

OVERALL PROJECT PURPOSE

The purpose of the project is to provide reliable, convenient, efficient, and sustainable transit service in the GA 400 Corridor by:

- Providing high capacity, fixed-guideway transit through the GA 400 Corridor study area;
- Improving transit linkages and coverage to communities within the study area; and
- Enhancing mobility and accessibility to and within the study area by providing a more robust transit network that offers effective alternatives to automobile travel.



Goals and Objectives

GOAL 1 Improve Mobility and Access



- Increase north-south and east-west transportation capacity
- Increase transit ridership
- Improve transit travel times and reliability for all trip purposes
- Improve transit access and connectivity to employment, education, residential, and activity centers within the study area and the region
- Improve multimodal connections and access to the existing transit systems

GOAL 2 Support Land Use and Economic Development Planning



- Ensure consistency with land use plans of study area jurisdictions
- Support planned and potential economic development
- Provide opportunities for compact land development that supports transit ridership

GOAL 3 Provide Cost-Effective Transit Service



- Maximize operating and cost-efficiency
- Match the transportation investment to the study area's level of travel demand
- Provide a cost-effective transit system

GOAL 4 Minimize Environmental Impacts



- Avoid, minimize, and mitigate impact to cultural, historic, and environmentally sensitive areas
- Avoid, minimize, and mitigate negative impacts on the surrounding community including parks

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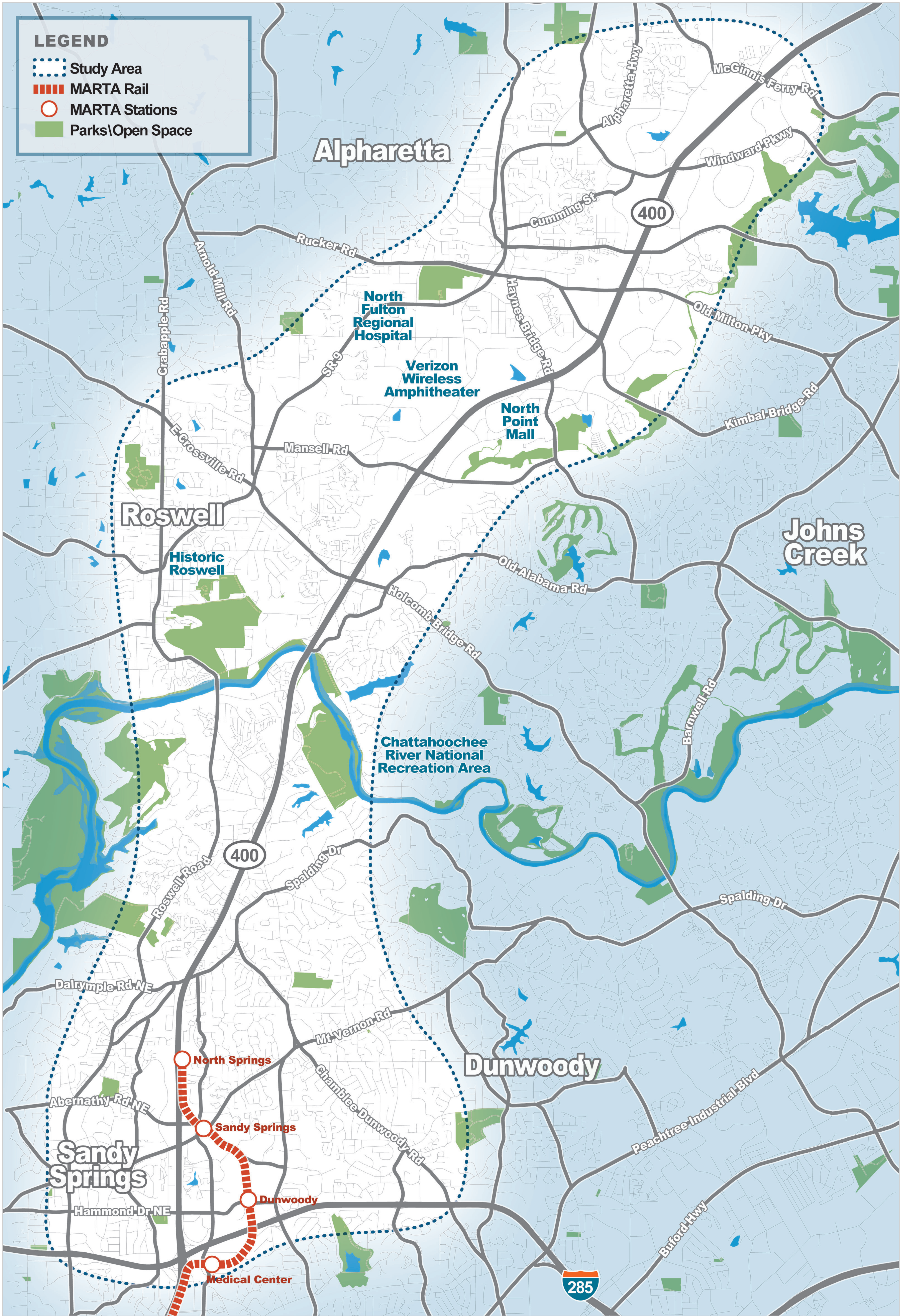
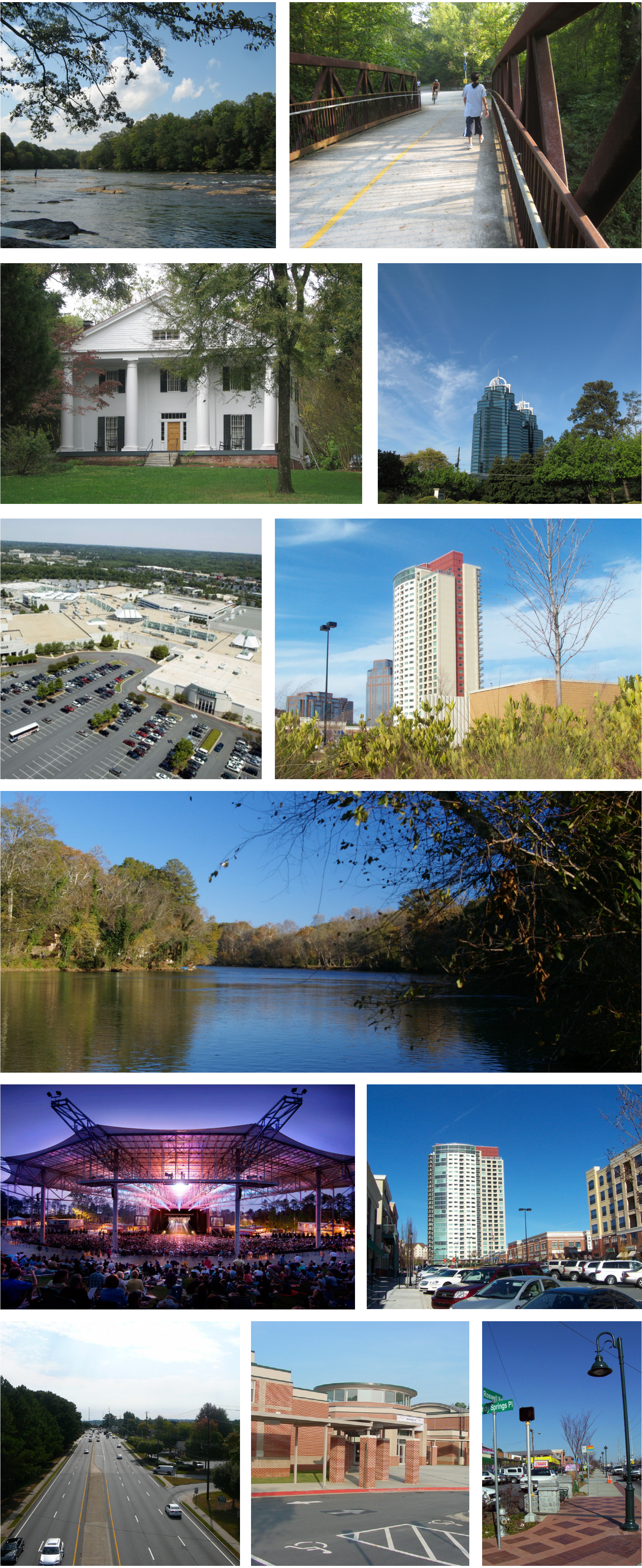
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STUDY AREA

