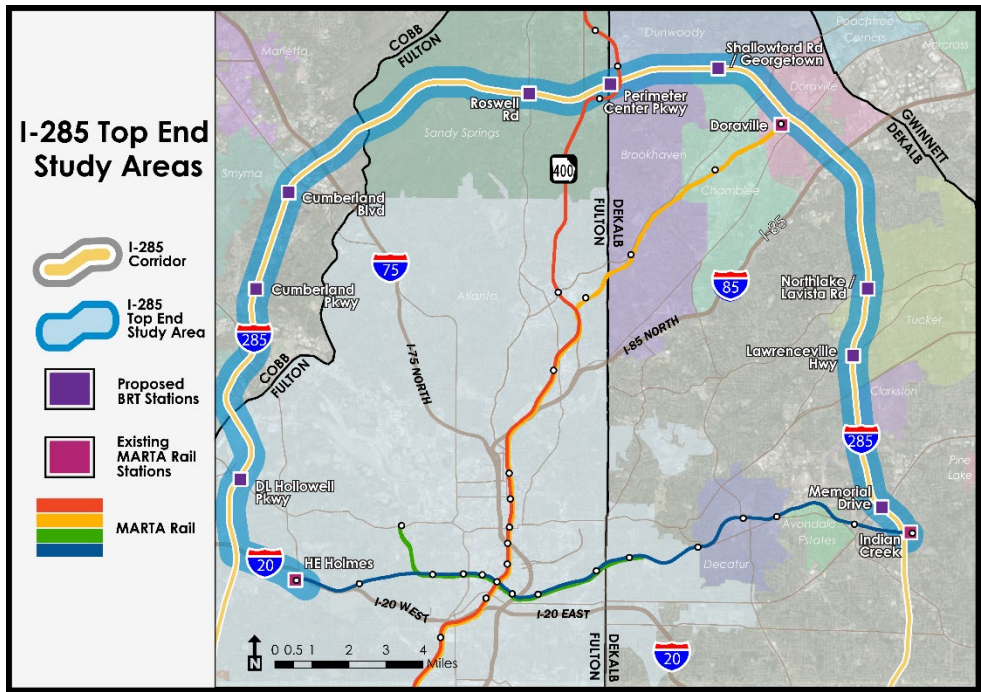


I-285 TOP END RAPID TRANSIT SEGMENT STATION PLAN

August 2022



I-285 Top End Transit Plan: Segment Station Plan

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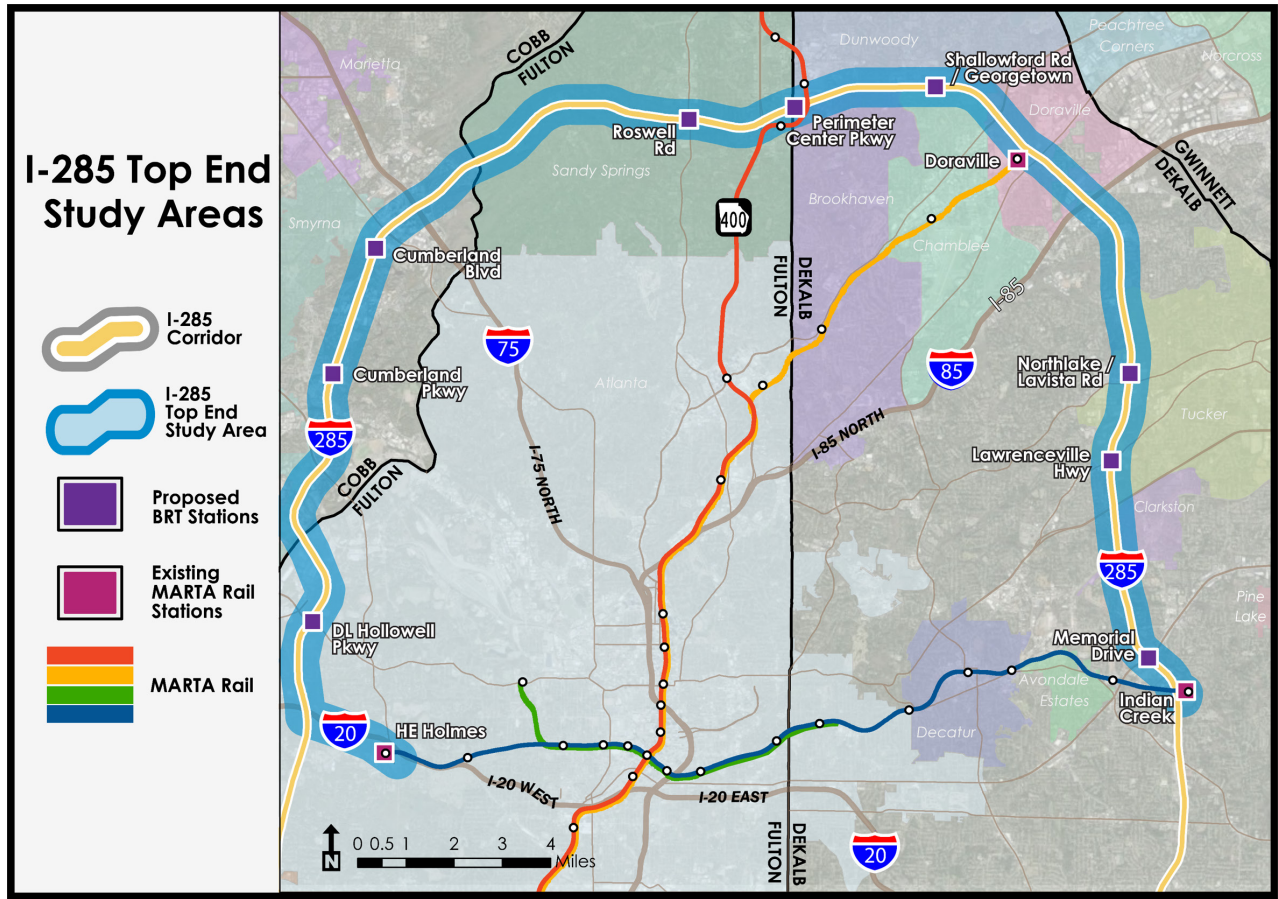
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I-285 Top End Transit Plan: Segment Station Plan

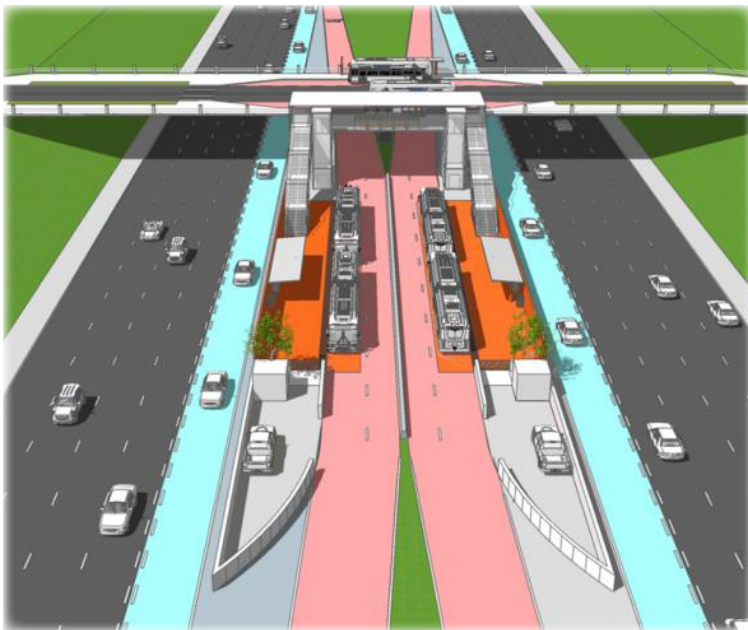
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I-285 Top End Transit



Study Area and Proposed Station Locations

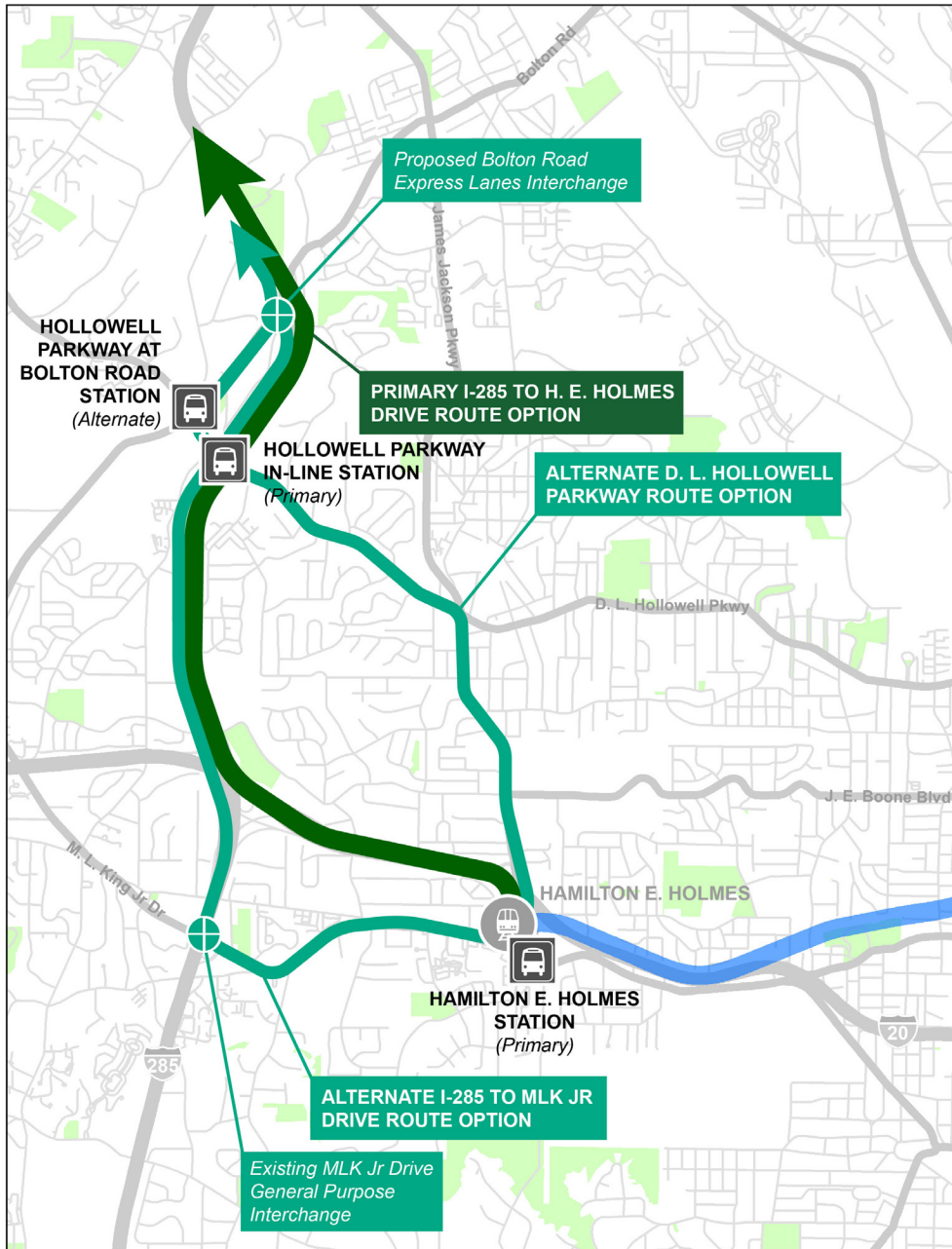


In-Line Station Prototype

The I-285 Top End Transit initiative is now in its third phase of study with a focus on station planning and coordination with the Georgia Department of Transportation (GDOT). Preliminary station plans, the third phase of study for the Top End Transit Initiative, were completed in July 2022 and officials from MARTA, the ATL, DeKalb County, Fulton County, Cobb County, and Gwinnett County have agreed to a memorandum of understanding identifying over \$16 Million in funds to continue design of the Top End Transit initiative. Current plans by GDOT show potential to open the transit line in 2028 in DeKalb County and 2032 in Fulton and Cobb Counties.

Hamilton E. Holmes

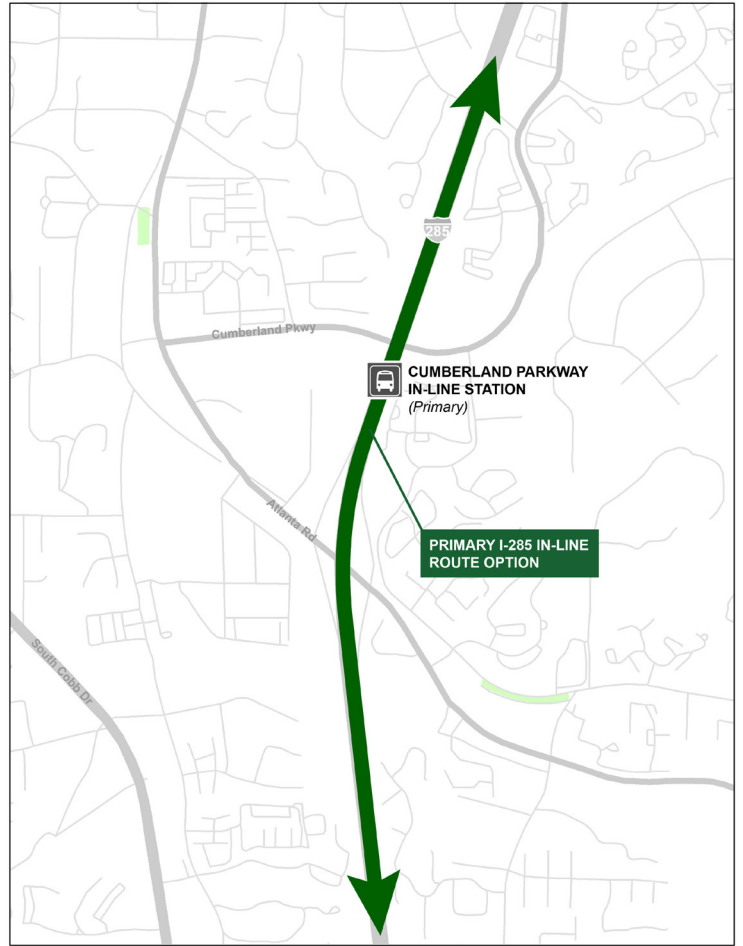
- Connecting to MARTA's H.E. Holmes Rail Station on the west-end of the MARTA rail line is an important connection to increase accessibility to the Top End Transit service
- Three potential routes have been identified to connect from the Donald Lee Hollowell area to the H.E. Holmes Station



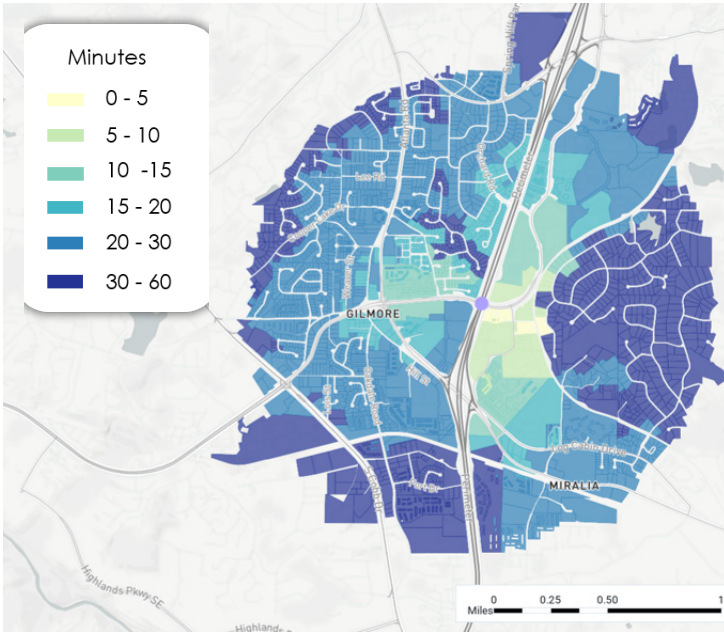
Potential Routes to H.E. Holmes MARTA Station

Cumberland Parkway

- The location of the Cumberland Parkway Station is likely to change based on GDOT’s evolving design for the Express Lanes along I-285
- This Station would connect to the Cumberland / The Battery stop in approximately 3 - 5 minutes
- While this area is not a major employment hub, there is a significant population within a 15-minute walk of the proposed Station location. Additionally, the WellStar Hospital is within walking distance

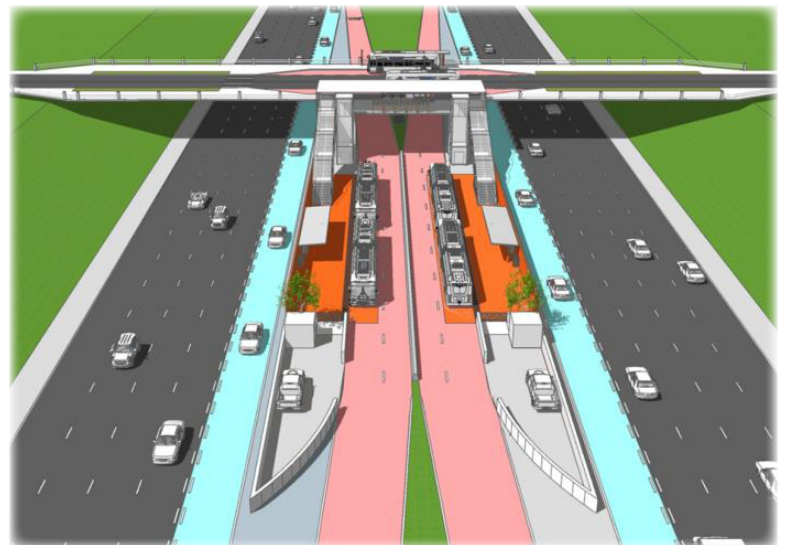


Potential Station Location



Walk Time to Area Destinations

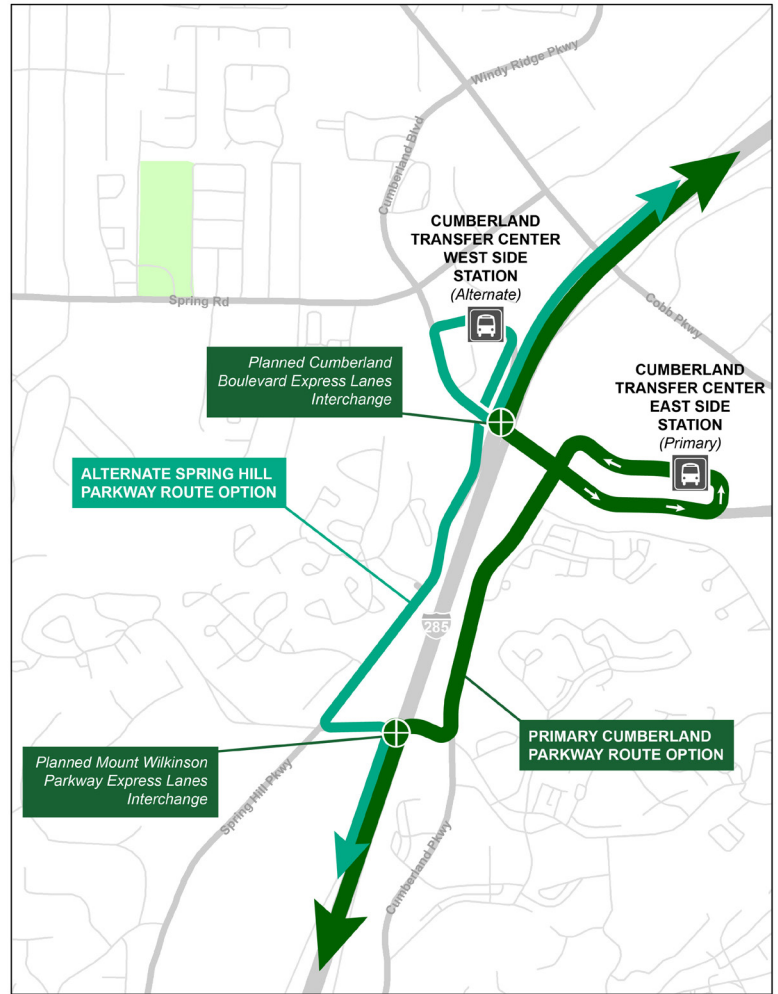
Walkshed	Population	Employment
10-minute	696	78
15-minute	2,725	302



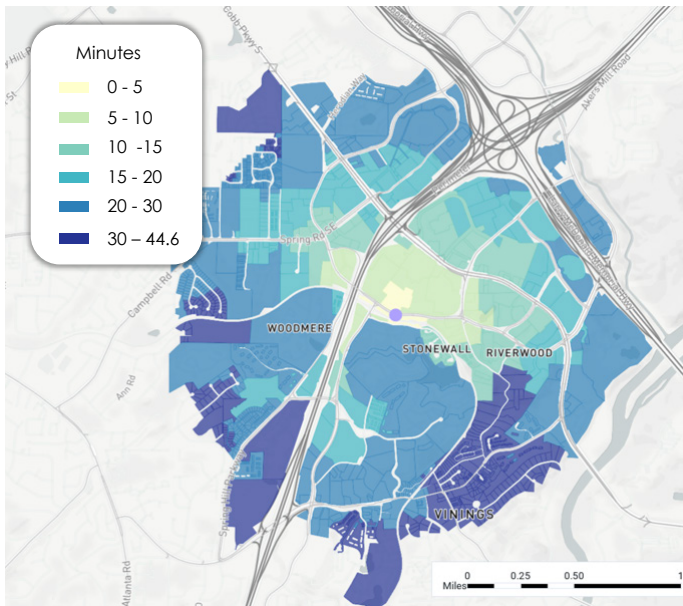
In-Line Station Prototype

Cumberland Transfer Center

- The location of this Station is focused on the Cumberland Transfer Center. If the Transfer Center location does not move forward, alternative sites have been considered, including locations close to The Battery and Truist Park
- This Station would be approximately 3 - 5 minutes from the Cumberland Parkway Station and approximately 9 - 11 minutes from the Roswell Station
- This Station is centered around the Cumberland Business District and connectivity to the proposed Cumberland Sweep Multimodal Trail



Potential Station Location



Walk Time to Area Destinations

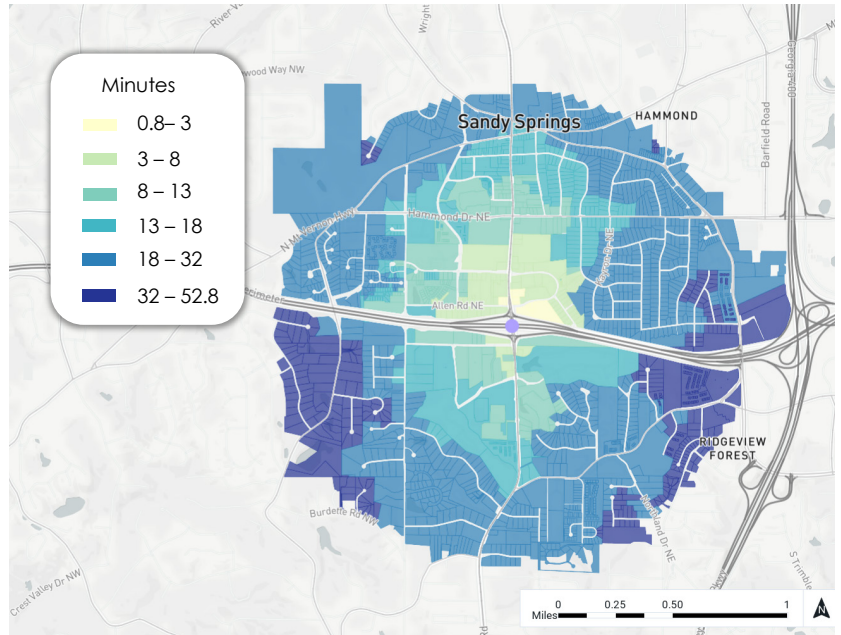
Walkshed	Population	Employment
10-minute	28	7,115
15-minute	591	27,744



Potential Off-Line Station

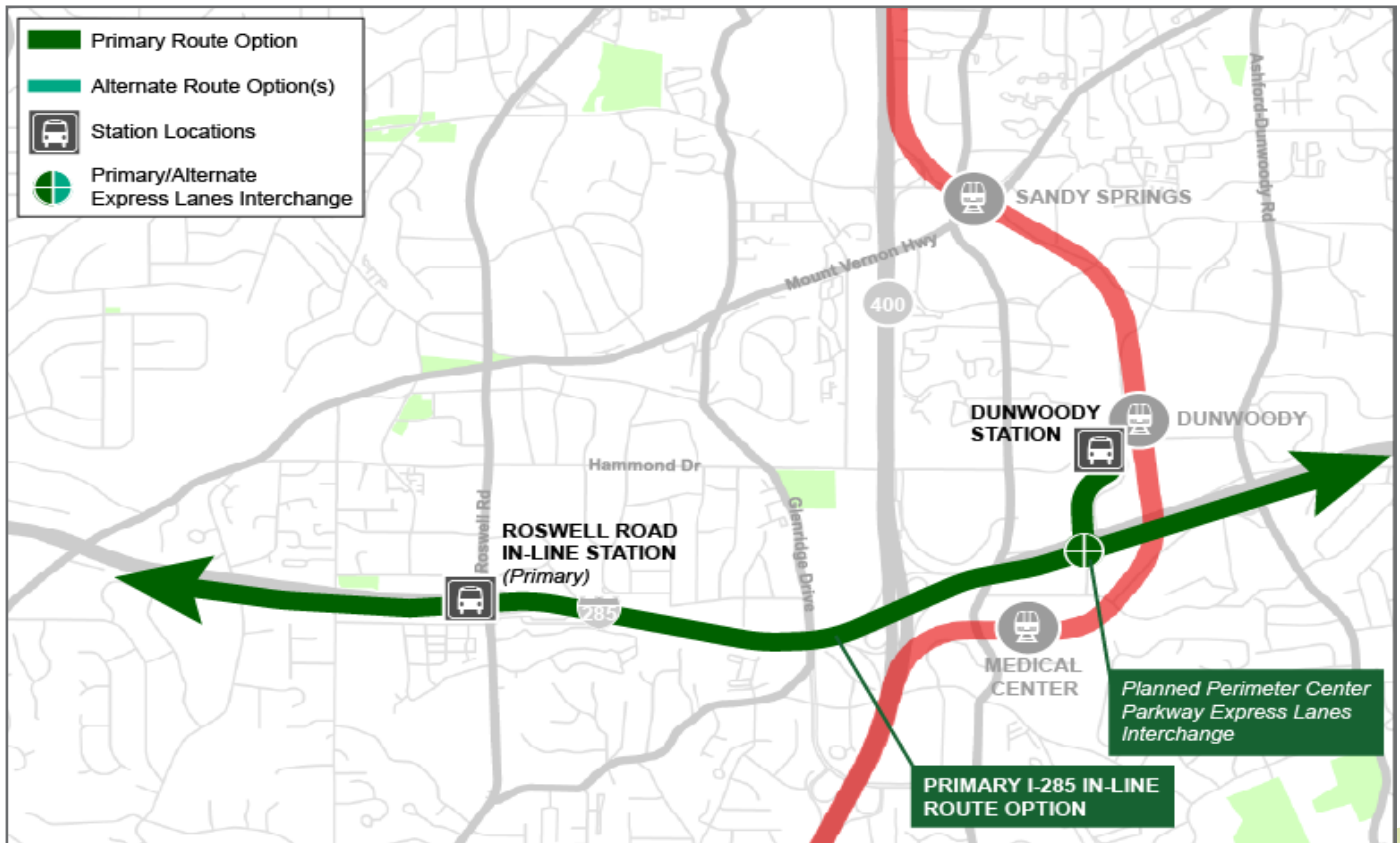
Roswell Road

- Multiple locations have been considered for the Roswell Road Station at I-285 due to its challenging configuration, including elevated express lanes at this location
- This Station will be approximately 9 -11 minutes from the proposed Cumberland Station and approximately 4 - 6 minutes from the proposed Perimeter Station
- This Station is focused around a mix of residential areas and employment opportunities with access to Roswell Road and City Springs



Walk Time to Area Destinations

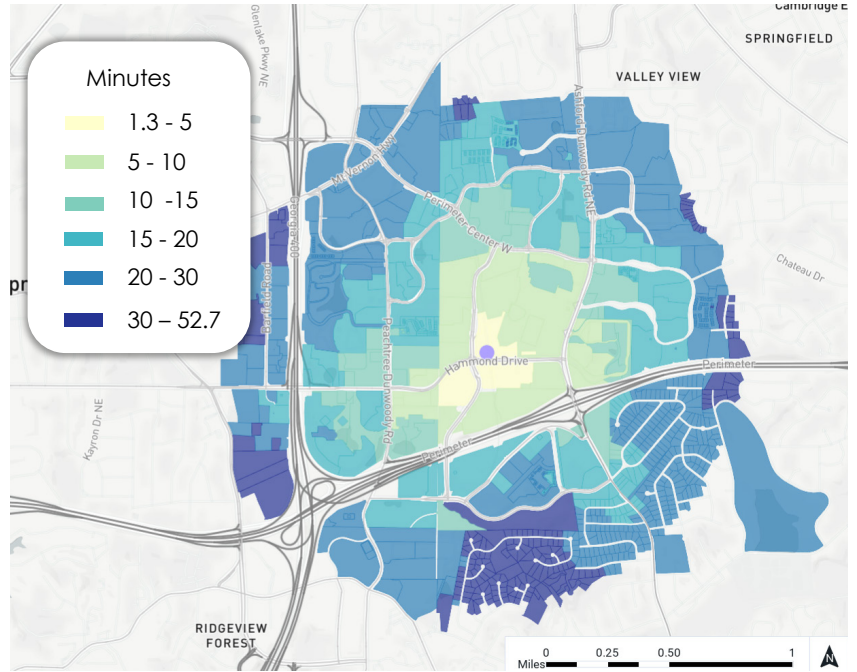
Walkshed	Population	Employment
10-minute	1,179	1,319
15-minute	3,077	3,424



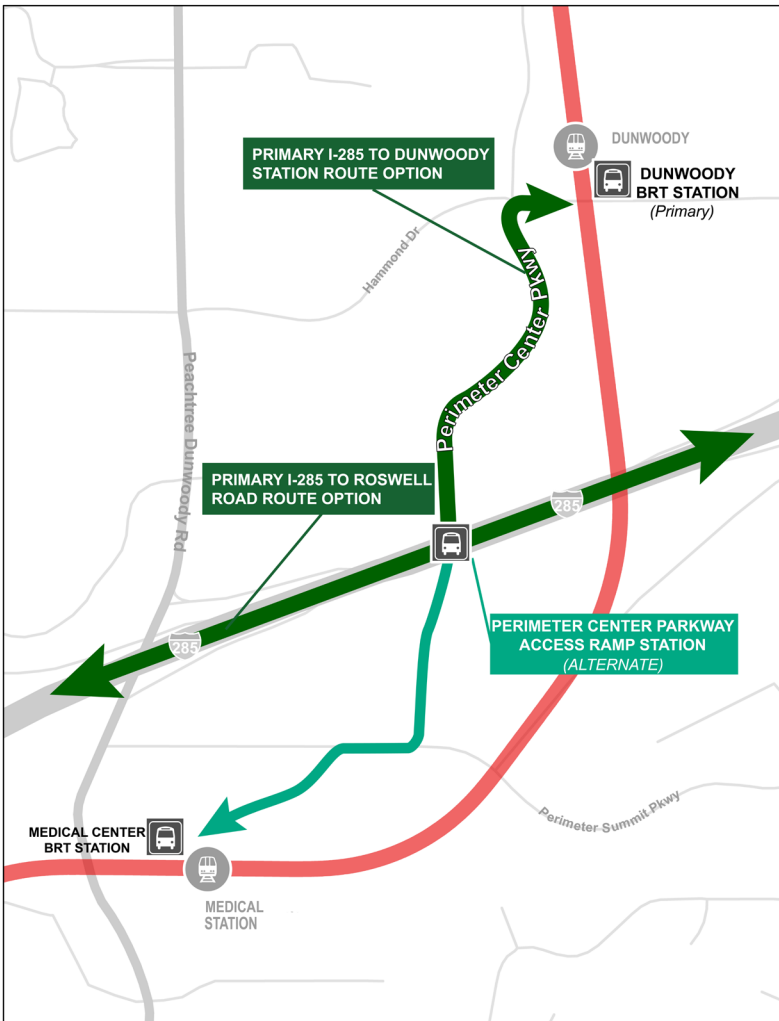
Potential Station Locations

Perimeter Center Parkway

- Multiple locations have been considered for the Perimeter Station. However, project modeling suggests that the Dunwoody MARTA Rail Station may be the most advantageous for system ridership
- The Station will be approximately 4 - 6 minutes from the proposed Roswell Station and approximately 6 - 7 minutes from the proposed Shallowford Station



