasures	✓			✓		✓
Backplates with retroreflective borders	✓	✓				
Convert intersection to roundabout	✓				✓	✓
Corridor access management	✓	✓				
Flashing yellow arrow	✓	✓	✓			
Improve intersection angle	✓	✓		✓	✓	
Improve intersection sight distance	✓	✓	✓	✓	✓	✓
Left- and right-turn lanes	✓	✓				
Protected left-turn phase	✓	✓	✓	✓		
Yellow change intervals	✓	✓	✓			

FIGURE 4.3 – INTERSECTION PROVEN SAFETY COUNTERMEASURES

COUNTERMEASURE	NARROW ROAD	NARROW SHOULDER	UNPAVED SHOULDER	HIGH SPEEDS	MULTIPLE LANES	SHARP CURVES	STEEP SLOPES
Advance markings for curves	✓	✓	✓	✓		✓	
Advance signs	✓	✓		✓		✓	
Enhanced delineation for horizontal curves	✓			✓		✓	
Enhanced friction for horizontal curves	✓			✓		✓	
Median barriers				✓	✓		
Median buffer				✓	✓		
Raised pavement markers	✓	✓		✓	✓	✓	
Roadside design improvements				✓		✓	✓
Rumble strips/stripes	✓	✓	✓	✓		✓	✓
SafetyEdge℠	✓	✓	✓	✓	✓	✓	✓
Wider pavement markings	✓	✓		✓	✓	✓	
Wider shoulder	✓	✓	✓	✓		✓	✓

FIGURE 4.4 – INTERSECTION PROVEN SAFETY COUNTERMEASURES

COUNTERMEASURE	HIGH SPEEDS	HIGH TRAFFIC VOLUMES	HIGH PEDESTRIAN VOLUMES	HIGH BICYCLE VOLUMES	MULTIPLE LANES	NO MEDIAN	LACK OF FACILITIES	LIMITED SIGHT DISTANCE	POOR VISIBILITY
Advance warning signs and markings	✓	✓	✓	✓	✓		✓	✓	✓
Curb extensions			✓		✓	✓	✓	✓	✓
Dedicated bicycle lanes	✓	✓		✓	✓		✓		
Grade separated crossing	✓	✓	✓	✓	✓	✓		✓	
High visibility crosswalk			✓				✓		✓
Leading pedestrian interval	✓	✓	✓		✓				
Lighting			✓	✓			✓		✓
Parking restriction near crossing		✓			✓	✓		✓	✓
Pedestrian hybrid signal	✓	✓	✓		✓	✓		✓	✓
Pedestrian refuge island	✓	✓	✓		✓	✓	✓	✓	✓
Prohibit right-turn on red		✓	✓					✓	✓
Protected left-turn phasing	✓	✓	✓					✓	✓
Raised crosswalk			✓				✓		
Rapid rectangular flashing beacon	✓	✓	✓		✓	✓			✓
Road diet	✓			✓	✓	✓	✓		
Separated multiuse path	✓	✓	✓	✓			✓		
Sidewalks	✓	✓	✓		✓		✓		✓

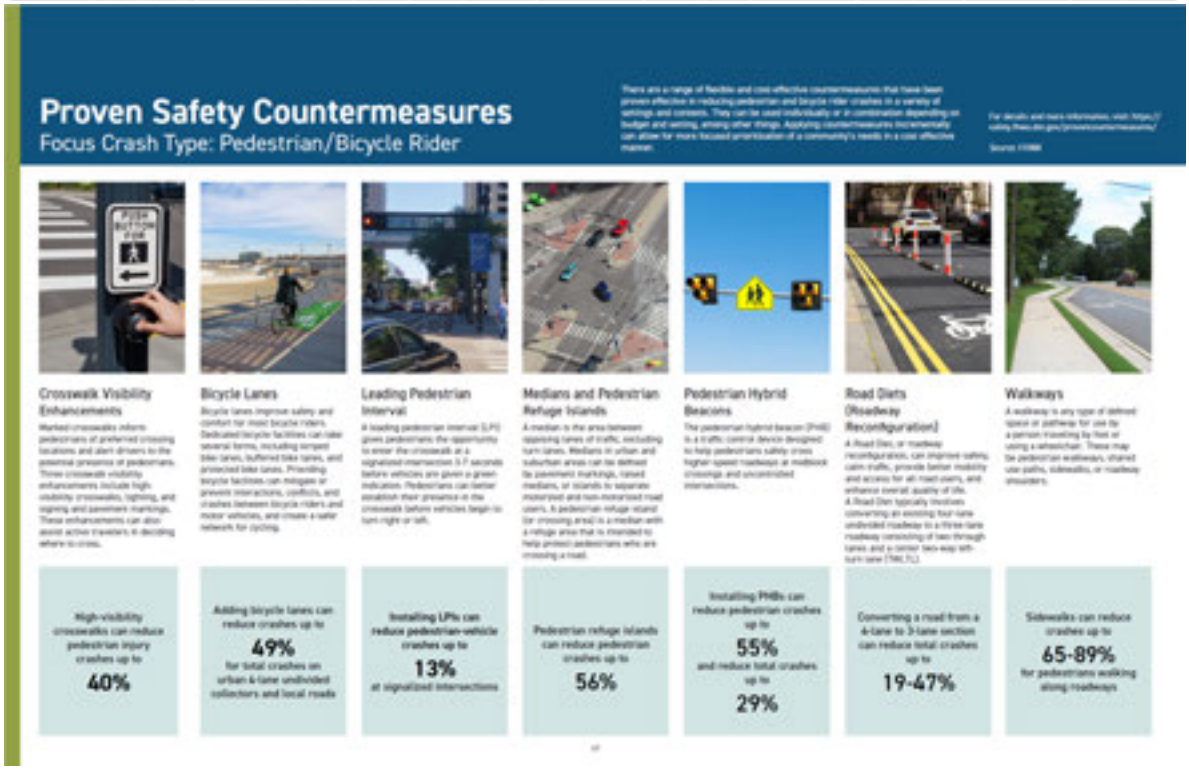


FIGURE 4.5 – INTERSECTION PROVEN SAFETY COUNTERMEASURES

TRAFFIC CALMING

The Institute of Transportation Engineers (ITE) officially defines traffic calming as "the combination of many physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve street conditions for non–motorized street users."

The most basic objective of traffic calming is the slowing of vehicular traffic. From that goal, new goals can be made:

Improved "feel" of the street – If people feel more comfortable on the street, they are more likely to engage in street–oriented activities with their neighbors.
Enhanced aesthetic values and a sense of nature – Most traffic calming methods can create communal open spaces, making neighborhoods more attractive, and break up the unending appearance of streets that encourage speeding.
Balance among modes of transportation – Reduced speeds provide more time road users to react
Increased safety – Reduced speeds significantly reduce the number of and severity of crashes involving motor vehicles.
Improved air quality and noise levels – Slower-traveling vehicles make less noise and generally release fewer pollutants into the environment.
Decreased fuel consumption – With the increased number of trips made by active transit and slower traffic speeds, fuel consumption has been reported to be reduced anywhere from 10 to 12 percent.
Continued accommodation of motor vehicle traffic – While shifting the balance among travel modes, it should not result in severely restricted traffic volumes or the shifting of traffic problems from a traffic –calmed area to other streets.

Reducing vehicle speeds is vital to providing a safe, shared environment. If a pedestrian is struck by a motor vehicle travelling at 20 miles per hour or less, they are likely to suffer only non–severe injuries. If struck by a motor vehicle traveling at 36 miles per hour or more, injuries are likely to be fatal.

Figure 4.6–A graph showing the relationship between the vehicle impact speed and the severity of pedestrian injury from the initial impact with a standard size motor vehicle. The abbreviated injury scale (AIS) is used to represent the threat to life a single injury presents, in this case, the initial impact with a motor vehicle.

Source: Chellman, C.E. Traditional neighborhood development street design guidelines. Washington, DC: ITE Technical Council Committee 5P–8, Publ. No. RP–027, 1997, Draft. (Draft announced for review and comment in ITE Journal, June 1997, 67(6), 44–45.)

Major Concerns of Traffic Calming

"Encouraging people to walk, play, and bike in and next to streets will cause them to develop a false sense of security. These bad habits will continue when they leave their neighborhoods and increase crashes."

"Traffic calming on lower volume residential streets may reduce the volume of traffic a street can handle, however local residents still will rely on the street to get to their homes. The other concern is that by slowing traffic on one street it may simply move the traffic onto another street, increasing congestion."

"*Traffic calming may improve safety for pedestrians, but textured crossings, bulb–outs, and other similar features have an adverse impact on cycling."*

"*Adding chicanes, medians, and roundabouts may increase emergency response times and prevent garbage trucks, school busses, and other large vehicles from accessing roads so design of facilities needs to be mindful of these road users."*

Traffic calming has been studied extensively in America and overseas, including the Netherlands, Germany, and Australia to evaluate the safety and impact of traffic calming techniques and devices.

A five–year study of traffic calming and follow–up research performed by the Germany Federal Government found **there was little change in overall traffic volumes, the reduction in average vehicle speeds was almost 50 percent, and the average trip time only increased by 33 seconds.**

The German study mentioned above found bicycle ridership doubled over 4 years after traffic calming elements were implemented.

When the Dutch city of Groningen implemented traffic calming elements in their downtown, they found it directly resulted in a substantial increase in bicycling and walking, with over 50 percent of all trips into the downtown being made by bicycle.

The Cyclist Touring Club has published a technical note, *Cyclists and Traffic Calming,* which includes extensive information adapting traffic calming strategies for bicycling.

Studies conducted in Berkley and Palo Alto, CA have found that traffic calming measures have not impaired police or fire response times.

Traffic Calming in Roswell

Roswell currently has a Neighborhood Traffic Calming Program, approved by Mayor and Council in October 2019, which applies to local roads located within residential neighborhoods. This policy does not apply to roadways that are designated as collectors or arterial roadways.

The goals of Roswell's Neighborhood Traffic Calming Program are as follows:

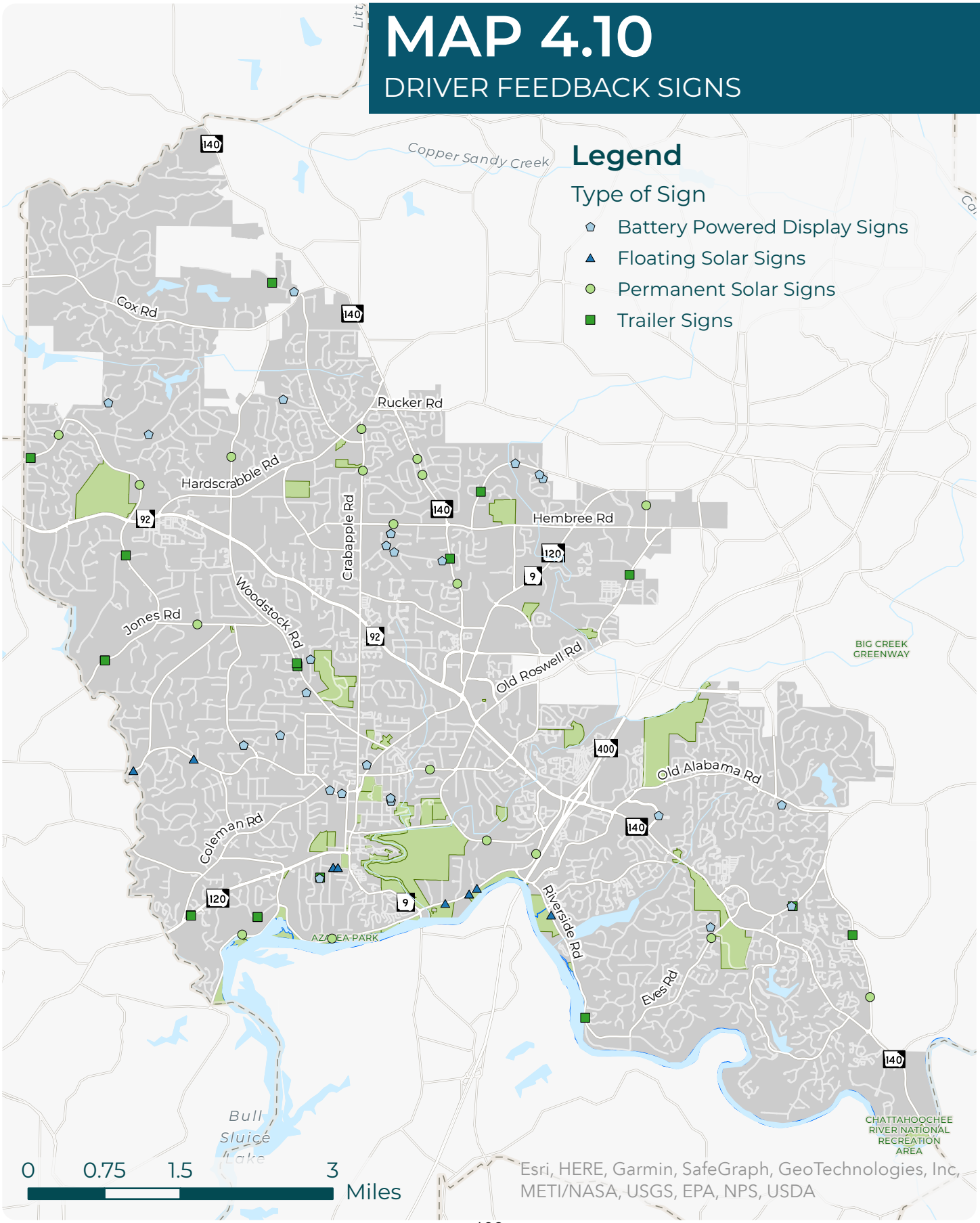
a. Reduction in speed for 85% of vehicles to a safe and legal speed limit.
b. Encouraging through traffic to avoid using local roads, and to stay on collectors and arterials.
c. Deterring truck traffic and other inappropriate vehicles from local roads.
d. Maintaining and/or enhancing emergency vehicle access and response time.
e. Encouraging and enhancing of pedestrian and bicycle access and usage.
f. Continuous improvement in the use of effective, efficient, economical, and environmentally sustainable traffic calming measures.
g. Focus on clear communication with and involvement of neighborhood associations and residents.
h. Collection of Input from public safety officials, emergency responders, school officials, planners, and engineers.

Speed Feedback Sign Program

The city currently has an inventory of 27 speed feedback signs, which has an electronic display board attached to a sign displaying the posted speed limit that illuminations the vehicles speed in miles per hour. The purpose of the signs are to alert drivers that they may be traveling above the posted speed limit so that they may slow down to correct the operation of their vehicle. Some signs have the ability to flash a message (i.e. “slow down”) or flash red/blue lights to indicate law enforcement to encourage speed reduction. Of the 27 signs in Roswell’s inventory, 23 of which are solar powered radar signs, and the remaining 4 are battery powered display signs. Sixteen of the solar signs have permanent locations. Three of the solar signs are dedicated to various locations on Riverside Road, King Street, and Pine Grove Road, with their locations being moved approximately every two months. The remaining four solar signs have been built onto trailers to be deployed based on resident complaints of high speeds, and for certain speed studies.

The four battery powered signs are rotated through subdivisions, based on resident complaints, and as an interim solution for traffic calming. These signs have a limited battery life and typically can only be deployed for 8–10 days. The program is very popular with our residents and allows us to respond to citizen complaints very rapidly (generally within 24–48 hours) which also yields positive feedback from our citizens. Map 4.10 below shows the traditional speed feedback sign locations.

MAP 4.10
DRIVER FEEDBACK SIGNS



TRAFFIC CALMING TOOLBOX

There are many different tools that can be used to implement traffic calming, but not all work in every given situation. It is important to first identify the nature and extent of the traffic related problems on a street, and then select and implement cost–effective measures to solve the identified problems.

The tables below provide a brief glance at where these various measures can be applicable based on street classifications per FHWA guidelines, however it should be noted that the vertical deflection options listed below are currently not permitted on any street type or functional class in Roswell based on adoption of the International Fire Code (IFC).

Measure	Location Applicability ✓ Generally Applicable O Use with Care × Nominal to Low Applicability * Depending on the local context criteria (i.e. Traditional Mainstreets, Village Mainstreets, etc.), the measure indicated may or may not be appropriate for the street classification.		
	Local / Collector Streets	Major Collector / Urban Arterial Streets	Rural Arterial Streets
Communication and Enforcement			
Information Signage	✓	✓	✓
Speed Display Device	✓	✓	✓
Educational Campaigns	✓	✓	✓
Minor Adjustments			
Full-lane Transverse Bars	✓	O	✓
On-Road Messaging	✓	✓	✓
Street Parking	✓	O	×
Vertical Centreline Treatments	✓	×	✓
Engineering			
Vertical Deflection			
Raised Crossings	✓	×	×
Raised Intersections	✓	×*	×
Speed Cushions	✓	×	×
Speed Humps / Tables	✓	×	×
Horizontal Deflection			
Chicanes (one-way streets)	Locals Only	×	×
Chicanes (two-way streets)	✓	×	×
Corner Tightening / Curb Radius Reductions	✓	O	O
Mini-Roundabouts	✓	×	O
Bulb-Outs / Curb Extensions / Neckdowns / Chokers	✓	O*	×
Cycle-Friendly Bulb-Outs	✓	O*	×
Lane Narrowings	✓	O	✓

Measure	Location Applicability ✓ Generally Applicable O Use with Care × Nominal to Low Applicability * Depending on the local context criteria (i.e. Traditional Mainstreets, Village Mainstreets, etc.), the measure indicated may or may not be appropriate for the street classification.		
	Local / Collector Streets	Major Collector / Urban Arterial Streets	Rural Arterial Streets
Centre Island Narrowings	✓	O	✓
Road Diets	✓	✓	×*
Surface Treatments			
Textured Crossings	✓	O	×*
Textured Surfaces	✓	×	×
Transverse Rumble Strips	O	×	✓
Traffic Management			
Vehicular Directional Closures	✓	×	×
Vehicle Diverters	✓	×	×
On-Street Plazas / Vehicle Access Closures	✓	×	×
Intersection Channelizations	✓	O	O
Raised Medians Through Intersections	✓	O	O
Right-in-Right-Out Islands	✓	O	O
Urban Designs			
Streetscaping	✓	✓	×*
Gateways	✓	✓	✓
Emerging			
Speed Kidneys	✓	×	×
Creative Pavement Markings	✓	×*	×
Shared Spaces	✓	×	×
Woonerven ("Living Streets")	✓	×	×
Automated Speed Enforcement	✓	✓	✓

COMMUNICATION AND ENFORCEMENT MEASURES

These are measures and programs which raise awareness and educate the public in regard to driving behavior and vulnerable street users.

Information signage is largely used to educate the public, draw attention to approaching conditions, and encourage lower speeds. They are best used in tandem with a larger traffic calming plan. Over usage may reduce effectiveness.

Speed display devices use radar technology to display approaching vehicle speeds. They work best on two–lane roads with low to moderate traffic, and ahead of school zones. Without enforcement, there is limited long–term effectiveness.

Educational campaigns raise awareness of specific road safety issues, including speeding and aggressive driving. Use of social media and over formats can increase the reach of the campaign, but may be less effective without joined enforcement.

MINOR ADJUSTMENT MEASURES

Pavement markings can be implemented quickly, potentially at a low cost through the use of low VOC (Volatile Organic Compounds) paint, with no impact to emergency vehicles or police enforcement. They do require regular maintenance, especially if they are placed in the wheel path of vehicles.

On–road messaging involves painting information on the roadway, usually near or in school zones or curves. They may also be used alongside gateway designs to alert drivers they are entering a community.

Pavement marking warning drivers they are in a school zone (Birmingham, England)
David P Howard via Wikimedia Commons

Lane transverse bars or **optical speed bars** are a series of parallel pavement markings that are painted along the lines of a travelled lane, and are used to create the illusion of increasing speed by reducing the distance between markings. These are best used on freeway off–ramps, bridges, intersections, and deficient horizontal curves.

Optical speed bars on Magnolia Street (Roswell, GA)

Street parking reduces the effective roadway width by allowing vehicles to park parallel to the edge of the roadway and encourage more cautious driving behavior. It is important to avoid implementing on roads were on–road bike volumes are high and no buffer area to prevent “dooring” is provided, as well as routes with high bus volumes. The challenge is to ensure that the installation of new on–street parking spaces near intersections, side streets, or some driveways, does not inadvertently interfere with sight distance requirements of vehicles.

Street parking on Mimosa Boulevard encourages drivers to slow down (Roswell, GA)

Vertical centerline treatments create the perception of narrow travel lanes by creating vertical “friction” elements in the center of the road. They have the potential reduce vehicular speeds and mitigate potential on–coming traffic conflicts, but might require frequent replacement from vehicle impacts.

Centerline treatment warning drivers of the crosswalk on Canton Street (Roswell GA)

ENGINEERING MEASURES

VERTICAL DEFLECTIONS

Vertical deflections raise a section of a road to encourage reduced speeds. They can potentially impact emergency response vehicles, persons with disabilities, and cause discomfort to transit users and drivers.

Raised crossings are marked pedestrian crossings at either intersections or mid–blocks, raised to be higher than the roadway. It is important to consider if there is a need to improve the visibility of vulnerable street users. They should not be placed within the braking zones of traffic signals. Traditionally not permitted due to conflict with IFC.

A raised pedestrian crossing with a sinusoidal slope, which reduces discomfort to cyclists and drivers (Harrisburg, PA) Pennsylvania Department of Transportation via the Pedestrian and Bicycle Information Center

Raised intersections are intersections built higher than the approach roads. They work best at urban cross–sections, and school zones. These can be costly to build if not constructed as part of a larger roadway reconstruction project. Traditionally not permitted due to conflict with IFC.

A raised intersection (Prague, Czechia) ŠJů via Wikimedia Commons

Speed cushions are raised areas, similar to speed humps, but do not cover the entire width of the roadway. They are designed to allow larger vehicles to "straddle" the cushions while smaller vehicles are vertically deflected. While some large vehicles and busses can pass with limited deflection, they can still affect emergency response times. They are more difficult to construct compared to speed humps. Traditionally not permitted due to conflict with IFC.

Speed cushions designed to accommodate cyclists (Seattle, WA)
Note that the white sedan is parked illegally, reducing oncoming vehicles' ability to see pedestrians.
Toole Design Group via the Pedestrian and Bicycle Information Center

Speed humps are raised areas of a roadway which cause vertical upward deflection of travelling vehicles. **Speed tables** are elongated speed humps with flat–topped sections. The preferred installation is in a series, close to street lighting, and downgrade from water catch basins to minimize the potential of ponding on the roadway. Traditionally not permitted due to conflict with IFC.

A speed bump with pavement markings warning drivers (Maui, HI)
Dan Burden via the Pedestrian and Bicycle Information Center

HORIZONTAL DEFLECTIONS

Horizontal deflections introduce an obstacle to the roadway which drivers must safety and comfortably navigate around. They can potentially provide an improved street appearance through landscaping and other aesthetic options. They might cause motorists and vulnerable street users inadvertently into a shared space without providing a designated exclusive space for vulnerable street users, or change the pedestrian–vehicle conflicts due to changes in visibility.

Chicanes use physical features built into the roadside that force the driving path to shift side to side, as well as potentially narrow road lanes. They can reduce traffic volumes and traffic noise, but can potentially divert traffic volumes to other streets as a result. Two–vehicle–wide chicanes on two–way streets are primarily considered to prevent high speeds, while less than two–vehicle–wide chicanes on two–way streets are primarily considered to prevent high speeds but can also discourage through traffic. These narrow chicanes rely on regulatory signs, good visibility, and driver courtesy to ensure a two–way conflict is not created. Mountable curbs can be considered where large vehicles may not be able to maneuver with standard barrier curbs.

Chicanes lining the street (Chicago, IL)
Kristen Brookshire via the Pedestrian and Bicycle Information Center

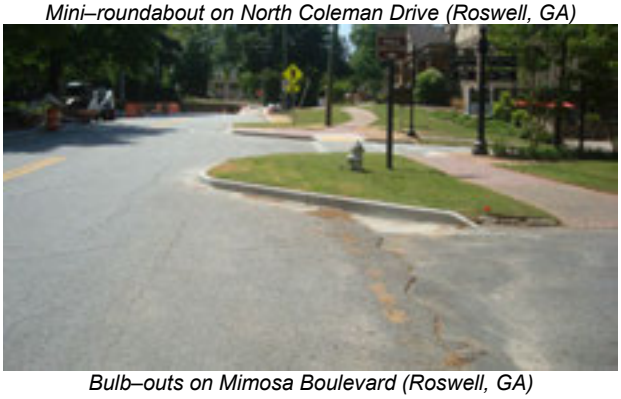
Corner tightening (curb radius reductions) extend the curb further out in the intersection to create tighter corners, requiring vehicles to make slower right turns. They are not recommended at intersections where there is a significant volume of trucks and busses turning, as they may need to mount the curb or cross into adjacent travel lanes to complete the turn movement.