GA 400 Corridor Alternatives Analysis



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GOAL 1

Improve Mobility and Access

FRAMEWORK



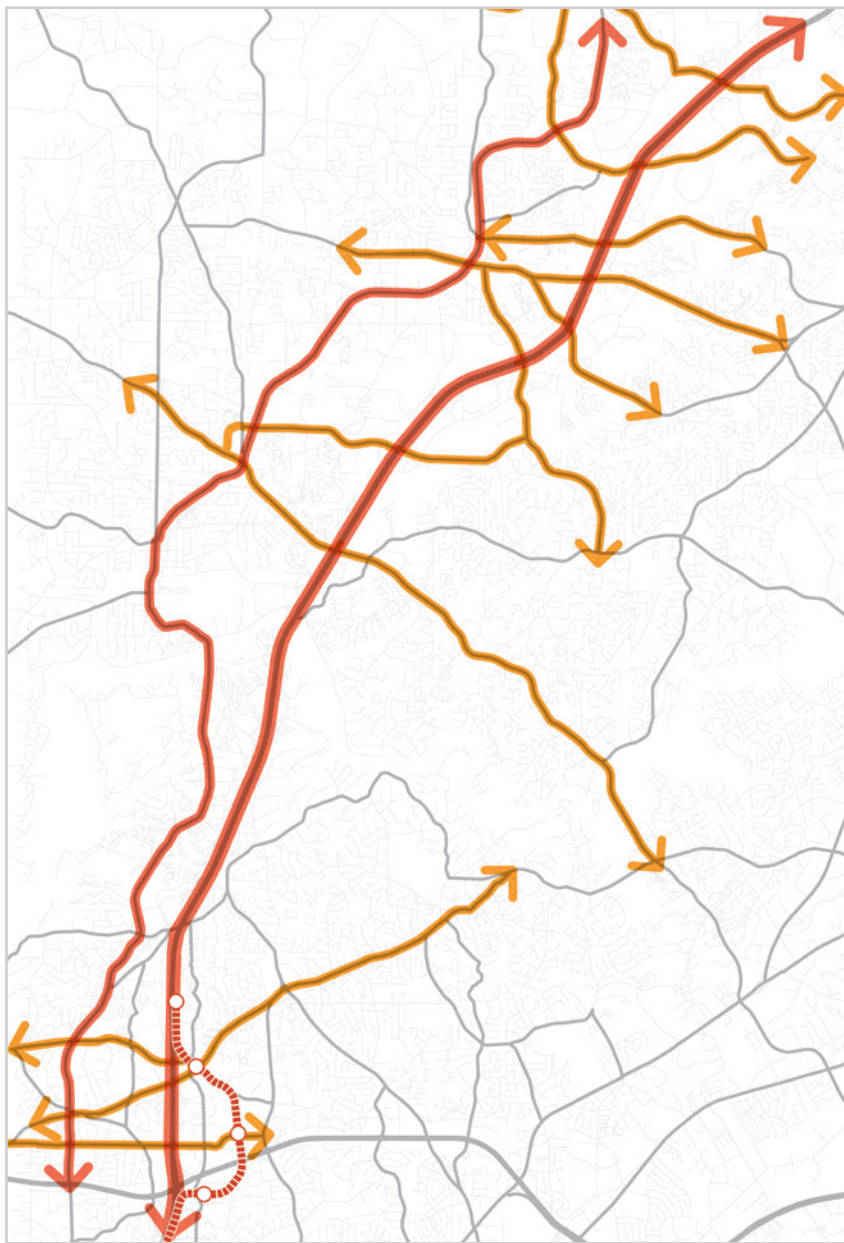