Walk Time to Area Destinations



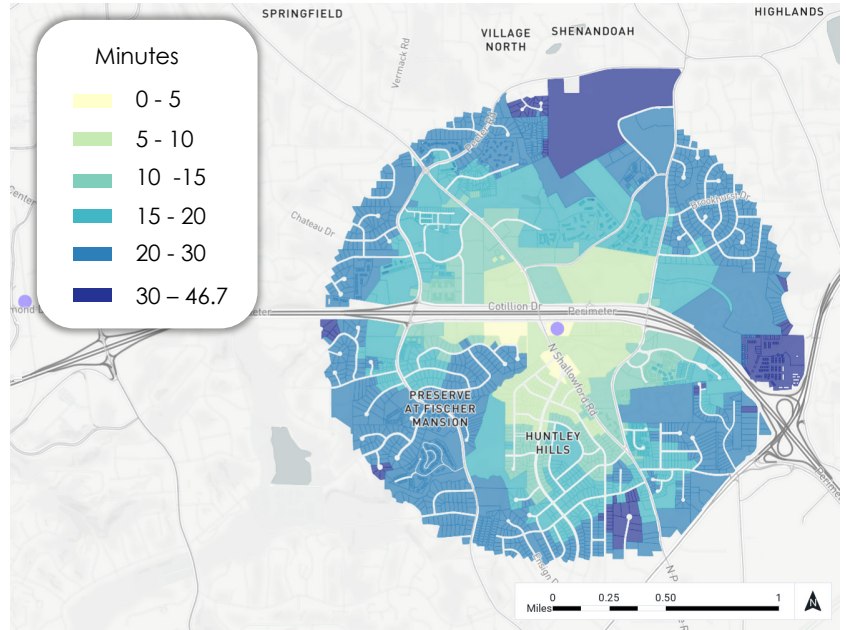
Potential Station Locations

Walkshed	Population	Employment
10-minute	289	12,825
15-minute	663	36,348

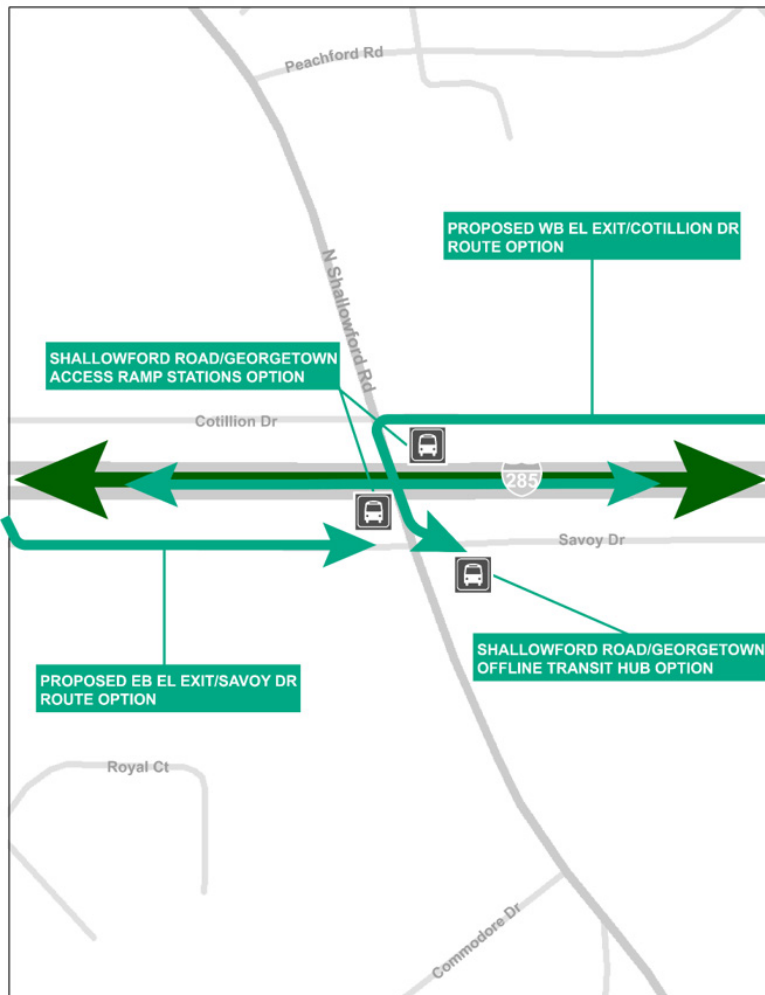
- This Station is focused around key areas within the Perimeter Business District and a growing concentration of transit supportive development with connecting pedestrian and bicycle infrastructure
- Off-line or ramp station configurations will be determined based on Express Lane design and ongoing outreach
- A connection to rail will be emphasized during site selection

North Shallowford Road / Georgetown

- The location of the North Shallowford Station may be on an access ramp or off-line station
- The proposed North Shallowford Station is approximately 6 -7 minutes from the proposed Perimeter Station and approximately 5 - 7 minutes from the proposed Doraville Station
- This Station is focused around a balanced mix of residential areas and employment opportunities

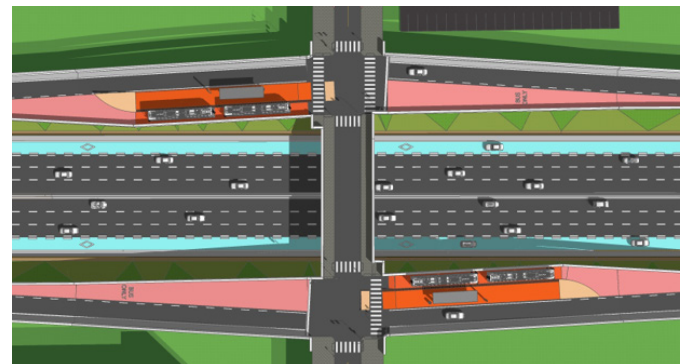


Walk Time to Area Destinations



Potential Station Locations

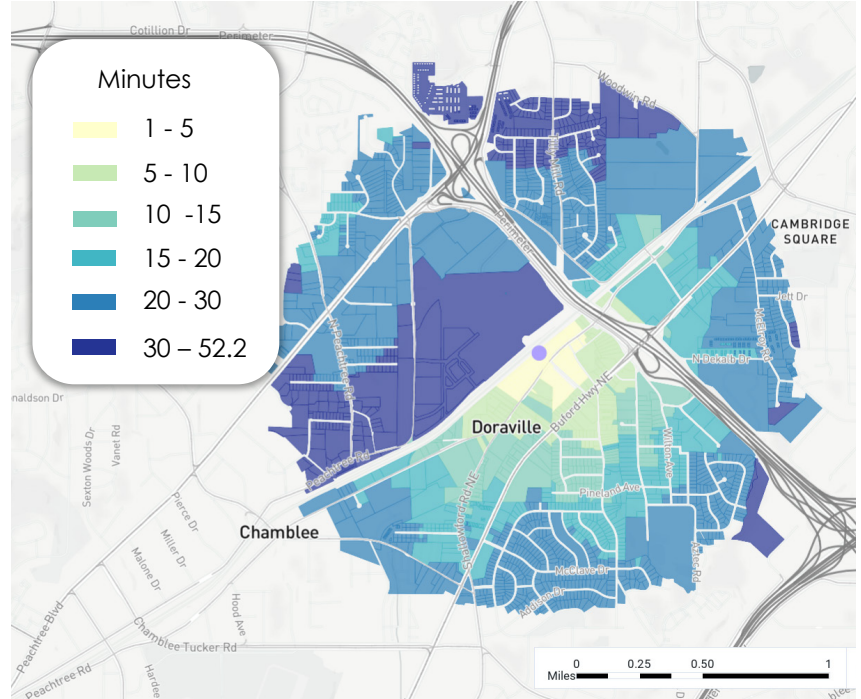
Walkshed	Population	Employment
10-minute	1,957	1,198
15-minute	5,060	2,521



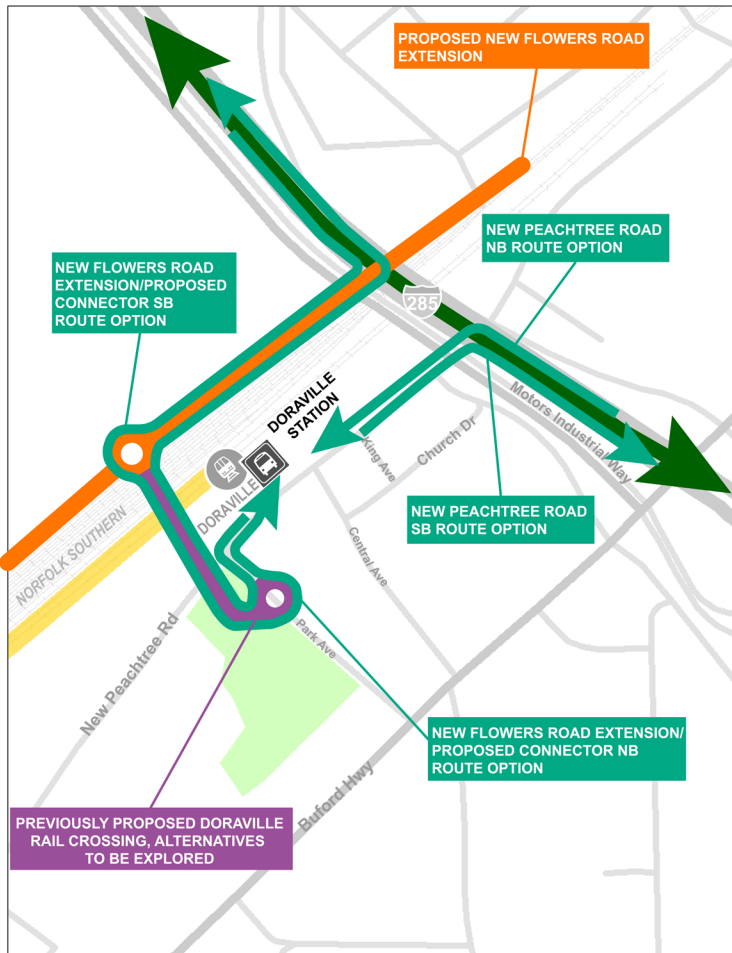
Off-Line Station Prototype

Doraville

- The location of the proposed Doraville Station is projected to be at the existing MARTA Rail Station
- The Doraville Station is approximately 5 -7 minutes from the proposed North Shallowford Station and approximately 8 - 9 minutes from the proposed Northlake Station
- This Station is focused around a mix of residential and employment opportunities including the Assembly Redevelopment Site and Downtown Doraville where future development is planned and anticipated

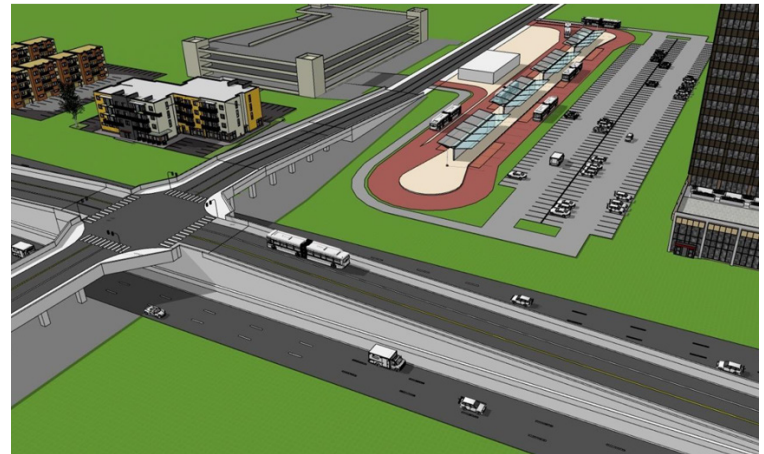


Walk Time to Area Destinations



Potential Station Location

Walkshed	Population	Employment
10-minute	243	1,479
15-minute	1,578	2,574

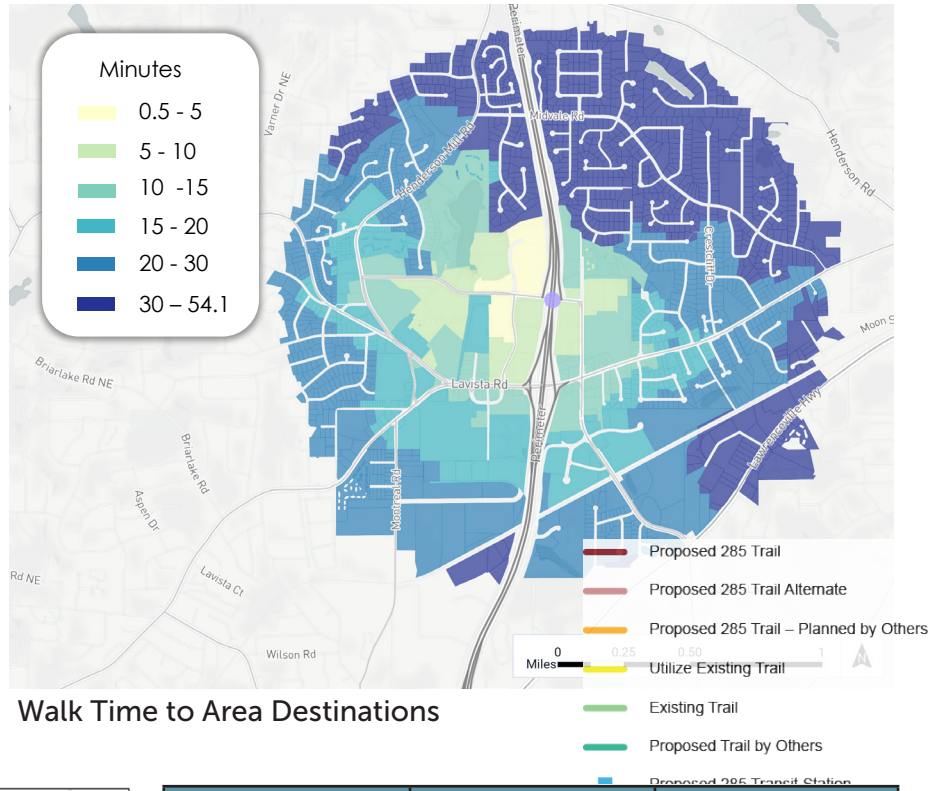


Off-line Station Prototype

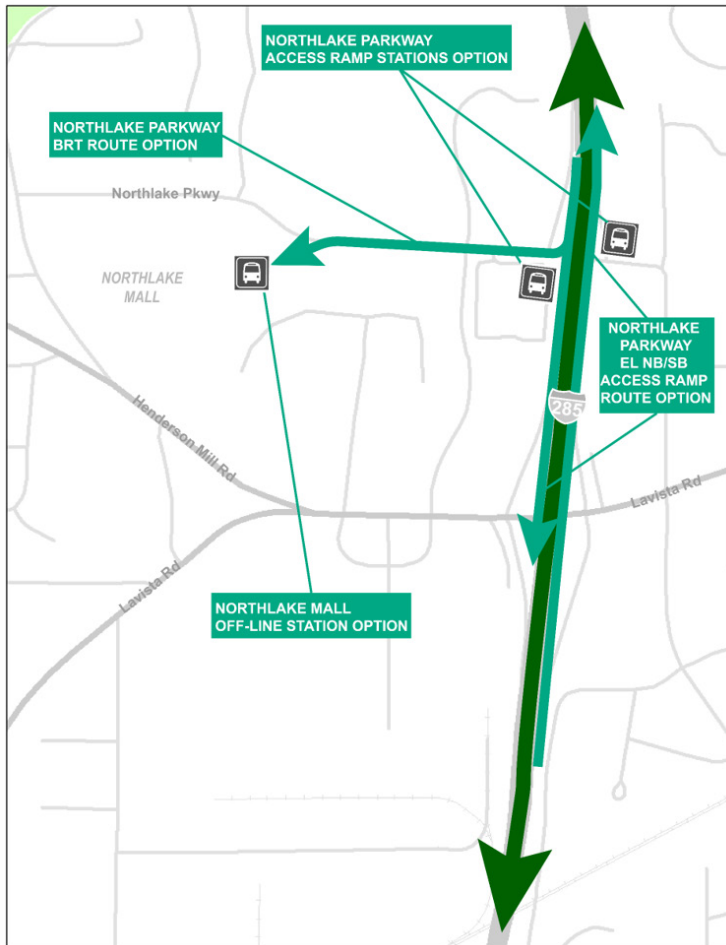
- A connection across the railroad tracks will be necessary for station connectivity

Northlake / Tucker

- The location of the Northlake/ Tucker Station may be offline at Northlake Mall, on an access ramp, or in-line
- The Northlake/Tucker Station is approximately 8 - 9 minutes from the proposed Doraville Station
- This Station is focused around a mix of residential and employment uses, including the Northlake Mall redevelopment area

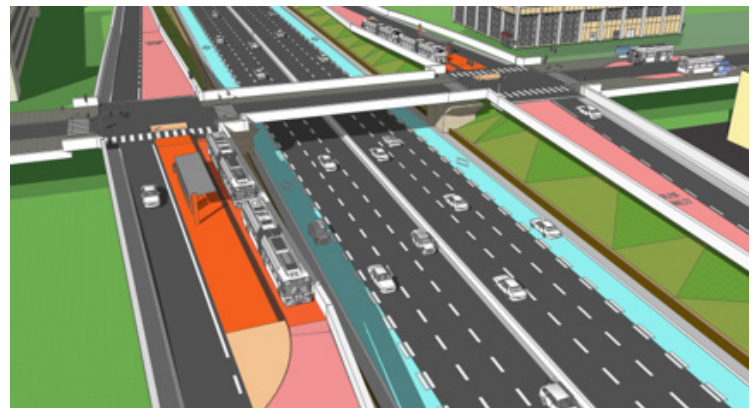


Walk Time to Area Destinations



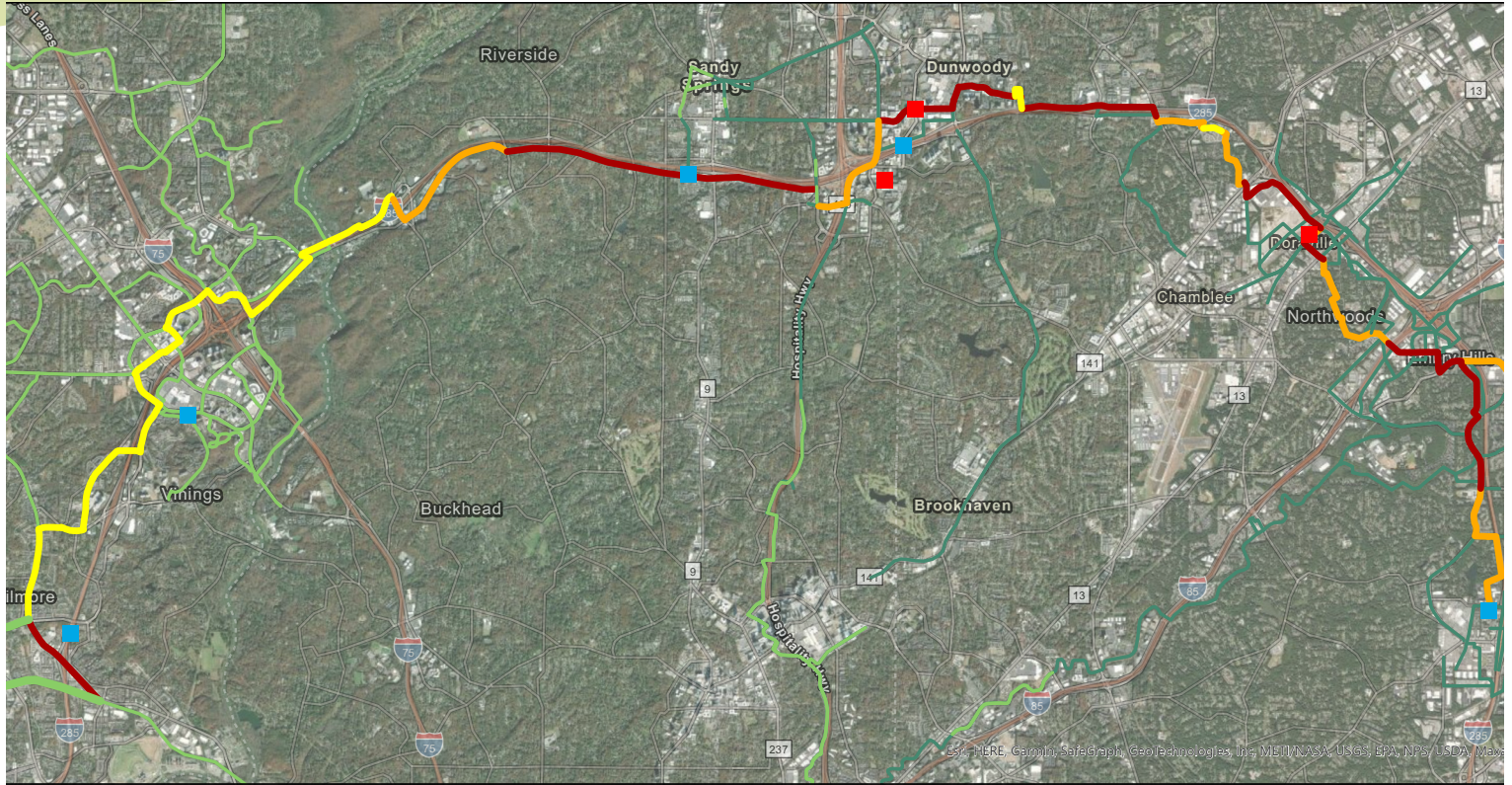
Potential Station Locations

Walkshed	Population	Employment
10-minute	728	2,751
15-minute	930	4,987

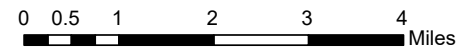


Access Ramp Station Prototype

I-285 Top End Regional Trail

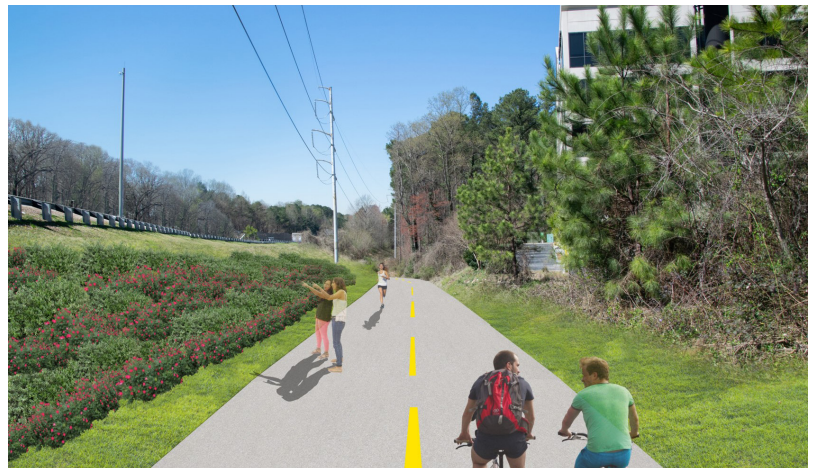


- Proposed 285 Trail
- Utilize Existing Trail
- Proposed 285 Transit Station
- MARTA Transit Station
- 285 Trail Alternate
- Existing Trail
- Proposed 285 Trail - Planned by Others
- Planned Trail by Others



Top End Trails Map

The Top End 285 Regional Trails Master Plan is an effort to consolidate the transportation and recreation plans of seven cities and four Community Improvement Districts to create a continuous regional trail across the Top End of I-285. The Plan connects Stone Mountain, the Peachtree Creek Greenway, PATH 400, the Cumberland Sweep, and the Silver Comet Trail to communities and destinations across North Atlanta. The Master Plan has identified key pedestrian and mobility gaps along the corridor, will progress the design of priority segments, and will establish a first and last-mile connectivity network to proposed transit stations and communities across the Top End.



Proposed Trail Prototype

I-285 Top End Transit Plan: Segment Station Plan

PROJECT INTRODUCTION AND BACKGROUND

The consideration of transit across the Top End of I-285 has been a point of discussion and debate over the last 20 years. In the summer of 2018, a feasibility study was initiated by the Mayors of seven cities between Tucker in DeKalb County on the east to Smyrna in Cobb County on the west. The feasibility study was designed to evaluate the potential to operate transit within or alongside the Georgia Department of Transportation's (GDOT) Major Mobility Investment Program (MMIP), which will construct a series of tolled express lanes from I-20 east to I-20 west and connect to express lanes along GA 400, I-75, and I-85.

The 2018 study concluded that a rubber-wheeled transit system utilizing the GDOT's planned I-285 Express Lane system is the most feasible, cost-effective option for a Top End Rapid Transit System. The study also identified potential station areas, evaluated the potential transit market, and estimated the capital and operational costs of a rubber-wheeled transit system.

Building on the 2018 feasibility study, a Pre-Project Development Study was completed in the summer of 2020 that conducted a travel time analysis, forecasted potential ridership, and updated the capital and operational costs for the project.

Stemming from the 2020 Pre-Project Development Study and in coordination with the recently completed DeKalb County Transit Master Plan, MARTA has taken a lead to further define the Top End transit system and stations within DeKalb County, including four stations that were part of the Top End feasibility studies; Perimeter, Shallowford, Doraville, and Northlake/Tucker; and four additional stations between Northlake and Covington Highway.

Initially the "Top End" was defined as Northlake to Cumberland Parkway, as shown in Figure 1, based on the partnership of cities and community improvement districts (CIDs) that invested in the I-285 Top End Transit Feasibility Study. In 2021, the Top End partners approached the newly created Atlanta-Region Transit Link Authority (ATL) to assist with further development of the system and station plans for the three stations west of GA 400 in Fulton and Cobb Counties (Roswell Road, Cumberland Boulevard, and Cumberland Parkway). At the same time, MARTA, based on the completion of the DeKalb County Transit Master Plan, took the lead for station plans east of GA 400 in DeKalb County (facilitated by WSP as the lead consultant). As a product of these combined efforts and further engagement with Cobb County and DeKalb County, the Top End project extents were extended from Indian Creek on the east to I-20 West / H.E. Holmes, as shown in Figure 2.

I-285 Top End Transit Plan: Segment Station Plan

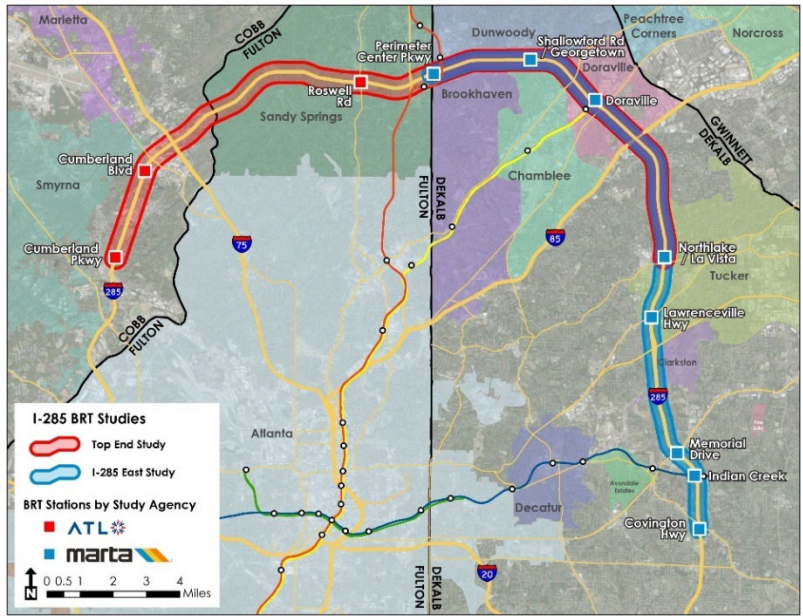


Figure 1. Original Project Extents

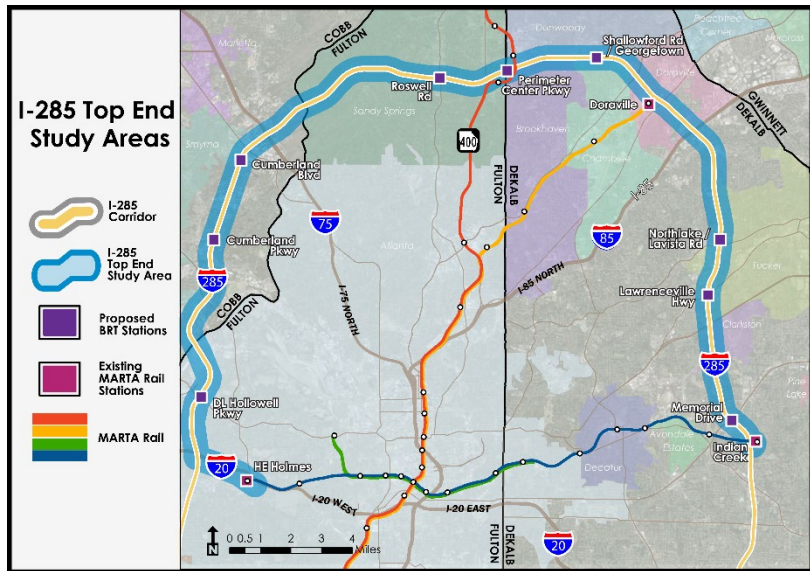


Figure 2. Current Project Extents

As a product of these studies, officials from MARTA, the ATL, DeKalb County, Fulton County, Cobb County, and Gwinnett County have agreed to a memorandum of understanding identifying over \$16 Million in funds to continue design of the Top End Transit initiative. Current plans by GDOT show potential to open the transit line in 2028 in DeKalb County and 2032 in Fulton and Cobb Counties.

I-285 Top End Transit Plan: Segment Station Plan

PREVIOUS STUDIES

To provide context for the I-285 Top End Rapid Transit Segment Station Plan and to ensure that proper consideration is given to previous studies and existing plans, a review of previous projects, plans, and studies was conducted. This previous studies review includes the first two phases of this study.

For the Segment Station Plan, this phase of work, the study was broken into two segments with the Atlanta-Region Transit Link Authority (ATL) funding the western portion of the study with stations in Fulton and Cobb County and MARTA funding the eastern portion of the study for stations in DeKalb County.

While the two segments were studied simultaneously, the ATL team conducted additional background research, including a more exhaustive review of previous studies, as shown in the Table below. A full summary description of these studies can be found in Appendix A.

Table 1. Previous Studies

Full Project Extents	I-285 Top End Transit Feasibility Study	2018
Full Project Extents	I-285 Top End Rapid Transit Pre-Project Development Study	2020
Roswell Road Station Area	Sandy Springs Transportation Master Plan	2021
Roswell Road Station Area	Sandy Springs ITS Master Plan	2019
Roswell Road Station Area	Sandy Springs Trail Master Plan	2019
Roswell Road Station Area	North Fulton Comprehensive Transportation Plan	2018
Roswell Road Station Area	The Next Ten Comprehensive Plan	2017
Roswell Road Station Area	Roswell Road Small Area Plan	2017
Roswell Road Station Area	Sandy Springs Sidewalk Master Plan	2016
Roswell Road Station Area	Sandy Springs Bike, Pedestrian, and Trail Plan	2014
Roswell Road Station Area	Roswell Road Livable Centers Initiative (LCI) Study	2008 and 2013

I-285 Top End Transit Plan: Segment Station Plan

Cumberland Boulevard Station Area	Blueprint Cumberland 3.0	2017
Cumberland Boulevard Station Area	Cumberland Bicycle Connectivity Implementation Plan	2016
Cumberland Boulevard Station Area	Cobb Comprehensive Transportation Plan	2015/on-going
Cumberland Boulevard Station Area	Connect Cobb Alternatives Analysis	2012
Cumberland Boulevard Station Area	Cumberland CID Market Research Report	2012
Cumberland Parkway Station Area	Cobb Comprehensive Transportation Plan	2015/on-going
Cumberland Parkway Station Area	Smyrna Connects	2020

I-285 Top End Transit Plan: Segment Station Plan

STATION PROTOTYPES

The following images represent station prototypes (in-line, off-line, and access ramp).

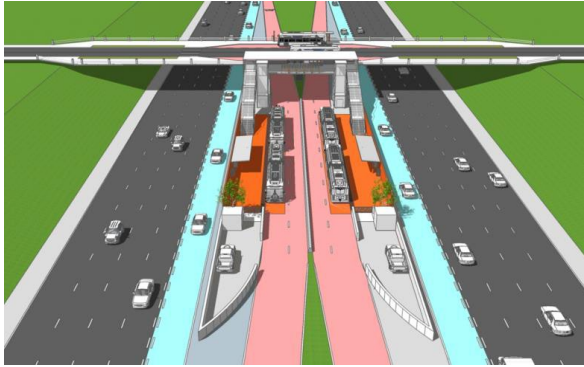


Figure 3. In-Line Station Prototype

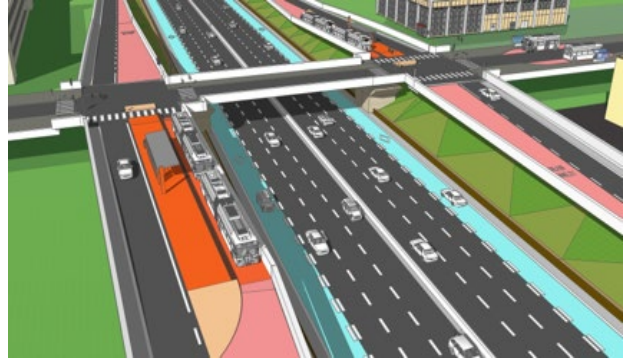


Figure 4. Access Ramp Station Prototype



Figure 5. Off-Line Station Prototype

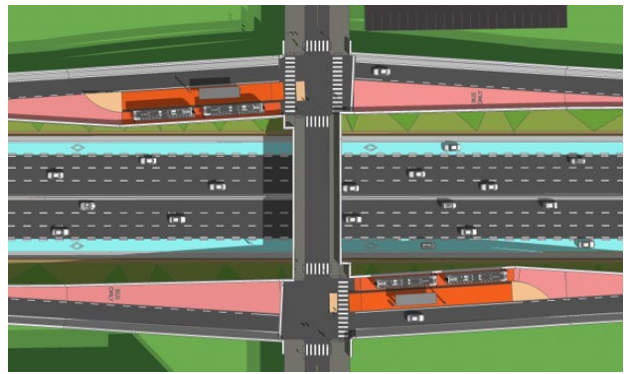


Figure 6. Access Ramp Station Prototype

I-285 Top End Transit Plan: Segment Station Plan

EXISTING CONDITIONS AND STATION ALTERNATIVES

This section provides a brief overview of the station areas examined as part of this plan. The station area is generally defined as the area within one to one-half mile of the interchange where each proposed station will be located. Extending the Top End effort further southwest in Cobb County and existing conditions assessments for the stations located in DeKalb County were completed as part of previous efforts. Thus, there is more in-depth documentation of existing conditions for three stations in the Existing Conditions Report available in the Appendix (Roswell Road Station, Cumberland Boulevard Station, and Cumberland Parkway Station). The Existing Conditions Report includes information related to surrounding land uses and populations including existing and future employment and residential population, low and medium wage jobs, household income, no-vehicle ownership, senior populations, and minority households.