Planters being used to reduce the turning radius and shorten the crossing distance for pedestrians (Oxnard, CA)
Dan Burden via the Pedestrian and Bicycle Information Center

Mini–roundabouts require vehicles to travel through an intersection in a counter–clockwise direction around a small traversable island. They are most effective when used in a series.

Mini–roundabout on North Coleman Drive (Roswell, GA)

Bulb–outs are horizontal extensions of curbs into the roadway, creating narrower sections of road surface area. They can shorten crossing distances, and be combined with transit stops to create high quality waiting areas and eliminate “lay–bys”.



Bulb–outs on Mimosa Boulevard (Roswell, GA)

Lane narrowing reduces the lane width with the intention of making drivers feel less comfortable travelling at high sprees because of the lack of buffer space from other objects. Adding physical features along the roadside tends to provide better results than pavement markings alone, though reduction of sight line must be considered. The additional space gained from lane narrowing can be used in other methods, and can reduce crossing distances.

A two-way street converted into a one-way street, with the second lane becoming on street parking and a bike lane (Leeds, England) Stephen Craven via Geograph

Raised median islands create an elevated island on the centerline of a two–way roadway to reduce the width of adjacent travel lanes. They can provide refuge between travel lanes at crossings, as well as provide space for street beautification. They can restrict access to side roads, and can potentially cause increased vehicle speeds if the lane width remains wide and are long enough to create a sustained sensed of protection from oncoming traffic.

Raised median island on Alpharetta Highway (SR–9) (Roswell, GA)

Road diets reconfigure the road surfaces by reducing the number of travel lanes or width of the road surface intended for vehicles are reduced to reallocate the space for other uses. They create a buffer of space between motor traffic and pedestrians, but can potentially affect emergency vehicle response times.

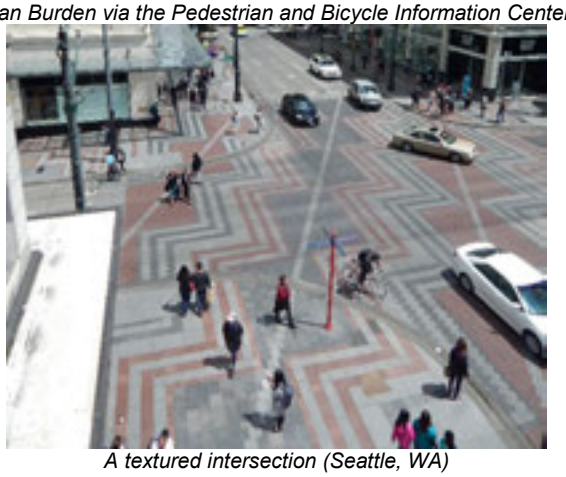
A four-lane road reconfigured to a two-lane road with a continuous turn lane and bike lanes (Lower Merion, PA) Montgomery Counting Planning Commission via Wikimedia Commons

SURFACE TREATMENTS

Textured crossings use materials or textures that contrast with the pavement to highlight transportation crossings. They can raise the profile of vulnerable street users, and can encourage slower driving speeds by signaling a context change in the environment. They can cause traction issues, and potentially cause a false sense of security for pedestrians. If they are not properly installed, they might settle differently from the adjacent roadway surface and could require additional maintenance.

A textured crossing with an additional buffer of a median island (Clearwater, FL)
Dan Burden via the Pedestrian and Bicycle Information Center

Textured surfaces involve replacing the standard asphalt of road with a textured material, such as cobblestone. They can improve aesthetics and signal a context change to drivers, as well as communicate that the street purpose goes beyond vehicular transportation. They may cause increased noise, and can cause discomfort for cyclists.



A textured intersection (Seattle, WA)
Seattle Department of Transportation via Wikimedia Commons

Transverse rumble strips are raised bars closed placed together on a roadway to create noise and vibration in a moving vehicle. They can reduce vehicle speeds and require limited maintenance, but cause noise and have a negative impact on cyclists.

Transverse rumble strips alert drivers they are approaching a roundabout (Hillsborough, Northern Ireland)
Albert Bridge via Geograph

TRAFFIC MANAGEMENT

Traffic management involves changing the roadway to limit traffic movement. They reduce traffic speeds and may reduce traffic volumes and potentially encourage more sustainable methods of travel by making travelling by car more cumbersome. The diversion of traffic may also result in other streets facing higher

volumes, and can potentially affect service operations such as garbage collection, school bus routes, and road maintenance.

Vehicular directional closures prohibit one direction of traffic from continuing on two–way streets. They are able to prevent through traffic while still allowing emergency access and can shorten crossing distances.

A directional closure with bicycle access (British Columbia, Canada)
Richard Drdul via Wikimedia Commons

Vehicle diverters are raised barriers running diagonally across intersections, forcing vehicles to turn. The goal is to limit the amount of through traffic using the road as a cut through. They can reduce the conflict at intersections and improve conditions for vulnerable street users, but can potentially put cyclists at risks from drivers not anticipating them passing through the barrier.

A vehicle diverter with bollards (British Columbia, Canada)
Richard Drdul via Wikimedia Commons

On–street plazas / vehicle access closures prevent vehicle access to sections of road, while still allowing bikes and pedestrians to travel through. These do create a significant decrease of traffic, but emergency vehicle routes must be considered when placing the closure and a potential vehicle turn around should be included.

16th Street in Denver, CO was converted into a pedestrian promenade in the 1980s
Matt Wright via Wikimedia Commons

Intersection channelizations involve placing raised islands, or bollards to prevent certain movements of vehicles. They can reduce the number of conflicts with pedestrians and reduce crossing distances, but may increase vehicles speeds due to specific geometry and configuration.

The island prevents cars from turning left, and also provides a refuge to pedestrians (Barcelona, Spain)
Eric Fischer via Wikimedia Commons

Raised medians through intersections are median islands located on the centerline of intersections, preventing left turns and through movements. They prevent left–turn and angle collisions and can provide a refuge area for pedestrians. The most beneficial placement for raised medians is along collector or arterial streets at intersections with local streets.

Left turns and u-turns are prohibited to allow cyclists and pedestrians to safety traverse the intersection (Pennsylvania Ave, Washington, DC)
Payton Chung via Wikimedia Commons

Right–in / right–out islands are raised triangular islands which prevent left turns and through movements to and from intersecting streets. They can reduce intersection conflicts and create shorter crossing distances, but can potentially increase speeds due to the minimized need to stop at the intersection.

A right-in right-out island with pedestrian and cycle gaps (British Columbia, Canada)
Richard Drdul via Wikimedia Commons

URBAN DESIGN

Urban design uses street furniture and landscaping to help create a sense of place

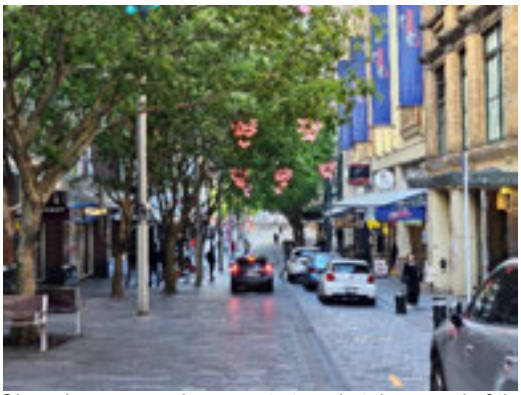
Streetscaping uses trees and other foliage, and street furniture within the right–of–way to encourage slower speeds. The closer to the travel lanes the streetscaping is, the greater the reduction in speed. It creates a more livable and environmentally sustainable public space, and can increase the appeal of walking and cycling.

Flowers have been found to be an effective method of streetscaping, as many drivers will slow down to appreciate the colorful blooms (Gloucestershire, England)
Via the BBC

Gateways are a special decorative type of streetscaping, designed to show street users they are in a transitional area or destination and encourage appropriate driving behavior.

The signs on both sides of the road, as well as the bollards narrowing the road, encourage safer speeds in this residential area (East Renfrewshire, Scotland)
Stephen Sweeney via Wikimedia Commons

Shared spaces minimize the separation between street users by removing curbs, road markings, and signs and signals. They help create civil interactions between street users, moving through the space using social cues rather than the assigned right of way movements.



Shared space requires cars to travel at the speed of the pedestrians around them (Auckland, New Zealand)
Mark Dana

Woonerven ("living streets") are residential streets which have been outfitted with a combination of shared space and other traffic calming devices to create a space where it is clear that through traffic is not intended to be the main user.

Cars have limited access on this Woonerf (Vauban, Germany)
Payton Chung via Wikimedia Commons

Beyond Countermeasures: Community–Level Factors

Speed Management

Speed management strategies reduce deaths and serious injuries, as well as reduce air and noise pollution, save fuel, and improve the level of comfort and overall experience for all roadway users.

Establishing appropriate speed limits–Historically, speed limits have been set using an 8fth percentile methodology, where the speed at or below which 85% of drivers are traveling is used to set the speed limit. It is important speed targets appropriate for the road function and community context are set, using resources such as NACTO's City Limits: Setting Safe Speeds for Urban Streets publication. Roswell staff are in the process of collecting new traffic data including speed date to submit our next radar permit submittal to GDOT for review this winter. The request has not been finalized yet, but it is anticipated staff will request speed limit reductions on some roads for GDOT to review.

Enforcing speed limits–It is vital to have a sustained, well–resourced law enforcement to help change road user behaviors and encourage compliance with speed limits. Automated speed enforcement, such as the school zone cameras on Holcomb Bridge Road at Vickery Mill Elementary and Crabapple Middle School can improve compliance without stretching Roswell Police Department's Traffic Enforcement Division thin.

Raising public awareness–Ensuring road users are aware of the rules of the road and road use etiquette can help to reduce crash risks. The NHTSA has an assortment of marketing tools

regarding speed prevention that can be used to help educate the public, and the ARC's Walk. Bike. Thrive! Plan 2outlines steps local governments can take to improve safety, mobility, and comfort for all road users.

Support through policy–a strong speed management program should look at all codes, ordinances, and laws which manage roadway operations and design, to determine if they are promoting safer speeds and roadways. The cities of Dunwoody and Brookhaven adopted Vulnerable Road User (VRU) ordinances in 2020 to help improve how drivers, pedestrians, and cyclists all interact on roads. They clarify language within vague state laws regarding to cyclist, pedestrian, and driver interactions as well as dissuade drivers from acting aggressive when passing those using active transit.

MODE SHIFT

Automobiles are one of the deadliest modes of transportation. By encouraging residents to walk, cycle, or take transit, safety outcomes can be improved.

Transportation Demand Management (TDM) can encourage drivers to Georgia Commute Options offers incentives to people who choose an alternative method of getting to work and school, and worth with employers to help implement commuter options as well as remote and flex work options, and identify tax savings for the company.

Complete Streets can encourage a mode shift by providing safe access for all roadway users. The City of Roswell adopted a Complete Streets Policy in 2008. It is recommended this policy be reanalyzed to ensure our Complete Streets truly meet the needs of all road users.

Improving **access to transit** stops and **the quality and quantity of transit service** also encourages a mode shift. While Roswell does not have direct control over the transit service offered by MARTA, RDOT is able to enhance the comfort and aesthetics of MARTA bus stops, which has been shown to improve transit. The Transit Center and the National Aging and Disability Transportation Center have produced resources on assessing and improving bus stops for local governments to use.

LAND USE AND DEVELOPMENT PATTERNS

Updating zoning regulations, designing public spaces that put people first, and pursing Transit Oriented Development (TOD) can support improved safety outcomes and should be considered by local governments moving forward. Under the Infrastructure Investment and Jobs Act (IIJA), a Transit Oriented Development Pilot Grant was introduced for municipalities to work towards. The City of Roswell will continue to explore opportunities to see how new opportunities align with the vision and goals set forth by our Mayor and Council.

4.2.4 MOVING TOWARD ZERO

A long–term vision of zero deaths and serious injuries requires a comprehensive, data–driven approach, steady incremental investments based on the Safe Systems Approach, and targeted and coordinated efforts from all safety stakeholders in the city.

In the summer of 2023, the City of Roswell received a Safe Streets for All (SS4A) planning grant. This grant awarded the City $250,000 to have a consultant produce a local safety action plan, which will recommend projects and safety strategies best to eliminate roadway fatalities and serious injuries, based on an analysis of crash data, the city's road network, and public involvement. A consultant is anticipated to be selected by the end of 2023 or January 2024.

5.0 NEEDS ASSESSMENT

The needs assessment presents the analysis results of needed transportation projects to support mobility and accessibility in the City of Roswell through 2050. The needs assessment reflects the City's continuing transportation planning process which provides a linkage between the Comprehensive Plan with the Transportation Master Plan. The fundamental aspect of this needs assessment is to confirm how transportation needs in the city may be changing in the future to reflect new patterns or the pace of development, the influence of recent transportation investments, other socioeconomic characteristics, and regional and sub-regional trends.

The foundation for the needs assessment is the CIP, which allocates available revenues for transportation projects in the City of Roswell over the next five years through 2028. The needs assessment builds upon those transportation funding commitments to determine what additional needs exist, or will exist over the next 25+ year planning horizon. It is important to note that the needs assessment is not constrained by cost. Rather, it presents future transportation demand within the City's corridors and travel sheds based on perceived levels of congestion, economic activity or redevelopment, and accessibility considerations for people with mobility limitations.

The needs assessment also reflects the growing trend to focus on livability within the City of Roswell in light of declining population growth rate and road-building or road-expanding constraints. The programs and projects identified in the needs assessment are compared with the projected financial resources through 2050 to determine which priority projects can be funded with available revenue sources.

The following broad trends were assumed to continue:

- Redevelopment of areas – particularly around the Historic District and along SR-140 / Holcomb Bridge Road exit off of the GA-400 expressway
- Demand for bicycle and pedestrian infrastructure to accommodate a growing population that cannot or chooses not to drive
- Continued increase in commuter travel through Roswell from neighboring jurisdictions

The cost of major transportation projects is also increasing and this coupled with more expensive right-of-way costs, decreasing options for new corridors, neighborhood opposition, and environmental constraints will make it increasingly difficult to implement major projects. Therefore, the Transportation Master Plan minor update must look beyond traditional means to expand the transportation infrastructure in the city and focus instead on land uses and urban design, technology, and alternative mode development to enhance mobility and improve accessibility for all users.

5.1 DEPARTMENT NEEDS FOR FUTURE CONSIDERATION

For the department to ensure we are providing the best service possible to our residents, there are additional equipment, staffing, and others needs that need further consideration and future funding.

5.1.1 CONSTRUCTION DIVISION

Construction needs to have access to reliable equipment which includes vehicles and equipment. In recent years since the pandemic supply chain issues have hampered the once routine process of ordering new vehicles or equipment. Some vehicles may require up to three (3) years to receive once placing an order.

Same goes for reliable equipment, ordering delays must be planned for to avoid any drops in service. Maintenance of existing equipment is also pivotal to our staff forces can be effective.

5.1.2 Engineering Design Division

Preconstruction activities that include tasks such survey, concept development, design, engineering are what make our projects move forward. Given all the obstacles involved, including utilities, right-of-way acquisition, stormwater requirements, permitting, etc. Having funding for adequate and qualified staffing is critical to deliver projects at a high level. Beyond staffing, having funding available for projects to move forward is also crucial. Staff needs funding to not only do the current or next phase of a project, but have ability to work with our decision makers to prepare to fund the next stage to get more projects shovel ready. This includes consistent direction on goals and priorities for projects being on-deck for delivery and having extra contingency plans available when unexpected challenges present themselves.

5.1.3 Maintenance Division

Continuing to invest in maintenance programs is paramount given rising cost and industry trends. Maintaining existing assists with today's pricing is a challenge that will require appropriate funding levels in the years ahead. Paving local roadways at a level our customers expect will require funding at levels anticipated to be at five or more million per year.

Ensuring all staffing needs are fulfilled is also important to ensure crews for all units (Asphalt, concrete, landscaping, street-sweeping, etc.) can not only react to complaints, but be proactive to best serve our customers. This includes having fully staffed crews and opportunities for team members to move up the ladder career wise over time. Also, as noted above under Construction Division, having reliable equipment and supplies is critical to success if staff are to keep doing smaller jobs in-house. Funding for their items such as equipment as well as including program funding for Bridge Maintenance, guardrail replacement, speed management and pedestrian safety help fund the work programs these crews work on.

5.1.4 Planning Division

For the City to continue to advance its status as a Walk Friendly and Bike Friendly Community, the easiest method would be to dedicate additional funding to the Speed Management and Pedestrian Safety account that will help with traffic calming programs and new pedestrian crossings around the City. The funding can also be used for activities related to Safe Route to School (SRTS). Additional funds for professional services would be beneficial to do consultant led planning studies on citywide or sub-area studies that current staff may not have the tools to lead or be constitutionally equipped to handle given the data/technical requirements. Funding for another round of the North Fulton Comprehensive Transportation Plan (NFCTP) within the next five years may also be worthy if the Mayor and Council agree.

5.1.4 Traffic Engineering Division

The Traffic division also needs equipment and supplies to enhance its services to the traveling public. The Mayor and Council graciously provided funding for a new pole replacement truck to help replacing old timber poles at certain intersections. The truck is on order, but is anticipated to arrive in 2026 due to the post-pandemic supply chain challenges. Some of the needed funding will be for the upcoming campaign to start replacing old wooden timber poles that support some of our traffic signals. These poles have a limited life span and require replacement, by doing this with in-house personnel the City can save money by avoiding the expense of hiring contractors. The truck is the first step toward this goal, but funding the program is key to avoid any issues caused by old poles decaying that may impact the traveling public.

Funding the Speed Management and Pedestrian Safety fund is key as it helps staff install traffic control devices and construct roadway design elements to reduce vehicle speeds and enhance pedestrian safety.

The program has a history of success in implementing projects such as pedestrian refuge median islands, crosswalk enhancements, rectangular rapid flashing beacon (RRFB) assemblies, pedestrian hybrid beacons (PHB), electronic radar speed feedback signs, and other traffic calming measures. This funding will help the rollout of the traffic calming campaign over the next five years that will coincide with our repaving program.

Additional equipment/infrastructure needs for a smooth operation of the Traffic Engineering division includes:

- A new dual-gun paint sprayer due to the existing sprayers nearing the end of their lifespan and require frequent repairs. The paint sprayer help in maintaining pavement markings and ensuring safe traffic flow throughout the city.
- A new 16-ft utility trailer for transporting barricades, traffic cones, signs, and other equipment to better support the city's projects, events, and emergency responses. The current method of using multiple pickup trucks is inefficient and time-consuming. A utility trailer would allow crews to load and unload equipment more quickly and efficiently, saving time and money. Additionally, a single trip to the site would suffice, reducing the number of trips and wear and tear on the Division's vehicles.
- A new portable sandblaster with accompanying accessories to allow the Division to reuse old and damaged traffic signs, saving the city money on the purchase of new aluminum blanks.
- A new Router Table Kit allowing us to cut aluminum sheets in-house to create custom-sized traffic signs, saving the city money on the purchase of expensive pre-cut blanks, saving the city money on the purchase of new aluminum blanks. The router table can also be used to create decorative sign blanks and cut smaller blanks from larger damaged signs saving us the cost of ordering blanks from a local vendor.
- Upgrade the City's school zone flashers to a new Retrofit School Timer Switch which is necessary because the current system is old and no longer allows the city to communicate with the system remotely. The existing system requires staff to physically visit each school and reprogram the devices on-site during abnormal school release days. The new system will allow the city to control all school devices remotely, which will save time and money.
- Installation of fiber optic networks to connect the local intersections to the central traffic management center. The fiber optical network will provide high speed data communication and improve the traffic flow and safety at the intersections. The network can also benefit other city departments like Police Department and Fire Department.
- Upgrade the existing monitors and display software used by RDOT TMC, 911 Center, and the emergency operation center (EOC) to help improve traffic flow monitoring, incident management and ensure the security of the City network.

5.2 Plan Needs for Future Consideration

As staff developed the Transportation Master Plan, several general ideas and concepts were developed but not to the level where staff felt a specific program could be cost out. In most cases, some sort of additional independent study would have to take place to determine things such as scope, costs, locations, impacts to the community, or a new operator. Some of these broad concepts are listed below:

5.2.1 Urban Stormwater Structures

As the effects of climate change become more apparent, it is clear the City needs to take steps to protect its infrastructure and citizens from the extreme heat and severe flash flooding events the metro region is forecasted to see.

Research has shown that based on climate models and development trends, the City of Roswell is going to be at higher risk of flash flooding events than the surrounding North Fulton cities. As more of the city is developed, it is paramount that the city UDC be updated to require bioretention and biofiltration planters

and swales in development plans which will introduce a large area of impermeable surfaces or those that may cause detrimental runoff.

The National Association of City Transportation Officials (NATCO) has published their Urban Street Stormwater Guide to address resiliency and climate change while providing the best practices for sustainable stormwater management in the public right of way.

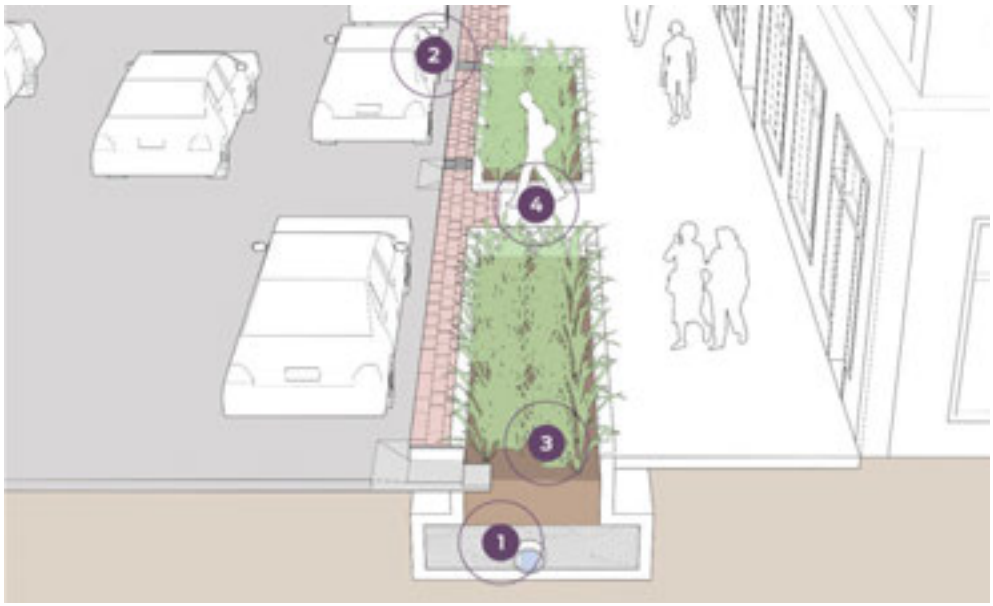


FIGURE 5.1—AN EXAMPLE OF A BIOFILTRATION PLANTER

5.2.2 Enhancing our Bicycle and Pedestrian Networks

While once a leader in bicycle infrastructure in the state, Roswell has since fallen behind Alpharetta, Decatur, and Atlanta in quantity and quality of bicycle facilities.

It has been proven time and time again in research: when there are more cyclists on the roads, everyone becomes safer—not just the cyclists, but the drivers and pedestrians as well.

Roswell DOT has preferred implementing multi-use trails for bike facilities as they can be used by both pedestrians and cyclists. Unfortunately under federal law electric bicycles (“e-bikes”) are not allowed on any nonmotorized trail or pedestrian walkways. As e-bikes continue to grow in popularity, RDOT will need to build more bicycle lanes and cycle tracks.

Bike runnels or bike stairways are channels along stairways that allow bicyclists to easily carry their bikes up stairs. The cities of Seattle and Oakland, PA have begun incorporating in the cement sides of the stairs, but aluminum ones have also been employed for quick installation.