NORTH / SOUTH



EAST / WEST

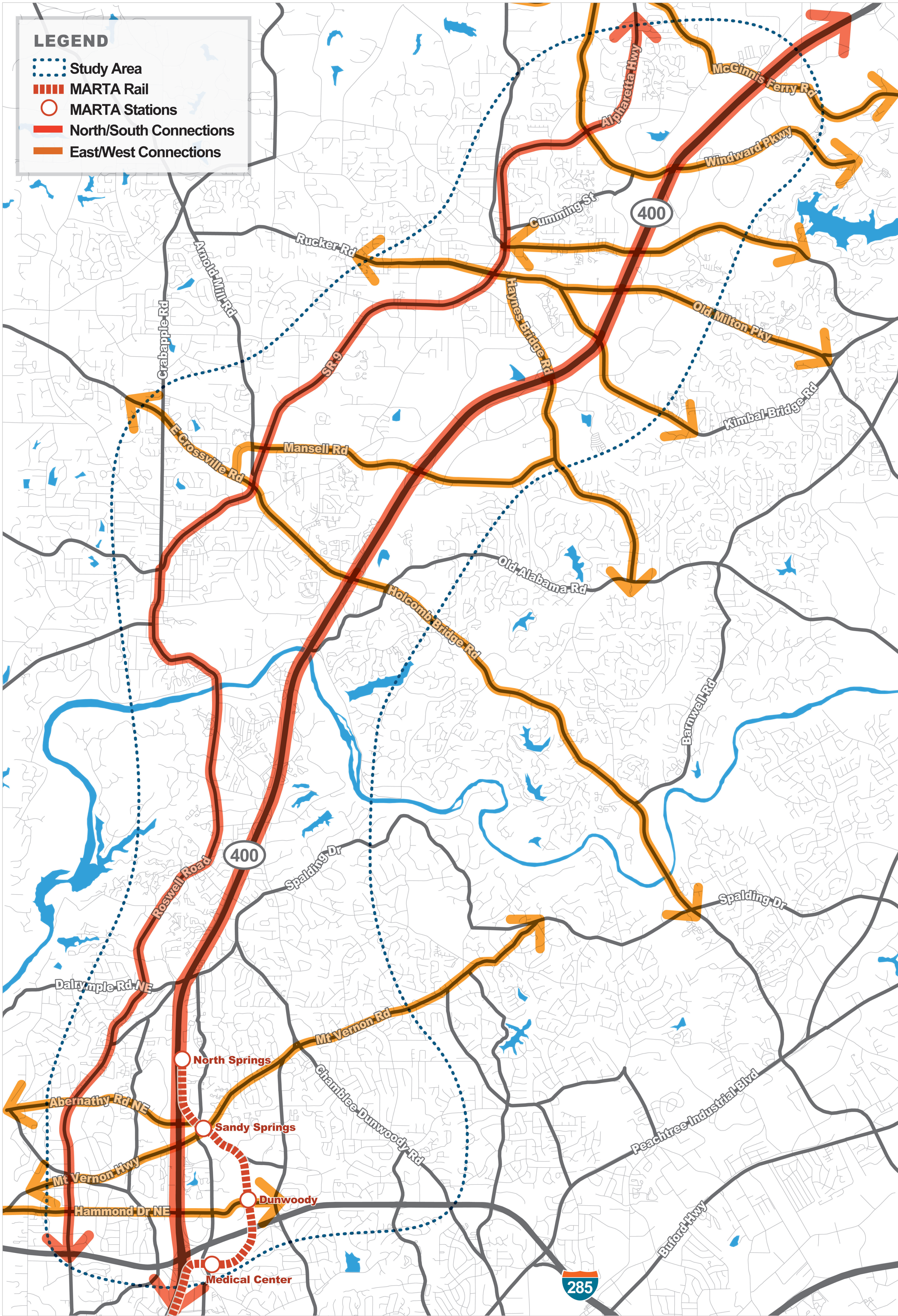


CONNECTIVITY



OBJECTIVES

- Increase north-south and east-west transportation capacity
- Increase transit ridership