Hamilton E. Holmes

Station Area Overview

As the western terminus station, connecting to MARTA's H.E. Holmes Rail Station, the terminating point of MARTA's west line, is vital to increasing accessibility and connectivity between the region core transit service (MARTA Rail) and the Top End Transit service.

Proposed Transportation Systems and Alternatives

In addition to a multimodal connection at the Hamilton E. Holmes MARTA rail station, a station should be considered on or at Hollowell Parkway near I-285 or alternatively along I-285 at Bolton Road. Three potential routes to connect a Hollowell Parkway Station to the H.E. Holmes Rail Station have been identified, as shown below in Figure 7.

I-285 Top End Transit Plan: Segment Station Plan

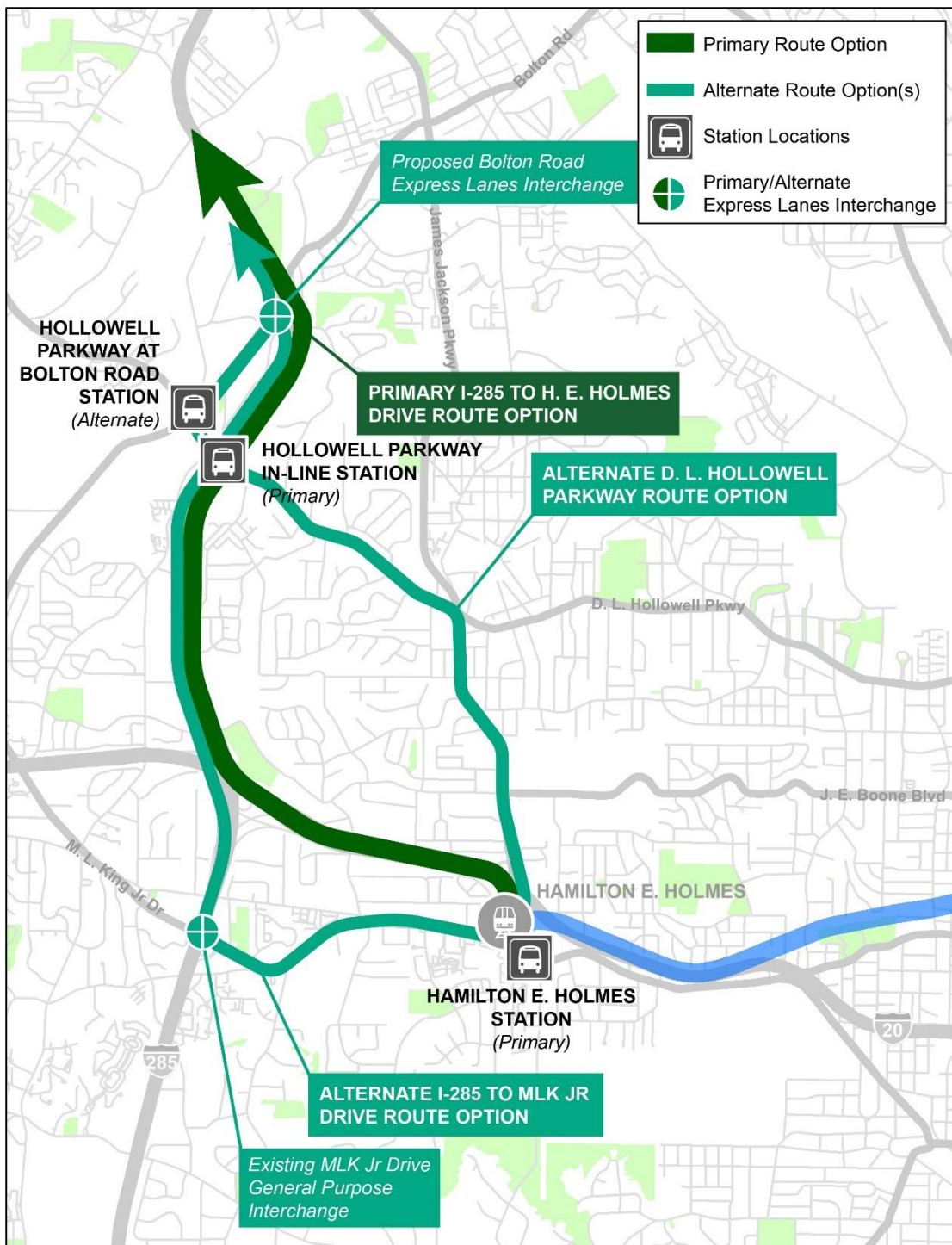


Figure 7. H.E. Holmes Routing Alternatives

I-285 Top End Transit Plan: Segment Station Plan

Cumberland Parkway

Station Area Overview

The Cumberland Parkway station area is located along the west side of I-285 near southern areas of the City of Smyrna and the southern extent of the Cumberland CID. Activity in the Cumberland Parkway station area is less concentrated compared to the Roswell Road and Cumberland Boulevard areas but includes key roadway connections between Cobb County, Smyrna, and the City of Atlanta along Atlanta Road and South Cobb Drive and several community destinations including a mixed-use center and health care facility. The proposed in-line station location is shown below in Figure 8.

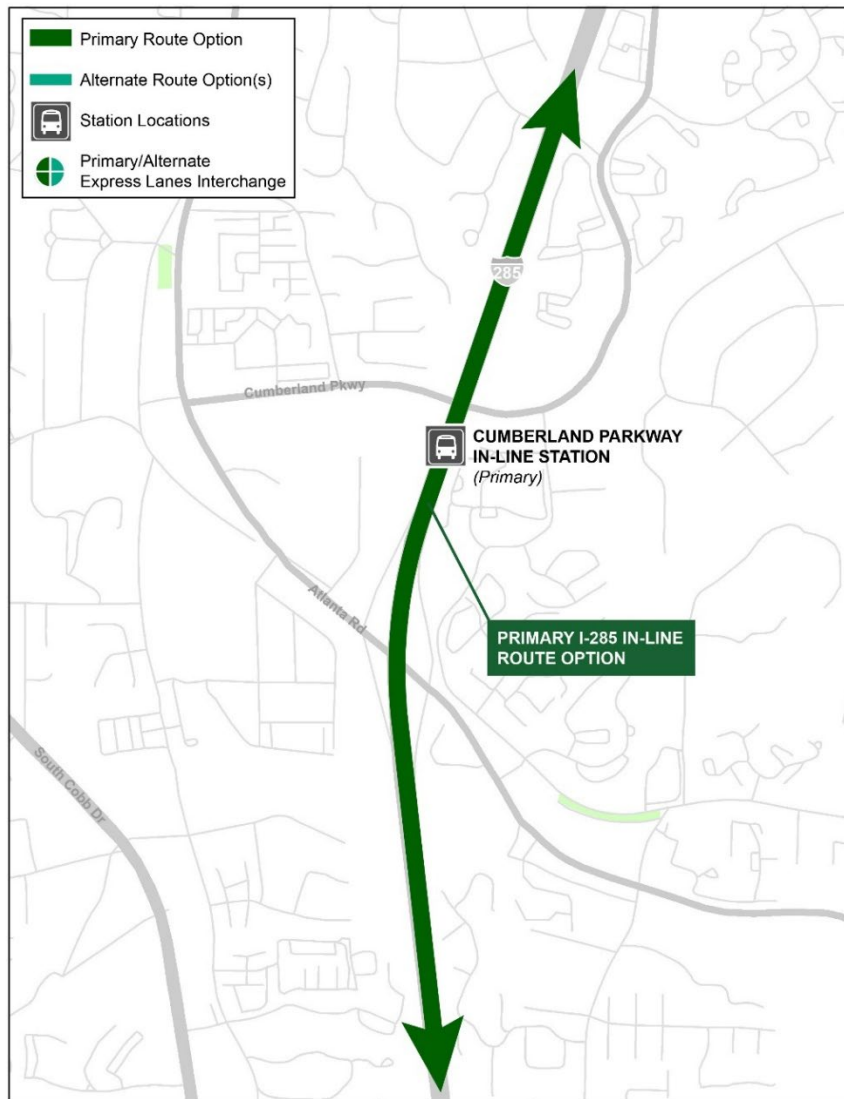


Figure 8. Cumberland Parkway In-Line Station Location

I-285 Top End Transit Plan: Segment Station Plan

Proposed Transportation Systems and Alternatives

While the location of the Cumberland Parkway Station is likely to change based on GDOT's evolving design of the Express Lanes along I-285, the potential station location would be within a 15-minute walk of a significant population (2,725 population and 302 employment) as shown in Table 2.

Table 2. Walkshed Population and Employment (Cumberland Parkway)

Walkshed	Population	Employment
10-minute	696	78
15-minute	2,725	302

The station would connect to the Cumberland / The Battery stop in approximately three minutes. This station would most likely be an in-line station, meaning the station would be located in between the I-285 lanes for easy access to the Express Lanes. The potential Cumberland Parkway station location is shown below in Figure 9.



Figure 9. Cumberland Parkway Potential Station Location

I-285 Top End Transit Plan: Segment Station Plan

Cumberland Boulevard

Station Area Overview

The Cumberland Transfer Center Station area is located to the west of the I-75/I-285 interchange and within the Cumberland Community Improvement District (CID) near the City of Smyrna. The station area is characterized by regional retail, office, entertainment and multifamily uses. The Cumberland area is one of the largest job centers in the Metro Atlanta region not served by a high-capacity transit service. In addition to the large concentration of commercial uses, the station area contains Truist Park, home of the Atlanta Braves, the Battery mixed-use development, and Cumberland Mall. potential station locations are shown below in Figure 10.

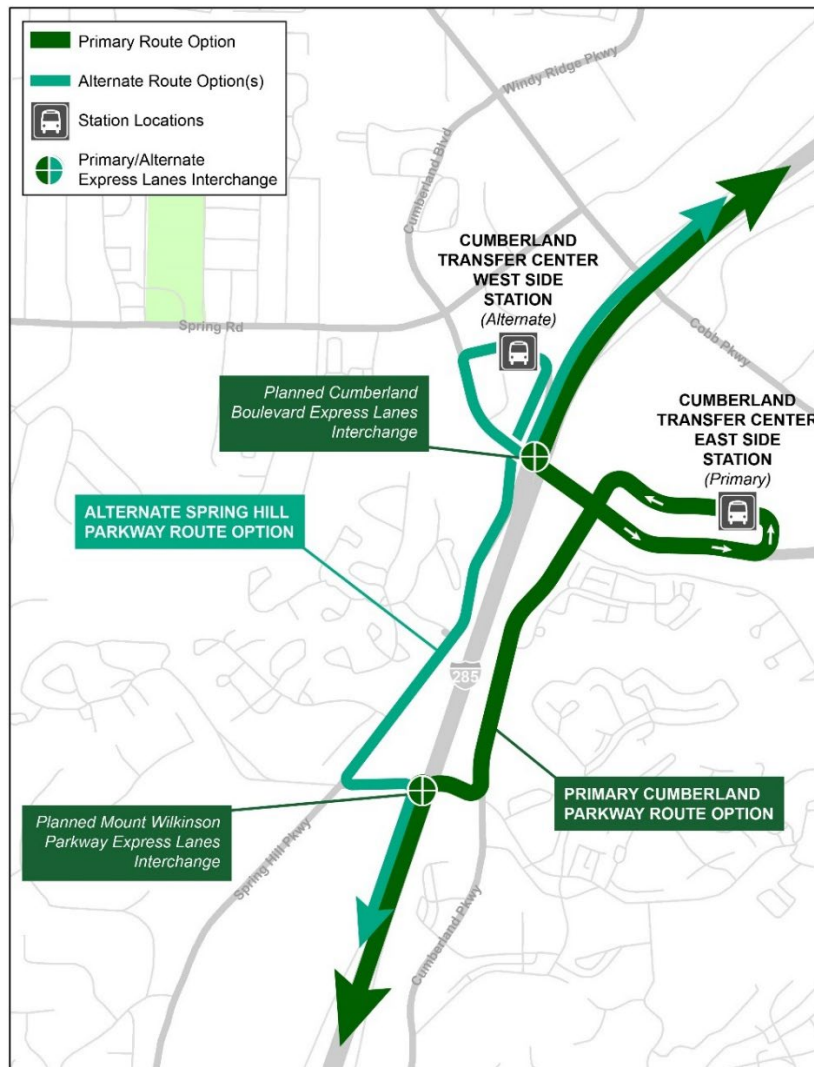


Figure 10. Cumberland Boulevard Station Location

I-285 Top End Transit Plan: Segment Station Plan

Proposed Transportation Systems and Alternatives

The alternatives here are based on the existing CobbLinc Transfer Center, the potential for a new transfer center on the Cumberland Mall site, and a desire to locate the station close to The Battery and Truist Park. This station would be approximately 3 - 5 minutes from the Cumberland Parkway Station and approximately 9 - 11 minutes from the Roswell Station. This station is centered around the Cumberland Business District and connectivity to the proposed Cumberland Sweep Multimodal Trail. The following table shows walk times to destinations in the vicinity of the potential station location, including the significant concentration of employment within 15-minutes of the proposed location.

Table 3. Walkshed Population and Employment (Cumberland Boulevard Station)

Walkshed	Population	Employment
10-minute	28	7,115
15-minute	591	27,744

One potential station location, based on a proposed transfer center at the Cumberland Mall site, is shown below in Figure 11.



Figure 11. Cumberland Boulevard Station Location

I-285 Top End Transit Plan: Segment Station Plan

Roswell Road

Station Area Overview

The Roswell Road station area is located just to the west of the interchange of GA 400 and I-285. This location is the singular station proposed within the City of Sandy Springs and Fulton County. The station area is along a major north-south commercial corridor within Sandy Springs along Roswell Road and near the City Springs mixed-use development and town center.

The primary transit route is along I-285 and multiple concepts were generated to accommodate stations along I-285, in coordination with the proposed managed lanes. However, the proposed configuration of the I-285 express lanes in this location would require the transit stations to be aerial with connecting bridges. As an alternate, offline station locations and a transit route along Hammond Drive were studied. However, these were eliminated and are not desired for further exploration by the City of Sandy Springs.

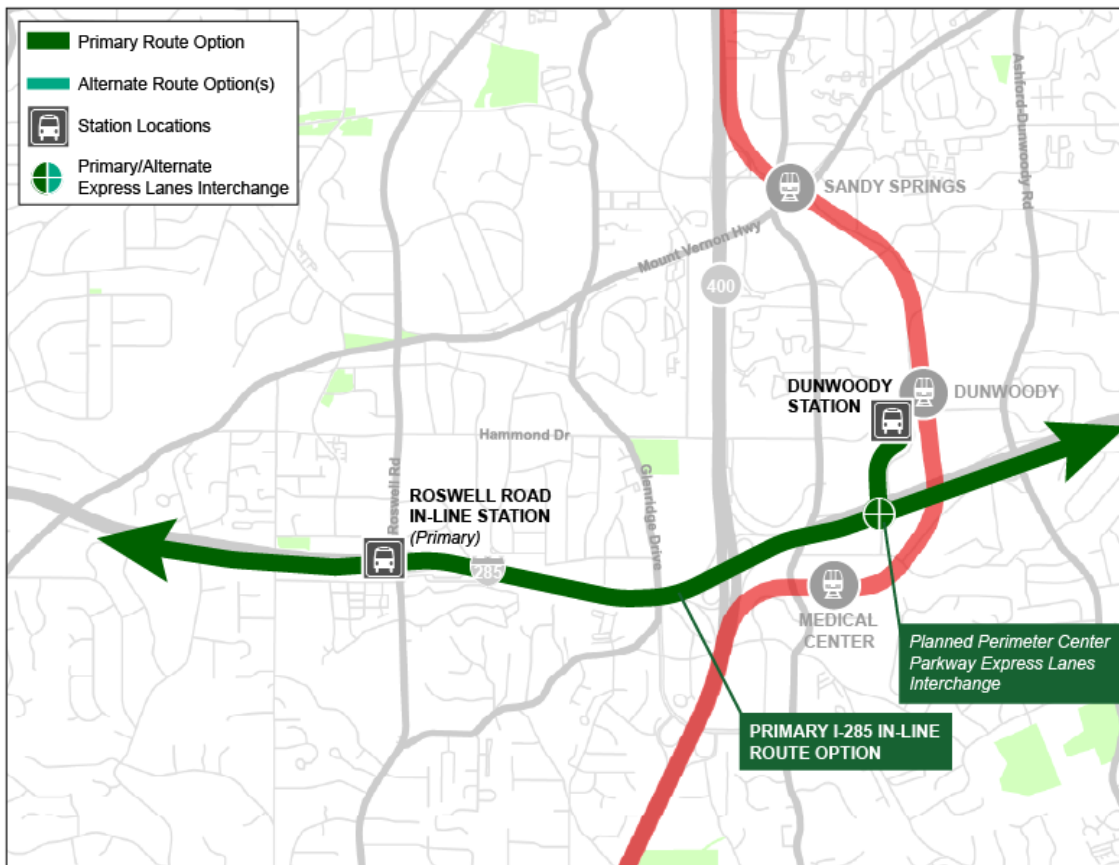


Figure 12. Roswell Road Potential Station

I-285 Top End Transit Plan: Segment Station Plan

Proposed Transportation Systems and Alternatives

Multiple locations have been considered to accommodate stations along Roswell Road, both at I-285 and slightly north toward City Springs. This station will be approximately 9 - 11 minutes from the proposed Cumberland Station and approximately 4 - 6 minutes from the proposed Perimeter Station. This station is located near a mix of residential areas and employment opportunities with access to Roswell Road and City Springs. The following table shows the walk times to destinations in the vicinity of the potential station location.

Table 4. Walkshed Population and Employment (Roswell Road)

Walkshed	Population	Employment
10-minute	1,179	1,319
15-minute	3,077	3,424

The potential station locations are shown below in Figure 13 through Figure 15. Due to the complexity of this station location, multiple, preliminary alternatives have been explored and creative design and/or engineering solutions should be explored as part of the next phase of design in coordination with GDOT's Express Lane Program (MMIP).

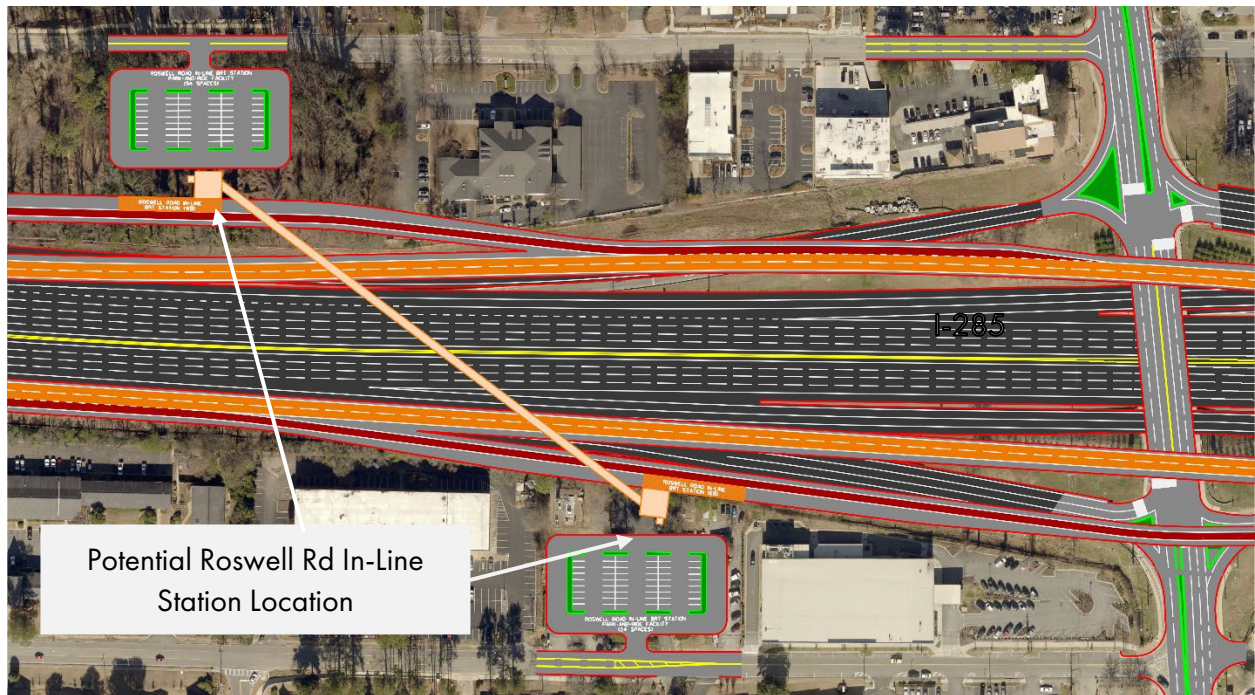


Figure 13. Roswell Road In-Line Station Location Alternative 1

I-285 Top End Transit Plan: Segment Station Plan

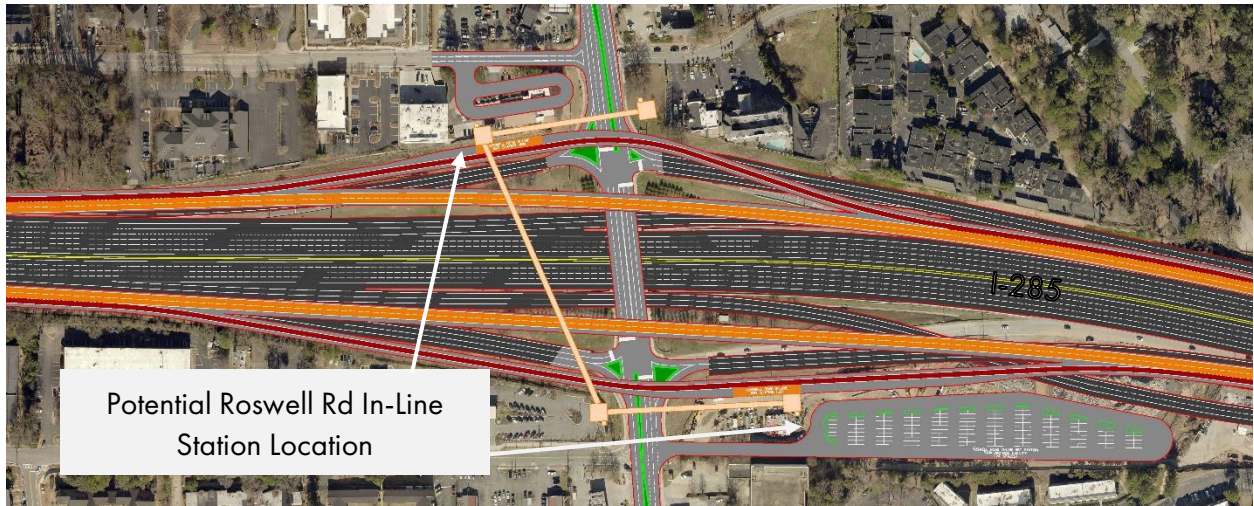


Figure 14. Roswell Road In-Line Station Location Alternative 2

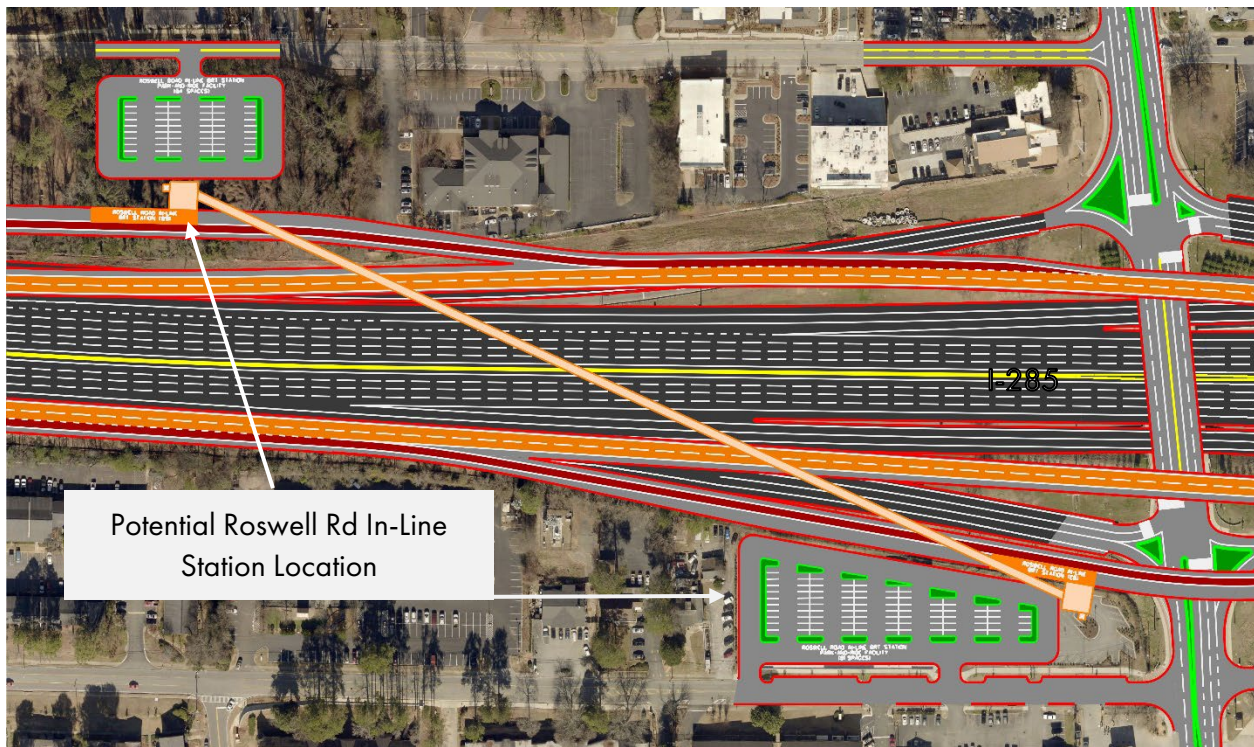


Figure 15. Roswell Road In-Line Station Location Alternative 3

I-285 Top End Transit Plan: Segment Station Plan

Perimeter Center Parkway

Station Area Overview

Multiple locations have been considered for the Perimeter Station. However, both project modeling and input from the study communities show a strong preference to connect the system directly to the Dunwoody MARTA Rail Station to maximize connectivity and ridership. The station will be approximately 4-6 minutes from the proposed Roswell Station and approximately 6-7 minutes from the proposed Shallowford Station.

The Dunwoody MARTA Rail Station is situated within the heart of the Perimeter Business District and is the focal point for a growing concentration of transit supportive development and connectivity to pedestrian and bicycle infrastructure.

Proposed Transportation Systems and Alternatives

The following table shows the walk times to destinations in the vicinity of the potential station location, including the largest concentration of employment within the transit corridor.

Table 5. Walkshed Population and Employment (Perimeter Center Parkway)

Walkshed	Population	Employment
10-minute	289	12,825
15-minute	663	36,348

The potential station location is shown below in Figure 16, showing the primary station as well as the alternate station location.

I-285 Top End Transit Plan: Segment Station Plan

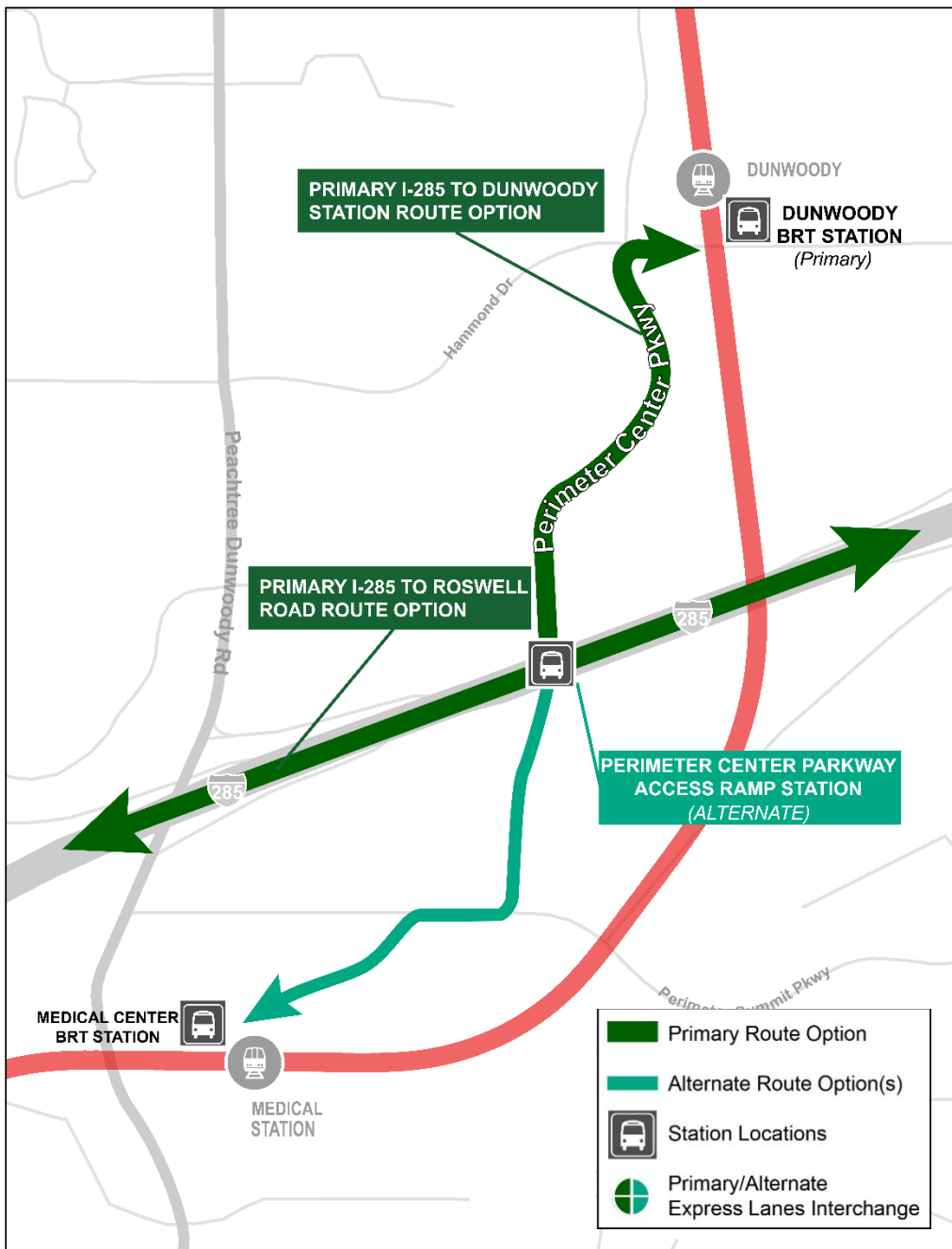


Figure 16. Perimeter Center Parkway Station Location

I-285 Top End Transit Plan: Segment Station Plan

North Shallowford Road / Georgetown

Station Area Overview

The proposed North Shallowford Station is approximately 6-7 minutes from the proposed Perimeter Station and approximately 5-7 minutes from the proposed Doraville Station. This station serves a balanced mix of residential areas and employment opportunities.

Proposed Transportation Systems and Alternatives

The following table shows the walk times to destinations in the vicinity of the potential station location, including the largest existing concentration of residential population within the transit corridor.

Table 6. Walkshed Population and Employment (North Shallowford Road / Georgetown)

Walkshed	Population	Employment
10-minute	1,957	1,198
15-minute	5,060	2,521

The potential station location is shown below in Figure 17, showing both inline and offline station alternatives.

I-285 Top End Transit Plan: Segment Station Plan

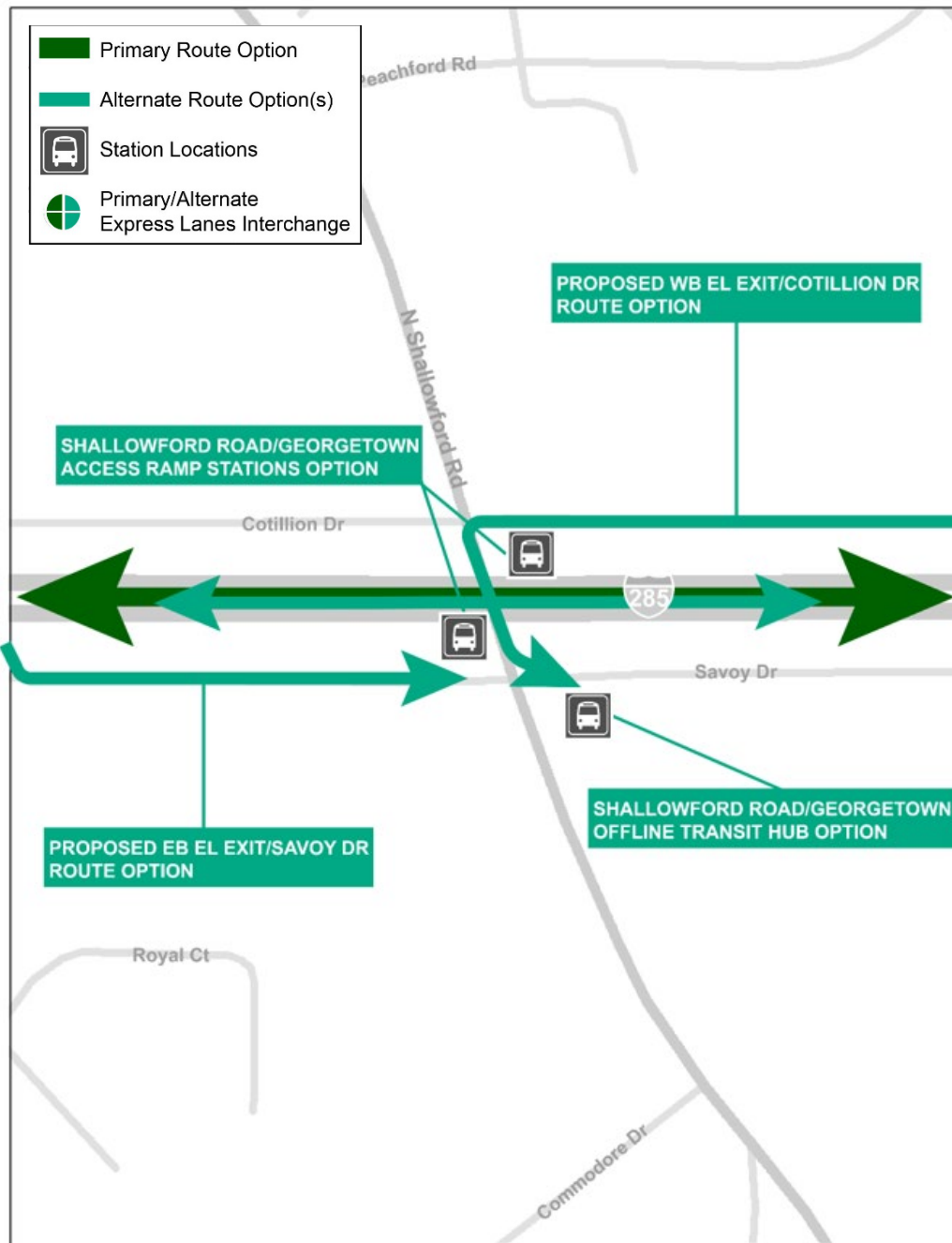


Figure 17. Proposed North Shallowford Station Location

I-285 Top End Transit Plan: Segment Station Plan

Doraville

Station Area Overview

The location of the proposed Doraville Station is the existing Doraville MARTA Rail Station, a critical connection to communities in northeast Atlanta including Brookhaven, Chamblee, and Doraville and a proposed future connection point to Gwinnett County transit. The Doraville Station is approximately 5 – 7 minutes from the proposed North Shallowford Station and approximately 8 - 9 minutes from the proposed Northlake Station.