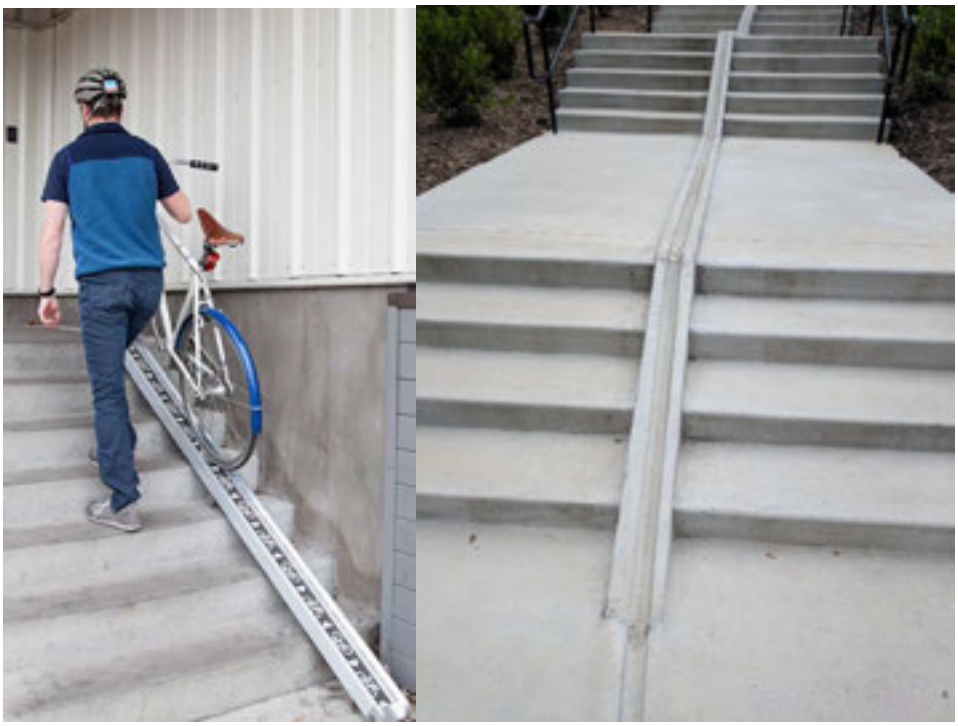


FIGURE 5.2—TWO TYPKES OF BIKE RUNNELS

ACCESSIBLE ROUTING APP

While many wayfinding apps now have pedestrian routing options, very few are able to say if the route is accessible.

Gwinnett County received a $40 million grant as part of the It's Transportation For Us (ITS4US) Program to provide more efficient, affordable, and accessible transportation to underserved communities. Their application, the Georgia Mobility and Accessibility Planer (G-MAP) uses connected vehicle infrastructure, an advanced trip routing engine, and a regional trip planner to allow travelers to create a personalized trip plan to navigate to their destination.

5.2.3 FURTHERING TRANSIT IN ROSWELL

MARTA NEXTGEN BUS NETWORK REDESIGN

As metro Atlanta has grown, MARTA's bus network has gradually expanded to accommodate the growth in the service area and serve newly developed areas. In 2021 due to expansions, declining ridership, and changing travel patterns, MARTA began the process of redesigning the bus network. The redesign is part of the MARTA 2040 program, which supports faster and more reliable service, shorter travel times, and connectivity.

MARTA initially presented two contrasting concepts of how the redesigned bus network could look to find what was most important to people and what the public's priorities were. Both concepts assumed that MARTA would run the same amount of bus service as it did in late 2019, just before the pandemic. The two concepts were the *Ridership Concept* and the *Coverage Concept*. The *Ridership Concept's* goal is to be useful to more people, so that more people ride. Right now MARTA has many routes, but most of them don't come often enough to be useful to most people. This concept would run higher frequency where there

are the most people and destinations, but with a fixed budget, that would mean it could not go everywhere that service goes now. The *Coverage Concept's* goal is to provide some service to as many people as possible, including all existing riders. This would require spreading service out, but spreading it out means spreading it thin. When MARTA runs so many routes, they cannot afford to run the service very often, and because of that, fewer people find the bus system useful.

After receiving public input and having discussions with their Board of Directors, MARTA leadership settled on a hybrid approach of the Coverage and Ridership Concepts with a slight advantage towards maximizing ridership. At the time of publishing this document, the bus network redesign was still in the concept development stage but there were discussions to remove some of the routes with the lowest ridership. Route 142, which serves East Roswell, was one of the routes being considered for deletion or some other form of modification.

Transit Center Feasibility

Given Roswell's position at the center of North Fulton and near the convergence of five state routes, the opportunity to create nodal development is feasible. If the state or regional transit agencies secure additional funding for new transit connections in North Fulton, Roswell may have an opportunity in certain areas. The development of a transit center, or smaller transfer station, could provide new opportunities to improve mobility and facilitate transfers among the transit systems, as well as provide incentives for future redevelopment plans that align with the vision of the City.

Further study is needed along with coordination with elected officials, local stakeholders, and regional transit partners. Some opportunity areas may exist along some of our state route corridors including, but not limited to, GA-400 at SR-140 / Holcomb Bridge Road and SR 9 at SR-140 / Holcomb Bridge Road. The importance of transit and other alternative modes should not be overlooked as the existing roadway network is at or over capacity during peak hours.

On-Demand Transit Service

The closest MARTA Park and Ride lot available for use by the citizens of Roswell is located at the Mansell Road exit of SR 400 (Exit 8). When some form of transit is implemented (possibly along the SR 92/Holcomb Bridge Road corridors), the need for other Park and Ride lots may be recognized. Their locations could be determined as the transit service is studied and a recommended implementation strategy is identified. Some hypothetical locations for Park and Ride lots could be along the SR 92 corridor west of SR-9, near the corner of SR-140 / Holcomb Bridge Road and SR 9/120, along Holcomb Bridge Road east of Barnwell Road, along SR 9/120 north of Hembree Road near the North Fulton Regional Hospital. The ultimate goal for the placement of these Park and Rides lots would be to capture trips heading into or through Roswell before they head onto the City's street network or SR 400 creating congested conditions. Regardless of location, the first step would be to identify a transit service (The ATL, MARTA, GRTA, or other provider) that would operate in the north Fulton County area. It is also unclear if or when neighboring counties such as Gwinnett County or Cherokee County may add or enhance transit operations.

In the fall of 2023 officials with Atlanta-region Transit Link Authority, or ATL, announced the region's first transit trip planning app was available for download, following months of testing that started in the spring. The goal of this new ATL Rides technology is simple, to enable transit customers to plan seamless trips, by way of a one-stop-shop app, for crossing systems in 13 counties operated by six different agencies. Those agencies include Xpress, MARTA, Ride Gwinnett, CobbLinc, Connect Douglas, and the Cherokee

Area Transit System, or CATS. Upgrades to the app in the future will include on-demand services such as paratransit and micro mobility options, including scooter and bike share.

Vertical Take-Off and Landing (VTOL) Vehicles

Additional consideration and future planning should also consider new alternatives including Vertical Take-Off and Landing (VTOL) Vehicles and locations to facilitate their operations. Pilot programs for VTOLs are already being explored in other cities including Chicago with United Airlines as a partner, as well as in Paris, France in advance of the upcoming Olympic Games. The Atlanta region being home to the world's busiest airport may likely follow and communities should consider VTOL facilities to provide an alternate mode of travel to regional destinations. These destinations would likely be Atlanta Hartsfield Jackson International Airport, but may also include other regional destinations (i.e. Downtown Atlanta, Athens, Chattanooga, etc.) that would ultimately depend on VTOLs aircraft range and other facilities.

Before Roswell could consider this, feasibility of suitable sites would need to be thoroughly reviewed and studied. At a minimum, additional information on noise and flight routing should be vetted given the airspace above the Atlanta region is already very congestion. The proximity to not only Atlanta Hartsfield Jackson International Airport restricts higher altitudes, but low altitudes are also a concern given the approach and departure patterns of the multiple satellite airports including: DeKalb Peachtree Airport (PDK), Cobb County International Airport / McCollum Field (QQR), Dobbins Air Reserve Base (MGE), Fulton County Charlie Brown Airport (FTY), and Gwinnett County airport (LZU).

6.0 FINANCIAL PLAN

The following includes a discussion of the variety of sources available for funding of Transportation Master Plan projects and programs.

6.1 FEDERAL FUNDING

President Biden signed the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), into law on November 15, 2021. The law authorizes $1.2 trillion for transportation and infrastructure spending with $550 billion of that figure going towards “new” investments and programs. Funding from the IIJA is expansive in its reach, addressing energy and power infrastructure, access to broadband internet, water infrastructure, and more. Some of the new programs funded by the bill could provide the resources needed to address a variety of infrastructure needs at the local level.

6.1.1 MAJOR POLICY CHANGES

- Local Control: In a step forward for cities seeking to streamline design and complete streets processes, the IIJA contains a new provision granting cities authority to apply an approved design guide of their choice to federally funded projects on locally owned streets. This language establishes that when states administer Federal funds to cities, they are neither required nor permitted to require cities to comply with state design standards or safety policy.

- Complete Streets: MPOs must use 2.5 percent of their overall funding to develop and adopt complete streets policies, active transportation plans, transit access plans, transit-oriented development plans, or regional intercity rail plans. Similarly, states must reserve 2.5 percent of State Planning and Research funds for the same purposes. However, these policies do not have to be included in state or MPO spending plans.

- NEPA Reform: The IIJA streamlines reviews by limiting the allowable number of pages for a decision and requiring a single federal agency to be responsible for issuing a decision resulting from a NEPA review.

- Crash Data: The IIJA requires new crash data systems to distinguish between bicycles, electric scooters, and wheelchairs.

In 2023, the City was awarded two IIJA grants from the federal government. The Transportation Department received a $250,000 planning grant from the Safe Streets and Roads for All Grant Program and the Recreation and Parks Department received a $2 million scoping study grant from the Reconnecting Communities and Neighborhoods Grant Program. An overview of each program is on the following pages.

6.1.2 Safe Streets and Roads for All (SS4A)

- To develop or update a comprehensive safety action plan (Action Plan); conduct planning, design, and development activities in support of an Action Plan; and carry out projects and strategies identified in an Action Plan
- Two types of grants: Action Plan Grants and Implementation Grants
- Implementation activities can include applying low-cost roadway safety treatments; identifying and correcting common risks; transforming a roadway corridor; installing pedestrian safety enhancements and closing network gaps
- $5 billion over 5 years ($1 billion FY2022)

6.1.3 Reconnecting Communities and Neighborhoods

- Pilot program for planning and capital investments
- For projects to restore community connectivity by removing, retrofitting, or mitigating highways or other transportation facilities that create barriers to community connectivity, including to mobility, access, or economic development
- Can include high-quality public transportation, infrastructure removal, pedestrian walkways and overpasses, capping and lids, linear parks and trails, roadway redesigns and complete streets conversions, and main street revitalization
- $1 billion over 5 years: $250 million for planning; $750 million for capital investment; $30 million for technical assistance

The SS4A grant that RDOT received will be used to a create Citywide Safety Action Plan that will enable staff to pursue Implementation Grants in years going forward. The Reconnecting Communities and Neighborhoods Grant that Recreation and Parks received will be used to conduct a scoping study for a multi-use trail connecting the Big Creek Greenway on the east side of Georgia 400 to the Liberty Square neighborhood on the west side of the freeway.

When applying for future grants consideration should be given to the fact that the USDOT has stressed that inter-jurisdictional cooperation and an emphasis on equity increases the likelihood of receiving funds. Additional grants from the IIJA that the City may pursue include the following:

6.1.4 RAISE Grant

- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
- For planning and capital investments that support roads, bridges, transit, rail, ports, or intermodal transportation
- Successor to BUILD and TIGER
- $2.2 billion awarded to-date; another $7.5 billion over 5 years
- Competitive grant with 50/50 funding split for rural and urban areas
- Projects evaluated on several criteria, including safety, environmental sustainability, quality of life, economic competitiveness and opportunity, partnership and collaboration, innovation, state of good repair, and mobility and community connectivity

6.1.5 Strengthening Mobility and Revolutionizing Transportation (SMART)

- To conduct demonstration projects focused on advanced smart community technologies and systems in order to improve transportation efficiency and safety.
- Can include coordinated automation, connected vehicles, sensors, systems integrations, delivery/logistics, innovative aviation, smart grid, traffic signals
- $100 million over 5 years

Federal funding is categorized in a variety of programs covering all modes of transportation. Most federal funding sources require a match from the project sponsor. The level of match varies widely from category to category. If a project uses federal funds, the level of analysis, documentation, outreach, and commitment is generally more detailed or stringent.

Another source of federal funding is the Surface Transportation Block Grant program (STBG). The STBG provides flexible funding that may be used by states and local governments for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

In the metropolitan Atlanta region, four agencies have responsibility for programming federal funding – the Georgia Department of Transportation (GDOT), the Atlanta Regional Commission (ARC), the State Road and Tollway Authority (SRTA), and the Metropolitan Atlanta Rapid Transit Authority (MARTA). If the City of Roswell wishes to program federal funds on any project or program in the Transportation Master Plan, coordination with some (or all) of these agencies is necessary.

6.2 State Funding

In 2015, the State of Georgia made a very proactive and significant change to how it funds transportation with the passage of the Transportation Funding Act or House Bill 170 (HB 170). With a combination of new taxes and fees, the bill raises approximately $850 million to $1 billion a year depending on economic conditions. Under Georgia's previous tax structure for gasoline (a 7.5 cents per-gallon excise tax, and a 4 percent sales tax) about 19.3 cents on every gallon went to the state. Under HB 170, the same gallon of gas is taxed at 26 cents per gallon, or 29 cents for diesel. Therefore, drivers of most vehicles pay about six cents more per gallon at the pump. It should be noted that the Governor's Office has the authority to suspend the gas tax for emergencies, which happened multiple times during the COVID-19 pandemic or during times of higher oil prices or economic conditions. Heavy trucks and big-rig owners pay a "highway impact fee" of $50 to $100 depending on the weight of the vehicle. The measure does not set aside any money for mass transit. State funds, and certain Federal funds, for Transportation projects are primarily controlled by the Georgia Department of Transportation.

6.2.1 Local Maintenance and Improvement Grant (LMIG)

The Local Maintenance and Improvement Grant or LMIG was created in 2010 by the Georgia Department of Transportation by merging the former State Aid program and the Local Assistance Repaving Program or LARP. LMIG funds can be used on a variety of projects including resurfacing, safety improvements at intersections, culvert/bridge improvements, and a variety of other uses. LMIG funds are provided to local governments based on a formula which accounts for key stats including population and road mileage. LMIG funds do require a local matching requirement which the City has to budget for and include every year. The City maintains a yearly repaving schedule for the City street system. LMIG supplements the resurfacing funds traditionally provided by Mayor and Council in the annual budget.

6.3 Local Funding

A five-year Capital Improvement Program (CIP) for the City of Roswell is developed and updated annually as part of the City's budget process. The first year of the CIP is incorporated into the Annual Budget and Program for Services and is commonly known as the Capital Budget for the fiscal year. The Capital Budget is the City's annual appropriation for capital spending, authorizes specific projects, and appropriates specific funding for these projects. The subsequent or outlying years of the CIP are updated and revised each year to reflect the changing needs and priorities of the City. Projects and financing sources listed in the CIP for years other than the first year are not authorized until the Annual Budget and Program for Services for

those years is adopted. The outlying years serve only as a guide for future planning and are subject to further review and modification in subsequent years.

Typical examples of capital projects include construction of new City facilities, remodeling or expansion of existing facilities, purchase, improvement and development of land, street construction, reconstruction, resurfacing or road improvements, sidewalks, drainage and waterline projects, vehicles, heavy equipment, computers and other machinery and equipment, and planning and engineering costs related to specific capital improvements. The large increases in Transportation One-Time Capital expenses in FY 2019 and 2020 are related to the anticipated construction of the Historic Gateway and Big Creek Parkway Projects. For a complete view of the current year's fiscal budget, please consult the City of Roswell City Budget available on the City's website or by contacting the City's Finance Department.

6.3.1 BONDS

The City has utilized general obligation bonds to fund a variety of transportation improvement projects. The issuance of general obligation bonds must be authorized by the voters through approval of a bond referendum. Bonds were approved by voters in 1995, 2000 and 2012 to fund intersection, bridge, sidewalk and drainage projects.

More recently in November 2022, Roswell voters approved $179.6 million in funding through three Bond Program questions on the ballot:

- $107.6 million for Recreation, Parks, Bicycle & Pedestrian Paths, and Sidewalks
- $52 million for Public Safety (Police & Fire) Capital Projects
- $20 million for a Downtown Public Parking Deck for the City

The City's first bond issuance of $86.2 million (out of the total $179.6 million) was approved in May 2023 and included $53.1 million to use towards Recreation, Parks, Bicycle & Pedestrian Paths, and Sidewalks; $13.1 million towards Public Safety (Police & Fire) Capital Projects; and $20 million towards a Downtown Public Parking Deck for the City. A second issuance of additional bond funds is expected in of 2025.

RDOT is using $20 million of the *Bicycle & Pedestrian Paths, and Sidewalks* bond issuance to fund portions of the following projects earlier in 2023, the Mayor and Council may elect to add/modify the project list at a later date based on new information:

1. **Old Alabama Road Multi-Use Trail – Big Creek Park to Roxburgh Drive**
    - Design expected to be completed in autumn 2023 on portion west of Wooten Road. Survey and design east of Wooten Road out to Roxburgh Drive is anticipated to be completed in autumn of 2024. Construction is anticipated to begin on the portion east of Wooten Road in winter of 2024-2025, assuming no significant right-of-way concerns are uncovered.

2. **Hardscrabble Road Multi-Use Trail – King Road to near Whittingham Place (near Target shopping center)**
    - Right-of-way acquisition expected to be completed in autumn of 2023. Construction anticipated to begin in the winter of 2023-2024.

3. **Oxbo Road Multi-Use Trail – From area near/east of Pleasant Hill Drive to Grimes Bridge Road**
    - Survey and design anticipated to begin in autumn 2023 and be completed in summer of 2024. Construction anticipated to begin in autumn of 2024.

4. **Etris Road Multi-Use trail – Between Hardscrabble Road and Crabapple Road**
    - Survey and design anticipated to begin in autumn 2023 and be completed in winter 2023-2024. Construction anticipated to begin in winter of 2023-2024.

5. **King Road Multi-Use trail – Between Publix Shopping Center and Hardscrabble Road**
    - Survey and design anticipated to begin in autumn 2023 and be completed in winter 2023-2024. Construction anticipated to begin in summer 2024, assuming no significant right-of-way concerns are uncovered.

6. **Norcross Street Multi-Use Trail – Between Myrtle Street and Millbrook Circle**
    - Funding for this project will be included in the second bond issuance, expected 2025.

7. **Riverside Road (Bridge) - Near Martin's Landing**
    - Funding for this project will be included in the second bond issuance, expected 2025.

8. **Hardscrabble Road Sidewalk - Near Northside Chapel Funeral Home**
    - Funding for this project will be included in the second bond issuance, expected 2025.

9. **Hembree Road Sidewalk – From Upper Hembree Road to near Tapestry Com. Church**
    - Funding for this project will be included in the second bond issuance, expected 2025.

10. **Hembree Road Sidewalk – From Hembree Park to near Montessori School**
    - Funding for this project will be included in the second bond issuance, expected 2025.

11. **Chaffin Road Sidewalk – From Hembree Road to Northgate Trace**
    - Funding for this project will be included in the second bond issuance, expected 2025.

6.3.2 Transportation Special Purpose Local Option Sales Tax (TSPLOST)

During the 2016 Legislative Session, the Georgia Legislature passed Senate Bill 369 (SB 369) authorizing counties to consider a Special Purpose Local Option Sales Tax for transportation purposes (TSPLOST). In contrast to the previous transportation sales tax referendum held in 2012 that created regional project lists throughout the state, SB 369 focused on local control, allowing counties and municipalities to determine their most pressing transportation needs and establishes funding specifically dedicated to those improvements. In November of 2016, Fulton County residents (outside of the City of Atlanta) voted on a 0.75-cent sales tax for transportation purposes. The City of Atlanta voted independently on transportation and transit funding within the City's limits. Funding from this initiative can be spent only on transportation improvements, such as roads, bridges, sidewalks, bicycle paths, and other transportation-related purposes included in the legislation.

Staff worked cooperatively with Alpharetta, Johns Creek, Milton and Sandy Springs on a coordinated project list that would have a regional impact. The focus was on visible projects (new construction, not regular maintenance) that will make an impact and can have major progress if not completion within 5 years. Projects were taken from existing initiatives such as the North Fulton Comprehensive Transportation Plan, Holcomb Bridge Road Corridor Study, and the Livable Centers Initiatives.

TSPLOST 2 is a second round of sales tax–supported transportation project funding that was approved by taxpayers in all Fulton County cities, with the exception of the City of Atlanta, on the November 2020 ballot.

At the June 2021 City Council meeting, the City of Roswell's elected officials approved a list of eligible projects for TSPLOST 2 referendum that occurred in November of 2021.

Roswell's Tier 1 TSPLOST 2 projects and a brief description are below:

1. **Riverside Road Corridor Improvements**
    - Project Limits: Riverside Park to Old Alabama Road
    - Proposed Scope: Multi-use trail, sidewalk, bike lanes, and intersection improvements
    - Estimated Cost: $8,775,000

2. **Corridor Improvements for Grimes Bridge Road, Dogwood Road, Old Dogwood Road**
    - Project Limits: Grimes Bridge Road from Dogwood Road to Oxbo Road, Dogwood Road from Riverside to SR-140, Old Dogwood Road from Dogwood Road to SR-140 (2.25 miles total)
    - Proposed Scope: Multi-use trail, sidewalk, and intersection improvements
    - Estimated Cost: $10,500,000

3. **Nesbit Ferry Road—Corridor Improvement with Johns Creek**
    - Project Limits: SR 140/Holcomb Bridge Road to Old Alabama Road
    - Proposed Scope: multi-use trail, sidewalk, operational and intersection improvements
    - Estimated Cost: $1,000,000

4. **Pine Grove Road/Magnolia Street Corridor Improvements**
    - Project Limits: Mimosa Blvd to Lake Charles Road
    - Proposed Scope: Multi-use trail, sidewalk, and intersection improvements
    - Estimated Cost: $6,900,000

5. **Pine Grove Road Corridor Improvements**
    - Project Limits: Lake Charles Road to Cobb County
    - Proposed Scope: Multi-use trail, sidewalk, and intersection improvements
    - Estimated Cost: $7,935,000

6. **Old Ellis Road Extension (ROW only)**
    - Project Limits: from Sun Valley Road to Old Ellis Road
    - Proposed Scope: Extend Old Ellis Road to Sun Valley Road, multi-use trail, sidewalk, bike lane, and intersection improvements
    - Estimated Cost: $6,000,000

7. **Big Creek Pkwy Phase 2—Warsaw Connection (ROW and construction)**
    - Project Limits: Warsaw Road to Old Holcomb Bridge Road (at/near intersection with Holcomb Bridge Road)
    - Proposed Scope: Extend Big Creek Parkway to Warsaw Road with bike/pedestrian accommodations
    - Estimated Cost: $5,000,000

8. **Cox Road Intersection Improvements (Cox Road at Etris Road and Cox Road at King Road)**
    - Project Limits: Intersection Improvement
    - Proposed Scope: Intersection Improvement
    - Estimated Cost: $1,000,000 (25% Partnership, with Milton paying 75%)

9. **Norcross Street Bridge Replacement**
    - Project Limits: Bridge Replacement over Hog Wallow Creek
    - Proposed Scope: Bridge Replacement
    - Estimated Cost: $4,200,000

10. **Old Alabama Road Multi-Use Trail**
    - Project Limits: Market Blvd. to Holcomb Woods Pkwy.
    - Proposed Scope: Multi-use trail (one side of road)
    - Estimated Cost: $2,000,000

11. **Old Alabama Road Multi-Use Trail**
    - Project Limits: Holcomb Woods Pkwy. to Big Creek Park Entrance
    - Proposed Scope: Multi-use trail (one side of road)
    - Estimated Cost: $640,000

12. **Holcomb Bridge Road Multi-Use Trail (along Holcomb Bridge Road)**
    - Project Limits: Martins Landing Drive to Eves Road (along Holcomb Bridge Road)
    - Proposed Scope: Multi-use trail (one side of road)
    - Estimated Cost: $2,800,000

13. **Holcomb Bridge Road Multi-Use Trail**
    - Project Limits: Boston Market to Martin Landing Drive
    - Proposed Scope: Multi-use trail (one side of road)
    - Estimated Cost: $1,600,000

14. **Woodstock Road Multi-Use Trail**
    - Project Limits: Canton Street to SR-92/Woodstock Road
    - Proposed Scope: Multi-use trail (one side of road)
    - Estimated Cost: $7,142,635

15. **River Eves Elementary School Multi-Use Trail (off-system trail)**
    - Project Limits: Eves Road to Eves Circle
    - Proposed Scope: Multi-Use Trail
    - Estimated Cost: $700,000

16. **Chattahoochee River Parks Multi-Use Trail Rehab**

    (1) Asphalt Milling/Replacement, (2) Boardwalk Improvements/Rehab
    - Project Limits: Existing portions of asphalt trail from Willeo Road to Don White Park just west of GA-400 and repairs to frequently flooded portions of the boardwalk system
    - Proposed Scope: Milling and replacement of the existing asphalt trail surface, including restoration and repairs to certain portions of the boardwalk system prone to flood impacts.
    - Estimated Cost: $2,195,750

6.4 Exploration of Other Funding Sources

The structure of the Transportation Master Plan allows projects to be amended into the Capital Improvement Program or to be shifted to the mid- or long-range timeframes. As each year's budget is created, a certain number of projects are proposed for the Capital Improvement Program. By having a large number of projects in the Transportation Master Plan to choose from, the Mayor and City Council working with the public could select certain projects to move forward using Bond proceeds or sales tax revenue.