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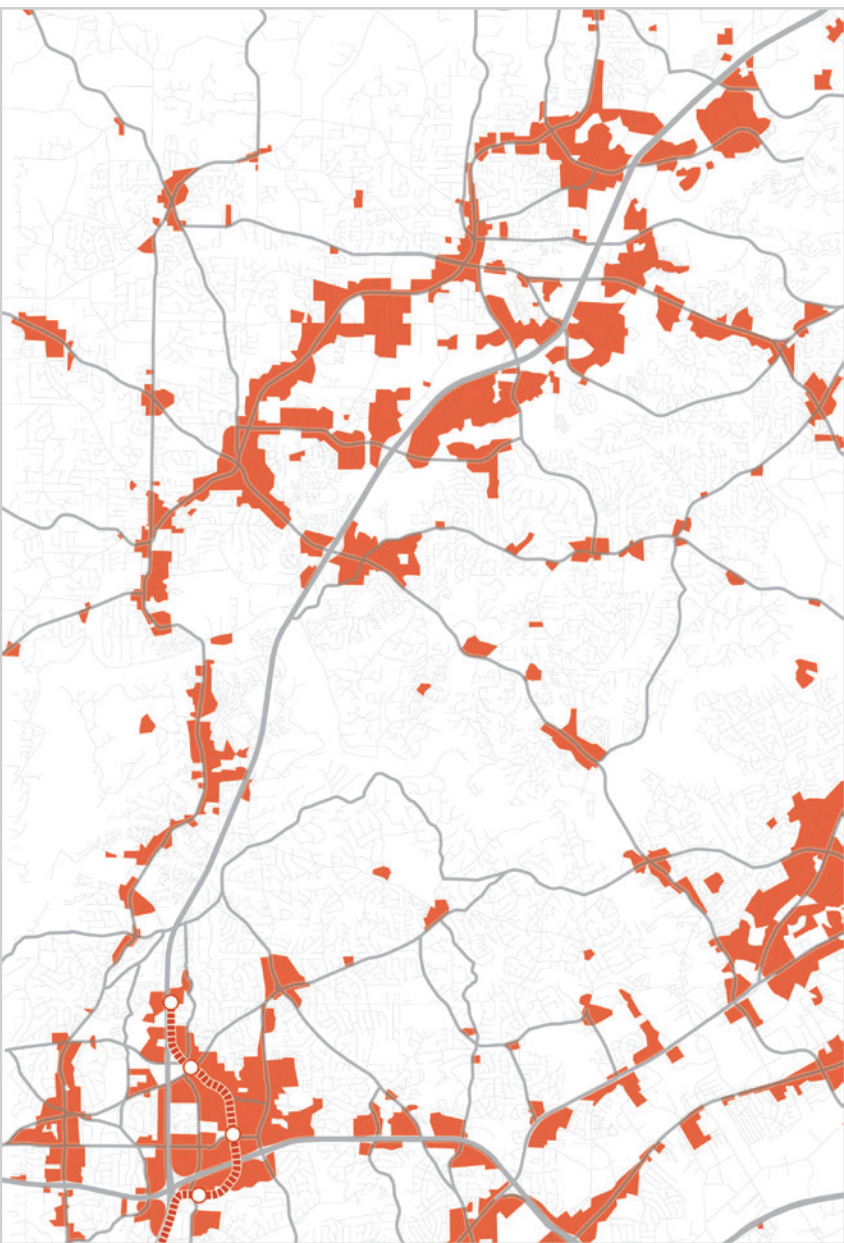
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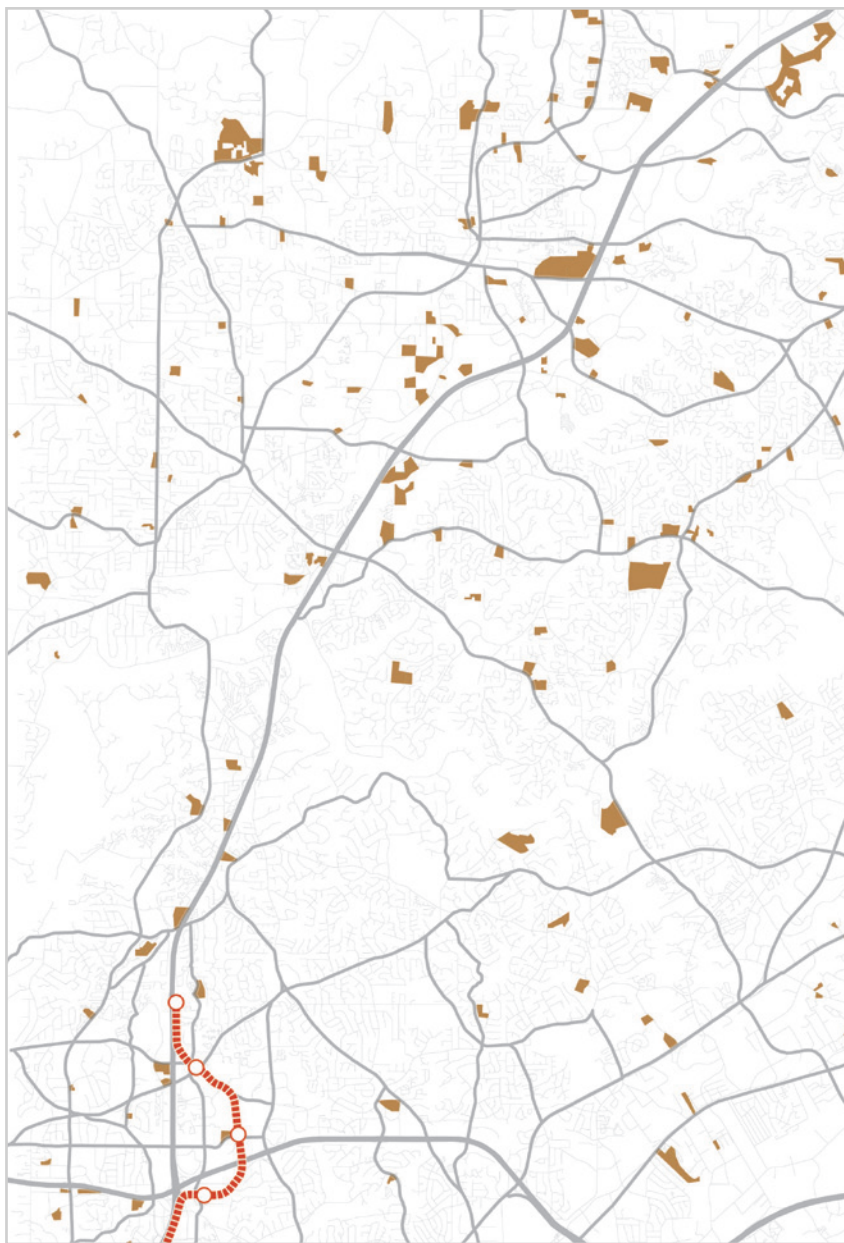
GOAL 2