This station is located among a mix of residential and employment opportunities, including the Assembly Redevelopment Site and Doraville Town Center where future development is planned and anticipated.

Proposed Transportation Systems and Alternatives

The following table shows the walk times to destinations in the vicinity of the potential station location.

Table 7. Walkshed Population and Employment (Doraville)

Walkshed	Population	Employment
10-minute	243	1,479
15-minute	1,578	2,574

The potential station location is shown below in Figure 18, showing the station location and proposed roadway connections. The transit route would enter and exit the Doraville Station via Peachtree Road or Flowers Road.

The preliminary station plan shows a covered roadway concept that has been previously considered as part of the Assembly redevelopment when it was under previous ownership. However, the covered roadway/tunnel is not a priority for the current owner, costly, and unfunded at this point. Alternate solutions to connect the east and west express lanes will need to be explored as part of the next phase of station plans.

Additionally, any new connections to the station and across the railroad tracks will need to be coordinated with the City of Doraville’s proposed downtown project and improvements.

I-285 Top End Transit Plan: Segment Station Plan

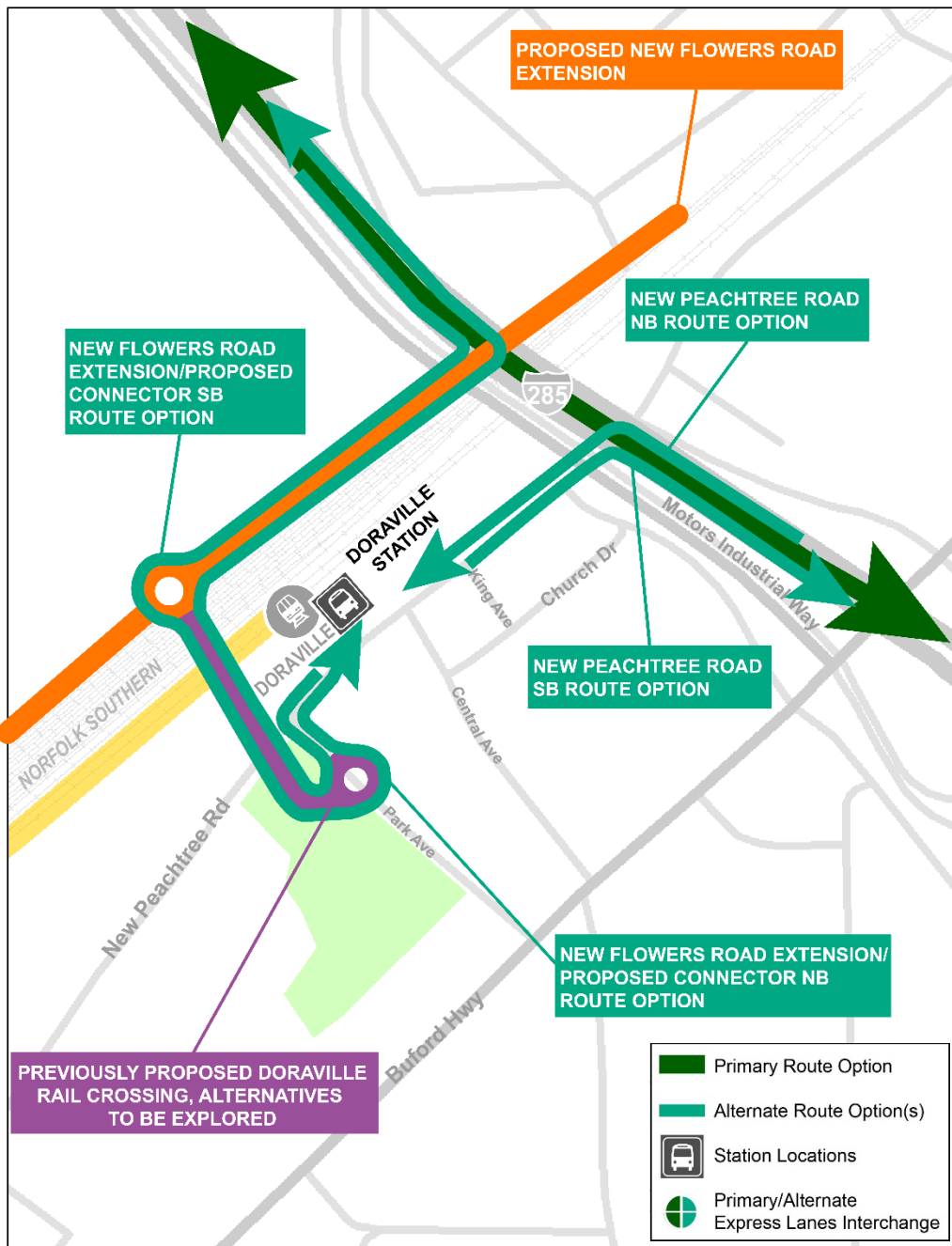


Figure 18. Doraville Station Location

I-285 Top End Transit Plan: Segment Station Plan

Northlake / Tucker

Station Area Overview

The location of the Northlake / Tucker Station may be offline at Northlake Mall, on an access ramp, or in-line. The Northlake Station is approximately 8-9 minutes from the proposed Doraville Station. This Station is located among a mix of residential and employment uses, including the Northlake Mall redevelopment area.

Proposed Transportation Systems and Alternatives

The following table shows the walk times to destinations in the vicinity of the potential station location.

Table 8. Walkshed Population and Employment (Northlake / Tucker)

Walkshed	Population	Employment
10-minute	728	2,751
15-minute	930	4,987

The potential station location is shown below in Figure 19, showing the primary station as well as the alternate station location.

I-285 Top End Transit Plan: Segment Station Plan

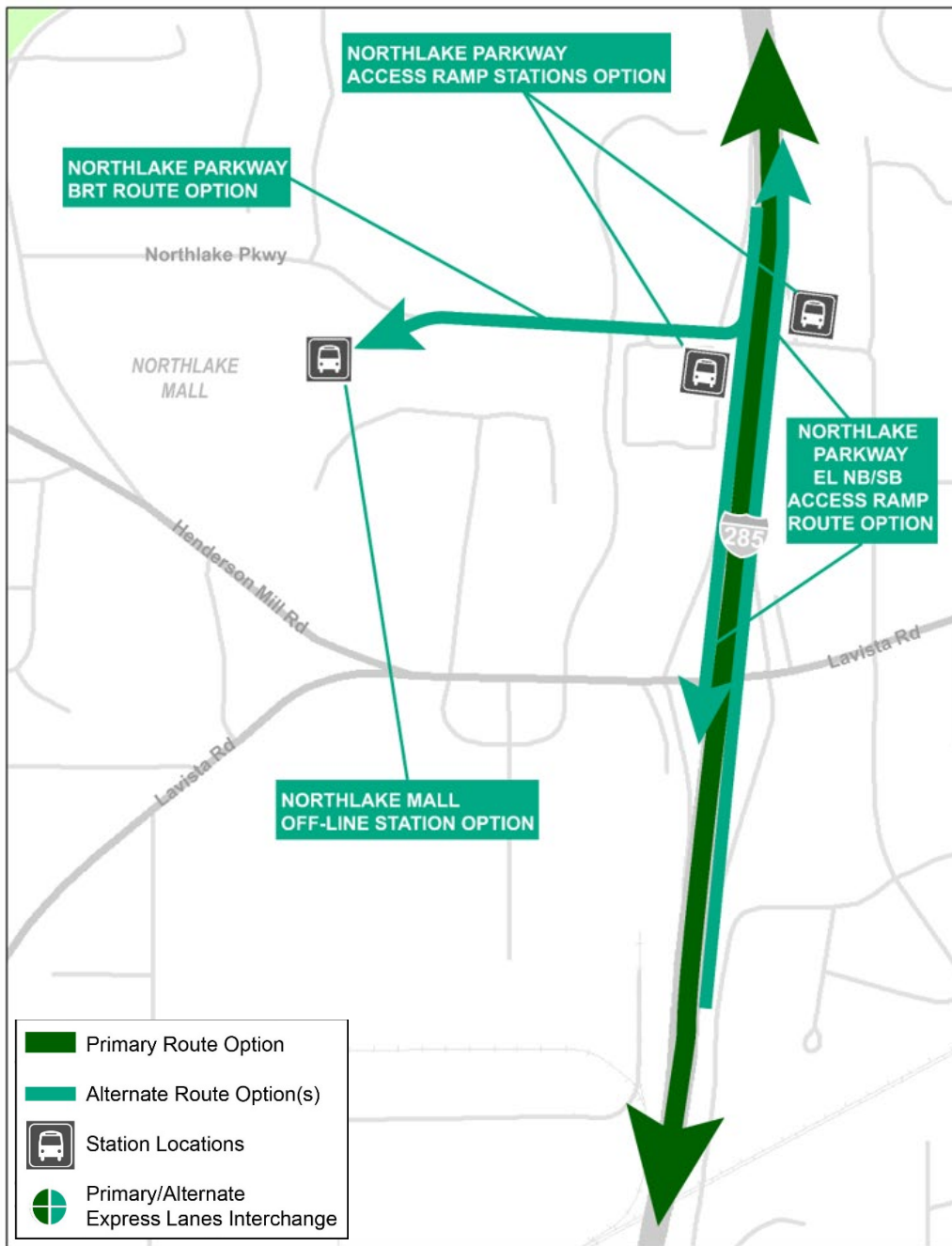


Figure 19. Potential Station Location

I-285 Top End Transit Plan: Segment Station Plan

Lawrenceville Highway and Memorial Drive / Indian Creek

Station Area Overview

Based on the DeKalb County Transit Master Plan and ongoing coordination, the east extents of the I-285 transit line were extended to the Indian Trail MARTA Rail Station to complete the connection between MARTA's west, north, northeast, and east rail lines. Stations should be considered at Lawrenceville Highway and at Indian Creek MARTA Station with connectivity to Memorial Drive. Utilizing the GDOT Express Lanes is a key project concept of the DeKalb TMP.

Connecting to MARTA's Indian Creek Rail Station, the terminating point of MARTA's east line, is vital to increasing accessibility and connectivity between the region core transit service (MARTA Rail) and the Top End Transit service.

Since these stations were added later in the process, specific station plans and alternatives will need to be developed in the next phase of study.

I-285 Top End Transit Plan: Segment Station Plan

SERVICE PLAN

Based on the 2019 Transit Feasibility Study previously described, an initial service plan was developed from Tucker in Dekalb County to Smyrna in Cobb County. The service plan was updated subsequently in the Phase 2 Pre-Project Development Technical Analysis based on additional details on station locations, estimated travel times, and ridership projections. As part of Phase 3, the service plan was further developed, and optimal frequency patterns with each station's features throughout the entire Top End were considered. Through use of the Phase 2 Pre-Project Development Technical Analysis, walkshed analysis, and the Federal Transit Administration's Simplified Trips-on-Project Software (STOPS) model, the following service plan was developed.

The following findings were based on the preliminary station locations and plans as of late 2021. As the project evolves, the service plan is expected to be revisited and studied in greater detail as part of the next phase of study and station locations become more certain.

Service Alternatives

The STOPS model was the primary analysis tool used to evaluate the various service design options. The following inputs to the STOPS model for each of the proposed station locations were used:

- Population and employment at the Transportation Analysis Zone (TAZ) level, provided by ARC
- 2015 Base Year and 2050 Horizon Year
- Travel times from the travel demand model
- Existing transit connectivity and feeder routes

Data from the 2010 Transit On-Board Survey, expanded to 2015 conditions, and complemented by Census Transportation Planning Products Program (CTPP) was used within the STOPS model. Four alternatives were considered within the STOPS model – each alternative consists of the same alignment and same stop locations.

The following table provides the stop locations and any additional detail about their use within the STOPS model:

I-285 Top End Transit Plan: Segment Station Plan

Table 9. STOPS Model Alternatives - Overview

Station	Park and Ride assumed in STOPS modelling (Yes/No)	Modelling notes		
		Included in Top End/East studies and STOPS model	Not included in Top End/East studies but included in STOPS model	Not included in STOPS model
Cumberland Parkway	Yes	✓		
Cumberland Boulevard	No	✓		
Roswell Road	No	✓		
Perimeter Center Parkway	Yes	✓		
Shallowford / Georgetown Road	No	✓		
Doraville	Yes	✓		
Northlake / Tucker	Yes	✓		
Lawrenceville Highway	No	✓		
Clarkston	No		✓	
Memorial Drive	No			✓
Indian Creek	Yes	✓		
Covington Highway	No	✓		
GSU / Perimeter College	Yes		✓	

The data from the previous table is displayed in the following figure.

I-285 Top End Transit Plan: Segment Station Plan

Comparison of Station and Alignment Assumptions

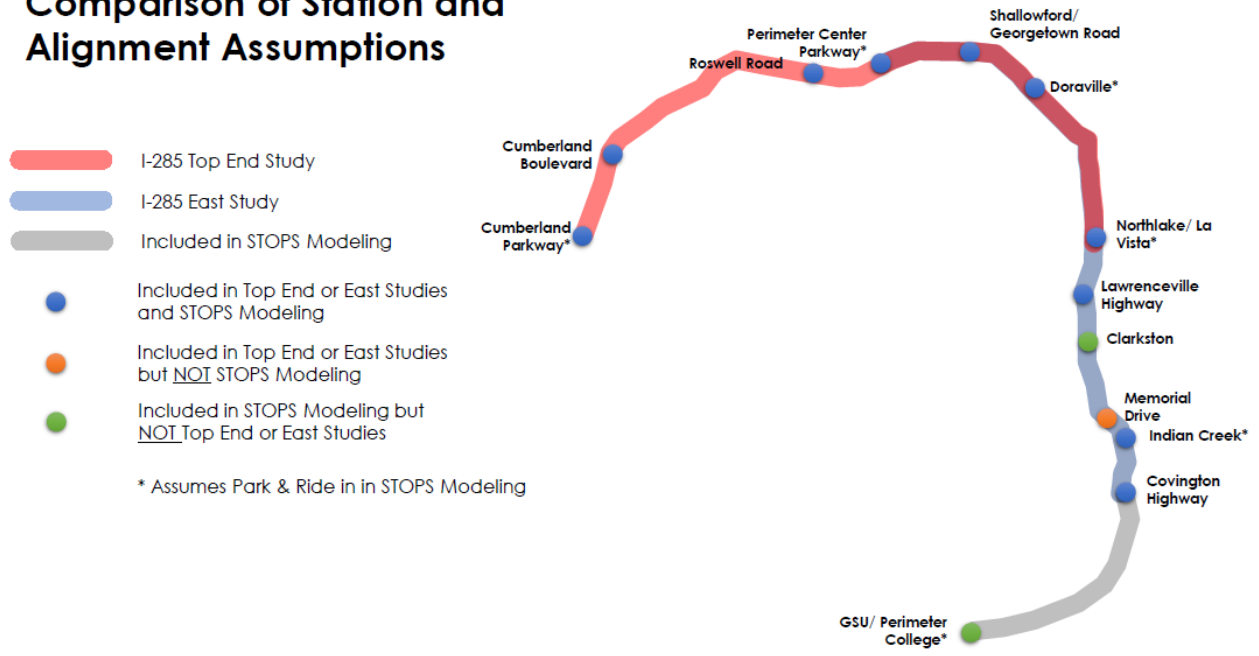


Figure 20. Comparison of Station and Alignment Assumptions

I-285 Top End Transit Plan: Segment Station Plan

Key features of each of the four alternatives are outlined below.

Alternative 1:

- 15-minute peak service
- 20-minute off-peak service
- Same stops serviced Mon-Fri and Sat-Sun

Alternative 1 offers the most consistent service to all 12 stations. There are no differences between weekday and weekend service, and 15-minute peak and 20-minute off-peak frequencies are consistent to all stations.

Alternative 1 is illustrated in the following figure.

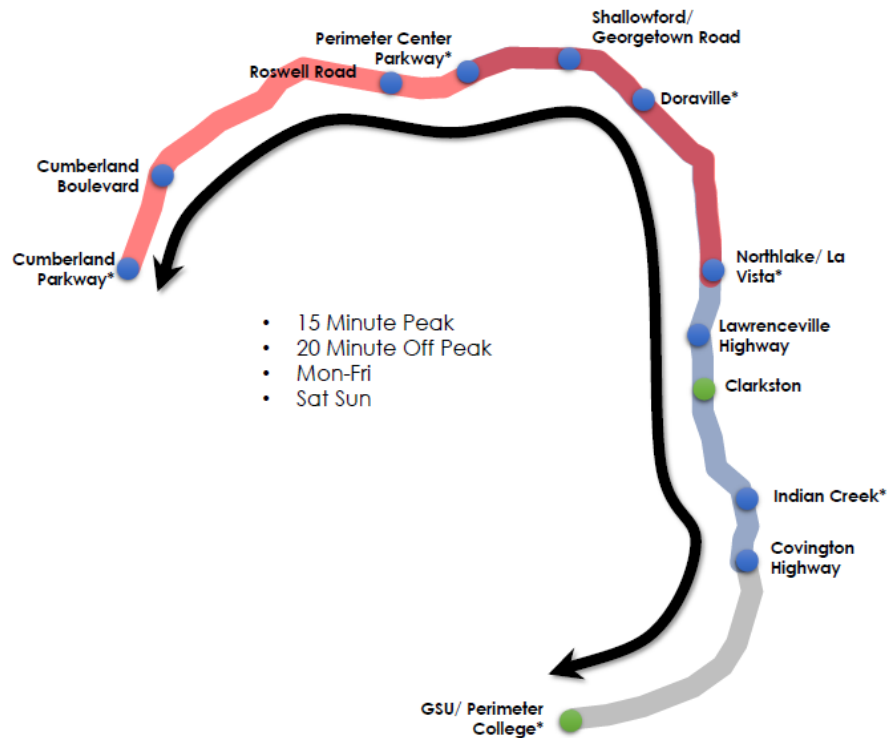


Figure 21. Alternative 1

I-285 Top End Transit Plan: Segment Station Plan

Alternative 2:

- 15-minute peak Mon-Fri service from Cumberland Parkway to Northlake
- 15-minute peak service Mon-Fri from Cumberland Parkway to GSU/Perimeter College (entire alignment)
- 20-minute off-peak service Mon-Fri and Sat-Sun from Cumberland Parkway to GSU/Perimeter College (entire alignment)

Alternative 2 offers two service patterns. The first provides service along the Top End from Cumberland Parkway from the west to Northlake to the east. With the service running along the entire alignment, this creates an effective 7.5-minute peak frequency along the Top End.

Alternative 2 is illustrated in the following figure.

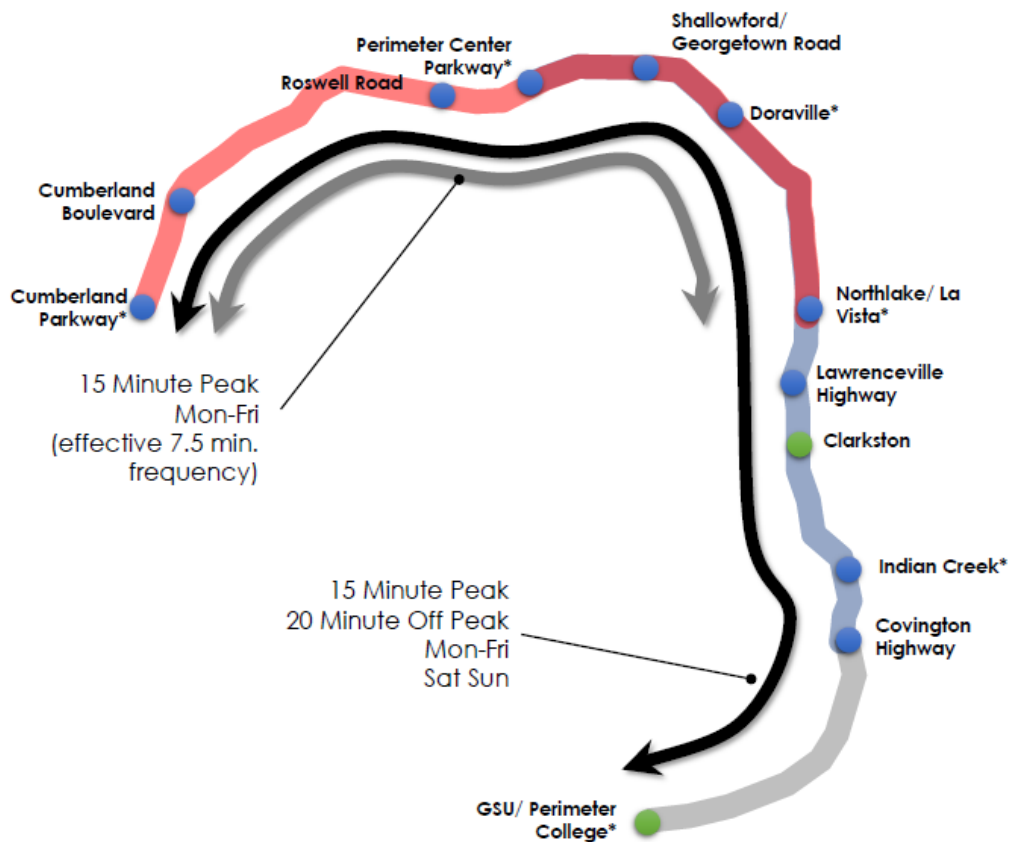


Figure 22. Alternative 2

I-285 Top End Transit Plan: Segment Station Plan

Alternative 3:

- 15-minute peak service Mon-Fri from Cumberland Parkway to Northlake
- 15-minute peak service Mon-Fri from Perimeter Center Parkway to GSU/Perimeter College
- 15-minute peak service Mon-Fri from Cumberland Parkway to GSU/Perimeter College (entire alignment)
- 20-minute off-peak service Mon-Fri and Sat-Sun from Cumberland Parkway to GSU/Perimeter College (entire alignment)

Alternative 3 offers three service patterns. The first provides service along the Top End from Cumberland Parkway from the west to Northlake to the east. The second provides service from Perimeter Center Parkway to GSU/Perimeter College. With the third service option running along the entire alignment, this creates an effective 7.5-minute peak frequency between Perimeter Center and Northlake.

Alternative 3 is illustrated in the following figure.

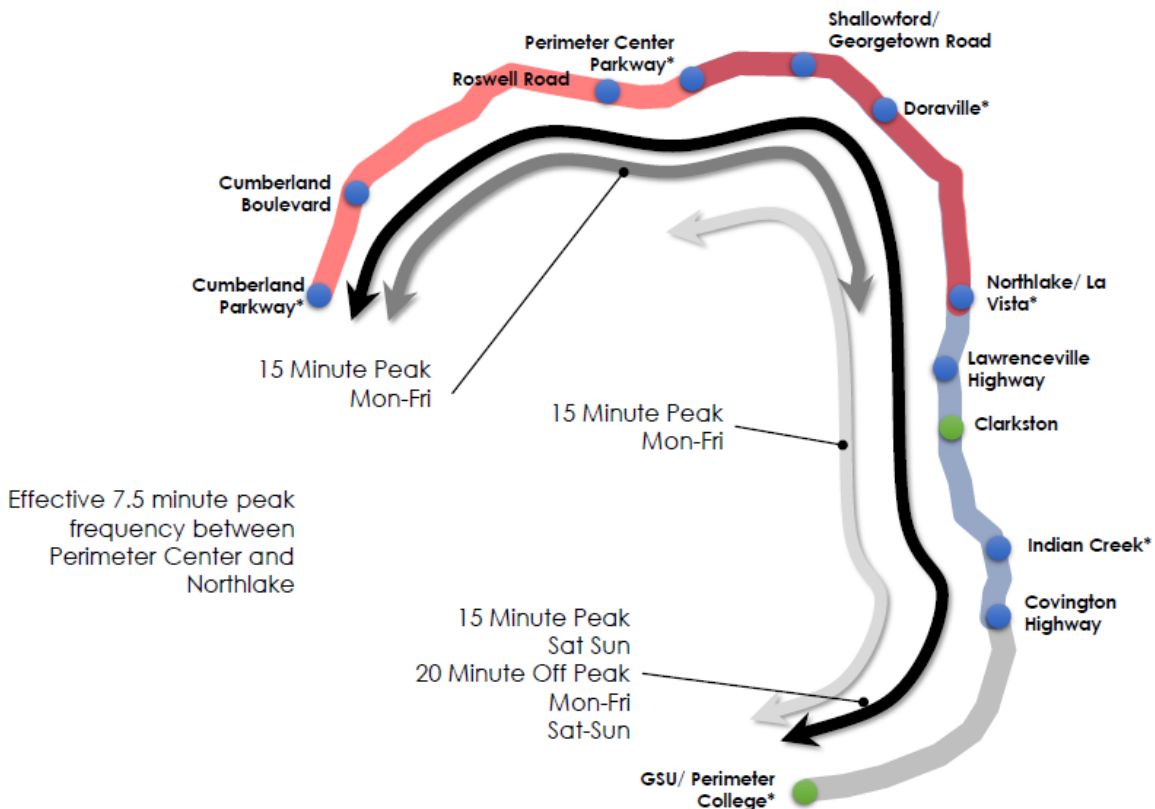


Figure 23. Alternative 3

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Alternative 4:

- 10-minute peak service Mon-Fri from Cumberland Parkway to Doraville
- 15-minute peak service Mon-Fri from Perimeter Center Parkway to GSU/Perimeter College
- 15-minute peak service Mon-Fri from Cumberland Parkway to GSU/Perimeter College (entire alignment)
- 20-minute off-peak service Mon-Fri and Sat-Sun from Cumberland Parkway to GSU/Perimeter College (entire alignment)

Alternative 4 offers three service patterns. The first provides service along the Top End from Cumberland Parkway from the west to Doraville to the east. The second provides service from Perimeter Center Parkway to GSU/Perimeter College. The third provides service along the entire alignment. This combination creates an effective 6.25-minute peak frequency between Perimeter Center and Doraville.

Alternative 4 is illustrated in the following figure.

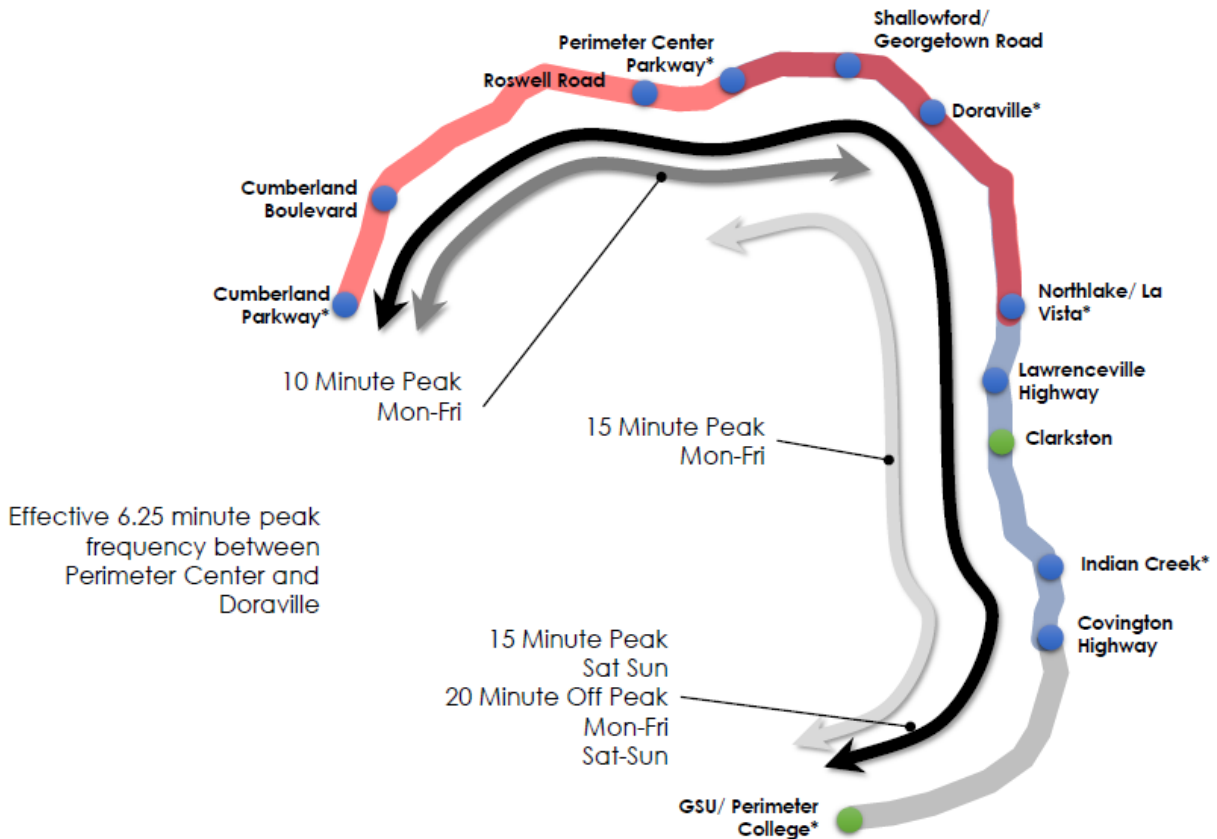


Figure 24. Alternative 4

I-285 Top End Transit Plan: Segment Station Plan

Ridership was estimated for all four alternatives using the STOPS model. The ridership estimates are conclusive that the results for each alternative are similar in both the current year and horizon year forecasts. When frequencies are greater than 15 minutes, ridership significantly drops off and the route becomes ineffective, therefore all alternatives feature this as a maximum. Ridership improves when station locations are in-line when compared to off-line. The greatest draws for ridership come from zero-car households, which comprises 30-40% of estimated ridership. Proximity to MARTA rail stations are also significant contributors to improved ridership, including the Dunwoody at Perimeter station, which draws about 40% of ridership from that connection, the Doraville station, and the Indian Creek station.

Station Analysis

Focusing on the initial Top-End stations, including Cumberland Parkway, Cumberland Boulevard, Roswell Road, Perimeter Center Parkway, Shallowford/Georgetown Road, Doraville, and Northlake/Tucker, each station was analyzed for location option, park-and-ride potential, station type, bus access, rail access, and walk access.

The stations can be grouped into two categories – stations with only one option for station type (in-line, off-line, access ramp) and stations with multiple potential options. The first group of stations includes Cumberland Parkway, Cumberland Transfer Center, and Doraville. Details about these three stations is found in the following table.

Table 10. Group 1 – Station information

Station	Type	Location	Park & Ride	Bus/Rail Access	Walk Access
			Kiss & Ride		
Cumberland Parkway	In-line	Cumberland Parkway	Yes	Cobblinc route 20	Elevated
			Yes		
Cumberland Transfer Center	Off-line	Cumberland Transfer Center via Cumberland Parkway or dedicated ramp	Yes	MARTA bus route 12, multiple Cobblinc routes (10, Rapid10, 15, 25, 50, Circulator Blue Route)	Level
			Yes		
Doraville	Off-line	Doraville MARTA station via New Flowers Road extension or New Peachtree Road	Yes	Rail service via MARTA's Gold line, multiple MARTA bus routes (25, 39, 104, 124, 133)	Level
			Yes		

For each of the following stations, a distinct comparison table will detail each station attributes: Roswell Road, Perimeter Center Parkway, Shallowford Road/Georgetown, **Northlake/Tucker**.