The challenge will be how to avoid overwhelming the staff as they manage a large program of transportation projects. While the one-time infusion of funding is welcome, one of the major issues would be defining how quickly the funding could be piped into infrastructure improvements. Another benefit of Bond or dedicated sales tax funding is that it allows other traditional sources of funding such as general sales or property taxes to be redirected to other improvements listed in the Capital Improvement Program.

7.0 CHALLENGES

7.1 FINANCING TRANSPORTATION

The single most important issues related to implementation of transportation infrastructure today is funding. At every level of government, there is simply not enough funding to expand the existing infrastructure and in some cases, **there is not enough funding to maintain the existing system**. Outdated forms of taxes and fees have traditionally not kept up with the demands of today's traveling public. Also, there are political pressures that make changing revenue collections methods difficult for decision makers to move forward.

Gasoline taxes, the traditional way of funding transportation was not indexed to inflation, therefore, the buying power has been diminished over the last three decades. Nearly ten years ago, Georgia State fuel tax code was enhanced to improve the buying power as the price of fuel rises and falls to make it a more reliable funding stream to meet Georgia's growing population. This was also done to fairly charge users that drive more fuel-efficient or electric vehicles. Recently, the Governor's office has temporarily suspended the gas tax in times of high inflation or fuel crises. The COVID-19 pandemic of 2020 redefined commuting patterns in large urban areas which large segments of the population working from home multiple days per week. As of 2023, traditional commuting patterns have begun to re-establish themselves and congestion has become more notable along with the ever growing increase in regional population.

7.2 IS CONGESTION INEVITABLE IN A METROPOLITAN AREA?

The City of Roswell and the Atlanta region has struggled with congestion for decades. With the explosive growth experienced throughout the latter 20th century, the transportation infrastructure has been unable to keep pace with the influx of new residents and jobs. The Atlanta Regional Commission (ARC) forecasts the Atlanta region's population may increase by 2.9 million people by the year 2050, which would put the region's population at or near 8.6 million.

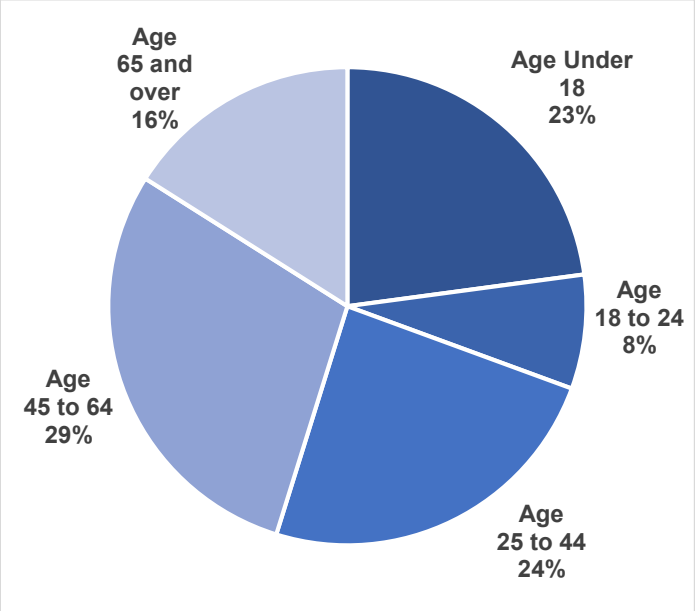
This coupled with land use patterns that focused traffic onto only a handful or major roads, the resulting congestion can be overwhelming at peak times. Directional peak movements are common throughout the region; however, more recently, congestion in both directions on roadways is becoming more prominent. Roswell is prone to congestion from neighboring cities cutting through to reach their destination. This problem is made worse by our city's southern border being a river with only a handful of crossing points acting as funneling points to regional traffic. Traffic is not just flowing north and south each day, but also east and west between large residential and employment centers in Gwinnett County and Cherokee County. In many cases, the region's roadways have been widened as far as current right-of-way will allow. To expand these roads would require very expensive land purchases which have significant right-of-way impacts to homes or businesses.

In the case of Roswell, the city's roadways serve a dual role by providing connections for local residents as well as acting as the major thoroughfares for regional commuters. There are few options for local citizens to use to get around the City and due to the City's lack of a grid system design and built out land use patterns, the installation of new connections is difficult without causing significant impacts to existing home owners. Given the City's built-out land uses, the addition of new roadways or widening of existing roads would require acquiring land that may include a structure (i.e. house, commercial building), or would require making connections that do not exist today. As a result of these issues, the need to more effectively use the existing transportation infrastructure is paramount.

7.3 Growth of the Senior Population

The metropolitan Atlanta area is currently experiencing an increase in persons over while compiling Census data for the Atlanta region, the Atlanta Regional Commission found people aged 65 and over rose 44% between 2012 and 2022. Further, the ARC predicts this number to grow dramatically over the next 10 years as more people choose to age in place. Nationwide, it is expected that one in five drivers will be over 65 by 2030. Until recently, the Atlanta region has been known to attract younger families but statistics now show that a shift in population is taking place. More seniors are moving to the metro Atlanta area or are remaining here after raising families. This high-growth population group will impact many facets of life in the region including transportation, economic development, recreation, and education.

Currently, those aged 45-64 make up Roswell's largest population group at over 27,000 (29%). This group is moving toward the "over 65" line; therefore, it is important for the City of Roswell to recognize and accommodate the large influx of older adults. Additionally, with the retirement age continuing to rise coupled with workers staying employed longer, it is expected more people will be staying in place for a longer time. These factors combined with an increasing life expectancy mean that the older generation will continue to grow.



The greatest thing that aging adults fear is the concern of losing their independence or ability to drive. Transportation has been and continues to be a challenge for older adults. Studies have shown that people over 65 years of age are more likely to give up public transit systems before giving up driving. This can pose a danger if older adults are not able to understand or comprehend roadway signs and signals. Many seniors find fast-paced and complex public transit systems difficult to work and inaccessible from their front door. As a result, many seniors resort to driving despite the challenges.

It is important for the City of Roswell to focus on signing, signaling, and markings to ensure they are clearly legible and easy to understand. This trend will also place more demands on all of the City's multi-modal facilities as this group will need more transportation choices. A truly multimodal transportation system should be accessible by all users regardless of age.

8.0 Administrative Modification Procedures

The Transportation Master Plan (TMP) was originally developed in 2006 and was updated periodically (2009, 2011, 2014, and 2019) since until this update in 2023. Having an established process is needed to accommodate changes to the TMP that spell out which types of changes that would require Mayor and Council input or action, public input, or could simply be made by staff administratively.

The Transportation Master Plan (TMP) is meant to be a living document. The need to update the TMP document to ensure it remains accurate and up-to-date is paramount. Certain modifications are considered relatively minor and can be addressed via staff revisions whereas other changes would require formal action by the Mayor and City Council. As a result, two modification types have been developed to address changes to the TMP.

8.1 Procedures for Administrative Modifications

There are times where minor revisions will be required for the Transportation Master Plan (TMP). These changes will be processed by RDOT staff and will not require any formal action by the Mayor and City Council. RDOT staff will review the TMP document quarterly and report any administrative changes to the Transportation and Community Development Committee (TCM) via the “Information Items” table.

Example of Modifications Considered Administrative

- Splitting or merging projects due to design, concept, environmental, right-of-way or constructability related issues (non-CIP projects only)
- Revising project limits without changing the overall project scope and intent (non-CIP projects only)
- Refining project cost or project phase cost
- Revisions to potential fund sources (non-CIP projects only)
- Moving projects between “short-range”, mid-range” and “long-range” portions of the TMP
- Deletion of a project after it has been constructed
- Typographical errors in text or graphics or minor updates based on new information
- Revision or update of data (i.e. US Census information)
- Revision or update of text or graphics (tables, graphs, maps) within the document

If the Mayor or any Councilmember wishes to address an issue listed as administrative, staff can move into the amendment process listed below and obtain formal approval of the amendment(s).

8.2 Procedures for Amendments

As more significant revisions are made to the Transportation Master Plan, there may be a need for the Mayor and City Council to provide input and feedback and take formal action to make modifications to the TMP. Revisions will be brought before the Mayor and City Council at a scheduled Work Session for discussion and later, presented to the full Council for action at either the Community Development and Transportation Committee meeting or the next regularly scheduled Council Meeting (or both). The normal procedure will be that no formal public meetings are expected to be scheduled. However, if the Mayor and City Council wish to give the public an opportunity to review the suggested revisions, arrangements will be

made to schedule one or more public meetings, open houses, or the like including announcements on the City's website.

Example of Modifications Considered Amendments

- Addition of a project
- Deletion of a project (other than one that has been constructed)
- Significant revision of project descriptions or intent
- Major updates to data (i.e. Functional Classification table)

9.0 Recommendations and Going Forward

9.1 Development of the Project List

The input was received, the needs have been studied, funding has been identified; now comes the final stage of the Transportation Master Plan update. The development of the project list is based on four levels of relevance, listed below. It should be noted that projects may not be completed (construction completed) in these timelines, but are anticipated to start if funding is identified.

Capital Improvement Program (CIP) and Short Range projects, Fiscal Year 2024-2028 (Tier 1 Projects)

Projects which are in the current year budget, actively underway or to be under construction, or have committed funding through TSPLOST I and II or the 2022 Bond Program or are projects that need to begin survey, concept, or design work and be placed in the budget to secure funding and move forward.

Mid-Range Projects, Fiscal Year 2029-2039 (Tier 2 Projects)

Projects that have been reviewed and/or studied by staff, or mentioned by the public or elected officials. Some have completed one or more phases but are waiting for funds to proceed. In essence, these projects are queued and ready to be placed in the budget and moved forward.

Long Range Projects, Fiscal Year 2040-2050 (Tier 3 Projects)

Projects identified during development of the Master Plan that require additional study and have not received funding.

Other Needs, Fiscal Year 2051 and Beyond

Projects that are “aspirational”, require future study, and have not received consideration for funding.

The project list includes over 187 projects (or programs) totaling over $697 million worth of investment. As new projects are conceived, they will be added to this list in future amendments. The full project list and maps of the projects are located at the end of this chapter. A more thorough explanation of the project list development process along with the scoring criteria and methods are located in the Appendix.

9.2 Master Plan Initiatives

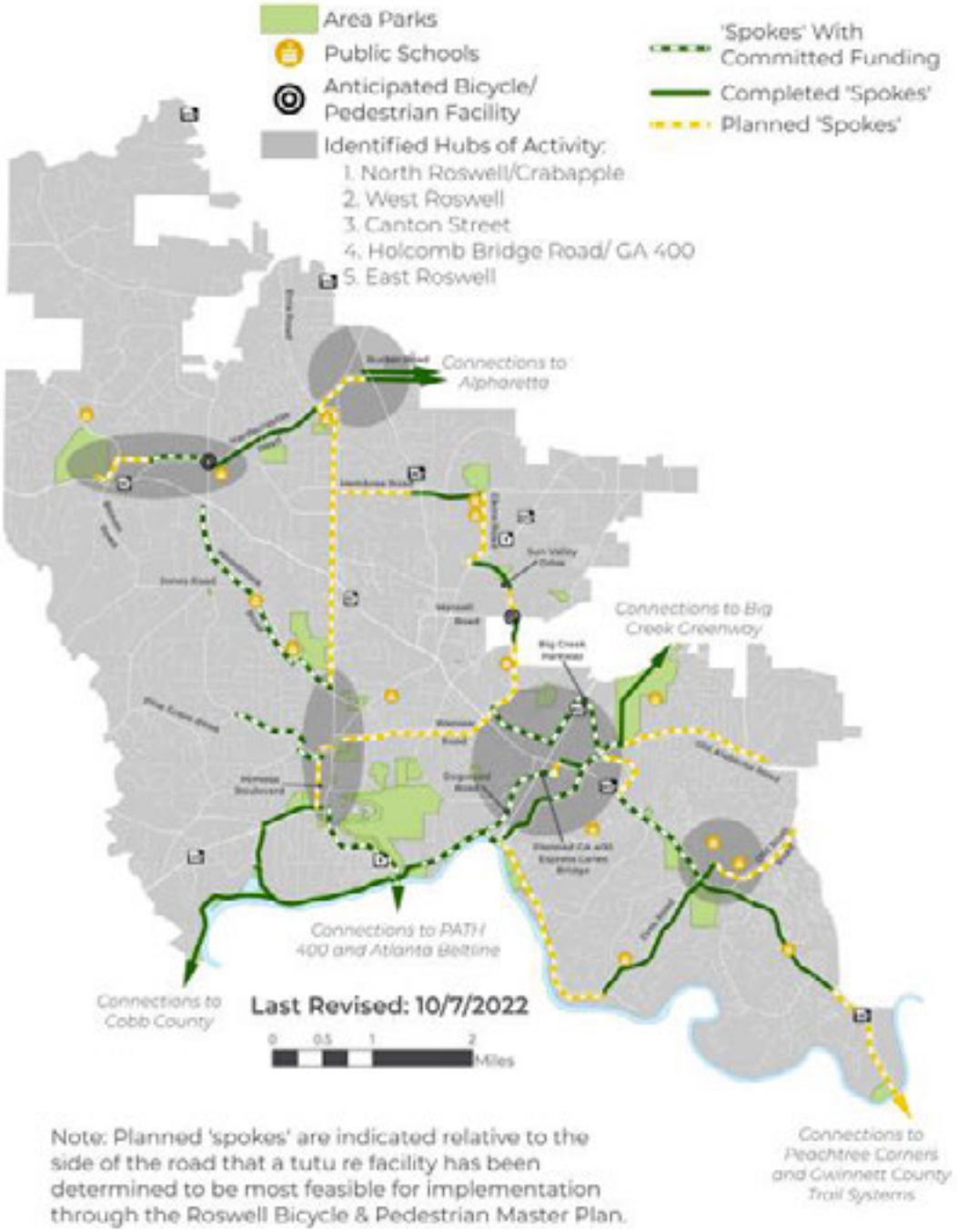
During development of the Transportation Master Plan update, several initiatives were developed that are new to the City or that took initiatives from the previous Transportation Master Plan and updated them to reflect current trends and direction in the City. Several of these initiatives are discussed below. Each of the initiatives is scheduled for implementation in the Transportation Master Plan and will receive funding when identified as a priority by the Mayor and City Council.

9.2.1 The Roswell Hub and Spoke Trail System

As part of the Roswell Bicycle and Pedestrian Master Plan adopted in 2019, the Roswell Hub and Spoke Trail System is a series of routes throughout the city that connect the City's key "hubs" of activity as identified by our residents during the public outreach phase. The projects would include the installation of wide multi-use paths, which unlike narrower sidewalks, can be legally used by both bicyclist and pedestrians. The Hub and Spoke trail system replaced the former plan, previously called the Roswell Loop trail system.

Building off previous Master Plan initiatives, staff took a new approach to ensure more timely and realistic implementation of the trail network. Staff reorganized the plan trail corridors into segments that would be easier to implement. The Hub & Spoke Trail system builds off Roswell's existing complete street policy. The plan also outlines which side of the road the multi-use trail is to be located on for future projects and/or development. As funding is identified or as redevelopment occurs, segments of the Roswell Hub and Spoke can be built. The Hub and Spoke Trail System map is included on the next page.

Roswell "Hub and Spoke" Bicycle & Pedestrian Network



Note: Planned 'spokes' are indicated relative to the side of the road that a tutu re facility has been determined to be most feasible for implementation through the Roswell Bicycle & Pedestrian Master Plan.

9.2.2 Safe Routes to Schools Program

The Safe Routes to Schools program was first introduced in the Federal Transportation Bill, SAFETEA-LU and continues under the Transportation Alternatives program in the current Federal Transportation Act, MAP-21. The program's goal is to increase the number of children in grades K-8 who bicycle and walk to school. The program will be implemented by increasing awareness, development of locally-driven programs, and improving bicycling and walking conditions around schools. Some of the benefits of this program include the reduction of congestion, improved air quality and safety near schools, and increased physical activity for children. In the Atlanta region, the program is managed by the Atlanta Regional Commission (ARC) with funding through the Georgia Department of Transportation (GDOT). Some of the past selected projects included sidewalk installation, providing funding for crossing guards and development of programs aimed at increasing awareness.

1. Sign Inventory
2. Level of Traffic Stress Analysis for Bicycle & Pedestrian Facilities
3. Technology Integration
4. Health & Planning
5. Age in Place

9.3 Going Forward

The City of Roswell and the Metro Atlanta region experienced tremendous population and commercial growth over the past 30 years. However, in recent years Roswell's growth has slowed given local policy and decision making on development. With this growth of not only Roswell, but of our neighboring cities, came increased demands on the transportation system. Some roadways were widened to accommodate the influx of vehicles traveling to points throughout the northern Atlanta region. Every major intersection corner saw an influx of grocery stores, banks, fast food restaurants, and occasional big box retailer. Today, many commercial properties are either under-utilized. In addition, too few roads are carrying far too much traffic trying to access job centers both north and south as well as east and west of Roswell. Coupled with nature barriers such as the Chattahoochee River – which has only three crossings in 11 miles of riverfront in Roswell – the needed capacity to handle the amount of traffic seen in north Fulton is just not present.

The Transportation Master Plan (TMP) includes a number of projects and programs to address or enhance operational problems, and looks to expand the use of non-automobile travel. The TMP is a dynamic document. Like any other Plan developed by the City, the TMP should never remain static but instead should be updated frequently to reflect the latest data available, more recent development, or changing traffic patterns across the City. In addition, the TMP should be updated periodically to deal with current year priorities and adjusts made during development of the annual budget and Capital Improvement Program (CIP).

Funding from state and federal levels for transportation improvements is limited, and is increasingly becoming more and more competitive. Consequently, City policy makers must be very strategic and selective in identifying the cost-effective projects for funding consideration. In addition, policy makers should focus more attention on maintaining the aging network as well as enhancing the existing network to reduce congestion, and encouraging alternative modes of transportation.

Finally, transportation and land use coordination planning is paramount. Thoroughfare plans and advance right-of-way purchases would help preserve new roadway and trail corridors and ensure connectivity between existing and new developments. Also, access management standards along high profile corridors and congested areas could promote efficiency of the highway system. The City of Roswell faces a number

of issues in the coming years as development transitions to redevelopment. City policy makers have taken steps to position Roswell to be a leader in the coming years. People are moving to Roswell due to its extensive amenities and small town feel. It is imperative City leaders stay on the forefront of planning and development to ensure Roswell does not lose this recent momentum.

During this update, the projects fall broadly into several either groups of projects or programs. These are the recommended areas for focus within the City:

- Continue progress on legacy projects (i.e. Historic Gateway, Big Creek Pkwy)
- Corridor Enhancement
- Intersection Improvements
- Bicycle and Pedestrian Program
- Traffic Calming projects

The scoring criteria for the TMP were based on several factors including the key goals and objectives that elected officials identified for RDOT in the spring of 2022. These goals and objectives are outlined below:

- Enhance mobility for Roswell residents
- Promote public safety
- Maintain, sustain, and enhance existing assets (maintenance)
- Elevate the quality of life and wellness of citizens
- Support economic growth
- Preserve character of existing neighborhoods (traffic calming, landscaping, lighting, place making)
- Explore innovative technology to optimize our transportation network

This was supplemented by additional priorities set forth by the Mayor and Council in 2023 to include traffic calming priorities within the development of the Transportation Master Plan (TMP) to help reduce speeding, improve safety and quality of life.

9.4 Project Scoring Methodology

Overview of Project Scoring for Roadway and Intersection Projects

After meeting with our stakeholders that included the general public, elected officials and the Transportation Advisory Commission it was decided that a balanced scoring method between safety factors and traffic/congestion data would be used for the ranking of the projects.

Safety Factors – Three year crash data (2020- 2022) was analyzed and the following factors were used for scoring:

- Accident Rate – This is the rate of accidents per 100 million vehicles (for intersections); and rate per 100 million vehicle miles (for mid-block segments), so the ranking is more or a per-capita approach that is partially dependent on traffic volumes, not just frequency. The higher the accident rate for a given project location the higher it was prioritized in the plan.
- Injuries – Any injury documented in the police accident report, regardless of severity, was counted and used for this scoring category.

- Fatal and Severe Injuries – Injuries that were categorized as severe or resulted in a fatality were scored a second time (in addition to the above injury scoring) to provide additional weight to them.

TRAFFIC/CONGESTION FACTORS – A number of strategies and data sources were used for scoring:

- Speeding Data – 85th percentile data was used to determine the speed at or below which 85 percent of the drivers travel on a road segment. Motorists traveling above the 85th percentile speed are considered to be exceeding the safe and reasonable speed for road and traffic conditions. This data was then compared to the roadway's posted speed limit and the difference of the two was used in scoring.

- Cut-Through Traffic Score – Using Streetlight Data's origin/destination tools (subscription service) staff analyzed all traffic entering and exiting the City during morning (6-10 AM) and evening (3-7 PM) weekday rush hours. Staff then performed additional analyses on whether that traffic was staying in the City, originating in the city, terminating in the city, or just cutting through or across the city to another external destination. This analysis was converted into a percentage of traffic that was using that various corridors to cut through the City (i.e. from Cherokee County to Gwinnett County). Higher cut thorough percentage values on non-state routes was prioritized in the plan.

- Level of Service – Level of service (LOS) is used to analyze roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on performance measure like vehicle speed, density and congestion. LOS is categorized using letters A through F, with A being the best and F being the worst, similar to academic grading. Current LOS and projected 2050 LOS (from ARC travel demand model) were used for this analysis.

- Risk Factor – ARC compiled a list of factors that increase the risk of different types of crashes and mapped areas in the region that have several of these risks. These factors help to identify locations with the greatest potential for safety improvement and the greatest need for investment. Staff compared our project list to these factors and scored them accordingly.

OVERVIEW OF PROJECT SCORING FOR BICYCLE AND PEDESTRIAN PROJECTS

Since the Bicycle and Pedestrian Master Plan was adopted by the Mayor and Council in 2019, it was the primary source for these types of non-motorized projects that include sidewalks, bike facilities, and multi-use trails. These bike/ped projects were previously scored and ranked when the document was adopted so there was no additional scoring needed.

The consultant team that prepared the Bicycle and Pedestrian Master Plan scored these projects by using a Propensity Analysis of the City. This technical analysis was an assessment that incorporated four overall considerations to determine the propensity for walking and biking on various corridors in Roswell:

- *Demand Analyses* which focused on demographic data that is suggestive of more likelihood for residents to walk or bike.
- *Attraction Analyses* which focuses on the accessibility of and proximity to various points of interest in the community that people may want to walk or bike to.

- *Character Analyses* which sought to define what the experience of walking or biking is like along certain corridors and how that may either encourage (or discourage) walking and biking.
- *Future Analyses* which recognizes that the other analyses are effectively considerations of existing conditions and that a plan for future walking and biking in the City of Roswell should consider how future growth and developed is planned and anticipated.

This overall analysis indicated relatively more propensity in the core areas of Roswell, with particularly high indications of more propensity in the areas around the SR 400/Holcomb Bridge Road interchange and in the historic core. For more information, please refer to the City of Roswell's Bicycle and Pedestrian Master Plan on the City's website.