Support Land Use and Economic Development Planning

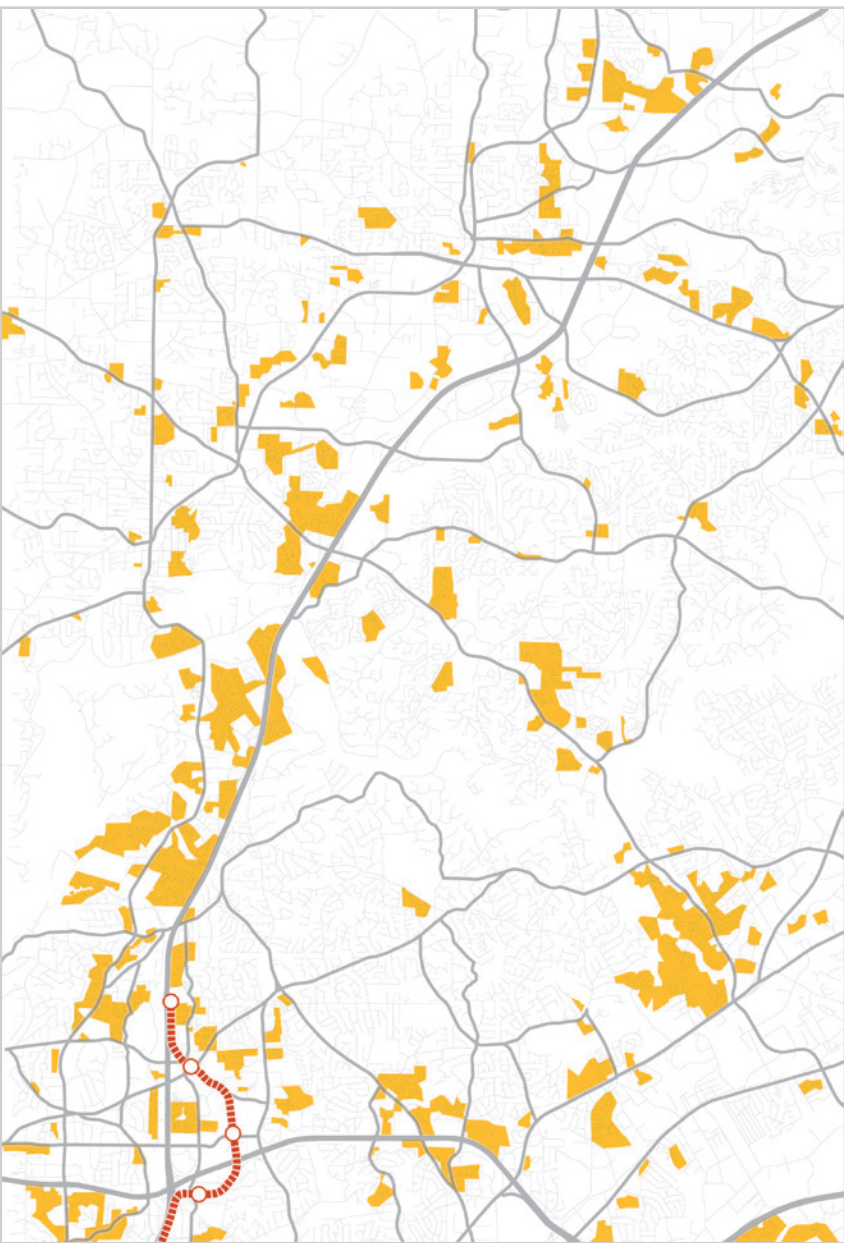
COMMERCIAL



TRANSITIONAL



MULTI-FAMILY

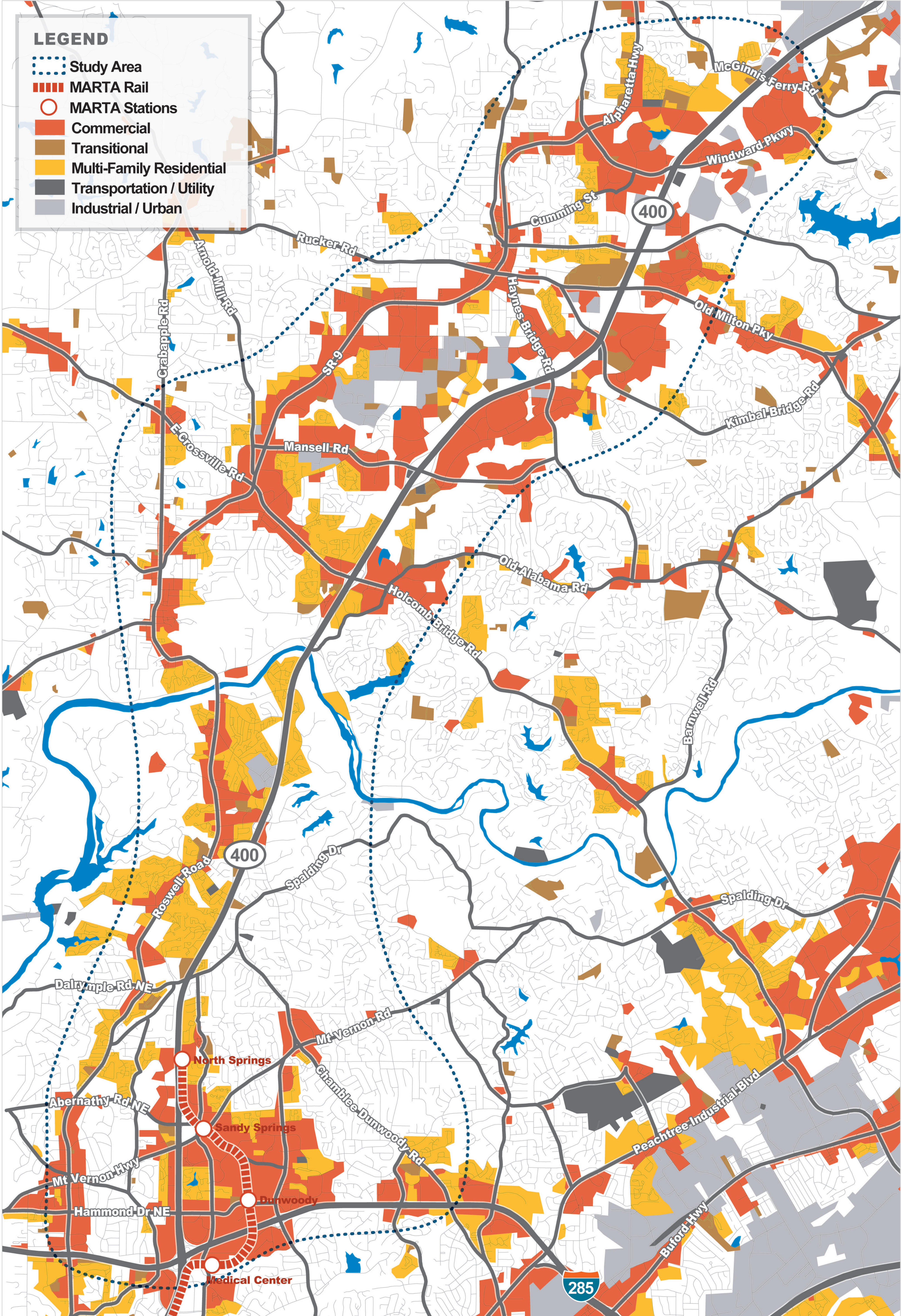


INDUSTRIAL / URBAN