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Table 11. Roswell Road – Station Type Comparison

Station	Type	Location	Park & Ride	Bus/Rail Access	Walk Access
			Kiss & Ride		
Roswell Road	In-line	Roswell Road	Yes	MARTA Route 5	Elevated
			Yes		
	Off-line	Roswell Road via Hammond Drive and Mt. Vernon Highway	No	MARTA Route 5, 87	Level
			No		

Table 12. Perimeter Center Parkway – Station Type Comparison

Station	Type	Location	Park & Ride	Bus/Rail Access	Walk Access
			Kiss & Ride		
Perimeter Center Parkway	Off-Line	Dunwoody MARTA Station via Perimeter Center Parkway	Yes	MARTA Rail - Red	Level
			Yes		
	Access Ramp	Perimeter Center Parkway	No	MARTA Rail - Red	Level
			No		
	Off-Line	Medical Center MARTA Station via Perimeter Center Parkway	Yes	MARTA Rail - Red	Level
			Yes		

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Table 13. Shallowford Road/Georgetown – Station Type Comparison

Station	Type	Location	Park & Ride	Bus/Rail Access	Walk Access
			Kiss & Ride		
Shallowford Road / Georgetown	Access Ramp	Shallowford Road	No	MARTA Route 103	Level
			No		
	Off-line	New transit hub via Shallowford Road	TBD	MARTA Route 103	TBD

Table 14. Northlake/Tucker – Station Type Comparison

Station	Type	Location	Park & Ride	Bus/Rail Access	Walk Access
			Kiss & Ride		
Northlake / Tucker	In-Line	Lavista Road Bridge	No	MARTA Route 126	Elevated
			Yes		
	Off-Line	Northlake Mall via Northlake Parkway	Yes	MARTA Route 133	Level
			Yes		
	Access Ramp	Northlake Parkway	No	MARTA Route 125 and 126	Level
			Yes		

Travel Times Analysis

One of the goals of the Service Plan analysis is to balance local access with speed and efficiency. This can be accomplished by pairing reasonable vehicle and operating requirements with appropriate frequencies. The following transit operating assumptions, based in part on the Pre-Project Development Study, are as follows:

- Signal delay with transit signal priority (TSP)
 - 24 seconds (major)
 - 6 seconds (minor)

I-285 Top End Transit Plan: Segment Station Plan

- Surface street operating speed: 30 mph
- Express lane operating speed: 45 mph
- Station dwell time: 15 seconds

These assumptions are illustrated in the following figure.

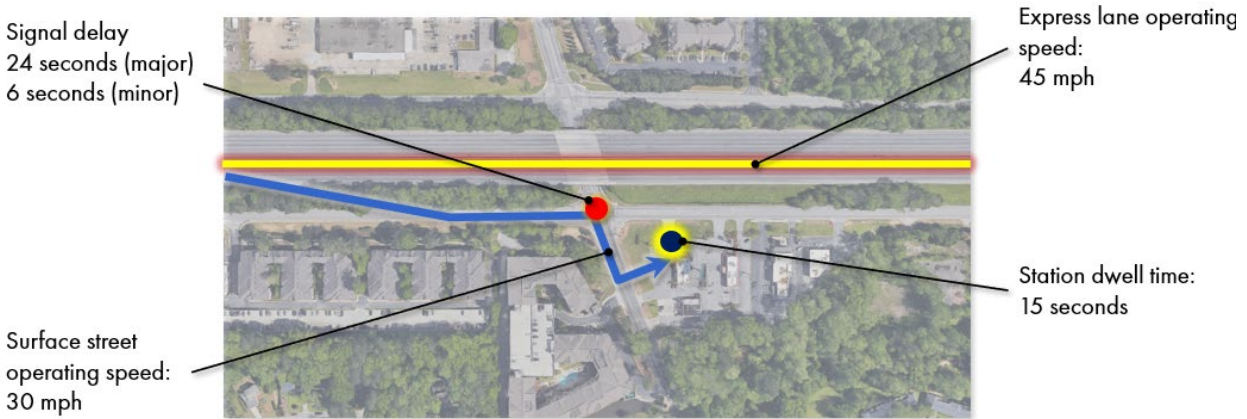


Figure 25. Travel Times Assumptions

Additional assumptions specific to the Top End Stations are displayed in the following table that were used to determine travel times. These are based on the Phase 2 Pre-Project Development Study and outcomes of the STOPS model. The Initial Service Plan defined a Core Service Plan that, where applicable, analyzed each station as either in-line, off-line, or access ramp. Two alignments, Core and Alternative, were analyzed for travel times depending on the station type. For stations with only one option, such as the Cumberland Parkway In-Line station type, an in-line station was used in both the Core and Alternative alignments.

Table 15. Core vs. Alternative Station Types

Station	Type	Core	Alternative
Northlake / Tucker	In-Line		✓
	Off-Line	✓	
	Access Ramp	NA	NA
Doraville Station	Off-Line	✓	
Shallowford Road /Georgetown	Access Ramp		✓
	Off-Line	✓	

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Perimeter Center Parkway	Off-Line (Dunwoody)	✓	
	Access Ramp		✓
	Off-Line (Medical Center)	NA	NA
Roswell Road	In-Line	✓	
	Off-Line		✓
Cumberland Transfer Center	Off-Line	✓	
Cumberland Parkway	In-Line	✓	

As described in the table, the Core station types for the Top End are as follows:

- Northlake/Tucker – off-line, Doraville – off-line, Shallowford Road/Georgetown – off-line, Perimeter Center Parkway – off-line (Dunwoody), Roswell Road – in-line, Cumberland Transfer Center – off-line, Cumberland Parkway – in-line

As described in the table, the Alternative station types for the Top End are as follows:

- Northlake/Tucker – in-line, Doraville – off-line, Shallowford Road/Georgetown – access ramp, Perimeter Center Parkway – access ramp, Roswell Road – off-line, Cumberland Transfer Center – off-line, Cumberland Parkway – in-line

When analyzing travel times throughout the Top End, the following conclusions were drawn:

- Corridor wide travel times range from 36+ to 41+ minutes
- Offline travel contributes significantly to travel time
- Perimeter Center Parkway and Roswell Road are the biggest contributors to this

Figure 26 and Figure 27 illustrates results for the Core and Alternative travel times analysis.

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41:17 Westbound
40:16 Eastbound

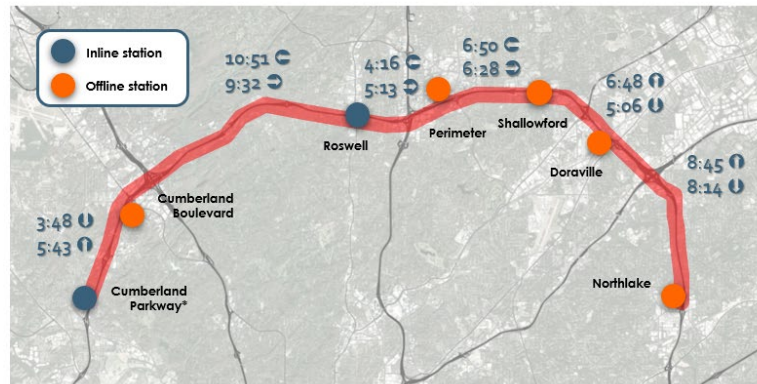


Figure 26. Travel Times Results – Core

36:19 Westbound
37:59 Eastbound

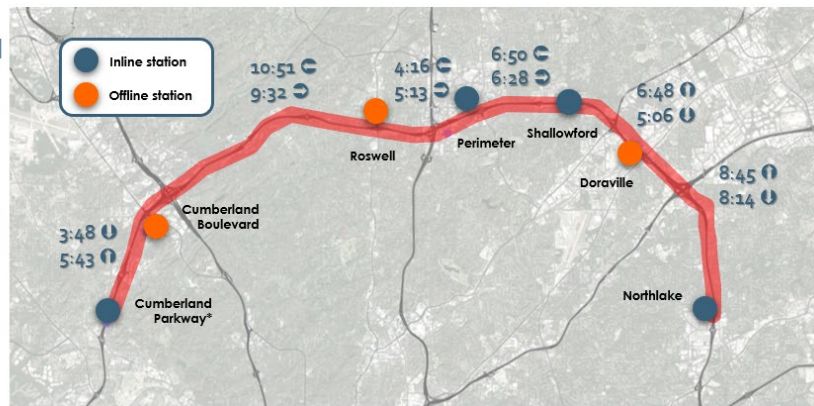


Figure 27. Travel Times Results - Alternative

The westbound and eastbound cumulative travel time graphs are displayed in the following figures:

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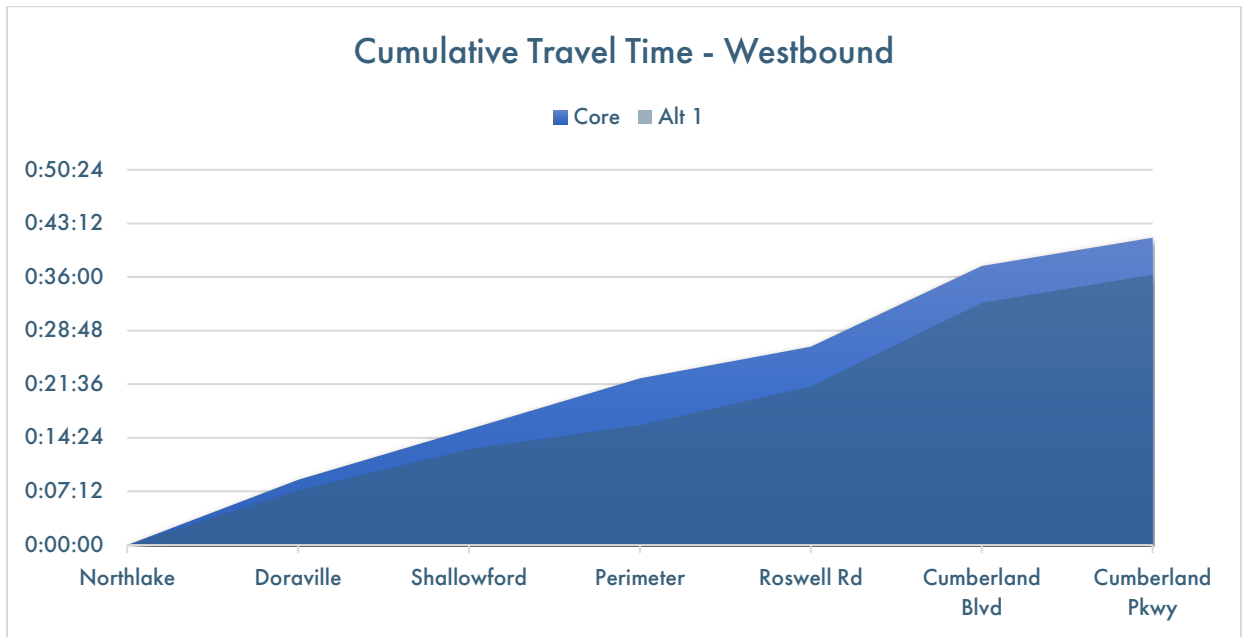


Figure 28. Westbound Cumulative Travel Times

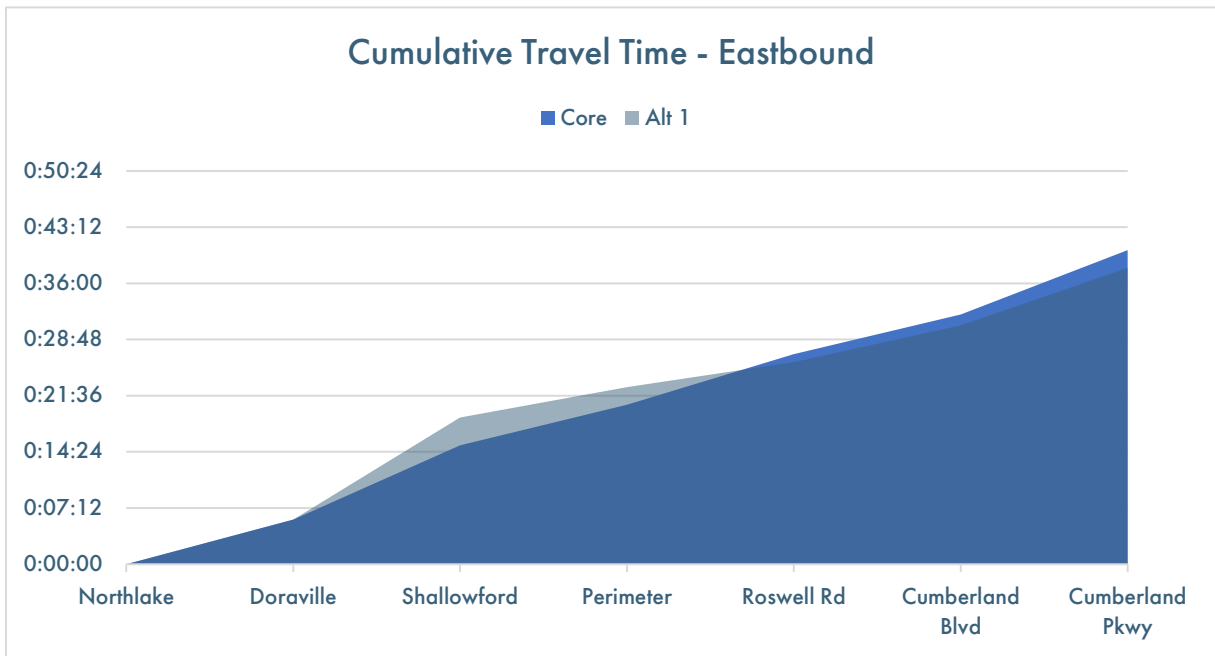


Figure 29. Eastbound Cumulative Travel Times

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The westbound and eastbound cumulative average speed graphs are displayed in the following figures:

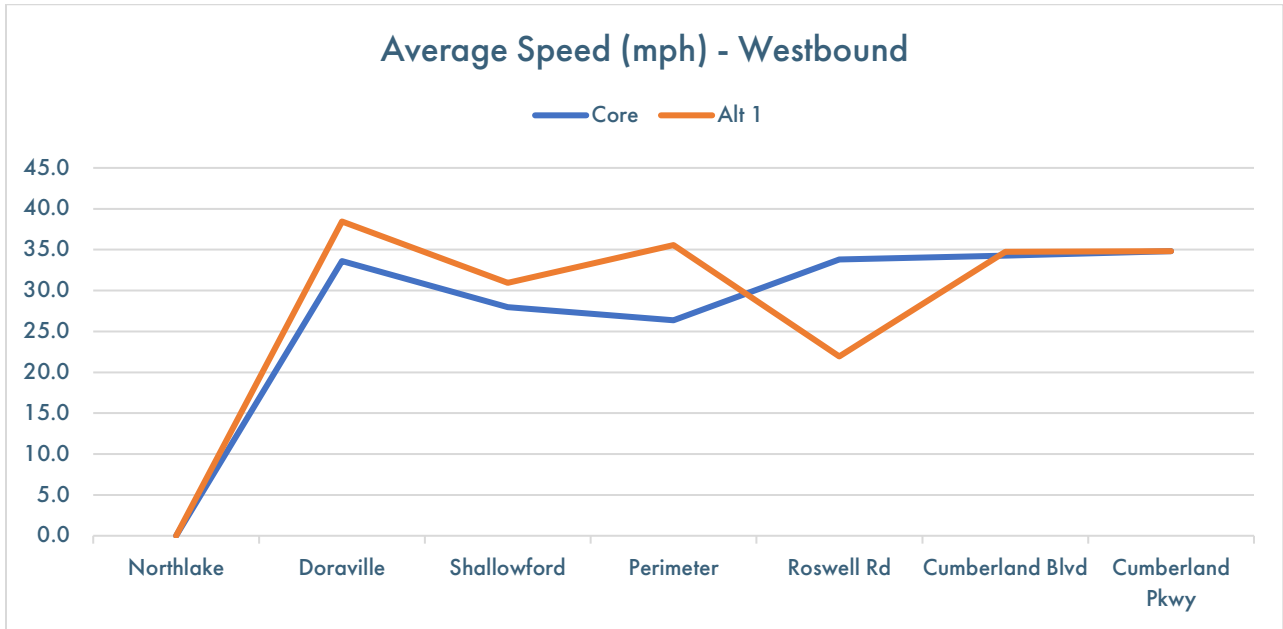


Figure 30. Westbound Average Speed Cumulative Travel Times

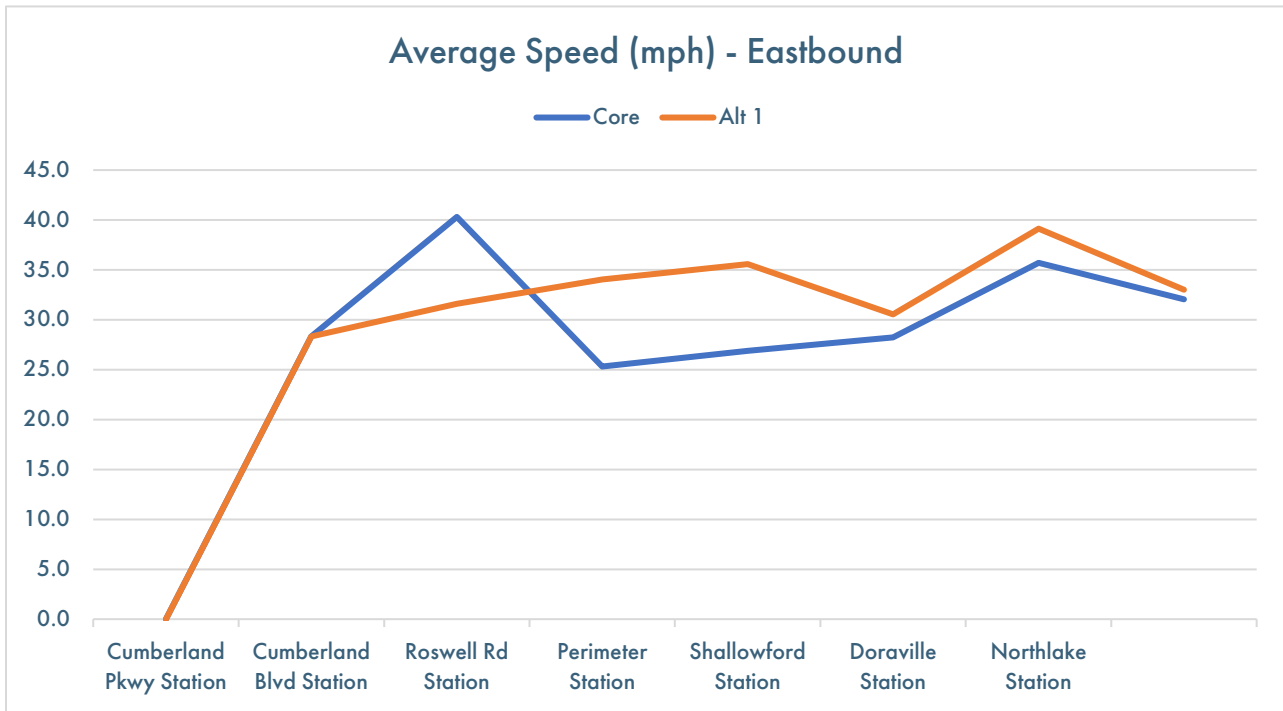


Figure 31. Eastbound Average Speed Cumulative Travel Times

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Time Breakdown by Station - Westbound Core

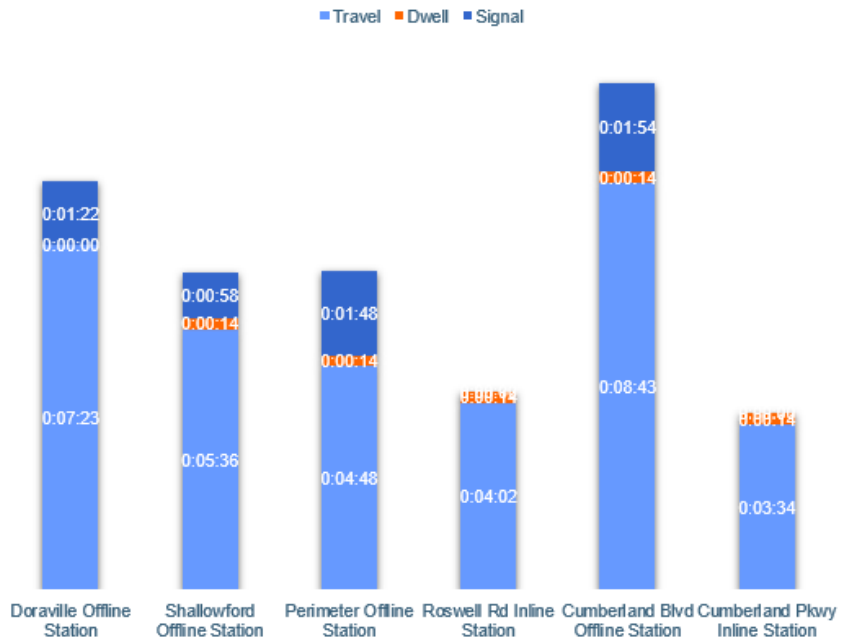


Figure 32. Westbound Time Breakdown by Station – Core

Time Breakdown by Station - Westbound Alt 1

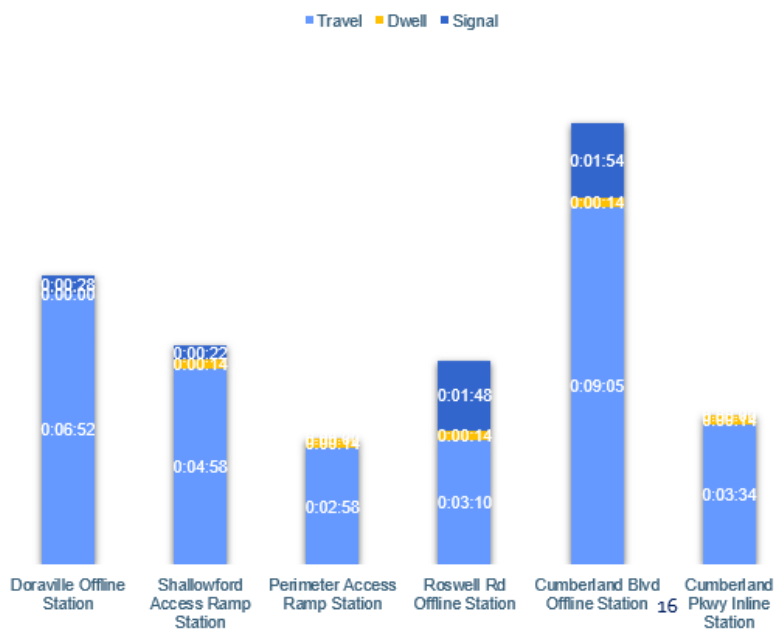


Figure 33. Westbound Time Breakdown by Station – Alternative

I-285 Top End Transit Plan: Segment Station Plan

Vehicle and Operating Requirements

Based on the travel times analysis, the total number of vehicles required are 6 regardless of whether the core or alternative alignment is chosen during the peak service times. During the off-peak service times, the core alignment requires 6 vehicles while the alternative alignment requires 4 vehicles. In order to accommodate these vehicle requirements, a cumulative travel time of about 40-minutes (including the layover) was used. The vehicle requirements are presented in the figure below.

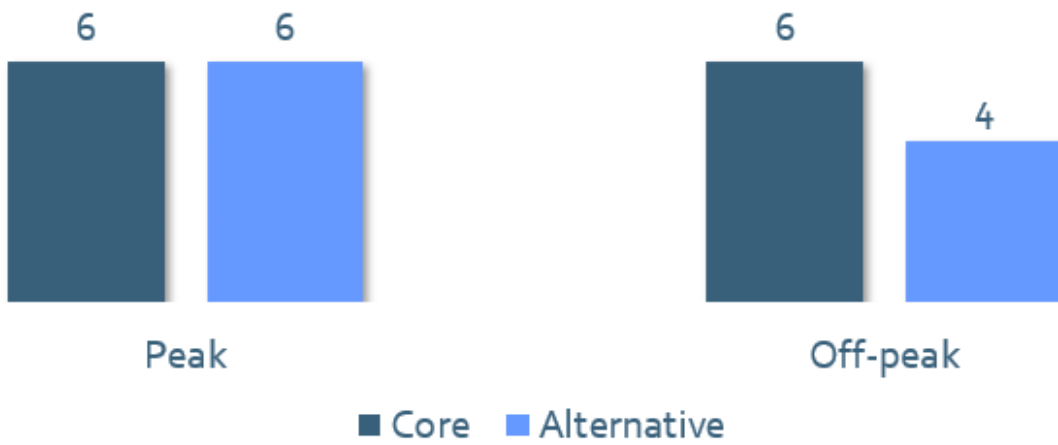


Figure 34. Vehicle Requirements – Core and Alternative

I-285 Top End Transit Plan: Segment Station Plan

Operating requirements are a function of number of vehicles, route length, and total time. These results are presented in units of annual revenue miles and annual revenue hours, presented in the following figures below.

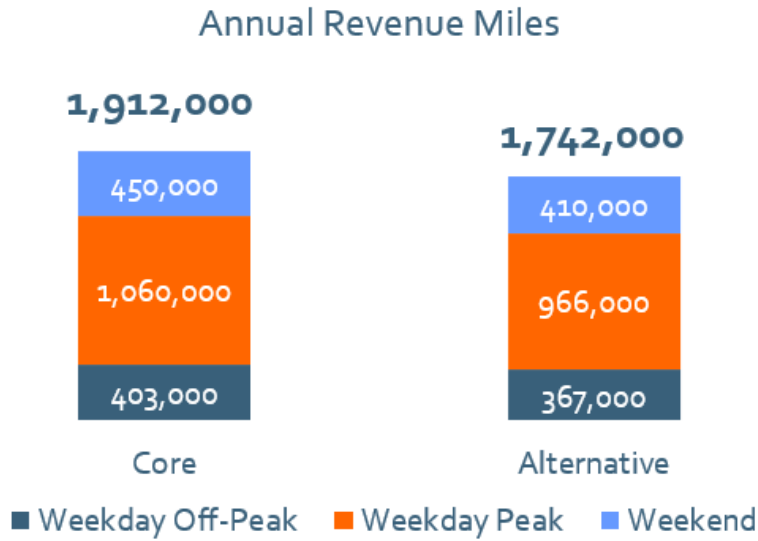


Figure 35. Annual Revenue Miles

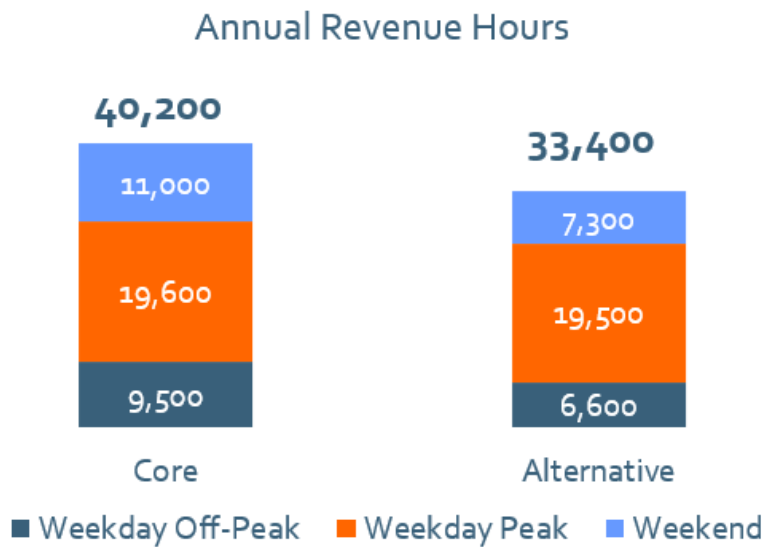


Figure 36. Annual Revenue Hours

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Population and Jobs within a 15-Minute Walk

The following table summarizes the proposed stations and station type as well as the population and employment totals within a 15-minute walk of the potential stations.

Station	Station Type	Population	Employment
Cumberland Parkway	In-Line	2,700	300
Cumberland Boulevard	Off-Line Cumberland Transfer Center	600	27,700
Roswell Road	In-Line	3,100	3,400
	Off-Line Hammond Drive	3,000	6,700
Perimeter	Off-Line (Medical Center Rail Station)	1,100	22,200
	Access Ramp (Perimeter Center Parkway)	800	15,500
	Off-Line (Dunwoody Rail Station)	700	36,300
Shallowford/Georgetown	Access Ramp (Shallowford Road)	6,200	2,700
	Off-Line	5,100	2,500
Doraville	Off-Line (Doraville Rail Station)	1,600	2,600
Northlake/ Tucker	Off-Line (Northlake Mall)	2,000	6,600
	In-Line (LaVista Road Bridge)	1,900	7,900
	Access Ramp (Northlake Parkway)	900	5,000

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FUNDING AND IMPLEMENTATION

The 2018 Top End I-285 Transit Feasibility Study included an initial, conceptual cost estimate for both a rail-based transit system and a high-capacity, rubber-wheel transit system. The study found that the estimated costs for a rail system was significantly higher than a rubber wheel option. The capital costs for the rail option were estimated to be 8 to 10 times more expensive than the rubber wheel option. The major driver for the rubber-wheel transit option being lower than the rail option was the ability for the rubber-wheel option to run within GDOT's Top End I-285 Express Lanes while a rail-based service would require a separate guideway and additional right of way acquisition.

The feasibility study also estimated and compared operating costs between the rail option and the rubber-wheel option. Operation and maintenance (O&M) costs were estimated to be twice as expensive for the rail option compared to the rubber-wheel option. Due to the relatively lower costs and faster delivery time estimated for the rubber-wheel option, it was recommended as the preferred alternative for additional study.

Project costs were updated in 2020 as part of the Pre-Project Development Study. At that time, station costs were estimated to be under \$200M for each of the I-285 East and I-285 West phases, assuming the elimination of the Powers Ferry Station in Fulton County/Sandy Springs. Estimated operating costs (\$7-8 M annually) and vehicle costs (\$10-11 M) were comparable to estimates from Phase 1.

The following discussions highlight the potential funding options to support the capital investment and ongoing operation of the Top End transit system. This section concludes with example scenarios to fund both capital and operating expenses.

Potential Funding Mechanisms

Capital - Federal Funding

Potential funding of the upfront capital costs, as well as the operational cost of the Top End I-285 transit project will likely rely on a combination of local, state, and federal support. The Top End I-285 transit project is positioned to capitalize on the construction of the GDOT MMIP Top End Express Lanes, as transit vehicles will be permitted to utilize the express lanes to maintain timely operations. It is also important to recognize GDOT's latest plans to expand its existing public private partnership program (P3) to increase the role of the private sector to realize greater cost savings that could, in turn be leveraged to potentially fund transit projects. GDOT is using the new private revenue P3 model to increase capacity and user benefits by extending the two Express Lanes in each direction on Top End I-285 from I-20 West to I-20 East. In addition, the new model may provide opportunities to place greater reliance on the private sector to deliver key infrastructure (e.g., BRT access ramps to Express Lanes) as part of the procurement agreement. This would allow the flexibility to pursue other smaller grants and funding opportunities to implement the I-285 Top End transit project.

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There are a range of alternatives to fund capital costs for the Top End transit project. The FTA through Small Starts of the Capital Investment Grant program could provide a substantial portion of the capital costs. State funding through the Georgia Transit Trust could also play a critical role. Local funding will play a crucial role, particularly to provide the required local match for federal funds and could come from sources such as sales taxes, commercial property value-capture taxes and even city and county general fund contributions.

The majority of the federal funds that are currently used for transit capital needs in the Atlanta region are distributed annually by the FTA through several formula programs (e.g., 5307, 5339). Transit operators have also been successful in securing one-time awards through FHWA flex funds and other competitive discretionary grant awards. While the Atlanta region has had some success in competing for relatively smaller federal discretionary grant awards for transit, FTA's Section 5039 Capital Investment Grant (CIG) Program is by far the largest source of federal capital funds, and thus remains a vital component to the comprehensive funding strategy for the Top End I-285 transit project.

FTA Capital Investment Grant

FTA's CIG Program (commonly referred to as "New Starts") is the main funding source for rail and bus expansion projects nationwide. All CIG projects must be evaluated and rated by FTA in accordance with statutorily defined criteria at various points in the development process. The projects must go through a multi-step, multi-year process and receive at least a "Medium" overall rating, in addition to other requirements. CIG Funding is distributed through the following categories:

- **New Starts** projects are new fixed guideway projects or extensions to existing fixed guideway systems with total estimated capital costs of \$300 million or more or are seeking \$100 million or more in CIG funding. The Top End I-285 project is currently ineligible for New Starts because BRT operating on Express Lanes do not meet the statutory definition of a "fixed guideway BRT", which must operate in exclusive lanes or separate right-of-way more than 50% of alignment during peak periods.
 - **Small Starts** projects are new fixed guideway projects, extensions to existing fixed guideway systems, or corridor-based BRT projects with total estimated capital costs of less than \$300 million and are seeking less than \$100 million in CIG funding. Under the current CIG guidelines, the Top End I-285 project qualifies for corridor-based BRT funding under the Small Starts program. However, because the project capital cost exceeds the overall budget requirements for Small Starts, the Top End I-285 project may need to be split into two phases to support two separate Small Starts applications. The phases would need to align with the potential timing of the GDOT Express Lanes. It is important to note the impending infrastructure bill and surface transportation reauthorization that could increase the Small Starts maximum to \$400 million and the federal share to \$150 million. While the cost of the Top End I-285

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project would still exceed the higher Small Starts limit, it would give the project the flexibility to pursue other smaller grants that are less competitive than the CIG program and other funding opportunities.

While Small Starts has a maximum allowable share of federal funding of 80%, more recently, Small Starts funding has averaged 57% per project. As such, a consistent stream of local or state funding is vital to securing the grant. Additionally, local funding commitment plays a key role in the CIG project evaluation process, thus, having a reliable local funding source is essential to the project's eligibility and competitiveness for federal funding.

- **Core Capacity** projects are substantial corridor-based capital investments in existing fixed guideway systems that increase capacity by at least 10% in corridors at capacity within the next five years. The Top End I-285 project is not eligible for Core Capacity since it is not an expansion of an existing system.