Overview of Project Scoring for Bridge Projects

GDOT performs bi-annual inspections of all state bridges under the direction of the U.S. Department of Transportation Federal Highway Administration (FHWA). Bridge conditions are rated using National Bridge Inventory (NBI) condition ratings in accordance with the Pavement and Bridge Condition Performance Measures final rule, which was published in 2017.

The latest inspection reports were downloaded from GDOT's "InspectX" web site, which lists a total of 27 structures (7 culverts and 20 bridges) within the Roswell city limits. Nine of those bridges are National Highway System (NHS) bridges and 18 bridges are non-NHS bridges. GDOT is responsible for the maintenance of all NHS bridges while cities and counties are responsible for the non-NHS bridges. Of the 18 non-NHS bridges listed in the report, the City of Roswell is assigned the maintenance responsibility for 17 structures (3 culverts and 14 bridges); the remaining structure is assigned to Cobb County.

A bridge condition is determined by the NBI condition ratings for the deck, superstructure and substructure items on bridges and the culvert item on culverts. Ratings greater than or equal to 7 classify a bridge as good, ratings of 5 or 6 as fair and less or equal to 4 ratings as poor. Of the 27 bridges within the city, 16 (59%) are rated good and 11 (41%) are rated fair. None of the city's bridges are rated poor. Of the 17 bridges for which the City of Roswell is assigned maintenance responsibility, 11 (65%) are rated good and 6 (35%) are rated fair.

Overview of Project Scoring for Corridor Improvements and Traffic Calming Projects

Similarly to the City's Complete Streets Policy, which states that it should apply "to all new construction and reconstruction of roadways under the jurisdiction of the City of Roswell" the guidance received from internal stakeholders was Traffic Calming Projects or tools would be considered when the City was repaving a street or during an upcoming corridor improvement. As stated in more detail in the System Maintenance chapter of this document, RDOT uses a system of road rating that utilizes the PCI (Pavement Condition Index) methodology, which became an American Society for Testing and Materials (ASTM) standard in 1999. The PCI ranges from zero (worst condition) to 100 (best condition). A citywide PCI assessment was completed in autumn of 2023 and these ratings were applied to the project corridors and ranked accordingly.

Project Recommendations

The full list of the project recommendations and maps of the projects are located on the following pages. They are also shown broken out into the Tiers (1, 2 and 3) mentioned at the beginning of this chapter.

MAP 9.1

ROADWAY PROJECTS

Legend

- Bridge and Culvert Maintenance
- Intersection Improvements
- Traffic Calming Enhancements
- Corridor Improvements

Roadway Projects

- Roadway Surface Upgrades
- Roadway Realignments

Inset 1

Inset 2

0 0.75 1.5 3 Miles

City of Johns Creek, GA, Esri Community Maps Contributors, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Description of potential scope (DRAFT - SUBJECT TO CHANGE OR REVISION OR NEW INFORMATION)	Project Standing	Project Funding Source	Future Potential Funding Source	2023 Project Cost Estimate (2023 Dollars)	
Bridges	**BRG-01**	**Alpine Drive – (Culvert)**	Hog Wallow Creek	—	TIER 2	This project will replace / rehab the existing structure				$ 1,000,000	
Bridges	**BRG-02**	**Azalea Drive**	Chattahoochee River Tributary	—	TIER 2	This project will replace / rehab the existing structure			State	$ 3,000,000	
Bridges	**BRG-03**	**Charles Place**	Hog Wallow Creek	—	TIER 1	This project will replace the existing bridge on Charles Place at Hog Wallow Creek.	Committed	General Funds	State	$ 3,500,000	
Bridges	**BRG-04**	**Crabapple Road – (Culvert)**	Tributary	—	TIER 2	This project will replace / rehab the existing structure				$ 1,000,000	
Bridges	**BRG-05**	**Jones Road**	Willeo Creek	—	TIER 1	This project will replace the existing bridge on Jones Road at Willeo Creek.	Committed	General Funds		$ 4,300,000	
Bridges	**BRG-06**	**Mansell Road (EBL)**	Big Creek	—	TIER 2	This project will replace / rehab the existing structure			State	$ 5,800,000	
Bridges	**BRG-07**	**Norcross Street**	Hog Wallow Creek	—	TIER 1	This project will replace / rehab the existing structure	Survey and Concept Design	TSPLOST II		$ 4,200,000	
Bridges	**BRG-08**	**Old Holcomb Bridge Road**	Big Creek	—	TIER 1	This project will replace the existing bridge on Old Holcomb Bridge Road at Big Creek.	Committed	General Funds		$ 5,450,000	
Bridges	**BRG-09**	**Oxbo Road**	Hog Wallow Creek	—	TIER 1	This project will replace the existing bridge on Oxbo Road at Hog Wallow Creek.				$ 4,050,000	
Bridges	**BRG-10**	**Pine Grove Road**	Willeo Creek Tributary	—	TIER 2	This project will replace / rehab the existing structure			State	$ 5,800,000	
Bridges	**BRG-11**	**Riverside Road**	Big Creek	—	TIER 1	Part of the SR-9 Gateway project, this project will replace the existing bridge on Riverside Road				$ 4,800,000	
Bridges	**BRG-12**	**Riverside Road**	Chattahoochee River Tributary	—	TIER 2	This project will replace / rehab the existing structure			State	$ 5,450,000	
Bridges	**BRG-13**	**Riverside Road**	Seven Branch	—	TIER 2	This project will replace or rehab the existing structure			State	$ 1,200,000	
Bridges	**BRG-14**	**Roxburgh Drive – (Culvert)**	Big Creek Tributary	—	TIER 2	This project will replace/rehab the existing structure				$ 1,100,000	**$ 50,650,000**
Corridor Improvements	**CDR-01**	**Canton Street**	SR-9 near Elizabeth Way	Near Webb St / Norcross Street	TIER 1	The project would examine feasibility and concept of a pedestrian plaza on portions of Canton Street or other nearby corridors and implment portions of the alternative/concept chosen				$ 2,500,000	
Corridor Improvements	**CDR-02**	**Cherry Way**	Green Street	Alpharetta Street (SR 9/120)	TIER 2	This project will upgrade Cherry Way for better operations or pedestrain opportunities				$ 1,061,333	
Corridor Improvements	**CDR-03**	**Green Street**	Alpharetta Street (SR 9/120)	Woodstock Street	TIER 1	This project will improve Green Street to enhance local traffic operation and add sidewalks where feasible				$ 1,988,898	
Corridor Improvements	**CDR-04**	**Grimes Bridge Road**	Oxbo Road	Dogwood Road	TIER 1	This project would construct traffic calming features along Grimes Bridge Road and portions of Dogwood Road.		TSPLOST II		$ 10,500,000	
Corridor Improvements	**CDR-05**	**Historic Gateway (SR 9)**	Chattahoochee River	Marietta Highway (SR 120)	TIER 1	This project includes several elements to improve the SR 9 corridor from the Chattahoochee River to SR 120/Marietta Highway: Removal of the reversible lane and addition of fourth travel lane, grade separation of the Riverside Road/Azalea Drive intersection with SR 9, and replacement of the Riverside Road bridge. The project also include two roundabouts: one at the Chattahoochee Street/SR 9 intersection and the other at the Jones Circle/SR 9 intersection.	Right of Way Acquisition	TSPLOST I	Federal/Local	$ 51,000,000	
Corridor Improvements	**CDR-06**	**Horton Drive**	Alpharetta Street (SR 9/120)	Mansell Circle	TIER 1	This project will convert Horton Drive into a one-way road.					
Corridor Improvements	**CDR-07**	**Nesbit Ferry Road**	Holcomb Bridge Road (SR 140)	Old Alabama Road (in Johns Creek)	TIER 1	This project will consider corridor improvements along Nesbit Ferry Road from SR 140/Holcomb Bridge Road to Old Alabama Road including a sidewalk in Roswell. This is a joint project with the City of Johns Creek.	Survey and Concept Design	TSPLOST II		$ 1,000,000	
Corridor Improvements	**CDR-08**	**Pine Grove Road**	City Limits at Cobb County	Mimosa Boulevard	TIER 1	This project would construct traffic calming features along Pine Grove Road.	Survey and Concept Design	TSPLOST II		$ 14,835,000	
Corridor Improvements	**CDR-09**	**Riverside Road**	Rivera Road	Dogwood Road	TIER 1	This project improves Riverside Road from Riviera Rd (Gateway cst limits) to the Riverside/Dogwood intersection. Improvements include bike facilites, a multiuse trail, mid-block crossings, and potential intersection improvements.	Preliminary Design	TSPLOST II		$ 8,564,650	
Corridor Improvements	**CDR-10**	**Warsaw Road Safety Improvements**	Worthington Hills Drive	Just south of Old Roswell Road	TIER 2	This project will upgrade the Warsaw Road corridor to include a center turn and improved crosswalks near Mimosa Elementary School.			Federal	$ 1,662,363	
Corridor Improvements	**CDR-11**	**Webb Street**	Mimosa Boulevard	Canton Street	TIER 1	This project will realign portions of Webb Street and Mimosa Boulevard for better access to Canton Street or upgrade Webb Street with 10' lane and/or sidewalks.				$ 4,561,000	**$ 97,673,244**
Intersection Improvements	**INT-01**	**Alpharetta Hwy (SR 9)**	Alpine Drive / Horton Drive	—	TIER 3	This project will improve operations and sight distance at the intersection of Alpharetta Highway with Alpine Drive and Horton Drive.				$ 10,000	
Intersection Improvements	**INT-02**	**Alpharetta Hwy (SR 9)**	Fraser Street	—	TIER 3	This project will realign Fraser Street with SR 9 for enhanced sight distance.				$ 400,000	
Intersection Improvements	**INT-03**	**Alpharetta Hwy (SR 9)**	Hembree Road	—	TIER 1	This project will examine feasibility of new intersection improvement that may include adding right turn lanes from northbound Alpharetta Highway to eastbound Hembree Road and southbound Alpharetta Highway to westbound Hembree Road, upgrade the eastbound channelization island to the new GDOT specifications, and improve signal timing.				$ 900,000	
Intersection Improvements	**INT-04**	**Alpharetta Hwy (SR 9)**	Hill Street / Ramsey Street	—	TIER 2	This project will construct right in-right out islands at the intersections of Hill Street and Ramsey Street with SR 9.				$ 45,000	
Intersection Improvements	**INT-05**	**Alpharetta Hwy (SR 9)**	Mansell Road	—	TIER 1	Examine signal timing improvements and add new pedestrian island in NE quadrant where dual right turn lanes exist				$ 45,000	
Intersection Improvements	**INT-06**	**Alpharetta Hwy (SR 9)**	Norcross Street	—	TIER 2	This project will improve signal timing at the intersection of Alpharetta Highway with Norcross Street.				$ 20,000	
Intersection Improvements	**INT-07**	**Alpharetta Hwy (SR 9)**	Upper Hembree Road	—	TIER 2	This project will improve signal timing at the intersection of Alpharetta Highway with Upper Hembree Road.				$ 20,000	
Intersection Improvements	**INT-08**	**Atlanta Street (SR 9/120)**	Oak Street	—	TIER 3	This project will examine feasibility of adding a left turn lane from southbound SR 9/120 to eastbound Oak Street.				$ 1,200,000	
Intersection Improvements	**INT-09**	**Canton Street**	Webb Street	—	TIER 1	This project will realign/relocate and slightly widen Webb Street connection to Canton Street for improving sight distance and turning radii.				$ 900,000	
Intersection Improvements	**INT-10**	**Coleman Road**	Willeo Road (west)	—	TIER 3	This project will construct a roundabout at the intersection of Coleman Road with Willeo Road (west) and remove the existing signal.				$ 1,610,456	
Intersection Improvements	**INT-11**	**Cox Road**	Etris Road and King Road		TIER 1	This project will consider intersection improvements at Cox Road at Etris Road and Cox Road at King Road. This is a joint project with the City of Milton. The Cities of Roswell and Milton have signed an agreement outlining the cost sharing for this project (25% partnership, with Milton paying 75%) with the City of Roswell commitment not to exceed $1M.	Survey and Concept Design	TSPLOST II		$ 1,000,000	
Intersection Improvements	**INT-12**	**Cox Road**	Lackey Road / Lum Crowe	—	TIER 3	This project will construct a roundabout at the intersection of Cox Road with Lum Crowe Road and Lackey Road to assist with traffic calming.				$ 4,075,000	
Intersection Improvements	**INT-13**	**Crabapple Road**	Hembree Road	—	TIER 1	This project will examine feasibility of new intersection improvement that may include a roundabout at the intersection of Crabapple Road with Hembree Road and remove the existing signal.				$ 4,075,000	
Intersection Improvements	**INT-14**	**Crossville Road (SR 92)**	Crabapple Road	—	TIER 1	This project will improve signal timing at the intersection of Crossville Road with Crabapple Road.				$ 35,000	
Intersection Improvements	**INT-15**	**Grimes Bridge Road**	Dogwood Road	—	TIER 2	This project will construct a roundabout at the intersection of Grimes Bridge Road with Dogwood Road and remove the existing signal. This project may be affected by the GDOT GA 400 Express Lanes project.				$ 1,465,214	
Intersection Improvements	**INT-16**	**Hardscrabble Road**	Etris Road	—	TIER 2	This project will improve signal timing at the intersection of Hardscrabble Road with Etris Road.				$ 20,000	
Intersection Improvements	**INT-17**	**Hardscrabble Road**	King Road	—	TIER 1	This project will consider an intersection improvements that may include a roundabout at the intersection of Hardscrabble Road with King Road and remove the existing signal.				$ 4,075,000	
Intersection Improvements	**INT-18**	**Holcomb Bridge Road (SR 140)**	Alpharetta Hwy (SR 9)	—	TIER 1	This project will explore a future concept to improve the intersection and also upgrade the northbound and southbound channelization islands to the new GDOT specifications.				$ 35,000	
Intersection Improvements	**INT-19**	**Holcomb Bridge Road (SR 140)**	Barnwell Road	—	TIER 1	This project will improve signal timing at the intersection of Holcomb Bridge Road with Barnwell Road.				$ 20,000	
Intersection Improvements	**INT-20**	**Holcomb Bridge Road (SR 140)**	Dogwood Road	—	TIER 2	This project will consider intersection improvement that may include Dogwood Road traveling over Holcomb Bridge Road west of the existing intersection connecting to Old Holcomb Bridge Road. The existing signal would be modified and all turns would be converted to right-in, right-out or relocated				$ 19,673,722	
Intersection Improvements	**INT-21**	**Holcomb Bridge Road (SR 140)**	GA 400 NB Ramp	—	TIER 1	This GDOT-led project will replace the existing bridge over SR-400, and reconfigure the GA 400 interchange into a diverging diamond interchange. The City of Roswell has committed $15M to the DDI project.	Procurement	General Funds		$ 7,500,000	
Intersection Improvements	**INT-22**	**Holcomb Bridge Road (SR 140)**	GA 400 SB Ramp	—	TIER 1	This GDOT-led project will replace the existing bridge over SR-400, and reconfigure the GA 400 interchange into a diverging diamond interchange. The City of Roswell has committed $15M to the DDI project.	Procurement	General Funds		$ 7,500,000	
Intersection Improvements	**INT-23**	**Holcomb Bridge Road (SR 140)**	Grimes Bridge Road/Old Roswell Road	—	TIER 1	This project will improve signal timing at the intersection of Holcomb Bridge Road and Grimes Bridge Road with Old Roswell Road.				$ 20,000	
Intersection Improvements	**INT-24**	**Holcomb Bridge Road (SR 140)**	Market Boulevard	—	TIER 2	This project will put Market Boulevard under Holcomb Bridge Road west of the existing intersection connecting to the Kimberly Clark property. The existing signal would be removed and all turns would be converted to right-in, right-out. The concept would need to revisisted after GDOT constructs and opens the GA-400 Express lane Project and the new interchange at Holcomb Bridge Road is opened.				$ 24,806,714	
Intersection Improvements	**INT-25**	**Holcomb Bridge Road (SR 140)**	Nesbit Ferry Road	—	TIER 1	This project will add a dedicated right turn lane from southbound Nesbit Ferry Road onto westbound Holcomb Bridge Road, and a left turn lane from northbound South Holcomb Bridge Way onto westbound Holcomb Bridge Road. There is currently a joint TSPLOST project with the city of Johns Creek currently underway.	Survey and Concept Design	TSPLOST II		$ 650,000	

Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Description of potential scope (DRAFT - SUBJECT TO CHANGE OR REVISION OR NEW INFORMATION)	Project Standing	Project Funding Source	Future Potential Funding Source	2023 Project Cost Estimate (2023 Dollars)	
Intersection Improvements	**INT-26**	**Holcomb Bridge Road (SR 140)**	Old Alabama Road	—	TIER 2	This project will conduct a planning study of the intersection of Holcomb Bridge Road with Old Alambama Road possibly following the completion of the GDOT GA 400 interchange reconstruction.				$ 150,000	
Intersection Improvements	**INT-27**	**Holcomb Bridge Road (SR 140)**	Old Roswell Place	—	TIER 2	This project will explore feasibility of restricting some turn movements at the intersection of Holcomb Bridge Road with Old Roswell Place.				$ 55,000	
Intersection Improvements	**INT-28**	**Holcomb Bridge Road (SR 140)**	Scott Road	—	TIER 3	This project will construct a median turn restriction island.				$ 41,000	
Intersection Improvements	**INT-29**	**Holcomb Bridge Road (SR 140)**	Warsaw Road	—	TIER 1	This project will construct a portion of the overall Big Creek Parkway project. This phase will make improvements along Warsaw Road south of Holcomb Bridge Road to just north of Bainbridge Road. Improvements along Holcolmb Bridge Road are also included including new dual left turn lanes and dual left on southbound Warsaw Road.				$ 8,991,743	
Intersection Improvements	**INT-30**	**Holcomb Bridge Road (SR 140)**	at/near Market Blvd / Market Way	—	TIER 3	This project will the explore the concept to consider an underpass to allow vehicles to pass under SER-140/HBR between Market Blvd and Kimberly Clark perimeter Road					
Intersection Improvements	**INT-31**	**Holcomb Woods Parkway**	Holcomb Bridge Road (SR 140)	—	TIER 2	This project will construct a dual left turn lane from Holcomb Woods Parkway onto eastbound Holocmb Bridge Road.					
Intersection Improvements	**INT-32**	**Houze Road (SR 140)**	Crabapple Road	—	TIER 2	This project will conduct a GDOT-led planning study or concept development project to look at the intersection of Houze Road with Crabapple Road which is partially in Alpharetta.				$ 50,000	
Intersection Improvements	**INT-33**	**Houze Road (SR 140)**	Mansell Road	—	TIER 2	This project will add a right turn lane to westbound Mansell Road to northbound Houze Road and stripe a second through lane for westbound Mansell Road.				$ 2,000,000	
Intersection Improvements	**INT-34**	**Houze Road (SR 140)**	Saddle Creek Drive	—	TIER 3	This project will construct a roundabout at the intersection of Houze Road with Saddle Creek Drive.				$ 1,537,835	
Intersection Improvements	**INT-35**	**Jones Road**	Bowen Road	—	TIER 3	This project will construct a roundabout at the intersection of Jones Road with Bowen Road.				$ 4,075,000	
Intersection Improvements	**INT-36**	**Magnolia Street**	Mimosa Boulevard	—	TIER 3	This project will construct an intersection improvement at the intersection of Mimosa Boulevard with Magnolia Street.				$ 500,000	
Intersection Improvements	**INT-37**	**Mansell Road**	Colonial Center Parkway	—	TIER 2	This project will improve signal timing at the intersection of Mansell Road with Colonial Center Parkway.				$ 20,000	
Intersection Improvements	**INT-38**	**Mansell Road**	Warsaw Road	—	TIER 2	This project will conduct a planning study of the intersection of Mansell Road with Warsaw Road which is on the border with Alpharetta				$ 50,000	
Intersection Improvements	**INT-39**	**Marietta Hwy (SR 120)**	Willeo Road	—	TIER 2	This project will improve signal timing at the intersection of SR-120 Marietta Highway with Willeo Road and consider other improvements.				$ 20,000	
Intersection Improvements	**INT-40**	**Nesbit Ferry Road**	Scott Road and Nesbit Lakes Drive	—	TIER 1	This project will consider improvements at the intersections of Nesbit Ferry Road with Scott Road and Nesbit Lakes Drivw. This is a joint project with the City of Johns Creek. The Cities of Roswell and Johns Creek have executed an agreement outlining the cost sharing for this project with the City of Roswell commitment not to exceed $1M for the entire project.	Survey and Concept Design	TSPLOST II		$ 1,000,000	
Intersection Improvements	**INT-41**	**Norcross Street**	Fraser Street/Forrest Street	—	TIER 3	This project would construct a roundabout at the intersection of Norcross Street with Frazier/Forrest Streets and remove the existing signal.				$ 4,075,000	
Intersection Improvements	**INT-42**	**Old Alabama Road**	Old Alabama Road Connector/Roxburg	—	TIER 2	This project will consider feasibility of installing a dual roundabout at Old Alabama Road and Roxburgh Drive and at Old Alabama Rd connector, and remove the existing signals.				$ 8,500,000	
Intersection Improvements	**INT-43**	**Old Roswell Road**	Old Roswell Place	—	TIER 2	This project will explore concept development for a new intersection improvement on Old Roswell Road.				$ 350,000	
Intersection Improvements	**INT-44**	**Pine Grove Road**	Hightower Road/Waterford Way	—	TIER 1	This project would construct a roundabout at the intersection of Pine Grove Road with Hightower Road/Waterford Way and remove the existing signal.	Survey and Concept Design	TSPLOST II		$ 1,537,835	
Intersection Improvements	**INT-45**	**Pine Grove Road**	Lake Charles Road	—	TIER 1	This project would construct a roundabout at the intersection of Pine Grove Road with Lake Charles Road and remove the existing signal.	Survey and Concept Design	TSPLOST II		$ 1,610,456	
Intersection Improvements	**INT-46**	**Pine Grove Road**	North Coleman Road	—	TIER 1	This project would construct a roundabout at the intersection of Pine Grove Road with North Coleman Road.	Survey and Concept Design	TSPLOST II		$ 1,537,835	
Intersection Improvements	**INT-47**	**Pine Grove Road**	Shallowford Road	—	TIER 1	This project would construct a roundabout at the intersection of Pine Grove Road with Shallowford Road.	Survey and Concept Design	TSPLOST II		$ 1,537,835	
Intersection Improvements	**INT-48**	**Riverside Road**	Dogwood Road	—	TIER 2	This project would consider feasibility of a roundabout at the intersection of Riverside Road with Dogwood Road and remove the existing signal. It is currently not in the scope for the Riverside Road TPLOST project in vincinity.				$ 4,075,000	
Intersection Improvements	**INT-49**	**SR 9/120 (Village Center)**	Magnolia Street/Canton Street	—	TIER 2	This project would explore feasibility to reconfigure the intersection of SR 9/120 with Magnolia, Canton, and Hill Streets making a traditional 4-point intersection.				$ 12,968,467	
Intersection Improvements	**INT-50**	**Woodstock Rd (SR 92)**	Hardscrabble Road	—	TIER 1	This project will extend the left turn lane from southbound Hardscrabble Road to eastbound Crossville Road, upgrade the eastbound channelization island to the new GDOT specifications, and improve signal timing.				$ 150,000	
Intersection Improvements	**INT-51**	**Woodstock Rd (SR 92)**	Mtn. Park / Bowen Road	—	TIER 1	This project will upgrade the eastbound and westbound channelization islands to the new GDOT speficiations, and improve signal timing.				$ 30,000	**$ 134,964,111**
Programs	**PGM-01**	**Bridge Maintenance**	—	—	ONGOING	This program performs general maintenance on City-owned bridges such as painting and inspection.				$ 1,375,400	
Programs	**PGM-02**	**Bus Stop Improvements**	—	—	ONGOING	This program will provide shelters and other amenities to improve the transit riding experience.				$ 137,540	
Programs	**PGM-03**	**Connectivity**	—	—	ONGOING	This program will make minor connections between parcels across the City to improve connectivity. Connections could be sidewalk, paths, and/or roads.				$ 2,063,100	
Programs	**PGM-04**	**Mast Arm/Pole Replacement**	—	—	ONGOING	This program will transition the City's traffic signals from span wire and poles to mast arms.				$ 6,877,000	
Programs	**PGM-05**	**Resurfacing**	—	—	ONGOING	This program is for the annual resurfacing of roadways across the City.				$ 2,475,720	
Programs	**PGM-06**	**Right-Of-Way Preservation**	—	—	ONGOING	This program will fund the purchase of land to facilitate future transportation infrastructure expansion.				$ 6,877,000	
Programs	**PGM-07**	**Safe Routes to School (SRTS)**	—	—	ONGOING	This program provides funds for improved crosswalks and sidewalk connections near schools to facilitate safer walking and bicycling opportunities.				$ 68,770	
Programs	**PGM-08**	**Sidewalk Connectivity**	—	—	ONGOING	This program provides funds to make minor sidewalk, multi-use trail, and/or crosswalk connections across the City including installation of ped signals.				$ 34,385	
Programs	**PGM-09**	**Speed Management and Pedestrian Saf**	—	—	ONGOING	This program provides funds for traffic calming features, improved crosswalks, sidewalks, RRFBs, or other safety treatments for the benefit of pedestrians.				$ 447,005	**$ 20,355,920**
Roadway Realignments	**RRA-01**	**Big Creek Parkway**	Holcomb Bridge Road (SR 140) (west of	Holcomb Bridge Road (SR 140) (east of	TIER 1	This project will construct a new Complete Street roadway from Warsaw Road over SR 400 connecting to Old Alabama Road.	Preliminary Design	TSPLOST I		$ 69,966,000	
Roadway Realignments	**RRA-02**	**Big Creek Parkway, Phase 3**	Big Creek Parkway	North Point Parkway	TIER 2	This project will connect Big Creek Parkway with North Point Parkway east of SR 400.				$ 63,956,100	
Roadway Realignments	**RRA-03**	**Commerce Parkway Extension**	Old Roswell Road	Holcomb Bridge Road (SR 140)	TIER 2	This project will extend Commerce Parkway south connecting to Holcomb Bridge Road at Market Place.				$ 2,081,490	
Roadway Realignments	**RRA-04**	**Green Street Connector**	Canton Street	Alpharetta Highway (SR 9/120)	TIER 1	This project will explore connecting Green St to the new traffic signal installed by the Southern Post Development					
Roadway Realignments	**RRA-05**	**Houze Road Realignment**	Existing Roadway	SR 9/120 at Commerce Parkway	TIER 2	This project will realign Houze Road north of the existing intersection to make a connection to the Commerce Parkway traffic signal at SR 9/120.				$ 4,827,256	
Roadway Realignments	**RRA-06**	**Mansell Road Extension**	Alpharetta Highway (SR 9/120)	Crossville Road (SR 92)	TIER 2	This project will extend Mansell Road southward from SR 92 and connect to SR 9/120 near Mansell Circle.				$ 13,685,230	
Roadway Realignments	**RRA-07**	**Myrtle Street Extension**	Existing Roadway	Oxbo Road	TIER 3	This project will extend Myrtle Street to Oxbo Road.				$ 550,518	
Roadway Realignments	**RRA-08**	**Old Ellis-Mansell Connector**	Mansell Place	Old Ellis Road	TIER 3	This project will extend Old Ellis Road westward to connect to Mansell Place.				$ 2,119,491	
Roadway Realignments	**RRA-09**	**Riverwalk Emergency Access**	Riverwalk Drive	Azalea Drive	TIER 2	This project will provide a wide path for emergency access from/to the Riverwalk Community. This path will also provide multi-use connections to the River.				$ 154,355	
Roadway Realignments	**RRA-10**	**SR 400 at Holcomb Bridge Road (SR 140**	SR 400	Holcomb Bridge Road (SR 140)	TIER 1	This GDOT project will replace the existing bridge, reconfigure the ramps to/from SR 400 to a diverging diamond interchange, and add a new southbound access to the express lanes. MARTA will build a Bus Rapid Transit (BRT) station below the interchange for the future BRT line on SR 400.		TSPLOST II		$ 64,729,223	
Roadway Realignments	**RRA-11**	**Sun Valley-Houze Road Connector**	Houze Road (SR 140)	Existing Roadway	TIER 2	This project will extend Sun Valley Drive west from SR-9 area over to Houze Road.				$ 550,518	
Roadway Realignments	**RRA-12**	**Sun Valley-Old Ellis Connector**	Sun Valley Extension	Old Ellis Road	TIER 1	This project will connect the Old Ellis-Mansell Connector and Sun Valley-Warsaw Connector.		TSPLOST II	Federal/NFCID	$ 13,314,590	**$ 235,934,769**
Roadway Surface Upgrades	**RSU-01**	**Kent Road**	King Road	Etris Road	TIER 3	This project will upgrade and/or pave Kent Road.				$ 3,276,040	
Roadway Surface Upgrades	**RSU-02**	**Lum Crowe Road**	City Limits	City Limits	TIER 3	This project will upgrade and/or pave Lum Crowe Road.				$ 2,900,000	**$ 6,176,040**
Traffic Calming Enhancements	**TCE-01**	**Alpharetta Highway (SR 9/120)**	Norcross Street	Holcomb Bridge Road (SR 140)	TIER 1	This project will reduce lane width with a lanscaped median island to encourage slower speeds and enhance aesthetics along Alpharetta Highway (SR 9).				$ 20,000	
Traffic Calming Enhancements	**TCE-02**	**Chaffin Road**	Coleman Drive	Crabapple Road	TIER 3	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 88,000	