OBJECTIVES

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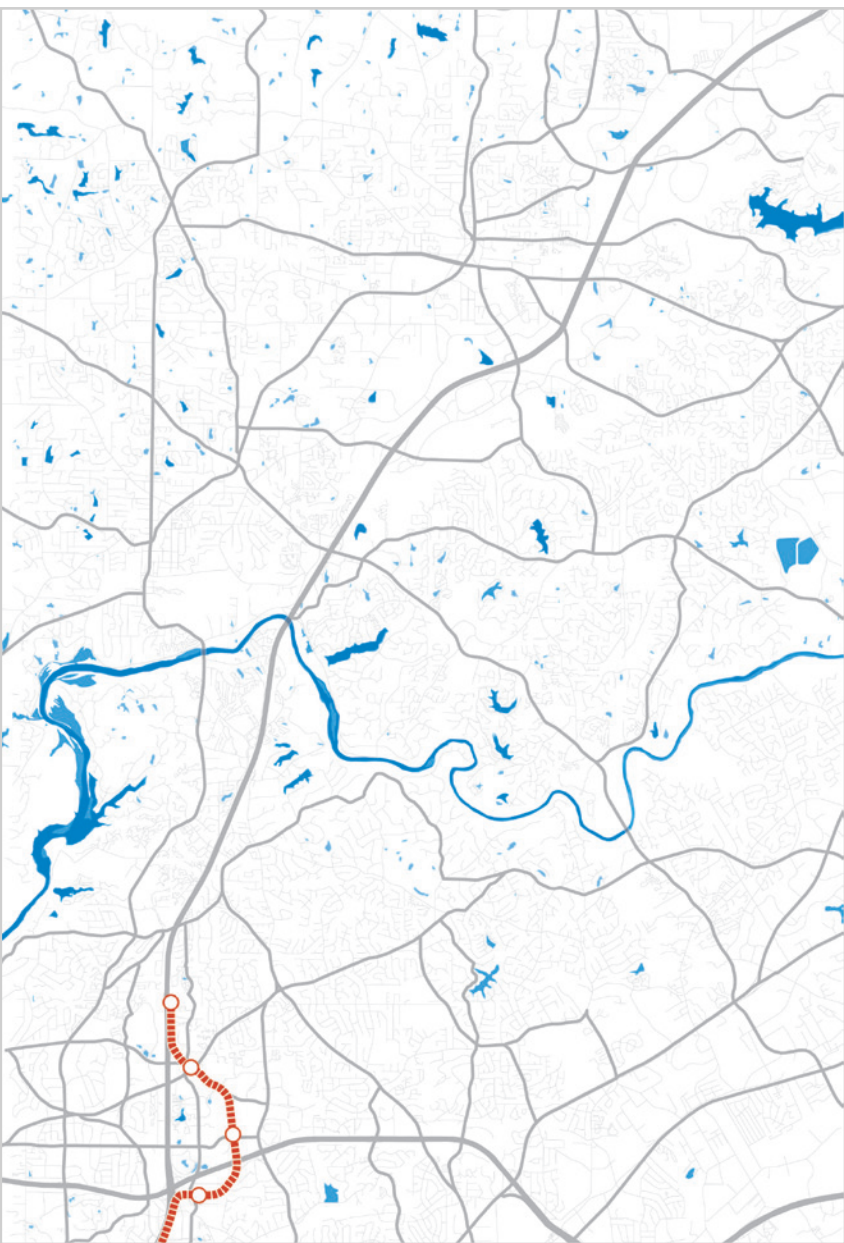
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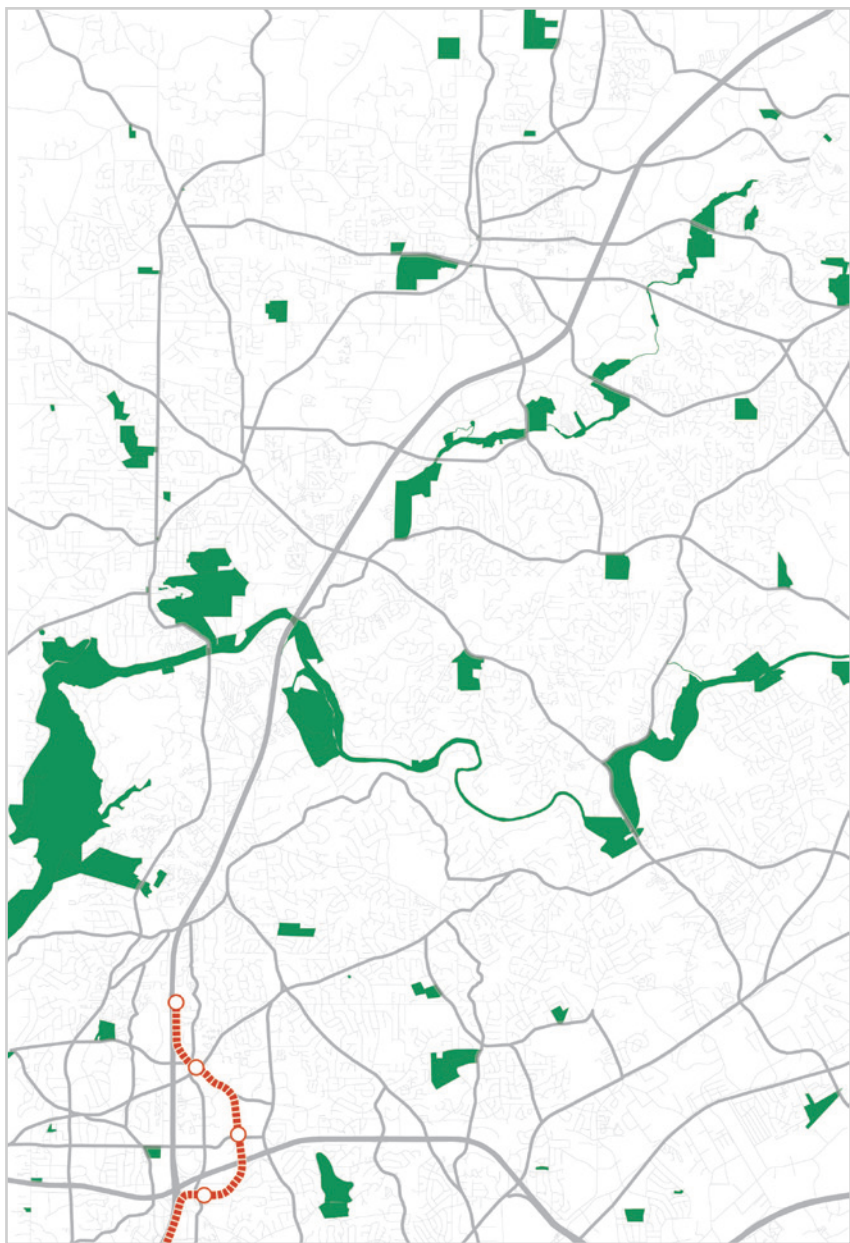
GOAL 4