Other Federal Discretionary Grants

In addition to CIG funding, the Top End I-285 project could be eligible other federal competitive discretionary grants. However, the magnitude of these funds relative to the total project cost means that a larger CIG grant is still required for implementation. A 20% local match is required to receive these grants. The Atlanta region has been the recent recipient of many of the discretionary grants including the following programs:

- **USDOT Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants (formerly BUILD/TIGER)** support transportation projects that will have a significant local or regional impact. RAISE funds available in FY 21 is \$1 billion and award size ranges between \$5 million and \$25 million. Priorities are given to projects that consider climate change and Environmental Justice communities. In 2018, MARTA was awarded a \$12.6 million TIGER grant for the Summerhill BRT. While Top End I-285 project could be competitive for a RAISE grant, the magnitude of the grant limits its applicability as the potential award amount would make up a relatively small share of the total project cost. Still, opportunities to pursue the RAISE grant to advance other discrete project improvements (e.g., improved access to BRT stations) should be explored.
- **FTA Bus and Bus Facilities Grants provides federal funding through formula allocation (Section 5339 (a)) and competitive grants (Section 5339 (b))** which can be used to replace, rehabilitate and/or purchase vehicles, including vehicle related equipment, and/or to construct bus related facilities. Section 5339 (a) formula funding is allocated based on population and operating statistics. The Bus and Bus Facilities competitive grants available in FY 21 is \$409 billion and the award size ranges between \$600,000 and \$18 million. Projects improving system conditions and reliability, and enhancing access and mobility are given special consideration. In 2020, MARTA was

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- awarded a \$13 million Bus and Bus Facilities grant for the Clayton County Operations and Maintenance Bus Facility. The Top End I-285 project would be eligible to receive both types of 5339 funds to support the construction of a bus maintenance facility and toward the purchase of BRT buses. The higher vehicle revenue miles as a result of the Top End I-285 project would allow the Atlanta UZA will receive a higher allocation of Section 5339 (a) formula funds. Additionally, based on its access and mobility benefits, the Top End I-285 project could be highly competitive for the 5339 (b) grants.
- **FTA Low or No (Low-No) Emissions Bus Grants** support the purchase or lease of zero emission and low emission transit buses and supporting facilities/equipment. Low-No Emission bus funds available in FY 21 is \$182 billion and the award size ranges between \$100,000 and \$7.4 million. Priorities are given to projects that support emission reductions, consistency with local plans, expedited timeline, and serve EJ communities. In 2021, the ATL was awarded a \$5.4 million Low-No Emissions Bus grant to purchase battery electric coach buses to replace diesel buses that have reached their useful life. The Top End I-285 project could be a good candidate to receive a Low-No Emission bus grant to support the purchase of low-emission or alternative-fuel buses. Pursuing Low-No Emission bus grant is worth consideration.
 - **FTA TOD Planning Pilot Grants** provide funding to integrate land use and transportation planning with a new fixed guideway capital investment. FTA has extended program eligibility to any corridor planning study as long as fixed guideway is considered as one of the alternatives. The award size ranges between \$250,000 and \$2 million. In 2015, MARTA and the City of Atlanta were awarded FTA TOD grants of \$1.6 million for the I-20 East heavy rail project and \$500,000 to implement the Beltline land use plan, respectively. Top End I-285 BRT could be eligible for FTA TOD pilot grants since other alternatives in fixed guideway was studied and evaluated as part of the 2019 Transit Feasibility Study.
 - **FTA Integrated Mobility and Innovation (IMI) Grants** fund projects that demonstrate innovative and effective practices, partnerships, and technologies to enhance public transportation effectiveness, increase efficiency, expand quality, promote safety, and improve the traveler experience. In 2020, approximately \$20 million was available through the IMI program. The ATL was awarded \$430,400 in 2019 to develop multi-modal journey planning application. The Top End I-285 project could be eligible to receive an IMI grant by demonstrating innovative approach and use of technology to improve reliability and passenger experience.

FHWA Federal Formula Funds

The FHWA also distributes federal formula funds to state and local governments, including sources that are eligible to be flexed to the FTA to support implementation of transit projects. The federal share for the FHWA formula funding is normally 80%.

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- **Surface Transportation Block Grant program (STBG)** is a versatile federal funding source distributed through the state governments for projects that maintain or enhance the existing condition and function of highway, bridge and tunnel projects, multimodal improvements, as well as transit capital projects. Funding is apportioned to the states by formula. In FY 2020, Georgia's apportionment in FY 2020 was \$401.7 million including Georgia's transportation alternatives program (TAP) set-aside of \$34 million. The Atlanta region typically receives approximately \$80 - 83 million in STBG funds and additional \$7 million per in TAP funds fiscal year. The Top End I-285 project would be qualified to receive STBG funds by through the ARC's TIP process.
- **CMAQ** program funds could be used on transit capital projects in addition to operation assistance as previous noted. The Atlanta region typically receives \$29 million from CMAQ funds per fiscal year. The Top End I-285 project would be qualified to receive CMAQ funds through the ARC's TIP process.

USDOT Transportation Infrastructure Finance and Innovation Act Loan

The TIFIA program is a Federal financial mechanism used to provide credit assistance to implement major transportation infrastructure projects. TIFIA loans allow project sponsors to borrow money at rates significantly lower than market rates help deliver regionally significant projects around the country. The amount of Federal credit assistance is limited to 33% of total estimated project costs. Most recently, Sound Transit made history by being the recipient of the largest package of loan of \$3.84 billion to advance six capital projects in the Seattle region. Due to the large-scale and complexity of the Top End I-285 transit project, it will likely meet the eligibility requirement to receive TIFIA loans. With steep rises in real estate and construction costs in the region and nationwide, a low-cost financing tool like TIFIA loans could play a key role in funding a significant portion of the project.

Federal Infrastructure Stimulus Funds (Infrastructure/Reconciliation Bill)

The Bipartisan Infrastructure Investment and Jobs Act (H.R. 3684) combines surface transportation reauthorization that would replace the FAST Act as well a one-time investment in infrastructure. The nearly \$1 trillion infrastructure bill has significant implications for transit investments in Georgia and nationwide. The legislation contains \$550 billion in new spending, which would increase funding for transit agencies by 65%. Key provisions in the bill with implications for the Top End I-285 project include the following:

- Increased CIG funding (effectively doubled per year) with advanced appropriations through FY 26
- Increased project eligibility for Small Starts from \$300 million to \$400 million with the federal share increase from \$100 million to \$150 million
- Increased federal formula funds for transit by 30%
- Fund RAISE program it at \$7.5 billion over the life of the reauthorization.

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- Additional support for transition to zero-emission electric buses, modernize bus and rail fleets and improve accessibility for seniors and passengers with disabilities.

Capital - Potential State Funding Sources

Georgia Transit Trust Fund

While no state funding is anticipated for operational costs for Top End I-285 transit, there is a significant opportunity for receiving state support for capital costs. The Georgia Transit Trust Fund was established in the 2021 legislation session with the passing of HB 511, providing a new mechanism for the state of Georgia to fund transit. The Georgia Transit Trust Fund is estimated to yield \$30 million a year for capital projects throughout the state. Even before the passage of HB 511, there was precedent for the state to provide funding for BRT within managed lanes in Metro Atlanta, as seen with the 2018 announcement by then Governor Deal of \$100 million state bond funding to fund transit stations for the proposed US 19/SR 400 BRT in Fulton County. The state contribution for Top End I-285 transit is estimated in the proposed budget in this paper as smaller than the US-19/SR 400, at around \$60-70 million.

Non-Excise Tax Funding

GDOT's revenue for roads is primarily derived from an excise tax on gasoline. Per the Georgia State Constitution, the excise motor fuel tax cannot be used to fund transit. But recently, the Transportation Funding Act (2016) and GA HB 170 provided GDOT a number of mechanisms to secure funding for a diverse array of transportation needs beyond funding earmarked for roads. These methods are listed in GDOT's budget as non-excise tax funding. These funding instruments could help fill in the gap between needs and available funding. Non-excise tax funding examples include the following: 1) hotel/motel \$5/night tax, which allocates funding to the GDOT General Fund and must be used for transportation purposes.

In FY 2020/2021, the Hotel Tax Fee collected \$179,341,600, by far the largest source of non-excise funding, contributing 85% of non-excise budget. Other non-excise funding sources include 2) Highway Impact fees, 3) alternative fuel fees and 4) alternative tax credit. These non-excise sources of funding are used to fund General Obligation (GO) Bond debt, intermodal programs, as well as a number of state authorities, such as SRTA, GRTA and The ATL. With the regional and statewide significance of the Top End I-285 transit project, a strong case could be made for state financial support for the project.

The Atlanta-Region Transit Link Authority develops the ATL Regional Transit Plan every two years and each year the ATL's Priority Investment List is submitted to the Governor's Office and General Assembly for consideration based upon the plan. The State can consider funding transit investments through recently created rideshare fee revenue or through the annual state bond program. With strong backing from the ATL, I-285 Top End Transit could be given consideration for State funding through future bond issuances or other revenue sources.

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Capital - Local Funding

County governments and cities should also be able to contribute to the capital costs of the Top End I-285 transit project. Overall, it is important that the Cities have flexibility in selecting the mechanism in which they contribute. An inclusive approach will most likely be the most effective as it will enable the primary stakeholders vested in I-285 Transit's success, the local CIDs, Cities, Counties and State to contribute resources. The mechanism to fund the City and County portion of the investment could be left up to the Cities and Counties. However, it may be difficult for a city or county to commit to a dedicated sales tax stream if there are current city sales tax designations between city and county governments in DeKalb.

Reliable, consistent local sources of funding could open up other sources of funding such as bonds. Thus, when building a funding strategy, vetting, and securing local funds is a critical first step, as strong local funding sources will make the projects more competitive. An exception currently is the GA 400 transit as the State of Georgia committed \$100 million for future BRT stations before securing local funding. If, however, local funding is not secured for the GA 400 transit project, the committed state funds would be jeopardized. This could potentially also jeopardize state support for Top End I-285 Transit. It is likely the State of Georgia would be hesitant to partner with the same local partner Fulton County and provide state funds for Top End I-285 transit project, if local support is not secured. The following describes potential local government funding mechanisms to support capital projects.

Special Purpose Local Option Sales Tax Allowance

One option to raise local funds for Top End I-285 transit could be through SPLOST allocations in unincorporated areas of Cobb County and in portions of DeKalb County. SPLOST funding must be dedicated to capital projects. SPLOSTs are passed with the project lists specified, so Top End I-285 transit could be added to the project list when future SPLOST renewals are considered. In the event that one of the participating counties of Cobb, Fulton and DeKalb passes a TSPLOST, TSPLOST funding could also provide a local funding source for capital costs. (Note: Fulton County is not currently eligible for a regular SPLOST)

A previous phase of I-285 Top End Transit study looked at various sales tax options and revenue sources that could be used to fund Top End I-285 transit.

City-Based Sales Tax

City-based Sales Tax could include 1-cent (or 1%) sales tax increment within the seven cities. The study estimated that the tax would yield (\$59.2M-\$92.5M). While this option provides a considerable amount of revenue, more than enough to cover operation and maintenance costs and provide some contribution toward capital costs, this option is a challenging option for a variety of reasons. In the event a 1% sales tax is passed in DeKalb County, the funding will be used to advance other priority projects in the county, as documented in the 2019 DeKalb County Transit

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Master Plan. Regarding the Fulton County portion of the project, the City of Sandy Springs also faces competing interests for additional sales tax funding, including a station along the proposed GA 400 line.

Limited New Sales Tax

Limited new sales tax to be administered within the Special Service District, a 1-cent sales tax increment for an area within 1/2-mile and 1-mile of I-285 between Cumberland Parkway/Atlanta Road on the west and Northlake Parkway/Tucker on the east. This option would draw revenue from the area that would most directly benefit from the transit system. The previous analysis by Georgia State University found that this structure could raise \$26,690,802 (annually or over X years), more than enough to coverage operation costs, which could then help support a portion of the capital costs. While the option is more likely than a city-wide transit tax dedicated to funding the Top End I-285 transit, it remains unlikely that the counties would agree to partitioning sales tax for dedicated transportation projects outside of a coordinated countywide effort.

Currently there is no legal mechanism for a portion of a county in Georgia to have a special sales tax district. A more likely scenario would be for counties to pass a TSPLOST with a city's receiving a designated portion or pass an additional MARTA penny in DeKalb.

ATL Funding Tax

This tax would function similarly to a TSPLOST, also known as a Transit SPLOST. The Georgia State Legislature passed House Bill (HB) 930 in 2018. This legislation created The ATL (a unified regional transit system) and enabled counties to levy an additional sales tax of up to one penny for transit service through a referendum for 30 years. Under HB 930, either MARTA or DeKalb County can collect the tax and issue debt against it. The DeKalb County Transit Master Plan includes revenue forecast scenarios of a 1/2 penny sales tax with projected revenue of \$1.8-\$1.9 billion and a full penny sales tax with projected revenue of \$3.6-\$3.7 billion. Fulton County is limited to 0.2 cents sales tax under current state law. Since DeKalb County recently passed its first regular SPLOST in 2018, there has been minimal public discussion regarding an additional Transit SPLOST.

Local Municipal Bond

As individual cities can borrow funds to meet operating expenses and to finance capital expenditures, bonds could play a role in financing the I-285 Top End transit system. The cities would be required to hold a referendum prior to issuing general obligation debt for the transit system. This debt is backed by the full faith and credit of the city. The bond is typically repaid through a dedicated millage rate or from a sales tax such as SPLOST funds, if a SPLOST was approved in conjunction with the general obligation debt. Revenue bonds are repaid solely from specific revenue generated by public works facilities purchased or constructed with the bonds and, by law, are not debts of the municipality and not applicable here. The borrowing of funds is subject to numerous legal restrictions,

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procedures, and requirements. Voter approval is not required for temporary loans, revenue bonds, certificates of participation, or multiyear installment purchase agreements.

Value Capture Tax

While a sale tax and subsequent bonding is a prominent way to fund transportation projects in Georgia another mechanism less frequently used locally but used with great success in cities throughout the world, is a value capture tax.

Tax Allocation Districts / Special Service Tax District

Georgia's Redevelopment Powers Law was adopted by the General Assembly in 1985 and provides local governments (cities and counties) the authority to sell bonds to finance infrastructure and other redevelopment within a specially defined area, a tax allocation district or TAD. The bonds are secured by a "tax allocation increment" which is the increase in the property tax revenues resulting from redevelopment activities that occur. As public improvements and private investment take place in a TAD, the taxable value of property increases. The city/county collects those revenues, putting the increased increment from new investment into a special fund to pay off bonds or loans that financed public improvements in the district. TAD financing serves as the basis for the Special Service District Value-Capture, but where the increasing in property values contribute a steady stream of funding.

Local Business Contribution

A local business contribution fund could be captured through the use of a Special Service District Value-Capture (Commercial) and 1-mill property tax increment for an area within 1/2-mile and 1-mile of I-285. This commercial only value-capture has the potential to yield \$6.8 million annually.

Operations – Local Funding

There are a number of alternatives to fund operational costs for the Top End transit project. While funding for operations will likely come from a range of sources, the sources will largely be local, including potential MARTA funding, a commercial value-capture tax, advertising, and farebox recovery. Federal funding for operations in large metropolitan urban areas is limited.

Several local funding options may be considered beyond the existing MARTA sales tax. While several of these options may be considered controversial, they are worth a more detailed examination.

Metropolitan Atlanta Rapid Transit Authority

Much of the proposed Top End transit system falls within the current MARTA service area, and thus a portion of the O&M costs could be funded through the MARTA 1% sales tax. The northern portions of Fulton County and DeKalb County contribute to MARTA through the original 1% sales tax. Admittedly, one of the challenges of the I-285 Top End transit route is the multi-jurisdictional nature of

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the route, since in addition to running through Fulton and DeKalb Counties, the proposed route runs into Cobb County, which is not part of MARTA's service area.

In the funding option presented above, this could potentially consist of \$2-3 million a year, since MARTA funds would not cover the Cobb County portion of operating costs and federal funding and farebox recovery could provide the remaining portion. There is also precedent for proposed BRT projects in the planned managed lanes in northern Metro Atlanta to received operational support from the original 1% MARTA sales tax. In 2018, Fulton County negotiated a commitment from MARTA to fund the GA 400 BRT using MARTA's existing operating funds.

Commercial Property Tax

One example source of funds would be local funding through a Special Service District tax on commercial property. This approach is similar to a CID model but with a different proposed boundary. This funding source could be reserved for capital costs or split between operation and capital costs. In the event that this source is divided between capital and operational costs, a relatively small portion could be reserved for operational funding, this proposed Special Service District Commercial Only (non-residential) would include a 1-mill property tax increment (or more) for an area within 1-mile of I-285 between Cumberland Parkway / Atlanta Road on the west and Northlake Parkway/Tucker on the east, excluding residential (single-family, duplex, and up to 4 units per building) properties. The commercial only value-capture option is projected to yield \$6.8 million annually. This option will be controversial and would be in direct competition with the CIDs in the corridor.

Residential Property Value Capture

The previous study also explored the option of including residential properties in the Special Service District. But for a number of reasons, including residential properties in the tax district or any tax district may not be judicious. Furthermore, in 2018 the Georgia General Assembly passed H.B 820 and the corresponding affirmative statewide referendum, which capped residential property tax increases at 3% in Fulton County and 2.6% in the City of Atlanta. As a point of reference, taxing residential property was not included in the City of Atlanta along the BeltLine. Only commercial properties are being taxed in the new Special Service District Value Capture to complete the BeltLine loop. Thus, it is unlikely that residential property tax increases would be a successful option. It is important to note, however, that a residential property-based tax such would spread out the cost to a more manageable level.

Additional Sales Tax

Another local funding option included in the initial study examined additional sales taxes, both within the Special Service District and the cities as whole. These options are less viable as they prescriptively add additional sales taxes beyond the current MARTA penny tax to the cities and county. It will be

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important to provide the cities with flexibility in how they source the contribution funds. This will be further discussed later in this study in the local portion of the capital costs.

Fare Revenue

The 2019 study estimated a 30% farebox recovery. This post-Covid-19 pandemic study projects a more conservative 25% farebox recovery. Even at 25% farebox recovery, the collected fares will contribute a substantial portion to the operation and maintenance costs of the project.

Advertising Revenue

In addition to fares, many transit agencies use advertising to generate additional revenue. Transit advertising can include advertising inside and on the exterior of vehicles and at transit shelters. While ridership has been declining nationwide, advertising revenue has been growing steadily over the years, according to a 2018 study by American Public Transit Association (APTA). Digital advertising, including the potential to leverage onboard digital displays as a revenue-generating resource, should be explored to help offset the long-term operation and maintenance costs of the project.

Operations - Federal Funding

A major transit investment along Top End I-285 would require a sustainable local or state funding source to support the ongoing operating and maintenance expenses. For large transit agencies operating in urbanized areas, most federal funds (particularly formula grants) are limited to capital expenses and typically not available to support most operations. Exception is when Congress distributed COVID-19 emergency relief funding (e.g., Atlanta Rescue Plan) based on traditional suballocation formula to support transit operations during the pandemic. While the Atlanta region received \$711 million in total COVID-19 emergency relief funding to help with operating expenses, these funds will not be available by the time the Top End I-285 transit project is implemented. With that said, there are a few Federal Transit Administration (FTA) and Federal Highway Administration (FHWA) funding programs that are eligible to offset some of the operational costs of the transit project.

FTA Section 5307 Urbanized Area Formula Grant funds are apportioned to urban areas with populations of 200,000 based on population and operating statistics reported to National Transit Database (e.g., vehicle revenue miles, passenger miles, etc.). These funds can be used to finance capital and planning projects as well as provide certain operating assistance. Transit agencies can use 5307 funding for "preventative maintenance," which means that 5307 can be used for any operating expense except for labor and fuel.

Section 5307 Bus Tier: Atlanta UZA will receive a higher allocation of 5307 funds with the implementation of Top End I-285 Transit as the portion apportioned on the basis vehicle revenue miles will grow in proportion to the service provided by the Top End I-285 project.

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FHWA Congestion Mitigation and Air Quality (CMAQ) funds are eligible to be “flexed” (transferred) to the FTA for use on transit capital projects and operation assistance (transit service start-up operation). CMAQ funds are distributed to state and local governments to help nonattainment and maintenance areas meet the requirements of the Clean Air Act. CMAQ funding can be applied to any project included within the ARC’s TIP that aims to reduce congestion and thereby improve regional air quality.

The Atlanta region typically receives \$29 million from CMAQ funds per fiscal year. Top End I-285 transit is eligible to receive CMAQ funding to help support the first three years of operations, however, the allotments are minor compared to other federal sources relative to the cost of the project. A long-term, sustainable solution for operating assistance is still needed.

Example Funding Scenarios

Capital

Capital costs for I-285 Top End could come from a range of sources, including Federal and State government, as well as from County and City governments via SPLOST and TSPLOST allocations, as well as a potential Value-Capture Tax.

Table 16. Potential Capital Funding Scenario

Capital Funding Source	Capital Funding Source:	Percentage of \$500 million budget:
Federal Funding	\$150 million (Small Starts) + \$10 million (vehicle) million = \$160 million	32%
State Funding	\$60 – 70 million	14%
City/County Contributions: (Special Service Sales tax, SPLOST/TSPLOST/General Fund)	\$10 million/annually for bond payments of \$170 million	34%
Additional Local Funding – Value Capture Tax (Commercial Only)	\$6 million/annually for bond payments of \$100 million	20%
Total Capital Funding:	\$470-500 million	100%

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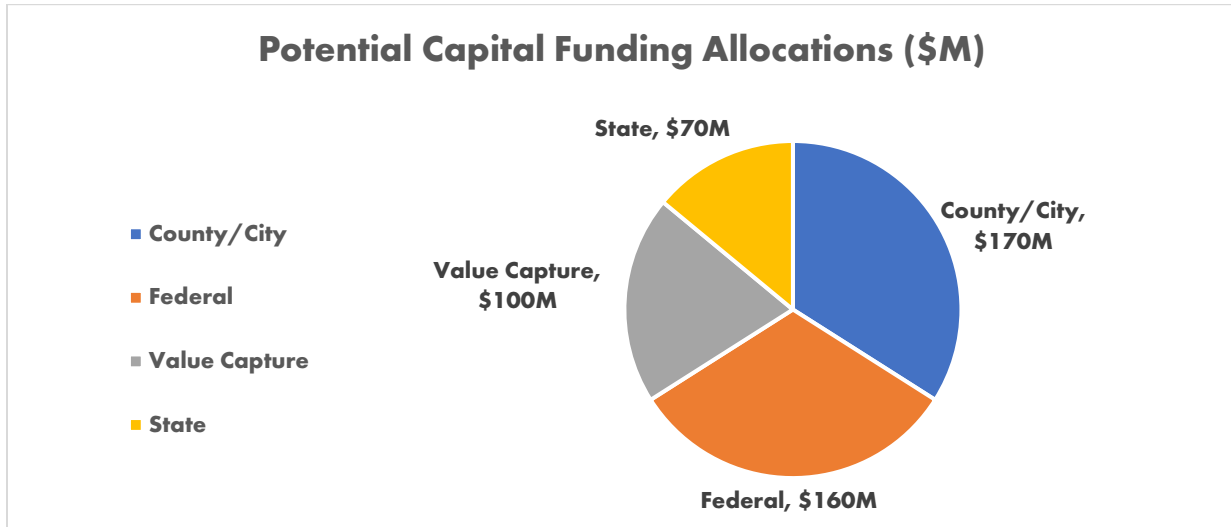


Figure 37. Potential Capital Funding Allocations

Operations

As stated above, annual operating costs for the I-285 Top End Transit System are estimated at approximately \$8M per year (based on the previously completed study). Six potential funding sources and potential contributions are outlined below.

Table 17. Potential Operation Funding Scenario

Operating Funding Source	Operational Funds:	Percentage of \$8 million budget:
MARTA Fulton & DeKalb original 1 penny sales tax	~ \$2-3 million	25% - 37.5%
Cobb County MARTA tax equivalent	~ \$1 million	12.5%
Additional Local Funding – Value Capture Tax	Up to \$1m	0 - 12.5%
State Funding	0	0%
Federal Funding	~ \$2 million	25%
Farebox Recovery:	~ \$2 million	25%
Total Operation Funding:	~ \$8 million	100%

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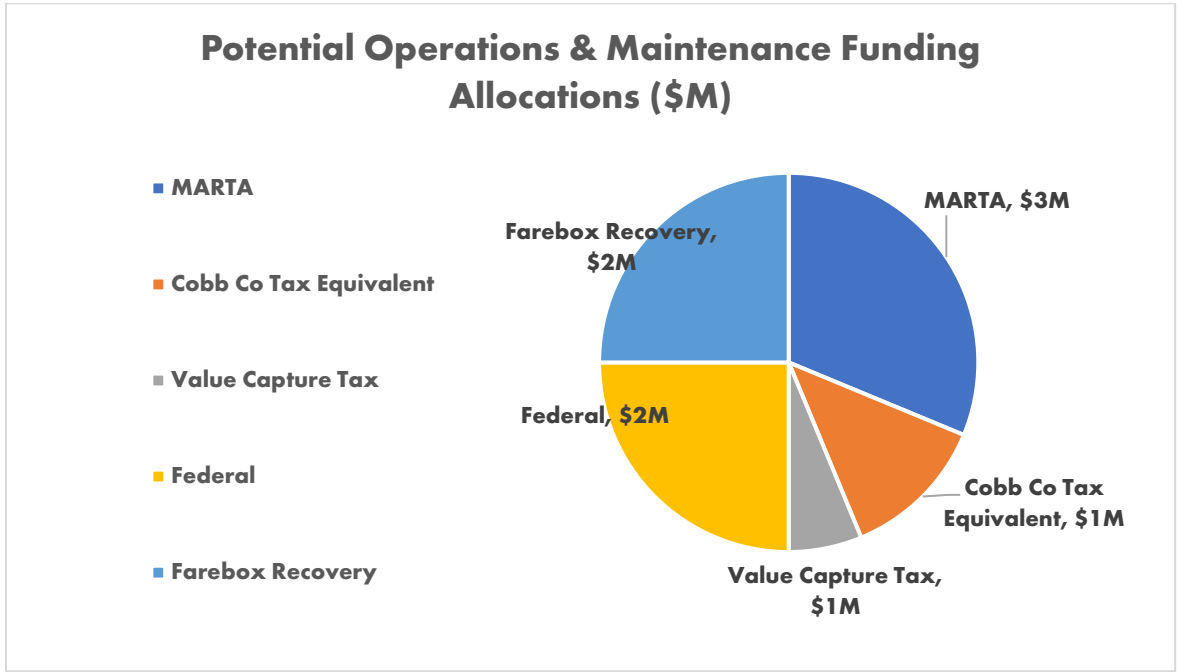


Figure 38. Potential Operations & Maintenance Funding Allocations

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NEXT STEPS

Officials from MARTA, the ATL, DeKalb County, Fulton County, Cobb County, and Gwinnett County have agreed to a memorandum of understanding identifying over \$16 Million in funds to continue design of the Top End Transit initiative. MARTA will take lead responsibility for procurement of the study team for the next phase and manage the study and implementation effort in collaboration with the other partners as outlined in the Memorandum of Understanding. This regional coordination is a critical first step in securing funds and implementing this transit project. Technical next steps include the finalization of station locations, configurations, operating plans, and refining ridership estimates. Current plans by GDOT show potential to open the transit line in 2028 in DeKalb County and 2032 in Fulton and Cobb Counties.

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APPENDIX A – EXISTING CONDITIONS REPORT FOR SELECT STATIONS

I-285 TOP END RAPID TRANSIT SEGMENT STATION PLAN

Existing Conditions

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Introduction

While consideration of transit across the Top End of I-285 has been a point of discussion and debate over the last 20 years, a feasibility study was initiated by the Mayors of seven cities between Tucker in DeKalb County on the east to Smyrna in Cobb County on the west in the summer of 2018. The feasibility study was designed to evaluate the potential to operate transit within or alongside the Georgia Department of Transportation's (GDOT) Major Mobility Investment Program (MMIP), which will construct a series of tolled express lanes from I-20 east to I-20 west and connect to express lanes along GA 400, I-75, and I-85.

The 2018 study concluded that a rubber-wheeled transit system utilizing the GDOT's planned I-285 Express Lane system is the most feasible, cost-effective option for a Top End Rapid Transit System. The study also identified potential station areas, evaluated the potential transit market, and estimated the capital and operational costs of a rubber-wheeled transit system.

Building on the 2018 feasibility study, a Pre-Project Development Study was completed in the summer of 2020 that conducted a travel time analysis, forecasted potential ridership, and updated the capital and operational costs for the project.

Stemming from the 2020 Pre-Project Development Study and in coordination with the recently completed DeKalb County Transit Master Plan, MARTA has taken a lead to further define the Top End transit system and stations within DeKalb County, including four stations that were part of the Top End feasibility studies; Perimeter, Shallowford, Doraville, and Northlake/Lavista; and four additional stations between Northlake and Covington Highway.

The top end partners then approached the newly created Atlanta-region Transit Link Authority (ATL) to assist with development of the system and three stations west of GA 400 in Fulton and Cobb Counties (Roswell Road, Cumberland Boulevard, and Cumberland Parkway) and coordination of the inter-county effort. Figure 1 below provides a map of the project extents for both Top End projects.

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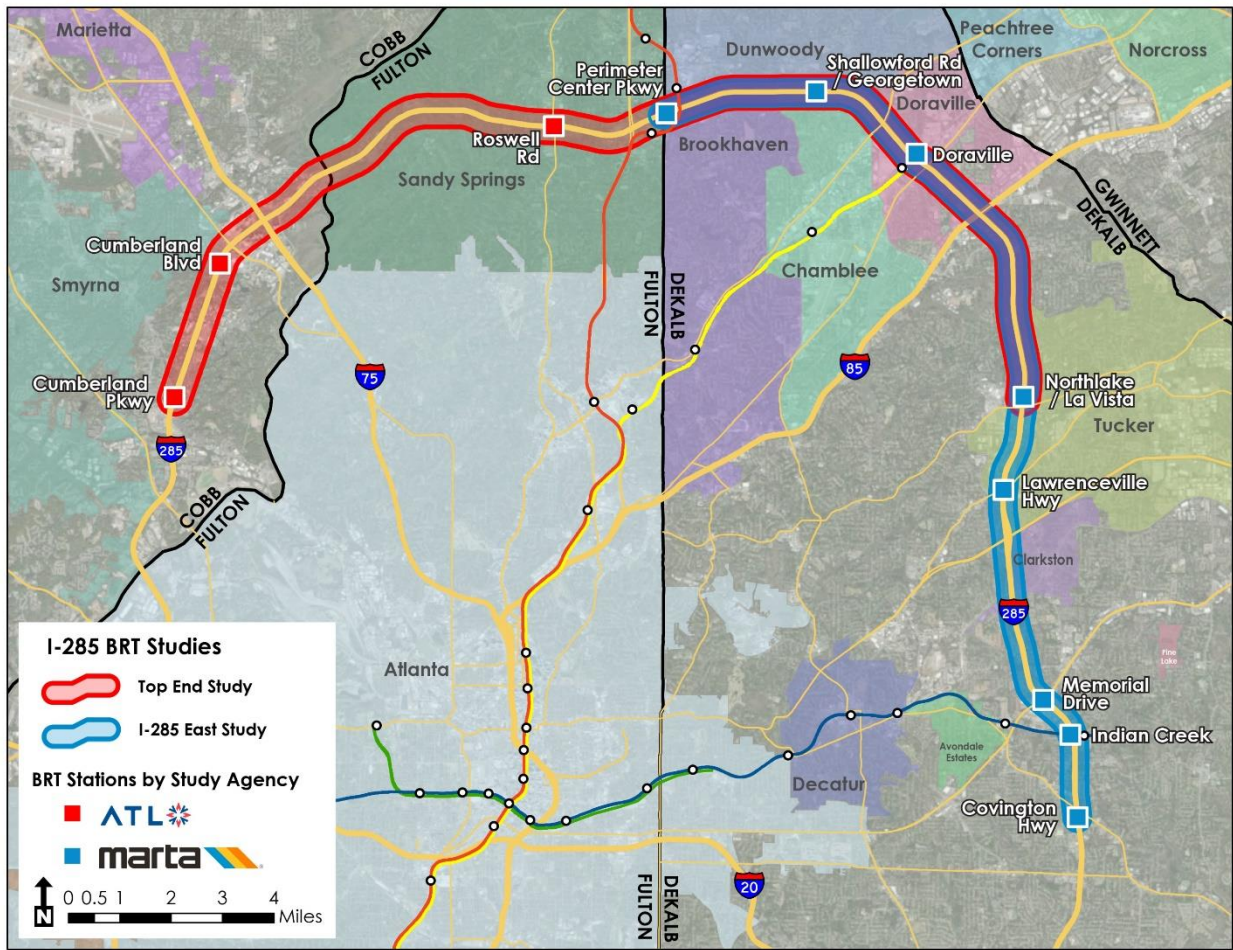


Figure 1: I-285 Top End Rapid Transit System Extents

This memorandum provides a summary of existing conditions for the three Fulton/Cobb station areas including a review of each potential station area, previous plans/studies, demographics and market conditions, and transportation systems.

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Station Area Overviews

This section provides a brief overview of the three station areas examined as part of this plan. The station area is generally defined as the area within one to one-half mile of the interchange where each proposed station will be located.

Roswell Road

The Roswell Road station area is located just to the west of the interchange of SR 400 and I-285, shown in Figure 2. This location is the single station proposed within the City of Sandy Springs and Fulton County. The station area is along a major commercial corridor within Sandy Springs along Roswell Road. The north-south Roswell Road corridor is a defining feature of the station area.