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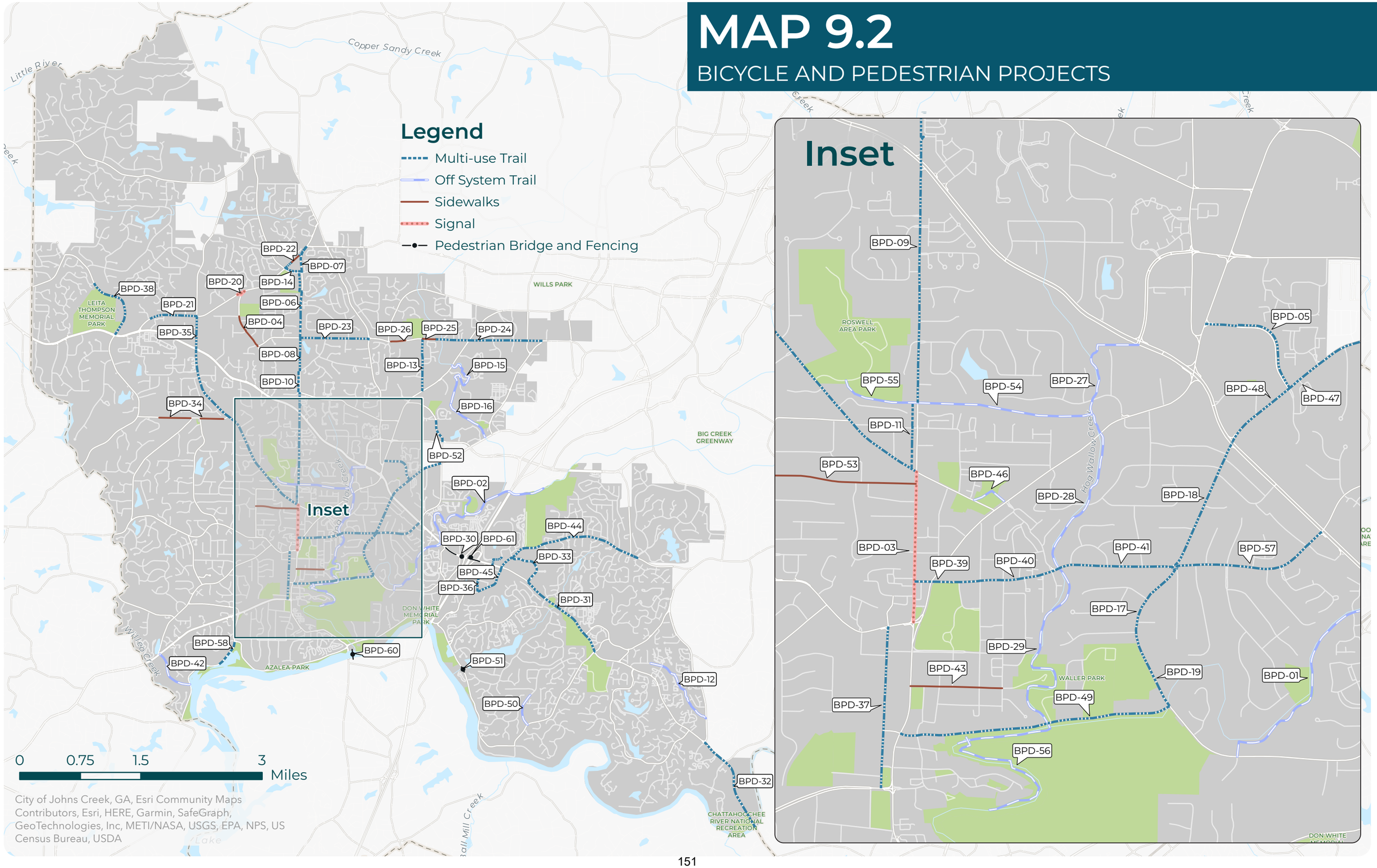
Traffic Calming Enhancements	**TCE-03**	**Coleman Road**	Pine Grove Road	Marietta Highway (SR 120)	TIER 1	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 100,800	
Traffic Calming Enhancements	**TCE-04**	**Commerce Parkway**	Holcomb Bridge Road (SR 140)	Old Roswell Road	TIER 2	This project will reduce lane width to encourage slower speeds along Commerce Parkway.				$ 100,800	
Traffic Calming Enhancements	**TCE-05**	**Cox Road**	Lackey Road	Litchfield Drive	TIER 3	This project will reduce lane width with a lanscaped median island to encourage slower speeds and enhance aesthetics along Cox Road.				$ 60,000	
Traffic Calming Enhancements	**TCE-06**	**Dogwood Road**	Holcomb Bridge Road (SR 140)	Riverside Road	TIER 1	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 4,000	
Traffic Calming Enhancements	**TCE-07**	**Etris Road**	City Limits	Crabapple Road	TIER 3	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 113,000	
Traffic Calming Enhancements	**TCE-08**	**Eves Road**	Riverside Road	Holcomb Bridge Road (SR 140)	TIER 2	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 150,000	
Traffic Calming Enhancements	**TCE-09**	**Grimes Bridge Road**	Meadowood Drive	Dogwood Road	TIER 1	This project will construct traffic calming features along Grimes Bridge Road.				$ 116,000	
Traffic Calming Enhancements	**TCE-10**	**Hightower Road**	Pine Grove Road	Coleman Road	TIER 2	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 48,000	
Traffic Calming Enhancements	**TCE-11**	**Holcomb Bridge Road (SR 140)**	Holcomb Woods Parkway	City Limits	TIER 2	This project will increase the placement of speed feedback signs along Holcomb Bridge Road (SR 140) as part of the Speed Management Program.				$ 8,000	
Traffic Calming Enhancements	**TCE-12**	**Holcomb Woods Parkway**	Old Alabama Road	Holcomb Bridge Road (SR 140)	TIER 2	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 26,000	
Traffic Calming Enhancements	**TCE-13**	**Houze Road (SR 140)**	Houze Way	City Limits	TIER 3	This project will increase the placement of speed feedback signs along Houze Road (SR 140) as part of the Speed Management Program.				$ 8,000	
Traffic Calming Enhancements	**TCE-14**	**Jones Road**	City Limits	Woodstock Road	TIER 2	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 28,000	
Traffic Calming Enhancements	**TCE-15**	**King Road**	Kent Road	Chaffin Road	TIER 3	This project will reduce lane width with a lanscaped median island to encourage slower speeds and enhance aesthetics along King Road.				$ 40,000	
Traffic Calming Enhancements	**TCE-16**	**Mansell Road**	Holcomb Bridge Road (SR 140)	City Limits	TIER 3	This project will reduce lane width with a lanscaped median island to encourage slower speeds and enhance aesthetics along Mansell Road.				$ 200,000	
Traffic Calming Enhancements	**TCE-17**	**Marietta Highway (SR 120)**	City Limits	Alpharetta Highway (SR 9)	TIER 2	This project will increase the placement of speed feedback signs along Marietta Highway (SR 120) as part of the Speed Management Program.				$ 8,000	
Traffic Calming Enhancements	**TCE-18**	**Mountain Park Road**	Woodstock Road (SR 92)	Old Mountain Park Road	TIER 3	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 48,000	
Traffic Calming Enhancements	**TCE-19**	**Norcross Street**	Alpharetta Highway (SR 9/120)	Warsaw Road	TIER 2	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 88,000	
Traffic Calming Enhancements	**TCE-20**	**North Coleman Road**	Pine Grove Road	Woodstock Road	TIER 2	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 8,000	
Traffic Calming Enhancements	**TCE-21**	**Old Alabama Road**	Riverside Road	Holcomb Bridge Road (SR 140)	TIER 1	This project will reduce lane width to encourage slower speeds along Old Alabama Road.				$ 16,000	
Traffic Calming Enhancements	**TCE-22**	**Old Mountain Park Road**	Mountain Park Road	City Limits	TIER 1	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 48,000	
Traffic Calming Enhancements	**TCE-23**	**Oxbo Road**	Alpharetta Highway (SR 9/120)	Grimes Bridge Road	TIER 1	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 118,000	
Traffic Calming Enhancements	**TCE-24**	**Pine Grove Road**	City Limits	Mimosa Boulevard	TIER 1	This project will construct traffic calming features along Pine Grove Road.				$ 8,000	
Traffic Calming Enhancements	**TCE-25**	**Riverside Road**	Dogwood Road	Azalea Drive	TIER 1	This project will construct traffic calming features along Riverside Road.				$ 8,000	
Traffic Calming Enhancements	**TCE-26**	**Riverside Road**	Old Alabama Road	Eves Road	TIER 1	This project will construct traffic calming features along Riverside Road.	Preliminary Design	TSPLOST II		$ 168,000	
Traffic Calming Enhancements	**TCE-27**	**Scott Road**	Holcomb Bridge Road (SR 140)	Old Scott Road	TIER 1	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 88,000	
Traffic Calming Enhancements	**TCE-28**	**Thompson Place**	North Coleman Road	Canton Street	TIER 3	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 48,000	
Traffic Calming Enhancements	**TCE-29**	**Warsaw Road**	Norcross Street	Holcomb Bridge Road (SR 140)	TIER 1	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 48,000	
Traffic Calming Enhancements	**TCE-30**	**Wavetree Drive**	Crossville Highway (SR 92)	Woodstock Road	TIER 1	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 88,000	
Traffic Calming Enhancements	**TCE-31**	**Willeo Road**	Coleman Road	Marietta Highway (SR 120)	TIER 2	Review future feasibility for traffic calming features that may include speed feedback signs, median treatments, horizontal deflection, or other improvements, etc..				$ 48,000	**$ 1,948,600**