Minimize Environmental Impacts

WATER



PARKS



WETLANDS

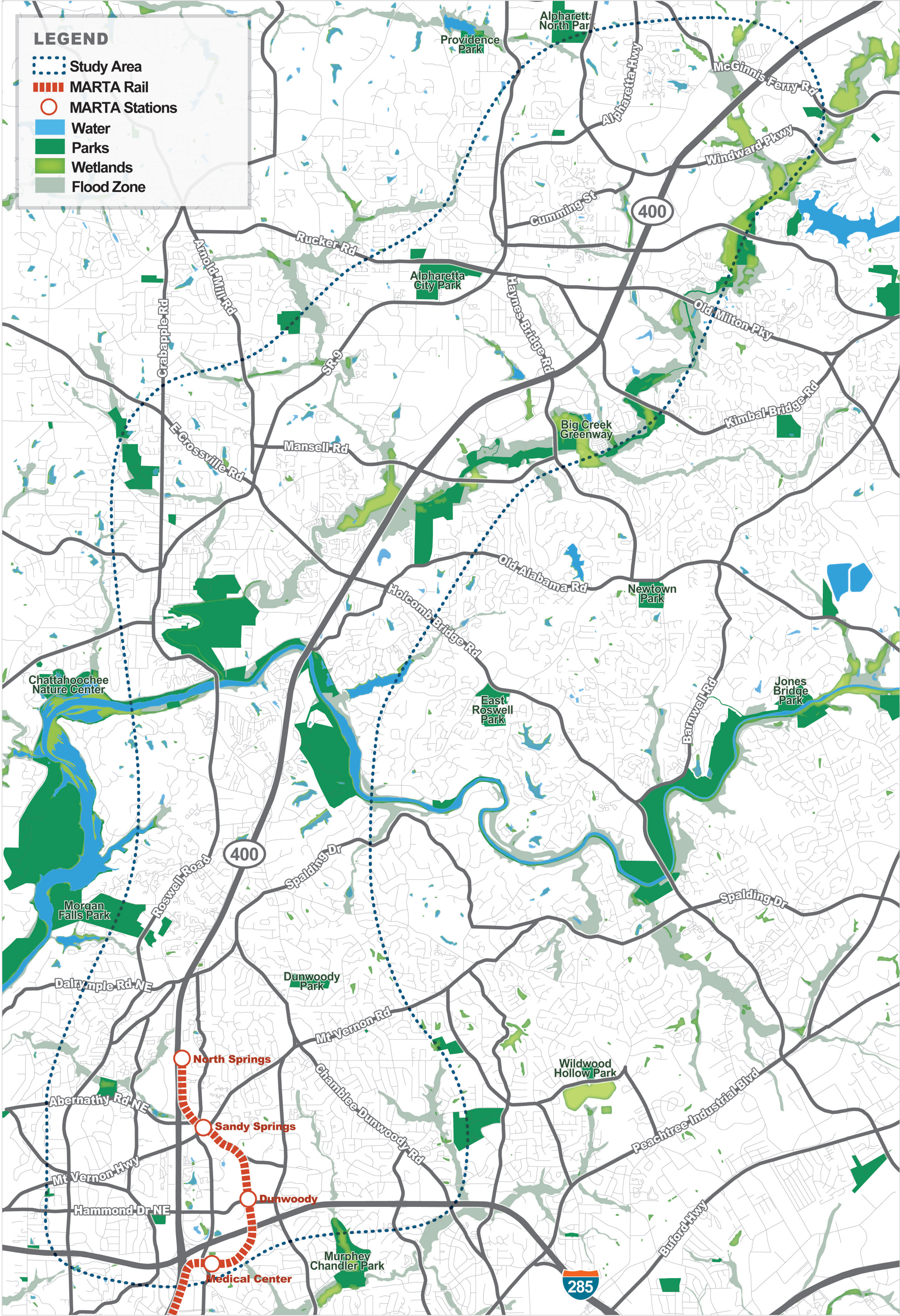


FLOOD ZONE



OBJECTIVES

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Transit Technology Matrix

	BUS	BUS RAPID TRANSIT (BRT)	LIGHT RAIL TRANSIT (LRT)	HEAVY RAIL TRANSIT (HRT)	DIESEL MULTIPLE UNIT (DMU)	AUTOMATED GUIDEWAY TRANSIT
VEHICLE	EXPRESS  A local bus or a coach LOCAL  Short or long buses, various design options	  Rubber-wheeled vehicles, various design options	   Rail cars powered by overhead catenaries on a fixed guideway. Various design options, including Street Cars (SC).	  Rail cars powered by electric fixed guideway	  Self-propelled rail cars with a diesel engine, usually underneath the carriage. Cars can operate individually or be linked for longer trains	  Single elevated rail that provides support and electric power
RIGHT OF WAY	S Shared	E S C Exclusive, Shared, or Combination	E S C Exclusive, Shared, or Combination	E Exclusive	E Exclusive, usually on existing freight rail lines. New systems can operate similar to LRT	E Exclusive
SERVICE	EXPRESS: longer distance service with few stops. LOCAL: frequent stops serving local trips.	Typically serves regional trips, and local trips in dense urban areas.	LRT typically serves regional trips of longer distance with few stops, while SC serve shorter local trips with multiple stops.	Typically serves regional trips, and local trips in dense urban areas.	Typically used for regional service with few stops, or where existing freight lines are available. New systems can operate similar to LRT.	Typically used for local trips in dense urban areas.
STOPS/ STATIONS	 Flexible stop locations. Various design options. 	 Typically fixed stations with a pre-boarding payment. Some systems have flexible stop locations. 	 Typically fixed stations with a pre-boarding payment. Some systems have flexible stop locations.	 Fixed stations with elevated platform and pre-boarding payment.	 Fixed stations with elevated platform and pre-boarding payment.	 Fixed stations with elevated platform and pre-boarding payment.
CAPACITY	PERSONS / VEHICLE 40-85	PERSONS / VEHICLE 45-150	PERSONS / RAIL CAR 70-255	PERSONS / RAIL CAR 170-300	PERSONS / RAIL CAR 85-200	PERSONS / RAIL CAR 40-160
COST	VEHICLE COST \$220,000-\$400,000	VEHICLE COST \$0.3-\$1 M CONSTRUCTION / MILE \$10-\$40 M	VEHICLE COST \$2-\$4 M / LRT \$0.6-\$3 M / SC CONSTRUCTION / MILE \$10-\$105 M	VEHICLE COST \$2.5- \$3.5 M CONSTRUCTION / MILE \$80-\$260 M	VEHICLE COST \$2.1-\$2.3 M CONSTRUCTION / MILE \$3-\$15 M	CONSTRUCTION / MILE \$90-\$130 M

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Draft Evaluation Framework

Evaluation Framework

Transportation Challenges

Transportation Challenges		Goals and Objectives	Evaluation Criteria	Performance Measures
• Levels of roadway congestion are forecasted to increase along the corridor. • Transit mobility options are limited. • Transit travel times are not competitive with auto travel times in the corridor. • Travel demands are increasing.	GOAL 1: Improve Mobility and Access			
	Increase north-south and east-west transportation capacity	Mobility	Total transit boarding	