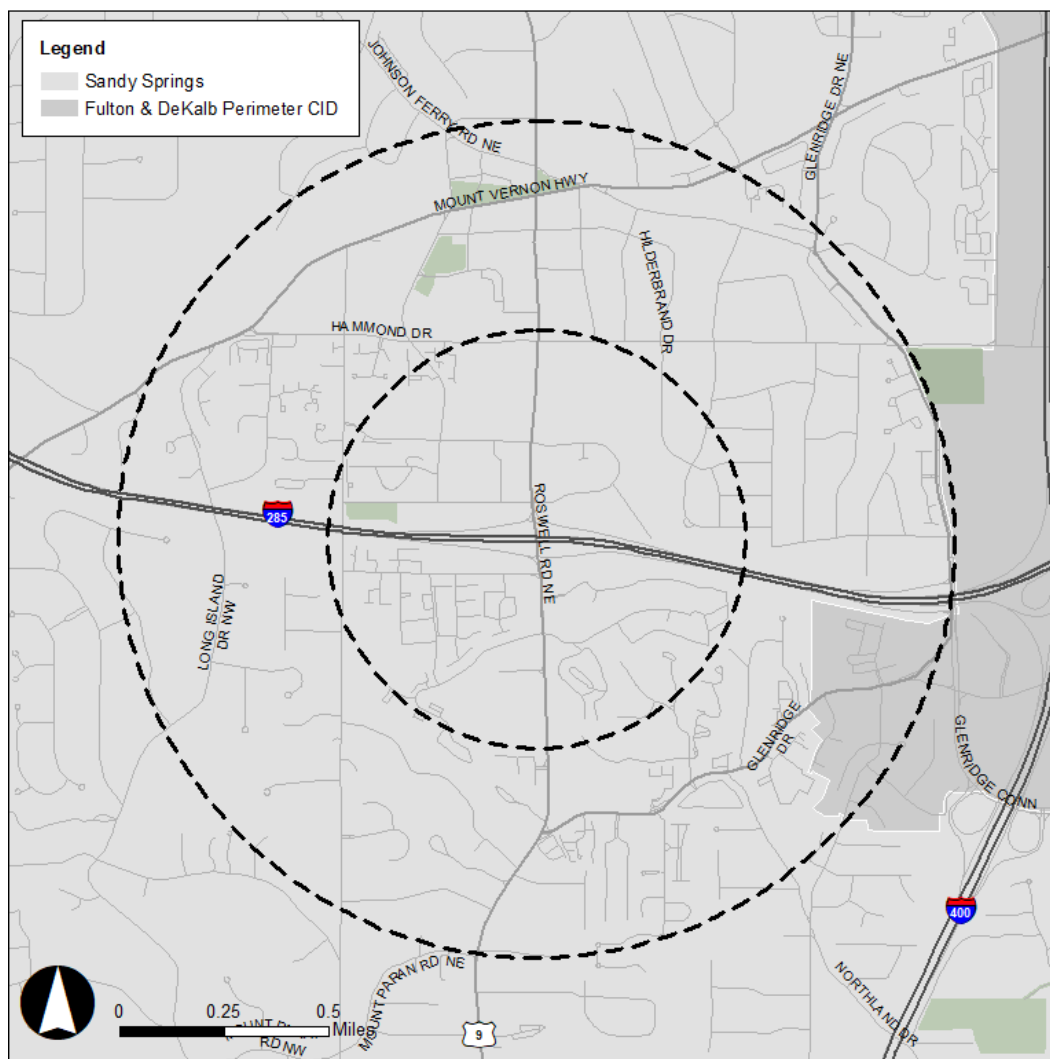


Figure 1: Roswell Road Station Area

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The Roswell Road corridor at I-285 is a mix of retail and multifamily. Legacy development patterns are garden style apartment buildings and traditional shopping centers with outparcels. More recent development reflects a more urban character, with buildings oriented to Roswell Road and smaller block sizes consistent with the framework established in the Roswell Road Small Area Plan. Suburban single-family neighborhoods surround the corridor's commercial and multifamily development. The existing land use pattern is depicted in Figure 3.

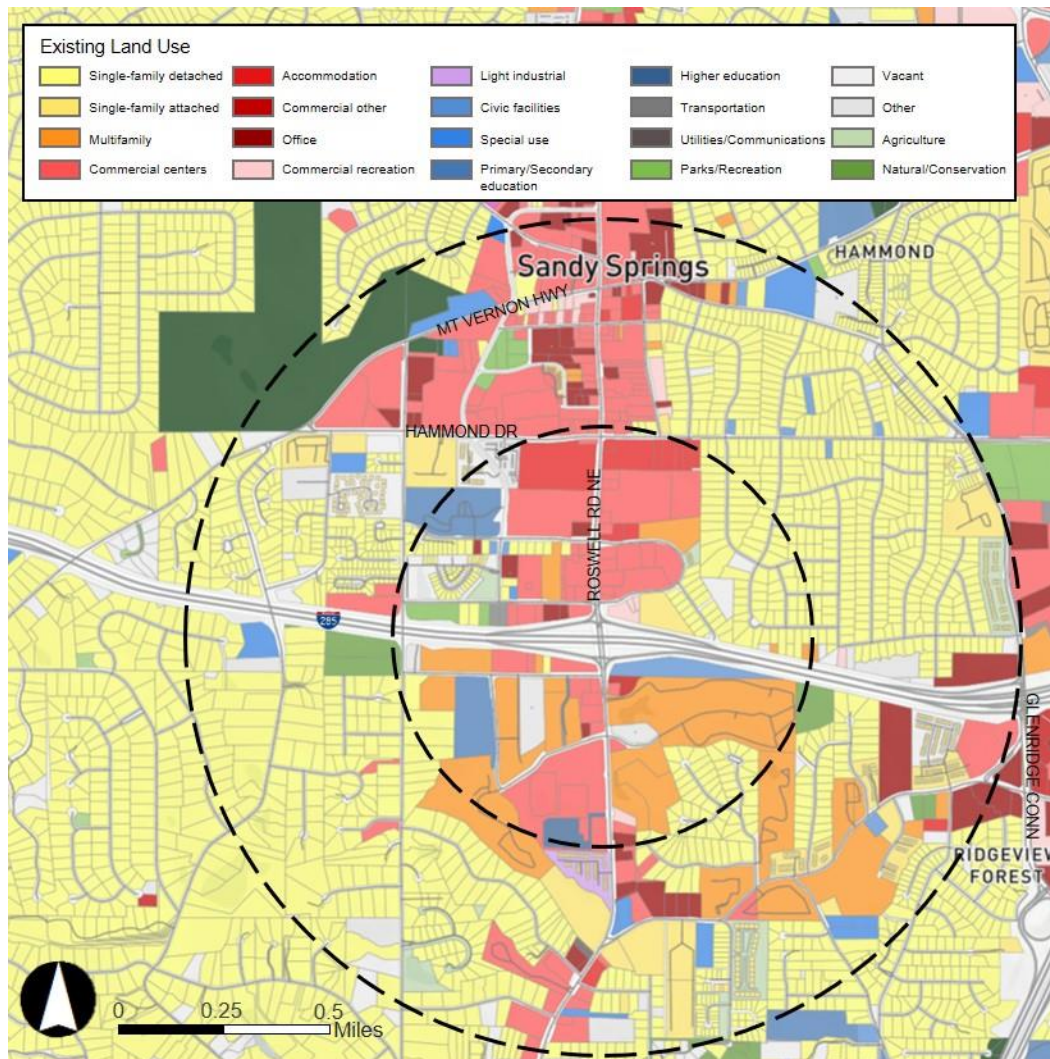


Figure 3: Existing Land Use - Roswell Road Station Area

The Next Ten Comprehensive Plan for Sandy Springs, envisions Roswell Road as a “pedestrian-friendly urban boulevard”. The corridor is anchored by the City Springs district north of I-285, which encourages and facilitates redevelopment of the corridor into a more dense, walkable urban environment. South of I-285, the future land use

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policy encourages a mix of mixed-use retail and urban neighborhoods. Existing single-family neighborhoods are preserved through the Protected Neighborhood designation. The Future Land Use Map for the Roswell Road station area is shown in Figure 4.

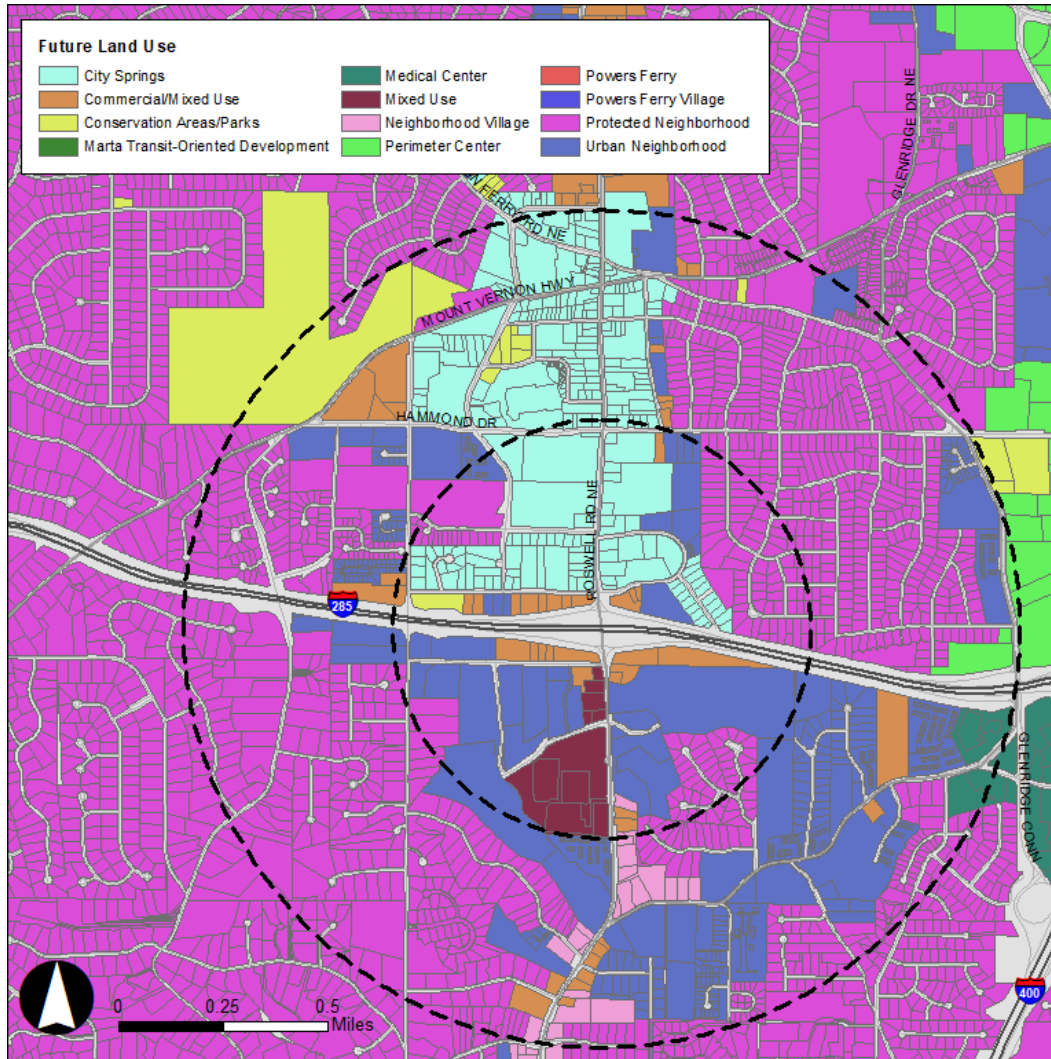


Figure 4: Future Land Use - Roswell Road Station Area

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Cumberland Boulevard

The Cumberland Boulevard station area is located to the west of the I-75/I-285 interchange and within the Cumberland Community Improvement District (CID) near the City of Smyrna. The Cumberland area is one of the largest job centers in the Metro Atlanta region not served by a high-capacity transit service. In addition to the large concentrations of employment, the station area also contains Truist Park, home of the Atlanta Braves, the Battery development and Cumberland Mall. Figure 5 presents a map of the Cumberland Boulevard station area.

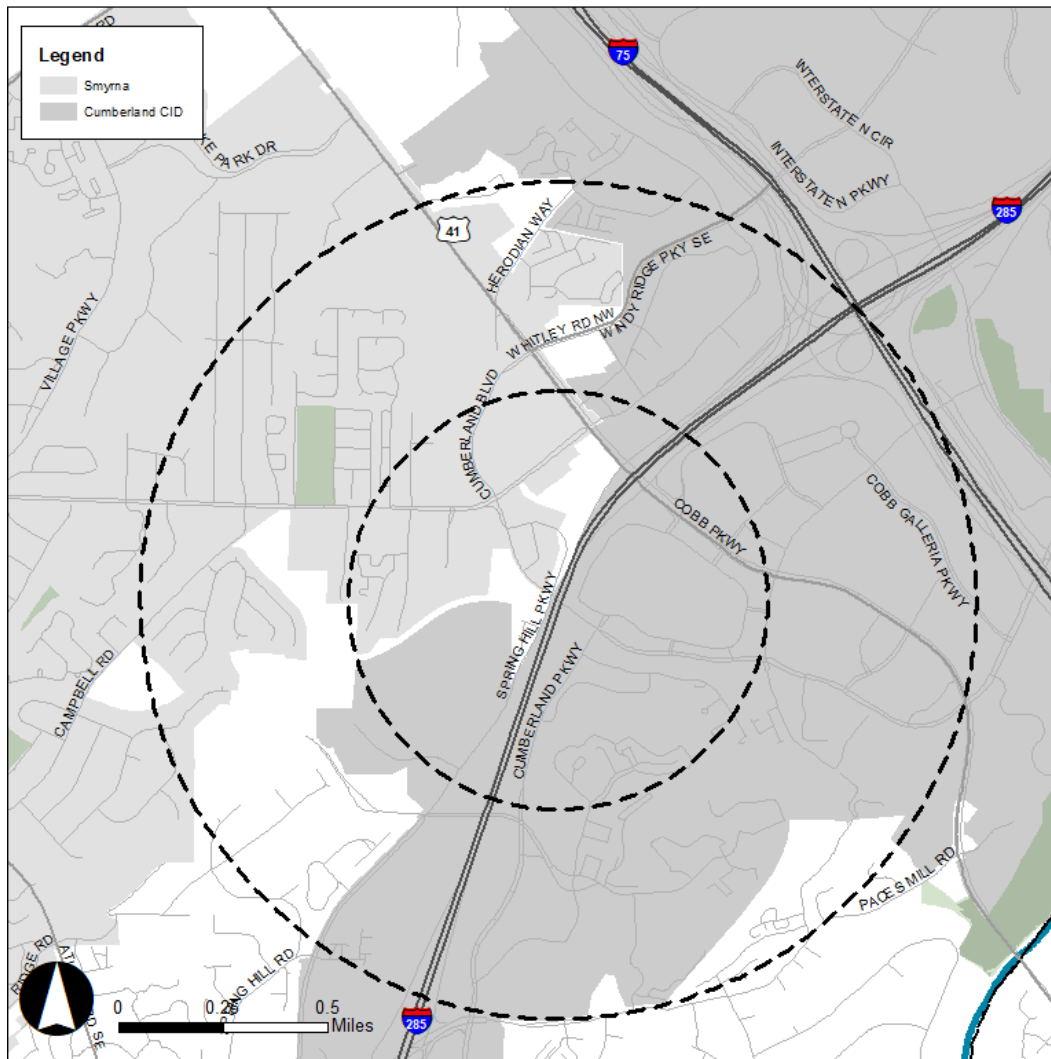


Figure 5: Cumberland Boulevard Station Area

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The Cumberland Boulevard station area is characterized by regional retail and entertainment and multifamily uses. Cumberland Mall is located south of I-285 and along the north side of Cumberland Boulevard. Galleria Center, a meeting and convention center, is located across Cobb Parkway from the mall. North of I-285 and northeast of Cobb Parkway, The Battery includes a mix of restaurant and entertainment uses and Truist Park. A series of pedestrian bridges connects the three areas, as Cobb Parkway is generally not pedestrian friendly. The area south of Cumberland Boulevard is primarily garden style apartment buildings. Existing land use within the Cumberland Boulevard station area is depicted in Figure 6.

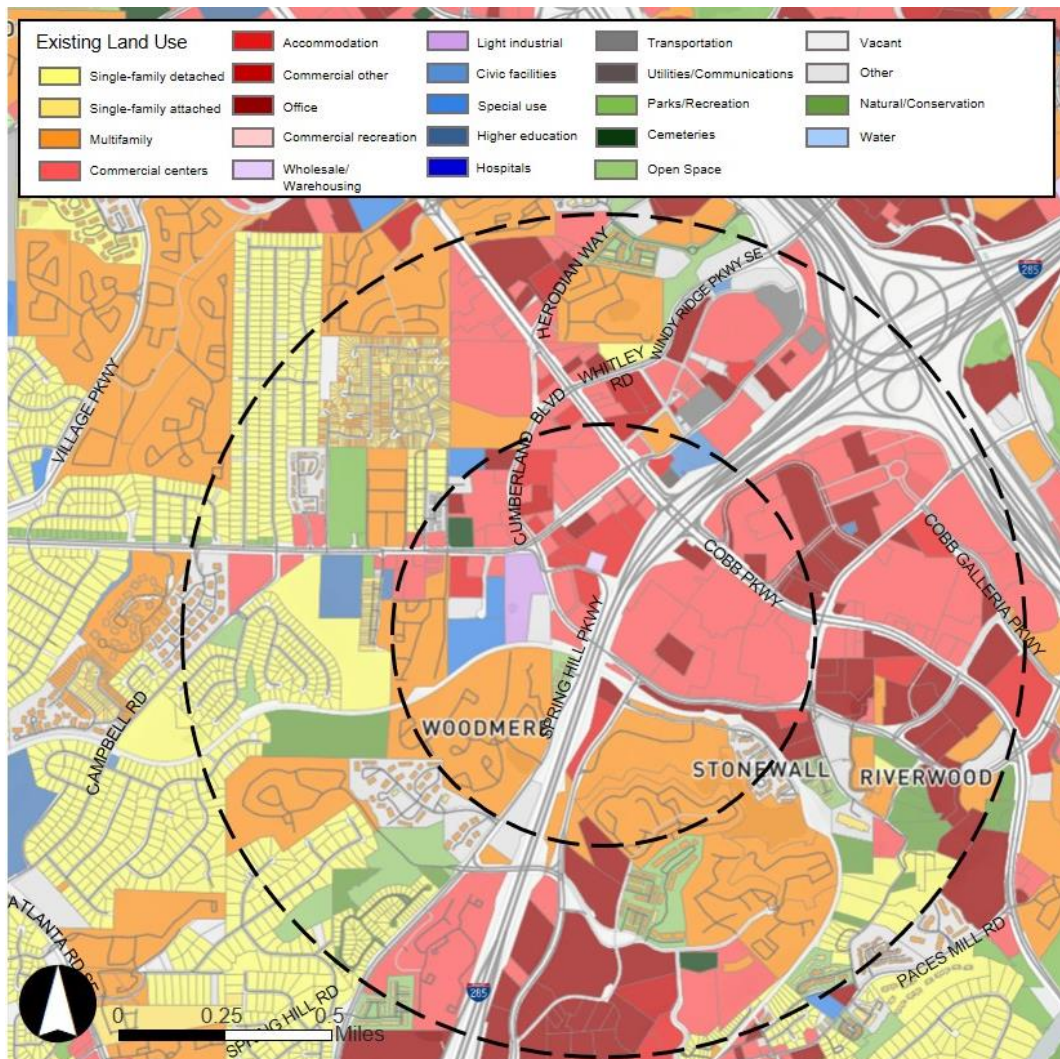


Figure 6. Existing Land Use - Cumberland Boulevard Station Area

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Future land use policy in the area is guided by the Cobb County and Smyrna comprehensive plans. Both plans seek to reinforce the regional destination through the Regional Activity Center designation as Cobb’s County Highest Intensity Character Area. The Future Land Use Map for the Cumberland Boulevard station area is shown in Figure 7.

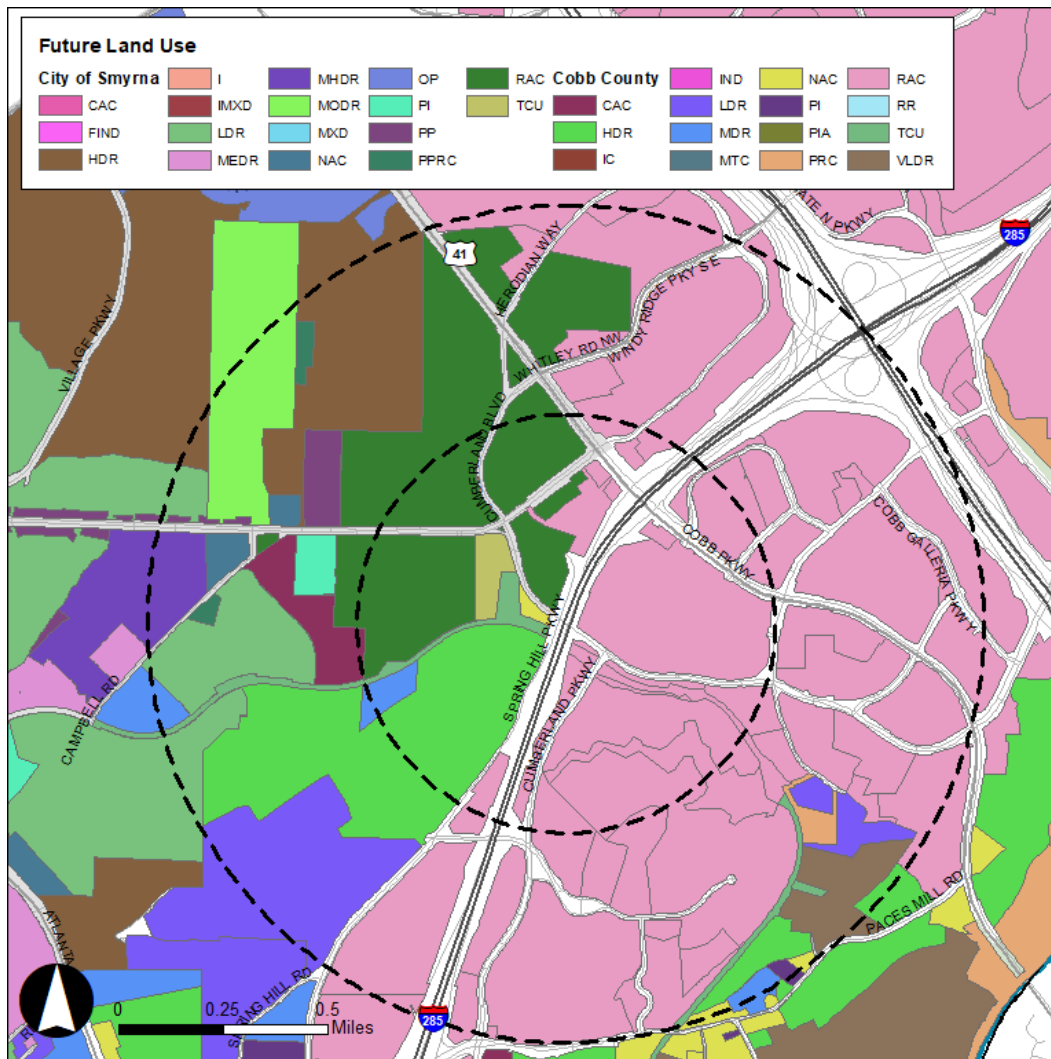


Figure 7. Future Land Use - Cumberland Boulevard Station Area

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Cumberland Parkway

The Cumberland Parkway station area is located along the west side of I-285 near the southern portions of the City of Smyrna and the southern extent of the Cumberland CID. Activity in the Cumberland Parkway station area is less concentrated compared to the Roswell Road and Cumberland Boulevard areas but includes key roadway connections between Cobb County, Smyrna, and the City of Atlanta along Atlanta Road and South Cobb Drive. Figure 8 presents a map of the Cumberland Parkway station area.

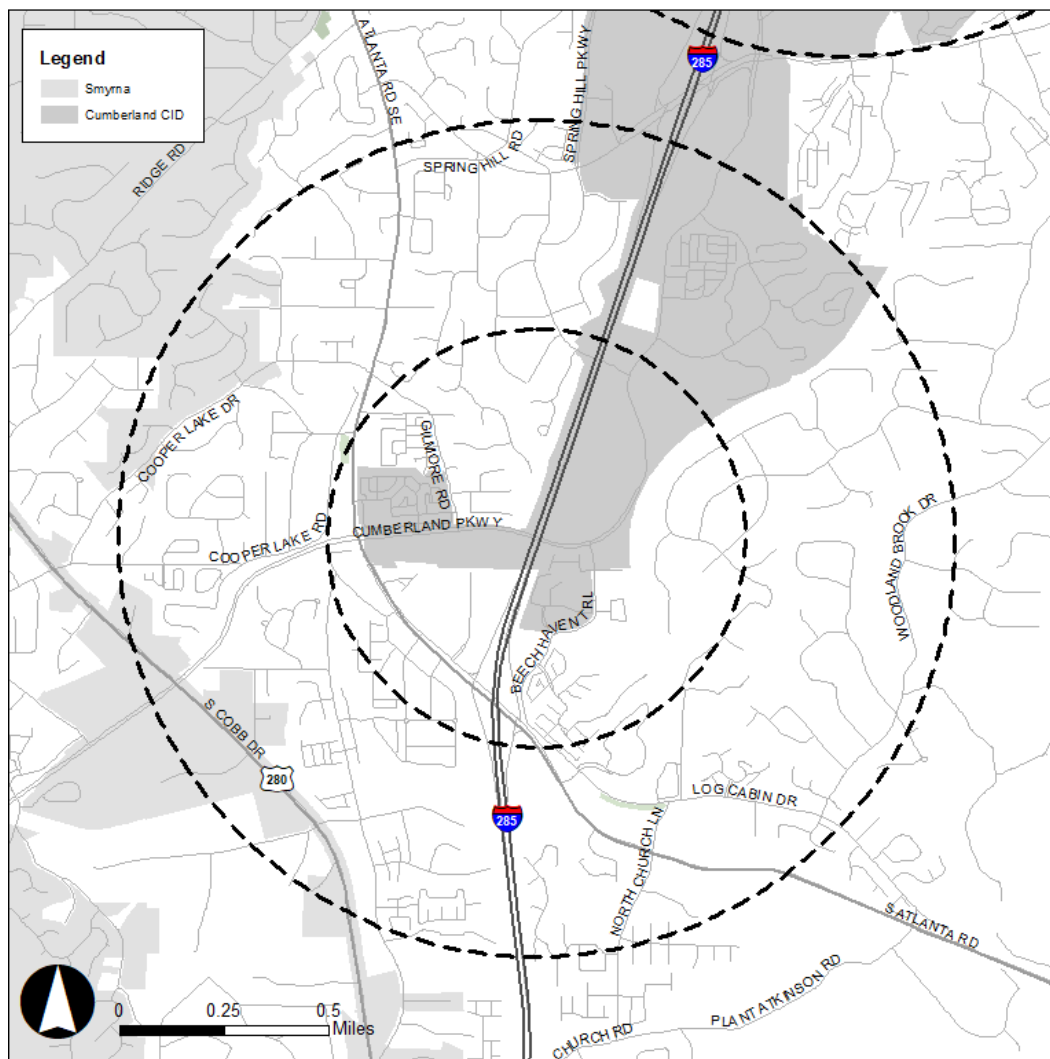


Figure 8: Cumberland Parkway Station Area

The Cumberland Parkway station area is surrounded by a mix of suburban single-family neighborhoods and garden style apartment developments. The area along the south side of the Cumberland Parkway is undeveloped and adjacent to the district's commercial and office centers. Cumberland Parkway is an arterial street with little

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development facing the corridor as most development is served by local and collector roads. Existing land use within the Cumberland Boulevard station area is depicted in Figure 9.

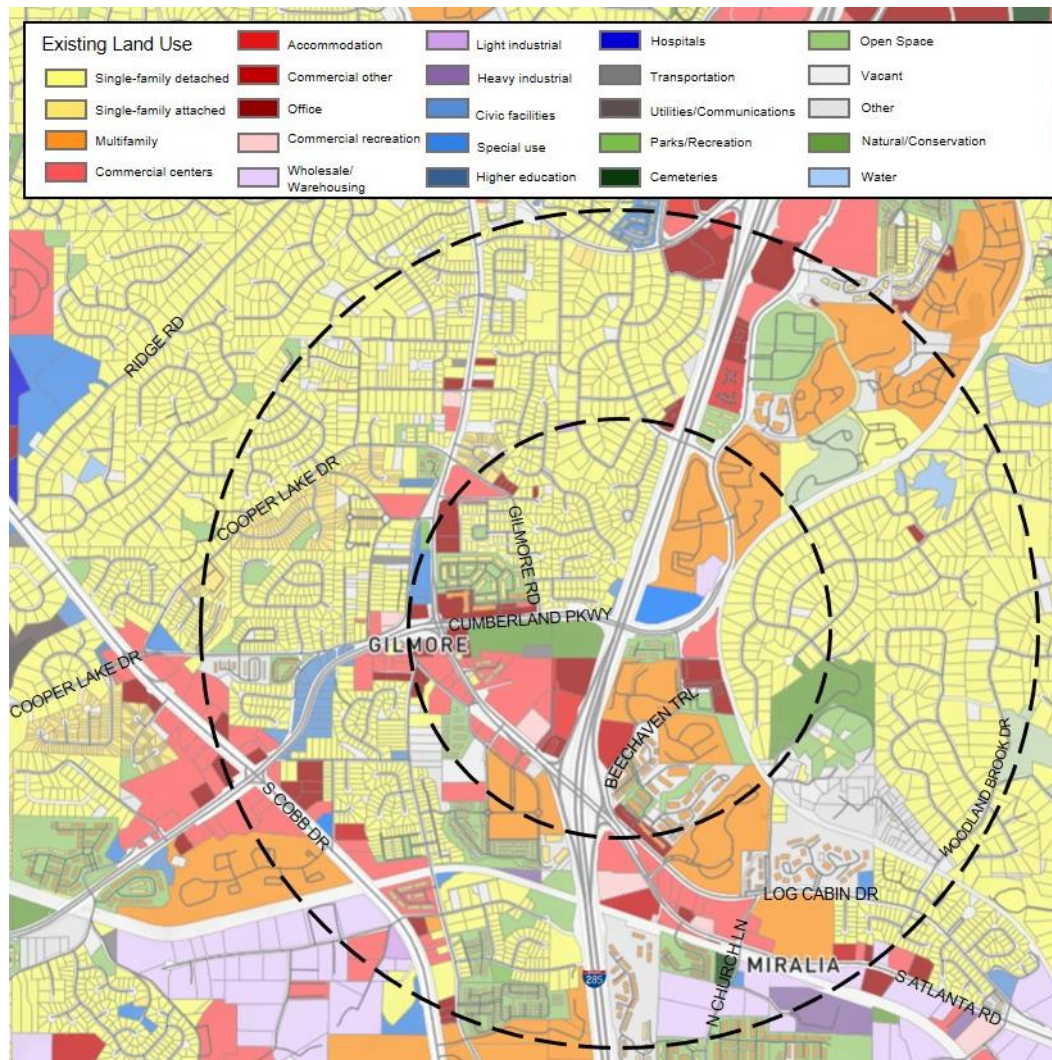


Figure 9: Existing Land Use - Cumberland Parkway Station Area

Future land use policy is guided by the Cobb County and Smyrna comprehensive plans. East of I-285, Cobb County's future land use policy seeks to transition the Cumberland Parkway corridor to a more regional destination orientation through the Regional Activity Center designation. West of I-285 and south of Cumberland Parkway, land use policy shifts to local orientation through the Neighborhood Activity Center designation. Existing multifamily uses are reinforced through the Medium Density Residential and High Density Residential designations, while existing single family areas are reinforced

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through the Very Low Density Residential designation. The Future Land Use Map for the Cumberland Boulevard station area is shown in Figure 10.

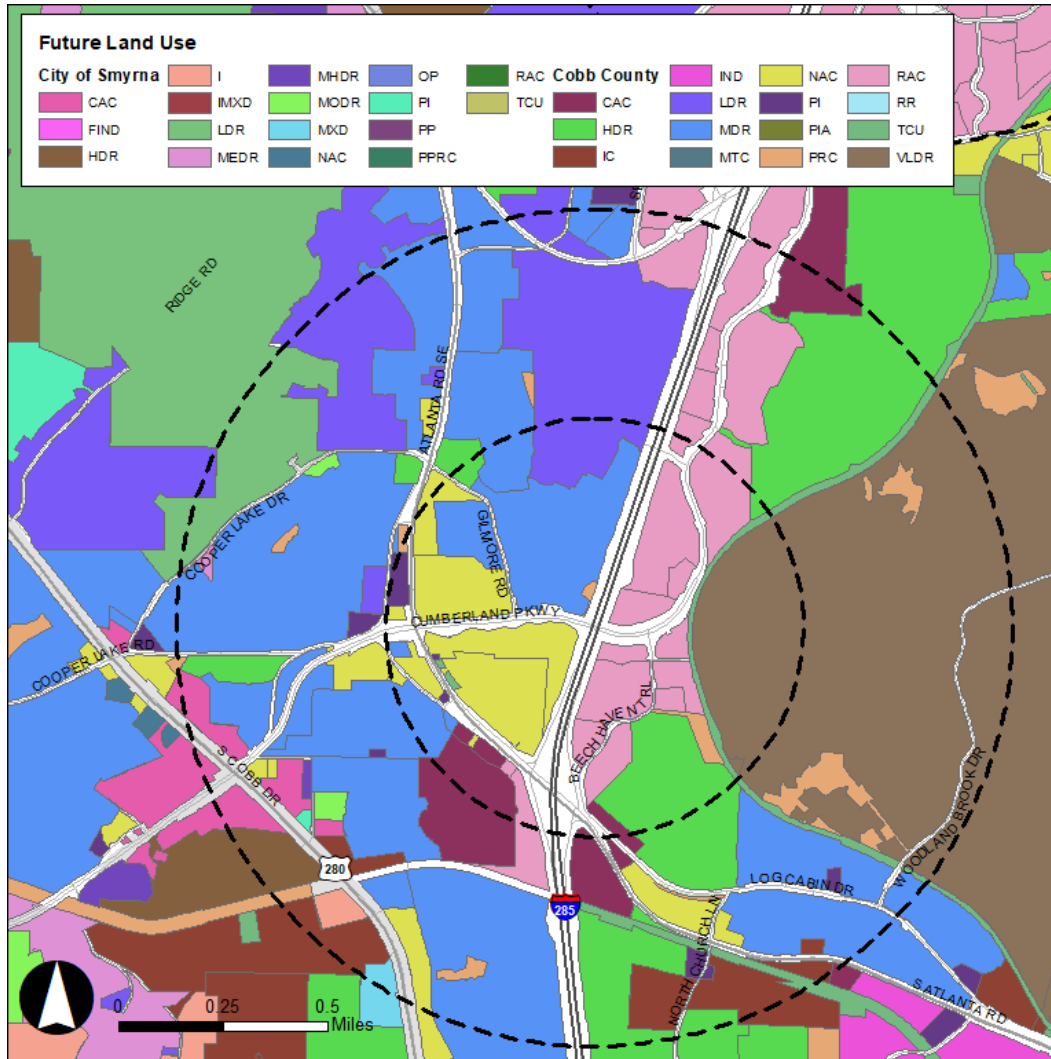


Figure 10. Future Land Use - Cumberland Parkway Station Area

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Previous Studies

To provide context for the I-285 Top End Rapid Transit Segment Station Plan and to ensure that proper consideration is given to previous studies and existing plans, a review of previous projects, plans, and studies was conducted. This previous studies review includes the first two phases of this study, the concurrent plan for the east half of the project, and studies completed within each of the station areas.