MAP 9.2

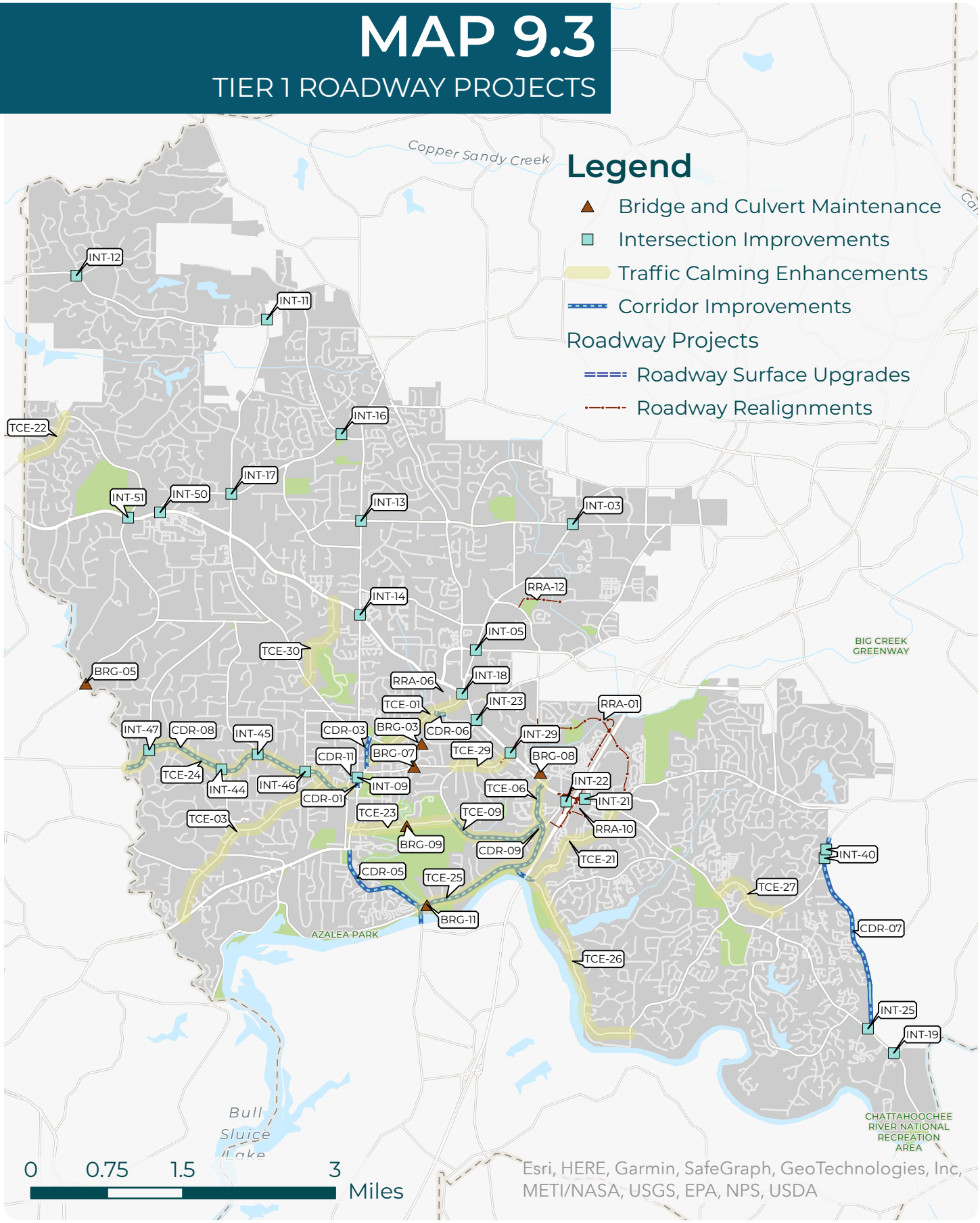
BICYCLE AND PEDESTRIAN PROJECTS



TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Description of potential scope (DRAFT - SUBJECT TO CHANGE OR REVISION OR NEW INFORMATION)	Project Standing	Project Funding Source	Future Potential Funding Source	2023 Project Cost Estimate (2023 Dollars)	
BPD-01	**Big Creek (waterway)**	Grimes Bridge Road	SR 140 / Holcomb Bridge Road	TIER 3	This project will build a multi-use greenway where feasible			Federal/Local	$ 7,720,300	
BPD-02	**Big Creek (waterway)**	SR 140 / Holcomb Bridge Road	Big Creek Park	TIER 1	This project will build a multi-use greenway along Big Creek spanning from Oxbo Road to Big Creek Park.	Committed	Reconnecting Communities Federal Grant (IIJA)	Federal/Local	$ 7,720,300	
BPD-03	**Canton Street**	Woodstock Road	SR 9	TIER 1	This project will install either enhanced crossings or possible (RRFB signals) for traffic calming and ped safety.				$ 126,298	
BPD-04	**Chaffin Road**	Hembree Road	Coleman Drive	TIER 1	This project will fill in gaps along the sidewalk network.	Committed	Bond Project		$ 587,567	
BPD-05	**Commerce Parkway**	Old Roswell Road	SR 9	TIER 3	This project will reduce lanes to add multi-use path where feasible				$ 2,282,192	
BPD-06	**Crabapple Road**	Etris Road	Hembree Road	TIER 3	This project will consider continuing of multiuse path			Federal/Local	$ 3,199,184	
BPD-07	**Crabapple Road**	Hardscrabble Road	Etris Road	TIER 3	This project will install multi-use path where feasible			Federal/Local	$ 1,968,850	
BPD-08	**Crabapple Road**	Hembree Road	Strickland Road	TIER 2	This project will fill gaps in sidewalk network and construct multi use path on corridor where feasible.				$ 2,131,634	
BPD-09	**Crabapple Road**	Houze Way	Planned Off System Trail	TIER 3	This project will install multi use path and/or fill gaps in sidewalk network where feasible.				$ 3,988,155	
BPD-10	**Crabapple Road**	Strickland Road	Houze Way	TIER 3	This project will construct multi use path where feasible				$ 1,749,845	
BPD-11	**Crabapple Road/Canton Street**	Planned Off-System Trail	Woodstock Road	TIER 2	This project will build a multi-use path along Crabapple Road and Canton Street.				$ 1,720,120	
BPD-12	**East Roswell Trail/Champions Green Parkway/Powder Ridge**	Scott Road	Nesbitt Ferry Road	TIER 2	This project will build a multi-use greenway on offroad sections and a multi-use path on portions of Champions Green Parkway where feasible.				$ 3,708,204	
BPD-13	**Elkins Road**	Alpharetta Highway (SR 9)		TIER 2	This project will build a multi-use path along Elkins Road, as well as fill gaps in the sidewalk network.				$ 2,737,144	
BPD-14	**Etris Road**	Hardscrabble Road	Crabapple Road	TIER 3	This project will continue multiuse path where feasible	Committed	Bond Project		$ 1,610,191	
BPD-15	**Foe Killer Creek**	Elkins Road	Old Ellis Road extension	TIER 3	This project will build a multi-use trail as greenway where feasible				$ 4,207,050	
BPD-16	**Foe Killer Creek**	Old Ellis Road extension	Old Roswell Road	TIER 3	This project will build a multi-use trail as greenway where feasible				$ 2,782,255	
BPD-17	**Grimes Bridge Road**	Adult Rec Center (ARC) entrance	Norcross Street	TIER 2	The project will install a multi-use trail where feasible				$ 2,142,451	
BPD-18	**Grimes Bridge Road**	Norcross Street	Holcomb Bridge Road	TIER 2	This project will fill gaps in sidewalk network. Add multi-use path if feasible.				$ 2,350,536	
BPD-19	**Grimes Bridge Road**	Oxbo Road	Adult Rec Center (ARC) entrance	TIER 2	The project will install a multi-use trail				$ 1,521,133	
BPD-20	**Hardscrabble Road**	King Road	Etris Road	TIER 3	This project will install RRFBs as appropriate if heavy bicycle and pedestrian usage is observed at the roundabout				$ 83,720	
BPD-21	**Hardscrabble Road**	Whittingham Place	King Road	TIER 1	This project will install a multi-use trail along corridor where feasible.	Right of Way Acquisition	Bond Project		$ 2,072,975	
BPD-22	**Hardscrabble Road/Crabapple Road**	Etris Road	Rucker Road	TIER 3	This project will continue the sidewalk as needed				$ 1,444,468	
BPD-23	**Hembree Road**	Crabapple Road	Houze Road	TIER 3	This project will fill gaps in sidewalk network as needed.			Federal/ARC	$ 3,247,207	
BPD-24	**Hembree Road**	Elkins Road	Old Roswell Road	TIER 2	This project will build a multi-use path along the south side of Hembree Road, as well as fill gaps in the sidewalk network.				$ 4,972,250	
BPD-25	**Hembree Road**	Hembree Park	Cross of Life Montessori School	TIER 1			Bond Project		$ 279,450	
BPD-26	**Hembree Road**	Upper Hembree Road	Tapestry Community Church	TIER 1			Bond Project		$ 445,500	
BPD-27	**Hog Wallow Creek**	Alpharetta Highway (SR 9)	Crossville Road (SR 92)	TIER 2					$ 2,177,952	
BPD-28	**Hog Wallow Creek**	Norcross Street	Alpharetta Street (SR 9/120)	TIER 2	This project will build a multi-use greenway along Hog Wallow Creek spanning from Norcross Street to Alpharetta Street.				$ 2,726,245	
BPD-29	**Hog Wallow Creek**	Oxbo Road	Norcross Street	TIER 2	This project will build a multi-use greenway along Hog Wallow Creek spanning from Oxbo Road to Norcross Street.				$ 4,115,609	
BPD-30	**Holcomb Bridge Road (SR 140)**	Dogwood Road	SR-400 SB on/off ramps	TIER 2	This project will install a fence or pedestrian type barrier to prevent illegal pedestrian crossings of SR-140.				$ 100,000	
BPD-31	**Holcomb Bridge Road (SR 140)**	Holcomb Woods Pkwy	Eves Road	TIER 1	This project will install a multi-use path on corridor where feasible		TSPLOST II		$ 4,139,969	
BPD-32	**Holcomb Bridge Road (SR 140)**	Nesbit Ferry Road	Gwinnett County Line	TIER 2	This project will build a multi-use trail along Holcomb Bridge Road.			Federal/ARC	$ 4,269,630	
BPD-33	**Holcomb Woods Parkway**	Holcomb Bridge Road	Old Alabama Road	TIER 2	This project will reduce lane widths to add a multi-use path and a cycle track.				$ 50,000	
BPD-34	**Jones Road**	Existing Sidewalk	Shallowford Road	TIER 2	This project will fill the sidewalk gap along the south side of Jones Road.				$ 415,000	
BPD-35	**King Road**	SR 92/Woodstock Rd	Hardscrabble Road	TIER 1	This project will install multi use path on corridor	Preliminary Design	Bond Project		$ 2,118,399	
BPD-36	**Market Boulevard**	Old Alabama Road	Kimberly Clark Driveway	TIER 2	This project will fill gaps in the sidewalk network, and potentially reduce the road lane width to build a multi-use path.				$ 2,713,378	
BPD-37	**Mimosa Blvd/ Oxbo Road**	Magnolia St	SR 9	TIER 2	This project will install multi use path on the west (Mimosa) and south (Oxbo) side of the corridor. Install RRFB or HAWK at crossing at the Oxbo Rd at SR 9 intersection and carry the path to Oxbo Rd east of SR 9. On the southern end of the corridor, tie the path in with the planned multi use path GDOT is installing at SR 9 south of SR 120.				$ 2,597,286	
BPD-38	**Mountain Park Road**	SR-92/Woodstock Rd	Mountain Park Elementary	TIER 3	This project will construct multiuse path where feasible				$ 3,316,151	
BPD-39	**Norcross Street**	Canton Street	Fraser St/Forrest St	TIER 2	This project will build a multi-use path along Norcross Street.				$ 1,707,544	
BPD-40	**Norcross Street**	Fraser St/Forrest St	Norcross Street Bridge	TIER 2	This project will build a multi-use path along Norcross Street.				$ 1,840,003	
BPD-41	**Norcross Street**	Norcross Street Bridge	Grimes Bridge Road	TIER 2	This project will build a multi-use path along Norcross Street.				$ 2,236,178	
BPD-42	**N-S Corridor**	Marietta Highway (SR 120)	Willeo Road	TIER 2	This project will build a multi-use greenway spanning from Marietta Highway to Willeo Road.				$ 2,581,679	
BPD-43	**Oak St**	SR 9	Myrtle Street	TIER 3	This project will fill in gaps in sidewalk network as needed				$ 504,842	
BPD-44	**Old Alabama Road**	Big Creek Park Driveway	Roxburgh Drive	TIER 1	This project will fill gaps in sidewalk network and consider multi-use path if/where feasible	Preliminary Design	Bond Project		$ 1,467,400	
BPD-45	**Old Alabama Road**	Market Boulevard	Big Creek Park Driveway	TIER 1	This project will build add a multi-use trail.	Survey and Concept Design	TSPLOST II		$ 2,640,000	
BPD-46	**Old Roswell Cemetery Trail**	Woodstock Road	Alpharetta Highway (SR 9)	TIER 1	This project will provide a sidewalk connection along the eastern side of Woodstock Road to Alpharetta Highway (SR 9).				$ 417,574	
BPD-47	**Old Roswell Road**	Commerce Parkway	Warsaw Road	TIER 3	This project will fill gaps in sidewalk network and consider multi-use path if/where feasible				$ 2,222,294	
BPD-48	**Old Roswell Road**	Holcomb Bridge Road	Commerce Parkway	TIER 2	This project will fill gaps in sidewalk network. Add multi-use path				$ 1,849,055	
BPD-49	**Oxbo Road**	Atlanta Street (SR 9)	Grimes Bridge Road	TIER 1	This project will install a multi-use trail where feasible	Committed	Bond Project		$ 3,622,996	
BPD-50	**Planned Off System Trail**	Eves Road	Eves Cir	TIER 1	This project will build a multi-use greenway where feasible	Committed	TSPLOST II		$ 2,139,103	
BPD-51	**Riverside Road Pedestrian Bridge**	Near Martins Landing dam	—	TIER 1	This project will build a new pedestrian bridge on the side of Riverside Road.	Committed	Bond Project		$ 625,000	
BPD-52	**Sun Valley Drive**	Mansell Road	Finchely Drive	TIER 3	This project will add a multi-use path where feasible				$ 1,830,444	
BPD-53	**Thompson Place**	North Coleman Road	Canton Street	TIER 3	This project will consider adding a sidewalk along Thompson Place				$ 877,650	
BPD-54	**Un-named E-W Creek**	Crabapple Road	Hog Wallow Creek	TIER 3	This project will build a multi-use greenway with protected crossing (RRFB or HAWK at Crabapple)				$ 2,721,107	
BPD-55	**Un-named E-W Creek**	Roswell Area Park	Crabapple Road	TIER 3	This project will build a multi-use greenway with protected crossing (RRFB or HAWK at Crabapple)				$ 1,843,379	
BPD-56	**Vickery Creek**	Oxbo Road	Waterfall by Mill Ruins	TIER 1	This project will rehab the existing trail and possibly install two new pedestrian bridges (env approvals needed)	Committed	Federal Lands Access Program (FLAP) Grant		$ 3,800,000	
BPD-57	**Warsaw Road**	Grimes Bridge Road/Norcross St rounda	Holcomb Bridge Road (SR 140)	TIER 2	This project will build a sidewalk or multi-use path where feasible				$ 2,567,271	
BPD-58	**Willeo Road**	Near Boardwalk Connection	Azalea Drive	TIER 2	This project will build a sidewalk or multi-use path where feasible				$ 1,956,233	
BPD-59	**Woodstock Road**	Canton Street	SR-92/Woodstock Rd	TIER 1	This project will build a multi-use path or sidewalks along portions of Woodstock Road.	Preliminary Design	TSPLOST II		$ 6,736,822	
BPD-61	**SR-400 / Holcomb Bridge Road interchar**	Holcomb Bridge Road	n/a	TIER 2	This project will develop concept or plans to eventually build pedestrian facilities to access a future BRT Transit site.			Federal / ARC	$ 11,500,000	
BPD-60	**SR 9 over Chattahoochee River Ped Brid**	Roberts Drive (in Sandy Springs)	Riverside Road/Azalea Drive	TIER 2	This project will add a new 12-foot wide bridge adjacent to the existing northbound SR 9 bridge over the Chattahoochee River. The bridge will connect to the existing Riverfront Trail in Roswell and sidewalks in Sandy Springs.			Federal/ARC	$ 8,274,543	**$ 153,779,413**

MAP 9.3

TIER 1 ROADWAY PROJECTS

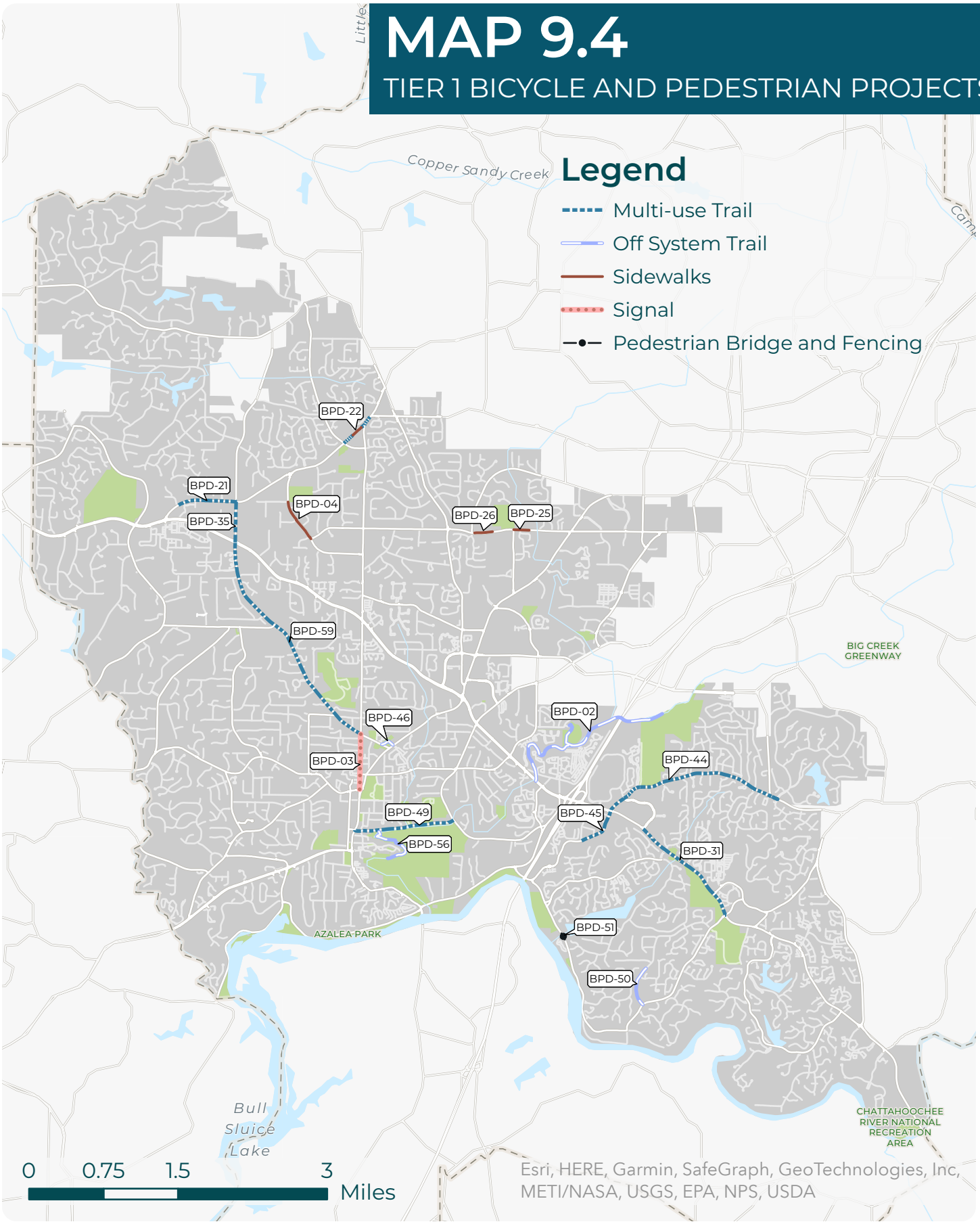


Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Bridges	**BRG-03**	**Charles Place**	Hog Wallow Creek	—	TIER 1
Bridges	**BRG-05**	**Jones Road**	Willeo Creek	—	TIER 1
Bridges	**BRG-07**	**Norcross Street**	Hog Wallow Creek	—	TIER 1
Bridges	**BRG-08**	**Old Holcomb Bridge Road**	Big Creek	—	TIER 1
Bridges	**BRG-09**	**Oxbo Road**	Hog Wallow Creek	—	TIER 1
Bridges	**BRG-11**	**Riverside Road**	Big Creek	—	TIER 1
Corridor Improvements	**CDR-01**	**Canton Street**	SR-9 near Elizabeth Way	Near Webb St / Norcross Street	TIER 1
Corridor Improvements	**CDR-03**	**Green Street**	Alpharetta Street (SR 9/120)	Woodstock Street	TIER 1
Corridor Improvements	**CDR-04**	**Grimes Bridge Road**	Oxbo Road	Dogwood Road	TIER 1
Corridor Improvements	**CDR-05**	**Historic Gateway (SR 9)**	Chattahoochee River	Marietta Highway (SR 120)	TIER 1
Corridor Improvements	**CDR-06**	**Horton Drive**	Alpharetta Street (SR 9/120)	Mansell Circle	TIER 1
Corridor Improvements	**CDR-07**	**Nesbit Ferry Road**	Holcomb Bridge Road (SR 140)	Old Alabama Road (in Johns Creek)	TIER 1
Corridor Improvements	**CDR-08**	**Pine Grove Road**	City Limits at Cobb County	Mimosa Boulevard	TIER 1
Corridor Improvements	**CDR-09**	**Riverside Road**	Rivera Road	Dogwood Road	TIER 1
Corridor Improvements	**CDR-11**	**Webb Street**	Mimosa Boulevard	Canton Street	TIER 1
Intersection Improvements	**INT-03**	**Alpharetta Hwy (SR 9)**	Hembree Road	—	TIER 1
Intersection Improvements	**INT-05**	**Alpharetta Hwy (SR 9)**	Mansell Road	—	TIER 1
Intersection Improvements	**INT-09**	**Canton Street**	Webb Street	—	TIER 1
Intersection Improvements	**INT-11**	**Cox Road**	Etris Road and King Road		TIER 1
Intersection Improvements	**INT-13**	**Crabapple Road**	Hembree Road	—	TIER 1
Intersection Improvements	**INT-14**	**Crossville Road (SR 92)**	Crabapple Road	—	TIER 1
Intersection Improvements	**INT-17**	**Hardscrabble Road**	King Road	—	TIER 1
Intersection Improvements	**INT-18**	**Holcomb Bridge Road (SR 140)**	Alpharetta Hwy (SR 9)	—	TIER 1
Intersection Improvements	**INT-19**	**Holcomb Bridge Road (SR 140)**	Barnwell Road	—	TIER 1
Intersection Improvements	**INT-21**	**Holcomb Bridge Road (SR 140)**	GA 400 NB Ramp	—	TIER 1
Intersection Improvements	**INT-22**	**Holcomb Bridge Road (SR 140)**	GA 400 SB Ramp	—	TIER 1
Intersection Improvements	**INT-23**	**Holcomb Bridge Road (SR 140)**	Grimes Bridge Road/Old Roswell Road	—	TIER 1
Intersection Improvements	**INT-25**	**Holcomb Bridge Road (SR 140)**	Nesbit Ferry Road	—	TIER 1
Intersection Improvements	**INT-29**	**Holcomb Bridge Road (SR 140)**	Warsaw Road	—	TIER 1
Intersection Improvements	**INT-40**	**Nesbit Ferry Road**	Scott Road and Nesbit Lakes Drive	—	TIER 1
Intersection Improvements	**INT-44**	**Pine Grove Road**	Hightower Road/Waterford Way	—	TIER 1
Intersection Improvements	**INT-45**	**Pine Grove Road**	Lake Charles Road	—	TIER 1
Intersection Improvements	**INT-46**	**Pine Grove Road**	North Coleman Road	—	TIER 1
Intersection Improvements	**INT-47**	**Pine Grove Road**	Shallowford Road	—	TIER 1
Intersection Improvements	**INT-50**	**Woodstock Rd (SR 92)**	Hardscrabble Road	—	TIER 1
Intersection Improvements	**INT-51**	**Woodstock Rd (SR 92)**	Mtn. Park / Bowen Road	—	TIER 1
Roadway Realignments	**RRA-01**	**Big Creek Parkway**	Holcomb Bridge Road (SR 140) (west of	Holcomb Bridge Road (SR 140) (east of S	TIER 1
Roadway Realignments	**RRA-04**	**Green Street Connector**	Canton Street	Alpharetta Highway (SR 9/120)	TIER 1

Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Roadway Realignments	**RRA-10**	**SR 400 at Holcomb Bridge Road (SR 140**	SR 400	Holcomb Bridge Road (SR 140)	TIER 1
Roadway Realignments	**RRA-12**	**Sun Valley-Old Ellis Connector**	Sun Valley Extension	Old Ellis Road	TIER 1
Traffic Calming Enhancements	**TCE-01**	**Alpharetta Highway (SR 9/120)**	Norcross Street	Holcomb Bridge Road (SR 140)	TIER 1
Traffic Calming Enhancements	**TCE-03**	**Coleman Road**	Pine Grove Road	Marietta Highway (SR 120)	TIER 1
Traffic Calming Enhancements	**TCE-06**	**Dogwood Road**	Holcomb Bridge Road (SR 140)	Riverside Road	TIER 1
Traffic Calming Enhancements	**TCE-09**	**Grimes Bridge Road**	Meadowood Drive	Dogwood Road	TIER 1
Traffic Calming Enhancements	**TCE-21**	**Old Alabama Road**	Riverside Road	Holcomb Bridge Road (SR 140)	TIER 1
Traffic Calming Enhancements	**TCE-22**	**Old Mountain Park Road**	Mountain Park Road	City Limits	TIER 1
Traffic Calming Enhancements	**TCE-23**	**Oxbo Road**	Alpharetta Highway (SR 9/120)	Grimes Bridge Road	TIER 1
Traffic Calming Enhancements	**TCE-24**	**Pine Grove Road**	City Limits	Mimosa Boulevard	TIER 1
Traffic Calming Enhancements	**TCE-25**	**Riverside Road**	Dogwood Road	Azalea Drive	TIER 1
Traffic Calming Enhancements	**TCE-26**	**Riverside Road**	Old Alabama Road	Eves Road	TIER 1
Traffic Calming Enhancements	**TCE-27**	**Scott Road**	Holcomb Bridge Road (SR 140)	Old Scott Road	TIER 1
Traffic Calming Enhancements	**TCE-29**	**Warsaw Road**	Norcross Street	Holcomb Bridge Road (SR 140)	TIER 1
Traffic Calming Enhancements	**TCE-30**	**Wavetree Drive**	Crossville Highway (SR 92)	Woodstock Road	TIER 1

MAP 9.4

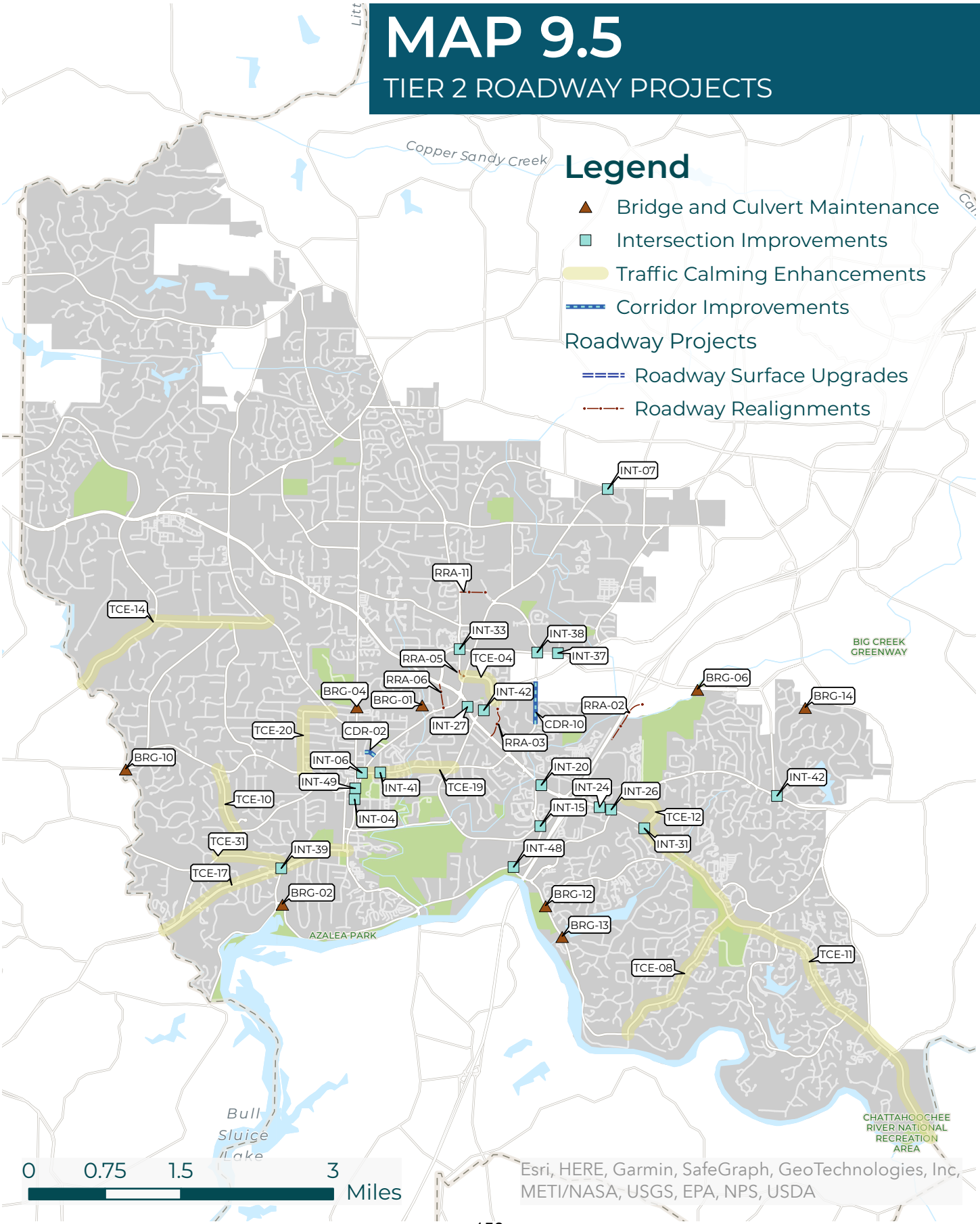
TIER 1 BICYCLE AND PEDESTRIAN PROJECTS



TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Project Type
BPD-02	**Big Creek (waterway)**	SR 140 / Holcomb Bridge Road	Big Creek Park	TIER 1	Off System Trail
BPD-03	**Canton Street**	Woodstock Road	SR 9	TIER 1	Signal
BPD-04	**Chaffin Road**	Hembree Road	Coleman Drive	TIER 1	Sidewalks
BPD-21	**Hardscrabble Road**	Whittingham Place	King Road	TIER 1	Multi-use Trail
BPD-25	**Hembree Road**	Hembree Park	Cross of Life Montessori School	TIER 1	Sidewalks
BPD-26	**Hembree Road**	Upper Hembree Road	Tapestry Community Church	TIER 1	Sidewalks
BPD-31	**Holcomb Bridge Road (SR 140)**	Holcomb Woods Pkwy	Eves Road	TIER 1	Multi-use Trail
BPD-35	**King Road**	SR 92/Woodstock Rd	Hardscrabble Road	TIER 1	Multi-use Trail
BPD-44	**Old Alabama Road**	Big Creek Park Driveway	Roxburgh Drive	TIER 1	Multi-use Trail
BPD-45	**Old Alabama Road**	Market Boulevard	Big Creek Park Driveway	TIER 1	Multi-use Trail
BPD-46	**Old Roswell Cemetery Trail**	Woodstock Road	Alpharetta Highway (SR 9)	TIER 1	Off System Trail
BPD-49	**Oxbo Road**	Atlanta Street (SR 9)	Grimes Bridge Road	TIER 1	Multi-use Trail
BPD-50	**Planned Off System Trail**	Eves Road	Eves Cir	TIER 1	Off System Trail
BPD-51	**Riverside Road Pedestrian Bridge**	Near Martins Landing dam	—	TIER 1	Pedestrian Bridge
BPD-56	**Vickery Creek**	Oxbo Road	Waterfall by Mill Ruins	TIER 1	Off System Trail
BPD-59	**Woodstock Road**	Canton Street	SR-92/Woodstock Rd	TIER 1	Multi-use Trail