			New transit riders compared to No-Build and Baseline	
			Number of transfers per linked trip	
	Increase transit ridership		Total passengers per mile	
			Potential impacts to roadway capacity	
			Annual corridor crash reductions as compared to Baseline	
	Improve transit travel times and reliability for all trip purposes	Travel Times	Transit travel time savings compared to No-Build and Baseline	
	Improve transit access to employment, education, residential, and activity centers within the study area and region	Accessibility and Connectivity	Differences in transit and auto travel times between various origins and destinations in the study area	
	Improve multimodal connections and access to the existing transit systems		Projected population, household, and employment near stations	
	Major trip generators/activity centers near stations			
	Low-income, minority, elderly and zero-car populations/households near stations			
• Economic development is constrained.	Improve transit travel times and reliability for all trip purposes		Interface with existing transit and future Concept 3 rapid transit service	
			Plans or policies in place for improved bicycle and pedestrian facilities	
	Goal 2: Support Land Use and Economic Development Planning			
	Ensure consistency with land use plans of study area jurisdictions	Land Use and Development	Consistency with adopted local and regional plans	
	Support planned and potential economic development		Acres of land with economic development incentives near stations	
	Provide opportunities for compact land development that supports transit ridership	Potential for TOD	Acres of transit-supportive future land uses and zoning near stations	
			Acres of vacant or under utilized land near stations	
	Goal 3: Provide Cost-Effective Transit Service			
	Maximize operating and cost-efficiency	Costs	Annual Operations and Maintenance (O&M) Costs	
	Match the transportation investment to the study area’s level of travel demand		Construction Capital Costs	
• There is a funding shortfall to construct transportation improvements.	Provide a cost-effective transit system	Cost Effectiveness	Right of Way Costs	
			Cost Effectiveness Index (incremental costs divided by transportation system user benefit)	
Goal 4: Minimize Environmental Impacts				
• Continued growth of vehicular travel will negatively affect the study area’s environment.	Avoid, minimize, and mitigate impact to cultural, historic, and environmentally sensitive areas	Environmental Quality	Acres of wetlands and water bodies near stations	
			Number of historic resources near stations	
			Noise sensitive land uses near alignments	
		Air Quality	Change in Vehicle Miles Traveled (VMT) compared to No-Build and Baseline	
			Change in daily emissions of air quality pollutants (CO, NOx, PM2.5, PM10)	
	Avoid, minimize, and mitigate negative impacts on the surrounding community including parks	Environmental Justice	Low-income, minority, elderly and zero-car populations/households near alignments	
		Community Impact	Estimated community impacts/disruptions and number of displacements	