MAP 9.5

TIER 2 ROADWAY PROJECTS

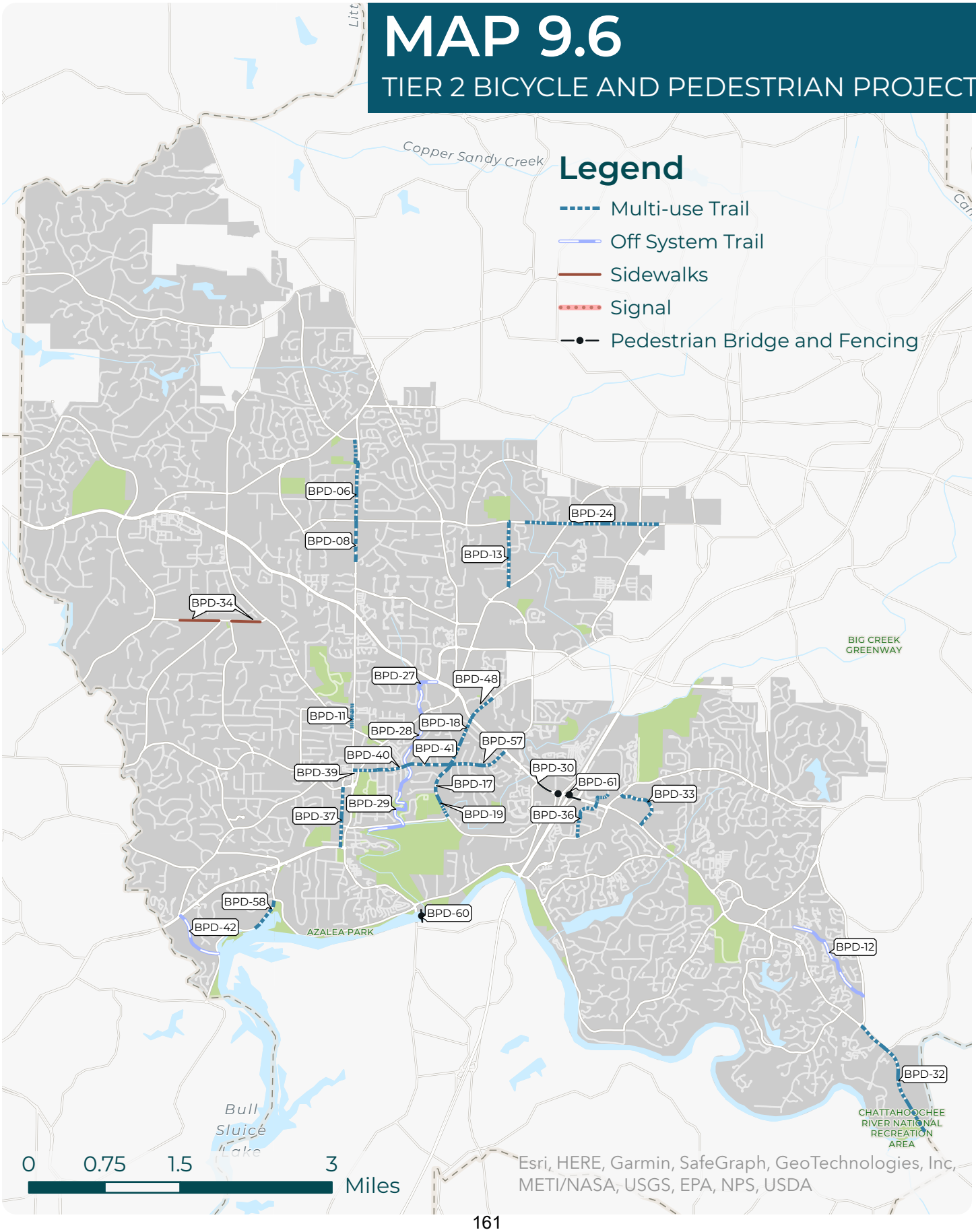


Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Bridges	BRG-01	Alpine Drive – (Culvert)	Hog Wallow Creek	—	TIER 2
Bridges	BRG-02	Azalea Drive	Chattahoochee River Tributary	—	TIER 2
Bridges	BRG-04	Crabapple Road – (Culvert)	Tributary	—	TIER 2
Bridges	BRG-06	Mansell Road (EBL)	Big Creek	—	TIER 2
Bridges	BRG-10	Pine Grove Road	Willeo Creek Tributary	—	TIER 2
Bridges	BRG-12	Riverside Road	Chattahoochee River Tributary	—	TIER 2
Bridges	BRG-13	Riverside Road	Seven Branch	—	TIER 2
Bridges	BRG-14	Roxburgh Drive – (Culvert)	Big Creek Tributary	—	TIER 2
Corridor Improvements	CDR-02	Cherry Way	Green Street	Alpharetta Street (SR 9/120)	TIER 2
Corridor Improvements	CDR-10	Warsaw Road Safety Improvements	Worthington Hills Drive	Just south of Old Roswell Road	TIER 2
Intersection Improvements	INT-04	Alpharetta Hwy (SR 9)	Hill Street / Ramsey Street	—	TIER 2
Intersection Improvements	INT-06	Alpharetta Hwy (SR 9)	Norcross Street	—	TIER 2
Intersection Improvements	INT-07	Alpharetta Hwy (SR 9)	Upper Hembree Road	—	TIER 2
Intersection Improvements	INT-15	Grimes Bridge Road	Dogwood Road	—	TIER 2
Intersection Improvements	INT-16	Hardscrabble Road	Etris Road	—	TIER 2
Intersection Improvements	INT-20	Holcomb Bridge Road (SR 140)	Dogwood Road	—	TIER 2
Intersection Improvements	INT-24	Holcomb Bridge Road (SR 140)	Market Boulevard	—	TIER 2
Intersection Improvements	INT-26	Holcomb Bridge Road (SR 140)	Old Alabama Road	—	TIER 2
Intersection Improvements	INT-27	Holcomb Bridge Road (SR 140)	Old Roswell Place	—	TIER 2
Intersection Improvements	INT-31	Holcomb Woods Parkway	Holcomb Bridge Road (SR 140)	—	TIER 2
Intersection Improvements	INT-32	Houze Road (SR 140)	Crabapple Road	—	TIER 2
Intersection Improvements	INT-33	Houze Road (SR 140)	Mansell Road	—	TIER 2
Intersection Improvements	INT-37	Mansell Road	Colonial Center Parkway	—	TIER 2
Intersection Improvements	INT-38	Mansell Road	Warsaw Road	—	TIER 2
Intersection Improvements	INT-39	Marietta Hwy (SR 120)	Willeo Road	—	TIER 2
Intersection Improvements	INT-42	Old Alabama Road	Old Alabama Road Connector/Roxburgh	—	TIER 2
Intersection Improvements	INT-43	Old Roswell Road	Old Roswell Place	—	TIER 2
Intersection Improvements	INT-48	Riverside Road	Dogwood Road	—	TIER 2
Intersection Improvements	INT-49	SR 9/120 (Village Center)	Magnolia Street/Canton Street	—	TIER 2
Roadway Realignments	RRA-02	Big Creek Parkway, Phase 3	Big Creek Parkway	North Point Parkway	TIER 2
Roadway Realignments	RRA-03	Commerce Parkway Extension	Old Roswell Road	Holcomb Bridge Road (SR 140)	TIER 2
Roadway Realignments	RRA-05	Houze Road Realignment	Existing Roadway	SR 9/120 at Commerce Parkway	TIER 2
Roadway Realignments	RRA-06	Mansell Road Extension	Alpharetta Highway (SR 9/120)	Crossville Road (SR 92)	TIER 2
Roadway Realignments	RRA-09	Riverwalk Emergency Access	Riverwalk Drive	Azalea Drive	TIER 2
Roadway Realignments	RRA-11	Sun Valley-Houze Road Connector	Houze Road (SR 140)	Existing Roadway	TIER 2
Traffic Calming Enhancements	TCE-04	Commerce Parkway	Holcomb Bridge Road (SR 140)	Old Roswell Road	TIER 2
Traffic Calming Enhancements	TCE-08	Eves Road	Riverside Road	Holcomb Bridge Road (SR 140)	TIER 2
Traffic Calming Enhancements	TCE-10	Hightower Road	Pine Grove Road	Coleman Road	TIER 2
Traffic Calming Enhancements	TCE-11	Holcomb Bridge Road (SR 140)	Holcomb Woods Parkway	City Limits	TIER 2
Traffic Calming Enhancements	TCE-12	Holcomb Woods Parkway	Old Alabama Road	Holcomb Bridge Road (SR 140)	TIER 2
Traffic Calming Enhancements	TCE-14	Jones Road	City Limits	Woodstock Road	TIER 2
Traffic Calming Enhancements	TCE-17	Marietta Highway (SR 120)	City Limits	Alpharetta Highway (SR 9)	TIER 2
Traffic Calming Enhancements	TCE-19	Norcross Street	Alpharetta Highway (SR 9/120)	Warsaw Road	TIER 2
Traffic Calming Enhancements	TCE-20	North Coleman Road	Pine Grove Road	Woodstock Road	TIER 2

Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Traffic Calming Enhancements	**TCE-31**	**Willeo Road**	Coleman Road	Marietta Highway (SR 120)	TIER 2

MAP 9.6

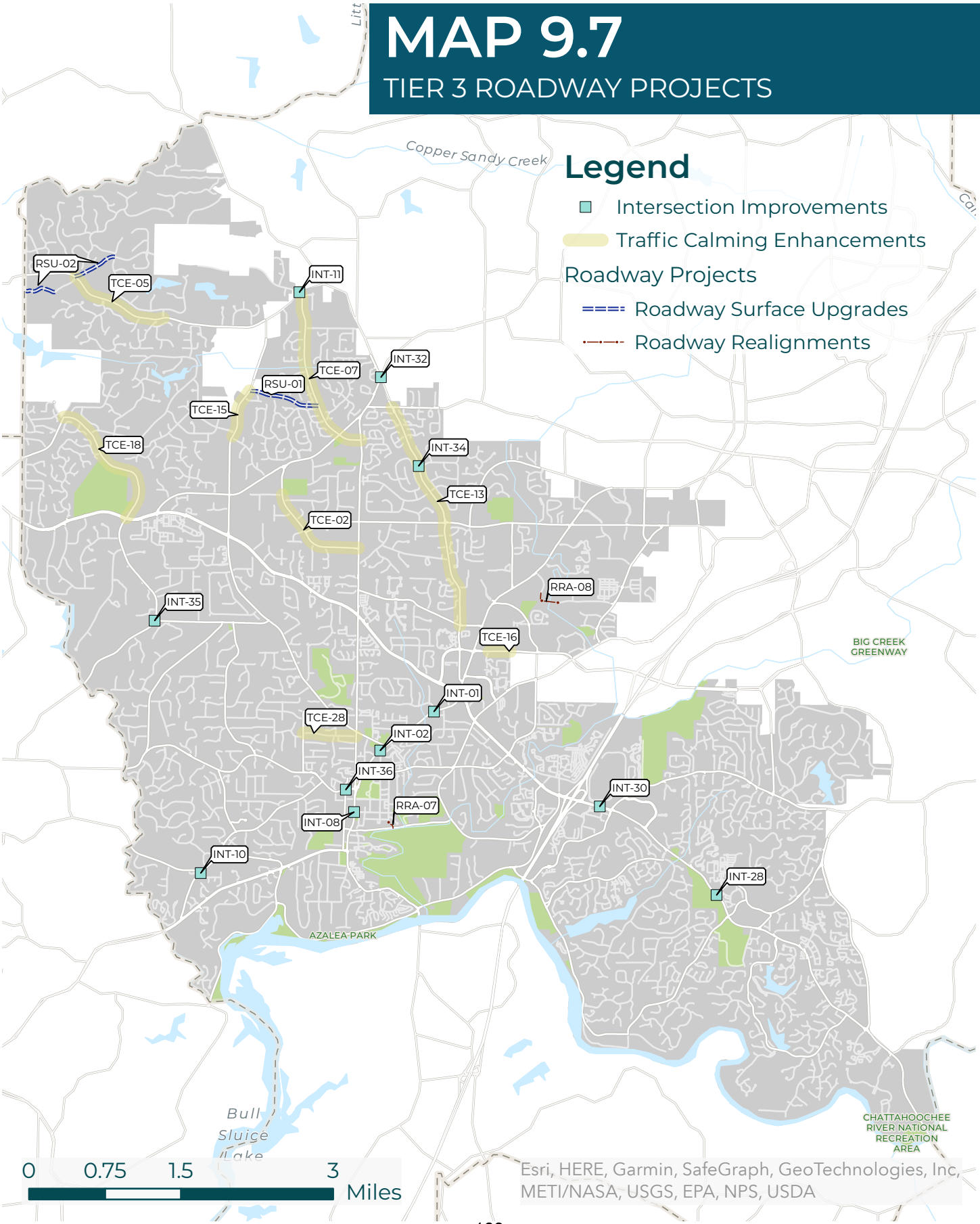
TIER 2 BICYCLE AND PEDESTRIAN PROJECTS



TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Project Type
BPD-08	**Crabapple Road**	Hembree Road	Strickland Road	TIER 2	Multi-use Trail
BPD-11	**Crabapple Road/Canton Street**	Planned Off-System Trail	Woodstock Road	TIER 2	Multi-use Trail
BPD-12	**East Roswell Trail/Champions Green Parkway/Powder Ridge**	Scott Road	Nesbitt Ferry Road	TIER 2	Off System Trail
BPD-13	**Elkins Road**	Alpharetta Highway (SR 9)		TIER 2	Multi-use Trail
BPD-17	**Grimes Bridge Road**	Adult Rec Center (ARC) entrance	Norcross Street	TIER 2	Multi-use Trail
BPD-18	**Grimes Bridge Road**	Norcross Street	Holcomb Bridge Road	TIER 2	Multi-use Trail
BPD-19	**Grimes Bridge Road**	Oxbo Road	Adult Rec Center (ARC) entrance	TIER 2	Multi-use Trail
BPD-24	**Hembree Road**	Elkins Road	Old Roswell Road	TIER 2	Multi-use Trail
BPD-27	**Hog Wallow Creek**	Alpharetta Highway (SR 9)	Crossville Road (SR 92)	TIER 2	Off System Trail
BPD-28	**Hog Wallow Creek**	Norcross Street	Alpharetta Street (SR 9/120)	TIER 2	Off System Trail
BPD-29	**Hog Wallow Creek**	Oxbo Road	Norcross Street	TIER 2	Off System Trail
BPD-30	**Holcomb Bridge Road (SR 140)**	Dogwood Road	SR-400 SB on/off ramps	TIER 2	Multi-use Trail
BPD-32	**Holcomb Bridge Road (SR 140)**	Nesbit Ferry Road	Gwinnett County Line	TIER 2	Multi-use Trail
BPD-33	**Holcomb Woods Parkway**	Holcomb Bridge Road	Old Alabama Road	TIER 2	Multi-use Trail
BPD-34	**Jones Road**	Existing Sidewalk	Shallowford Road	TIER 2	Sidewalks
BPD-36	**Market Boulevard**	Old Alabama Road	Kimberly Clark Driveway	TIER 2	Multi-use Trail
BPD-37	**Mimosa Blvd/ Oxbo Road**	Magnolia St	SR 9	TIER 2	Multi-use Trail
BPD-39	**Norcross Street**	Canton Street	Fraser St/Forrest St	TIER 2	Multi-use Trail
BPD-40	**Norcross Street**	Fraser St/Forrest St	Norcross Street Bridge	TIER 2	Multi-use Trail
BPD-41	**Norcross Street**	Norcross Street Bridge	Grimes Bridge Road	TIER 2	Multi-use Trail
BPD-42	**N-S Corridor**	Marietta Highway (SR 120)	Willeo Road	TIER 2	Off System Trail
BPD-48	**Old Roswell Road**	Holcomb Bridge Road	Commerce Parkway	TIER 2	Multi-use Trail
BPD-57	**Warsaw Road**	Grimes Bridge Road/Norcross St round	Holcomb Bridge Road (SR 140)	TIER 2	Multi-use Trail
BPD-58	**Willeo Road**	Near Boardwalk Connection	Azalea Drive	TIER 2	Multi-use Trail
BPD-61	**SR-400 / Holcomb Bridge Road intercha**	Holcomb Bridge Road	n/a	TIER 2	Multi-use Trail
BPD-60	**SR 9 over Chattahoochee River Ped Brid**	Roberts Drive (in Sandy Springs)	Riverside Road/Azalea Drive	TIER 2	Pedestrian Bridge

MAP 9.7

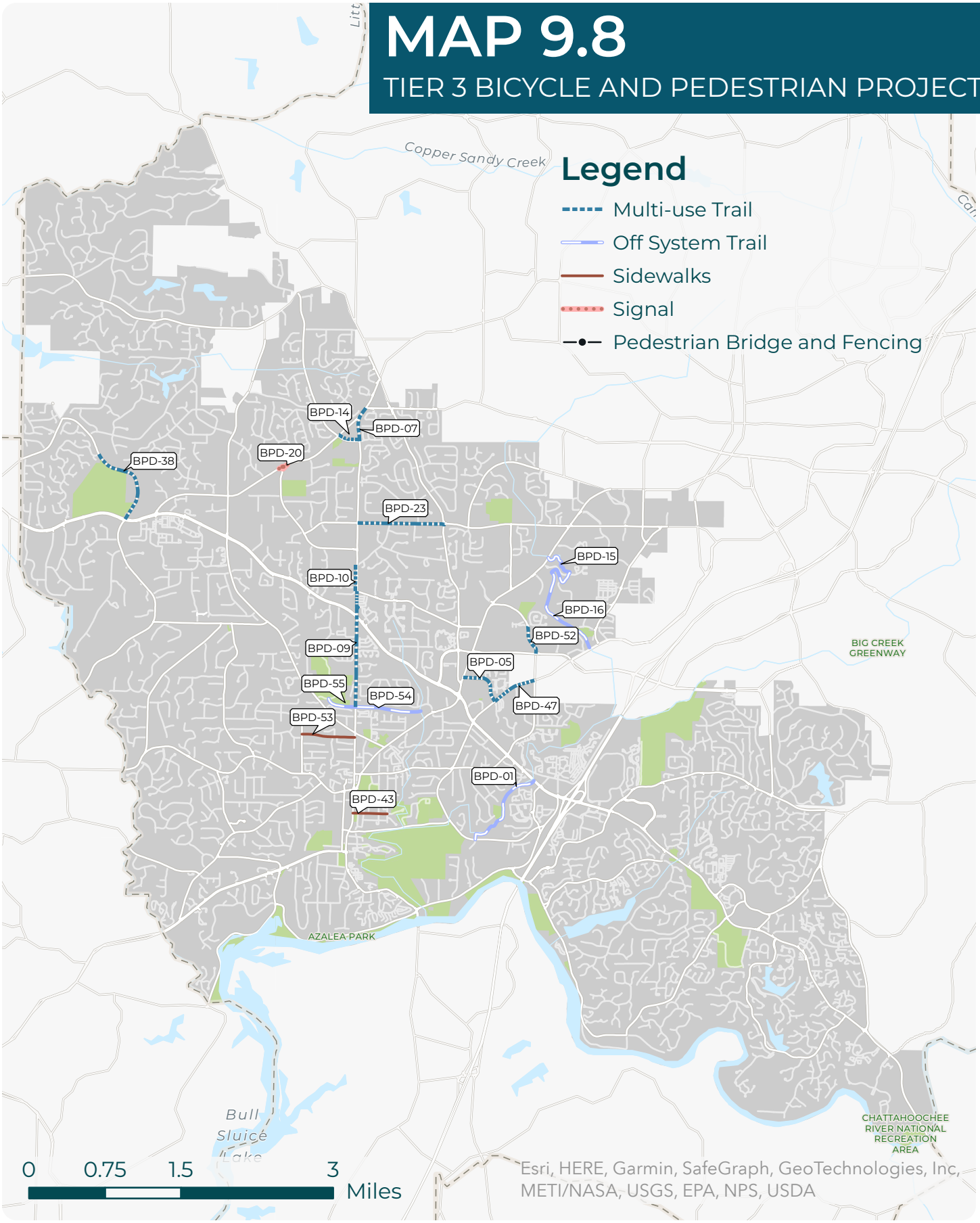
TIER 3 ROADWAY PROJECTS



Project Category	TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)
Intersection Improvements	**INT-01**	**Alpharetta Hwy (SR 9)**	Alpine Drive / Horton Drive	—	TIER 3
Intersection Improvements	**INT-02**	**Alpharetta Hwy (SR 9)**	Fraser Street	—	TIER 3
Intersection Improvements	**INT-08**	**Atlanta Street (SR 9/120)**	Oak Street	—	TIER 3
Intersection Improvements	**INT-10**	**Coleman Road**	Willeo Road (west)	—	TIER 3
Intersection Improvements	**INT-12**	**Cox Road**	Lackey Road / Lum Crowe	—	TIER 3
Intersection Improvements	**INT-28**	**Holcomb Bridge Road (SR 140)**	Scott Road	—	TIER 3
Intersection Improvements	**INT-30**	**Holcomb Bridge Road (SR 140)**	at/near Market Blvd / Market Way	—	TIER 3
Intersection Improvements	**INT-34**	**Houze Road (SR 140)**	Saddle Creek Drive	—	TIER 3
Intersection Improvements	**INT-35**	**Jones Road**	Bowen Road	—	TIER 3
Intersection Improvements	**INT-36**	**Magnolia Street**	Mimosa Boulevard	—	TIER 3
Intersection Improvements	**INT-41**	**Norcross Street**	Fraser Street/Forrest Street	—	TIER 3
Roadway Realignments	**RRA-07**	**Myrtle Street Extension**	Existing Roadway	Oxbo Road	TIER 3
Roadway Realignments	**RRA-08**	**Old Ellis-Mansell Connector**	Mansell Place	Old Ellis Road	TIER 3
Roadway Surface Upgrades	**RSU-01**	**Kent Road**	King Road	Etris Road	TIER 3
Roadway Surface Upgrades	**RSU-02**	**Lum Crowe Road**	City Limits	City Limits	TIER 3
Traffic Calming Enhancements	**TCE-02**	**Chaffin Road**	Coleman Drive	Crabapple Road	TIER 3
Traffic Calming Enhancements	**TCE-05**	**Cox Road**	Lackey Road	Litchfield Drive	TIER 3
Traffic Calming Enhancements	**TCE-07**	**Etris Road**	City Limits	Crabapple Road	TIER 3
Traffic Calming Enhancements	**TCE-13**	**Houze Road (SR 140)**	Houze Way	City Limits	TIER 3
Traffic Calming Enhancements	**TCE-15**	**King Road**	Kent Road	Chaffin Road	TIER 3
Traffic Calming Enhancements	**TCE-16**	**Mansell Road**	Holcomb Bridge Road (SR 140)	City Limits	TIER 3
Traffic Calming Enhancements	**TCE-18**	**Mountain Park Road**	Woodstock Road (SR 92)	Old Mountain Park Road	TIER 3
Traffic Calming Enhancements	**TCE-28**	**Thompson Place**	North Coleman Road	Canton Street	TIER 3

MAP 9.8

TIER 3 BICYCLE AND PEDESTRIAN PROJECTS



TMP Project Identifier	Project Name	From/At	To	TIER (subject to change)	Project Type
BPD-01	**Big Creek (waterway)**	Grimes Bridge Road	SR 140 / Holcomb Bridge Road	TIER 3	Off System Trail
BPD-05	**Commerce Parkway**	Old Roswell Road	SR 9	TIER 3	Multi-use Trail
BPD-06	**Crabapple Road**	Etris Road	Hembree Road	TIER 3	Multi-use Trail
BPD-07	**Crabapple Road**	Hardscrabble Road	Etris Road	TIER 3	Multi-use Trail
BPD-09	**Crabapple Road**	Houze Way	Planned Off System Trail	TIER 3	Multi-use Trail
BPD-10	**Crabapple Road**	Strickland Road	Houze Way	TIER 3	Multi-use Trail
BPD-14	**Etris Road**	Hardscrabble Road	Crabapple Road	TIER 3	Multi-use Trail
BPD-15	**Foe Killer Creek**	Elkins Road	Old Ellis Road extension	TIER 3	Off System Trail
BPD-16	**Foe Killer Creek**	Old Ellis Road extension	Old Roswell Road	TIER 3	Off System Trail
BPD-20	**Hardscrabble Road**	King Road	Etris Road	TIER 3	Signal
BPD-22	**Hardscrabble Road/Crabapple Road**	Etris Road	Rucker Road	TIER 3	Sidewalks
BPD-23	**Hembree Road**	Crabapple Road	Houze Road	TIER 3	Multi-use Trail
BPD-38	**Mountain Park Road**	SR-92/Woodstock Rd	Mountain Park Elementary	TIER 3	Multi-use Trail
BPD-43	**Oak St**	SR 9	Myrtle Street	TIER 3	Sidewalks
BPD-47	**Old Roswell Road**	Commerce Parkway	Warsaw Road	TIER 3	Multi-use Trail
BPD-52	**Sun Valley Drive**	Mansell Road	Finchely Drive	TIER 3	Multi-use Trail
BPD-53	**Thompson Place**	North Coleman Road	Canton Street	TIER 3	Sidewalks
BPD-54	**Un-named E-W Creek**	Crabapple Road	Hog Wallow Creek	TIER 3	Off System Trail
BPD-55	**Un-named E-W Creek**	Roswell Area Park	Crabapple Road	TIER 3	Off System Trail