Full Project Extents

The I-285 Top End Rapid Transit Segment Station Plan is the third phase of a study examining transit along the Top End of I-285. In addition to the first two phases, the plan is being completed concurrently with the Top End East Project that includes the stations within DeKalb County.

I-285 Top End Rapid Transit Feasibility Study

Completed in the summer of 2018, the I-285 Top End Rapid Transit Feasibility Study examined the possibility of transit along the Top End of I-285 from the City of Tucker in DeKalb County to the City of Smyrna in Cobb County. The study compared a rubber-wheel based system versus a rail-based high capacity transit within or alongside the Top End express lanes being constructed by GDOT. The study also evaluated special service district models and revenue potential to fund the project. The study concluded that a rubber-tired system using the GDOT express lanes would be far less expensive than a rail-based system and yield similar ridership results. The study also concluded that revenue projections could support maintenance and operation of a Top End Rapid Transit system but would be unable to construct the system without significant other or matching funding.

I-285 Top End Rapid Transit Pre-Project Development Study

Completed in the summer of 2020, the I-285 Top End Rapid Transit Pre-Project Development Study expanded on the 2018 feasibility study by examining travel times for a Top End Rapid Transit system compared to existing automobile travel times, planning-level cost estimations for the construction and operation of the system, and a ridership forecast for the system. The study found that travel times using the Top End Rapid Transit system were competitive with existing automobile times for thirteen out of sixteen examined travel patterns. The study also provided updated capital and operation costs for the project and highlighted the potential cost/benefit of the Powers Ferry Station and Roswell Road station due to their higher construction cost and elevated nature. Finally, the study found that ridership for the system was forecasted to be significant enough to justify the continued development and identified strategies for increasing ridership from the baseline forecast.

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Roswell Road Station Area

The Roswell Road station area is completely located within the City of Sandy Springs. As a result, the most relevant studies and plans are conducted by or for the City of Sandy Springs.

Sandy Springs Transportation Master Plan (2021)

The Sandy Springs Transportation Master Plan (TMP) was adopted in April of 2021. It seeks to integrate transportation and land-use policy while considering the needs of all modes, including driving, biking, walking, and transit. The TMP also provides direction to the City on how transportation projects, policies, initiatives, and best practices may be implemented over the next 5, 10, and 20 years. There are five transit projects identified in the short-range, likely to be implemented within five years, or in the mid-range (within five to ten years): Traveler Information Kiosks/Transit Curbside Management (partnership with MARTA), Transit Signal Priority Technical Upgrades along MARTA Routes, Transit Signal Priority Supportive Improvements along Hammond Drive, an I-285 BRT Feasibility Study, and an I-285 at Roswell Road Station Area Study. In addition to transit-specific projects, there are bicycle, pedestrian, and trail projects that support first/last mile connectivity.

Sandy Springs ITS Master Plan (2019)

The Sandy Springs Intelligent Transportation Systems (ITS) Master Plan outlines the city's intentions to optimize signal timing and the traffic operations network to reduce congestion and travel times across the city. It calls for the physical construction of several fiber-optic communications lines under major throughfares, including Roswell Road. The plan also discusses the importance of vehicle-to-vehicle and vehicle-to-infrastructure technologies that can be used to coordinate more effective local bus connections at Roswell Road.

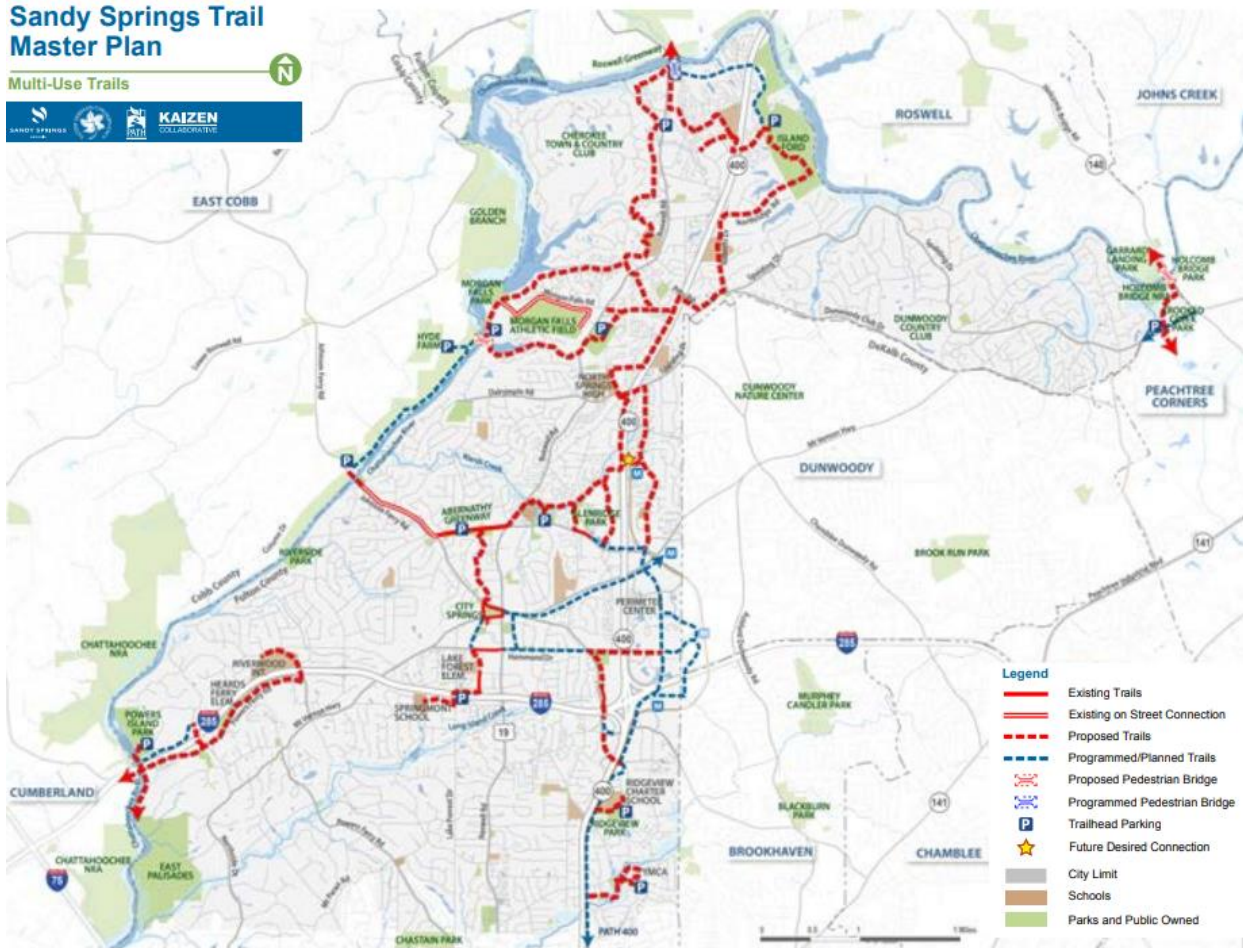
Sandy Springs Trail Master Plan (2019)

The Sandy Springs Trail Master Plan features proposed trails and side paths that connect to the proposed Roswell Road BRT station. A trailhead parking lot is planned at the Lake Forest Dr and I-285 crossing and will connect to a planned trail (5B) that moves east toward Roswell Rd (about a block away). This is part of a greater trail system improvement subsection referred to as Segment #5: City Springs / Perimeter Center Connectors.

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Sandy Springs Trail Master Plan

Multi-Use Trails



Source: Sandy Springs Trail Master Plan (2019)

Figure 11: Sandy Springs Trail Master Plan (2019)

North Fulton Comprehensive Transportation Plan (2018)

The North Fulton Comprehensive Transportation Plan summarizes recommended transportation improvements for the North Fulton area, including within the Roswell Road station area. The plan identifies a number of capacity and operational improvements within the station area that would supplement BRT along the Top End. Some projects include the SR 9 (Roswell Road) ITS System Expansion/Congestion Reduction and Traffic Flow Improvements, Roswell Road Transit Access Project, Roswell Road Boulevard, and Hammond Drive Phase 1 Efficiency Improvements.

The Next Ten Comprehensive Plan (Sandy Springs, 2017)

The Next Ten Comprehensive Plan emphasizes the interaction of land use and transportation. The plan highlights the importance of upgrading the built environment to better complement the planned and existing transit services in Sandy Springs. The plan

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identifies the area's large commuter population, which exceeds 100,000 workers, who enter Sandy Springs daily to work in or near the Perimeter. The plan includes several transit components, including potential MARTA heavy rail expansion and pedestrian-level improvements to support transit connectivity. Such improvements include better crosswalk signal timing to increase east-west accessibility, the construction of wide side paths along major roadways, and improved pedestrian crossings over I-285 to link neighborhoods in southern Sandy Springs.

Roswell Road Small Area Plan (2017)

The Roswell Road Small Area Plan encourages Sandy Springs residents to use non-automobile modes for short trips, with a specific focus on trips traversing the Roswell Road corridor. To achieve this, the plan recommends addressing first/last mile mobility challenges to access existing and future transit along Roswell Road and to a future BRT station at the interchange with I-285.

Sandy Springs Sidewalk Master Plan (2016)

The Sandy Springs Sidewalk Master plan identifies a master planned network that includes sidewalks along the Roswell Road corridor and several connections to the east and west of the corridor. This network will further enhance connectivity to the proposed BRT station at Roswell Road.

Sandy Springs Bike, Pedestrian, and Trail Plan (2014)

The Sandy Springs Bike, Pedestrian, and Trails Plan identifies many places with high demand for bike and pedestrian improvements along the Roswell Road corridor. To support that demand, the plan identifies side paths and increased midblock crossings. The plan recognizes the relationship between bike and pedestrian infrastructure and transit infrastructure and service and calls for facilities to complement each other to foster fewer local automobile trips. The plan also points out some of the major design constraints in Sandy Springs, such as the scarcity of publicly owned space and large multi-lane collector roads.

Roswell Road Livable Centers Initiative (LCI) Study (2008 and 2013)

First completed in 2008 and updated in 2013, the Roswell Road Livable Centers Initiative (LCI) Study examined Roswell Road south of I-285 in Sandy Springs. The study identified the area adjacent to I-285 within the station area as a future live work node. The study also identified a Bus Rapid Transit line along I-285.

Cumberland Boulevard Station Area

The Cumberland Boulevard station area is within the core of the Cumberland Community Improvement District (CID) and many of the relevant plans reviewed were developed by or for the CID.

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Blueprint Cumberland 3.0 (2017)

The Blueprint Cumberland 3.0 document is the third iteration of the Cumberland CID's master plan. The document outlines the expected growth and recommended land use improvements in the greater Cumberland area. The plan discusses the limitations of a pre-existing suburban development pattern and outlines the importance of providing better connectivity and mobility to take full advantage of Cumberland's concentration of office, retail and multifamily residential space. The plan identifies an access improvement project at Cumberland Boulevard at I-285 to support future high capacity transit and identifies that a BRT station along Cumberland Boulevard would serve the "core" of the Cumberland CID commercial district.

Cumberland Bicycle Connectivity Implementation Plan (2016)

The Cumberland Bicycle Connectivity Implementation Plan identifies a 60-mile framework of bikeways and trailways throughout the Cumberland Area to provide a safe and connected bicycle network. The plan assesses existing bicycle facilities and potential cyclist destinations. The Implementation Plan identifies three strategies to improve and transform existing facilities: marking existing paths as multi-purpose trails to accommodate cyclists, adding more signage and wayfinding to aid user experience, and developing additional trailheads, urban trails, and greenway trails. The plan's goal is to connect commercial areas, residential areas, transit stops, parks, and existing regional trails.

Cobb Comprehensive Transportation Plan (2015/On-going)

The most recently adopted Cobb Comprehensive Transportation Plan (CTP) was completed in 2015. The CTP is presently being updated concurrently with the I-285 Top End Rapid Transit Segment Station Plan and is scheduled to be completed in the Fall of 2021. The 2015 plan includes many projects within the station area including multiple interchange and grade separation improvements within the Cumberland CID and transit improvements that connect to the area. The plan also explores high-capacity transit service along US 41/Cobb Parkway and discusses improved integration with MARTA service. The plan also describes the need for denser infill and multifamily development in along I-285 that would further complement Top End transit.

Connect Cobb Alternatives Analysis (2012)

The Connect Cobb Alternatives Analysis studies transit needs and potential improvements along the Northwest Atlanta Corridor. Key objectives outlined in the Analysis are to connect major activity centers, including employment and education hubs, support localized trip opportunities, complement economic redevelopment, and provide accessibility throughout the corridor. The alternatives reviewed include express bus, bus rapid transit, and light rail transit.

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Cumberland CID Market Research Report (2012)

The Cumberland CID Market Research Report outlines the growth, competitiveness, and development potential of the Cumberland area relative to the greater region. The report reaffirms through demographic and employment analysis the importance of connecting the Cumberland area to the Top End Rapid Transit system. Moreover, the report provides insights into commuter trends to/from Cumberland for work and identifies a growing demand for transit options for commuting in the area.

Cumberland Parkway Station Area

Relevant studies to the Cumberland Parkway station area include plans concerning Cobb County and the City of Smyrna. The plans analyzed for the Cumberland Boulevard station area will also be relevant for the Cumberland Parkway, as the area is also part of the Cumberland CID.

Cobb Comprehensive Transportation Plan (2015/On-going)

The Cobb Comprehensive Transportation Plan is outlined above as part of the Cumberland Boulevard station area.

Smyrna Connects (2020)

Smyrna Connects outlines community-supported transit opportunities and developments that provide actionable solutions for public transportation over the next 20 years. The plan examines five needs within the City including frequent commuter bus service, convenient bus connections, enhanced transit facilities, enhanced transit marketing/education, and an after-hours voucher program for Transportation Network Companies (Uber, Lyft, etc.). The plan identifies three timeframes – short-term, mid-term, and long-term. Smyrna is the first city within Cobb County to prepare a document of this kind.

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Demographics and Market Conditions

An analysis of demographic and market conditions within each station area provides insight into the potential for transit service and a better understanding of the markets to be served. This analysis is focused on attributes that bear a strong relationship to demand for transit service, including:

- Existing and projected population and employment density;
- Low and medium wage jobs;
- Median household income;
- Household automobile ownership, and
- Percent senior and minority households.

The results of the analysis indicate that each station area contains elements of demographics that correlate with transit ridership, including income, employment characteristics, age and minority status and that the proposed service will address market demand. However, the overall population and employment densities suggest that the stations will need to draw their ridership from a larger area.

Population density varies within each of the station areas, although none are considered to be high density given their suburban context. The Cumberland Parkway and Cumberland Boulevard station areas have higher population density due to the magnitude of multifamily developments. The Roswell Road station area is expected to become more dense as the planned City Springs mixed use district and other transit-oriented developments envisioned by Sandy Springs' comprehensive plan take shape.

The Cumberland Boulevard station area is the only true employment center of the three. It contains a large number of low and medium wage jobs associated with regional retail and entertainment uses.

Like most households in the auto-centric Atlanta region, the vast majority of households in all three station areas own at least one vehicle. Median household incomes vary: A majority of households within the immediate vicinity (half-mile radius) of the Roswell Road station area have median household incomes that fall well below the regional median household income of \$72,000, while households within the Cumberland Parkway station area fall within the regional median household income and households in the Cumberland Boulevard station area exceed it.

Each station area includes locations with a high percentage or number of senior and minority households. However, neither group is the predominant population in any of the station areas.

The following sections provide additional detail for each station area.

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Roswell Road Station Area

Within the Roswell Road station area, locations with the greatest population density are located on the south side of I-285 where a majority of multifamily developments are located. In contrast, the greatest population change is anticipated to occur north of I-285 consistent with Sandy Springs' City Springs Future Land Use designation, which recommends greater density and a more walkable environment consistent with high capacity transit. Estimates of existing and future population from the Atlanta Regional Commission (ARC) Traffic Analysis Zones (TAZ) are shown in Figure 12.

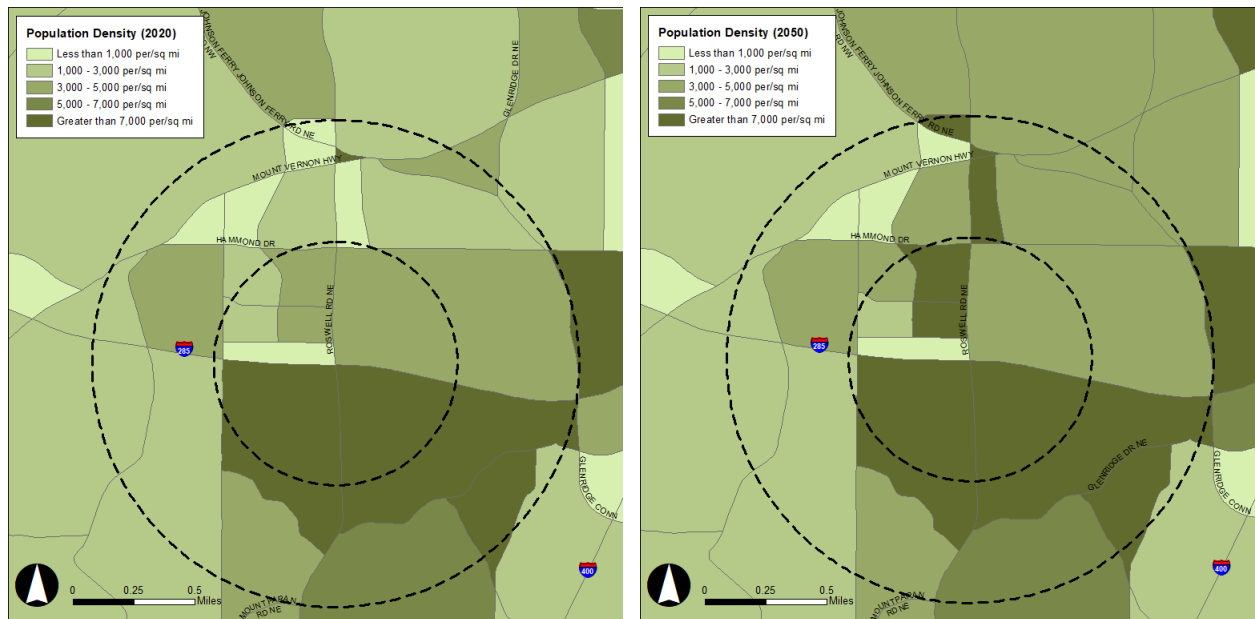


Figure 12: Roswell Road Station Area - Existing and Future Population

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Employment is relatively modest within the station area, consisting of primarily service-oriented jobs that support retail uses along the corridor. Reported wages for jobs within the station area follow a similar pattern, a majority of which fall within the low (\$1,250 per month or less) and medium (up to \$3,333 per month ranges). Existing and future employment is shown in Figure 13 and wage information is shown in Figure 14.

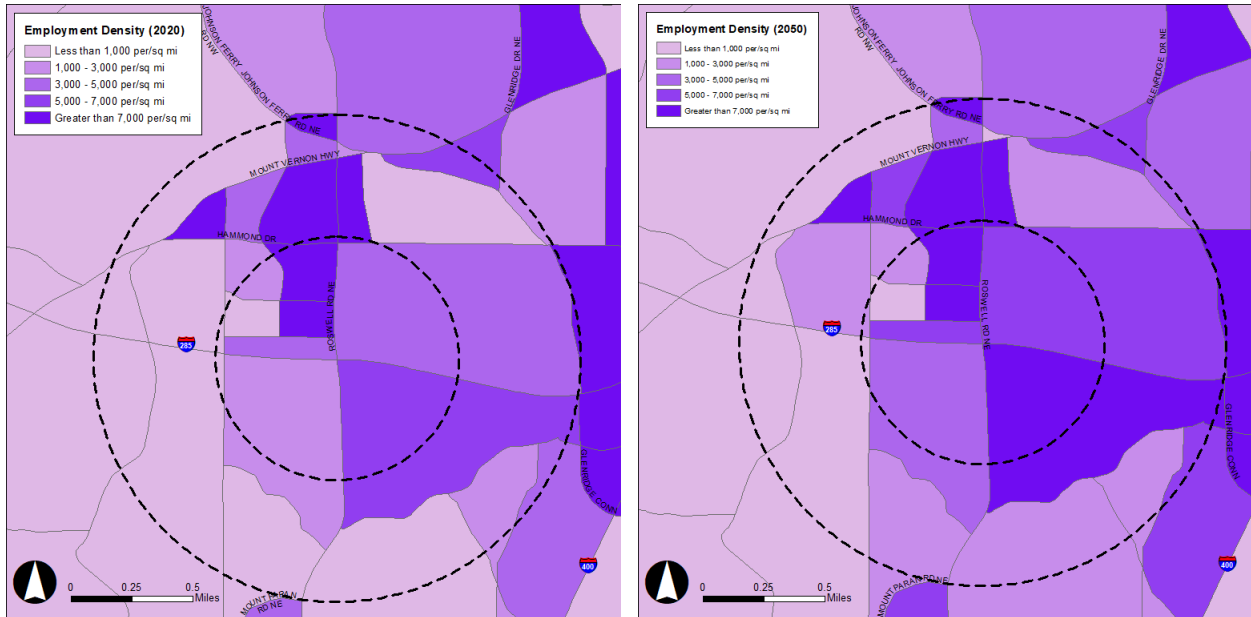


Figure 13: Roswell Road Station Area - Existing and Future Population



Figure 14: Roswell Road Station Area - Low and Medium Wage Jobs

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Figure 15 shows data related to median household income and average auto ownership in the Roswell Road station area. A majority of areas in the immediate vicinity of the planned station contain households with a median income of less than \$40,000 per year, while the locations within one-half mile and beyond (primarily single family neighborhoods) contain households with a median income of greater than \$100,000 per year. For reference the median household income for the Atlanta region (Core Based Statistical Area) was approximately \$72,000 in 2019.

Most locations in the station area contain households that own at least one auto (approximately 90 percent). One exception is the area immediately north of I-285 and east of Roswell Road in which 80 percent of households own at least one vehicle.

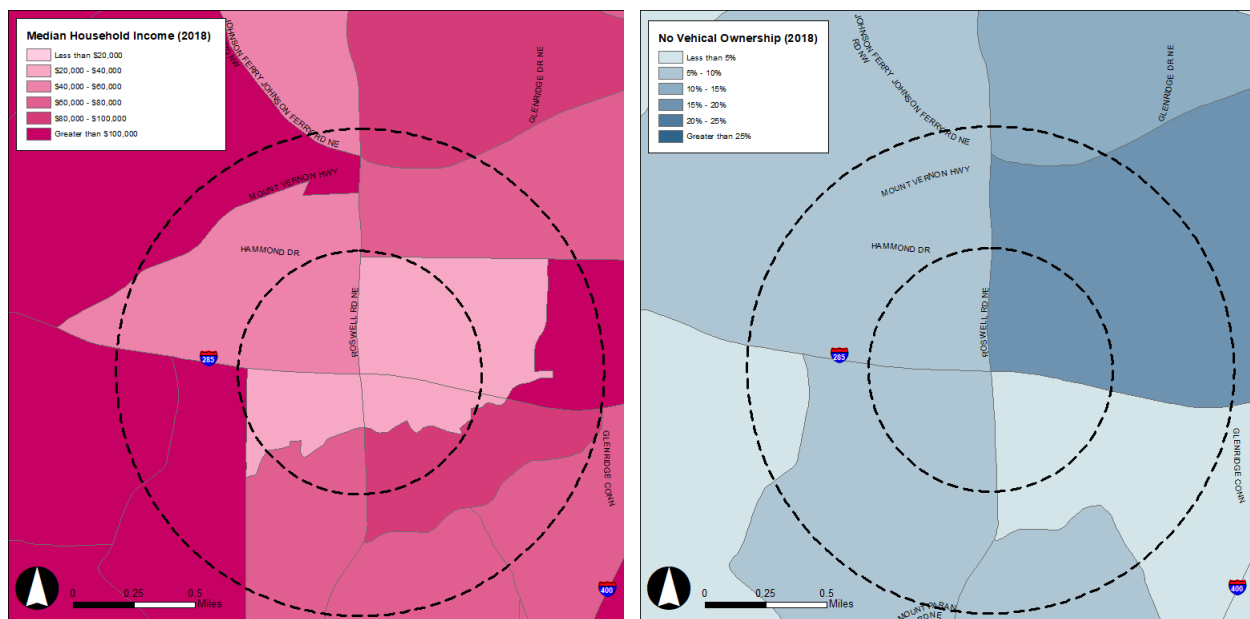


Figure 15. Roswell Road Station Area - Income and Auto Ownership

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The location immediately north of I-285 and west of Roswell Road includes a high percentage of senior (age 65 or greater) households (more than 30 percent). Most locations elsewhere within the station area contain less than 20 percent of senior households. Locations south of I-285 and east of Roswell Road contain relatively high number of racial and ethnic minority households. Senior and minority households within the Roswell Road station area are shown in Figure 16.

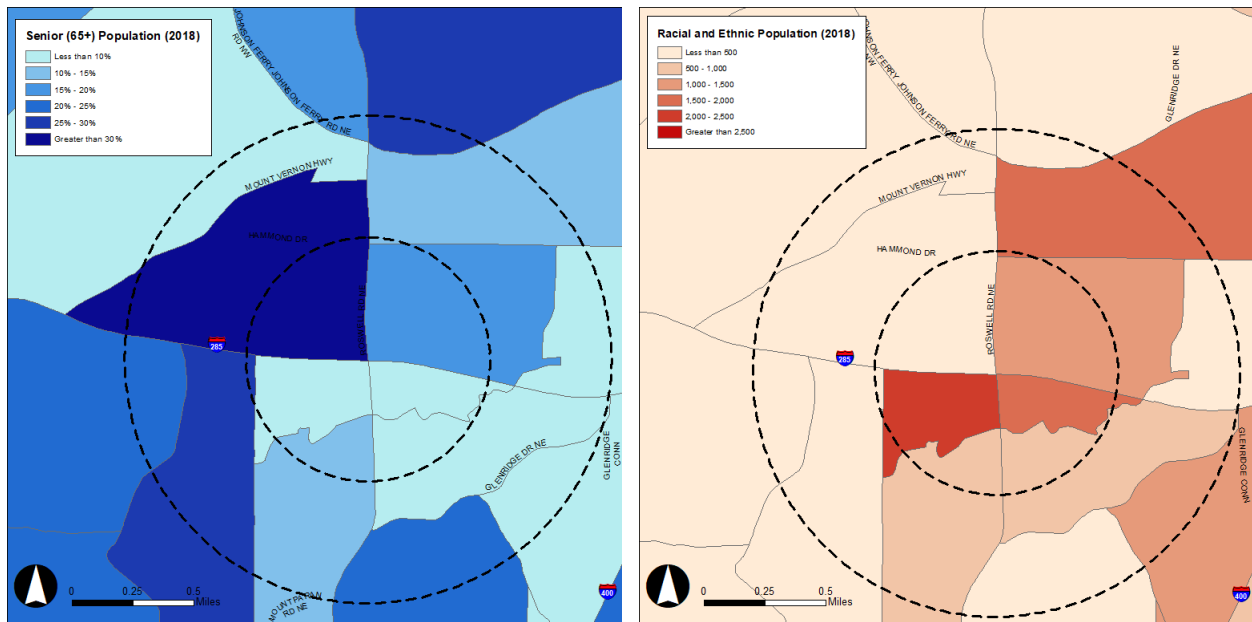


Figure 16: Roswell Road Station Area - Senior and Minority Households

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Cumberland Boulevard Station Area

Locations with the greatest population density in the Cumberland Boulevard station area are located north of Windy Ridge Parkway and west of I-75, consistent with the location of existing multifamily development. Population projections envision new population growth within the Cumberland Mall, Galleria Center and The Battery regional activity centers. Estimates of existing and future population are shown in Figure 17.

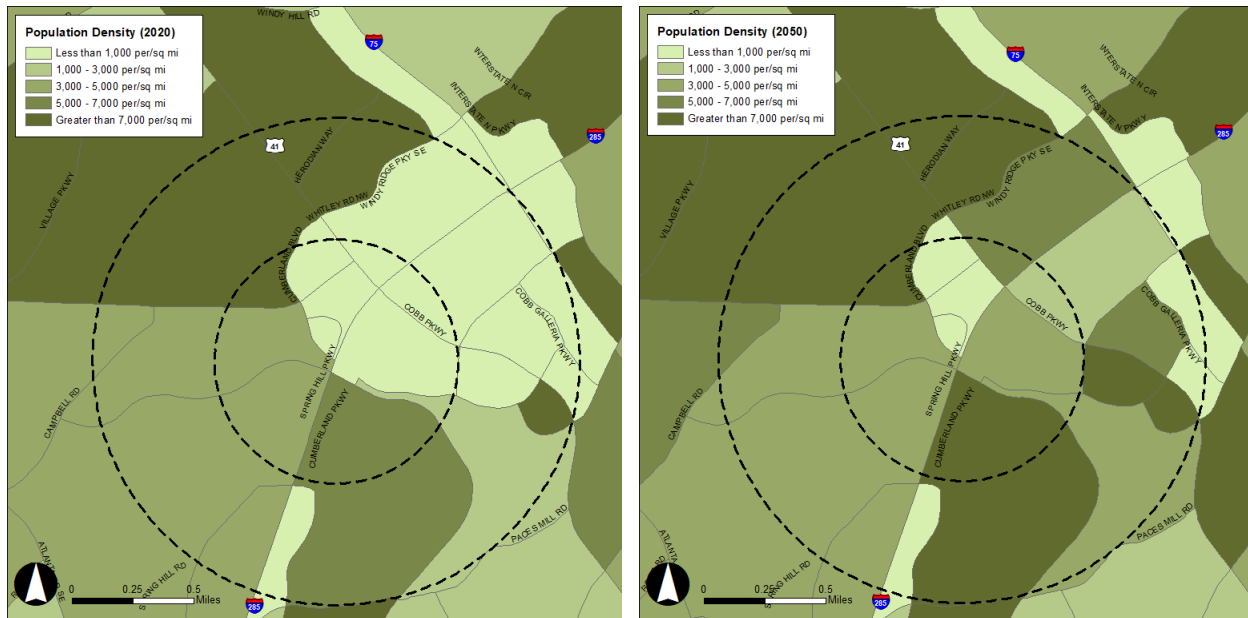


Figure 17: Cumberland Boulevard Station Area - Existing and Future Population

Employment is significant within the Cumberland Boulevard station area, consistent with its status as a regional activity center. Many of these jobs fall within the low (\$1,250 per month or less) and medium wage range (up to \$3,333 per month ranges) and are service oriented jobs associated with the mall, convention center and entertainment district at The Battery. Existing and future employment is shown in Figure 18 and wage information is shown in Figure 19.

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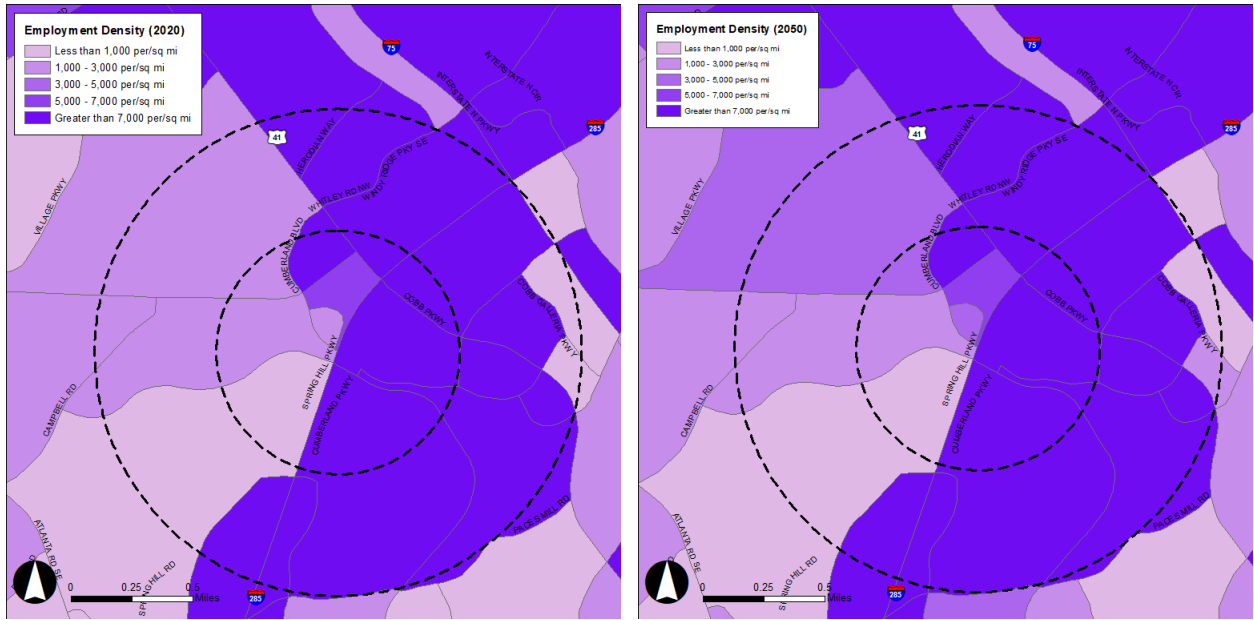


Figure 18: Cumberland Boulevard Station Area - Existing and Future Employment

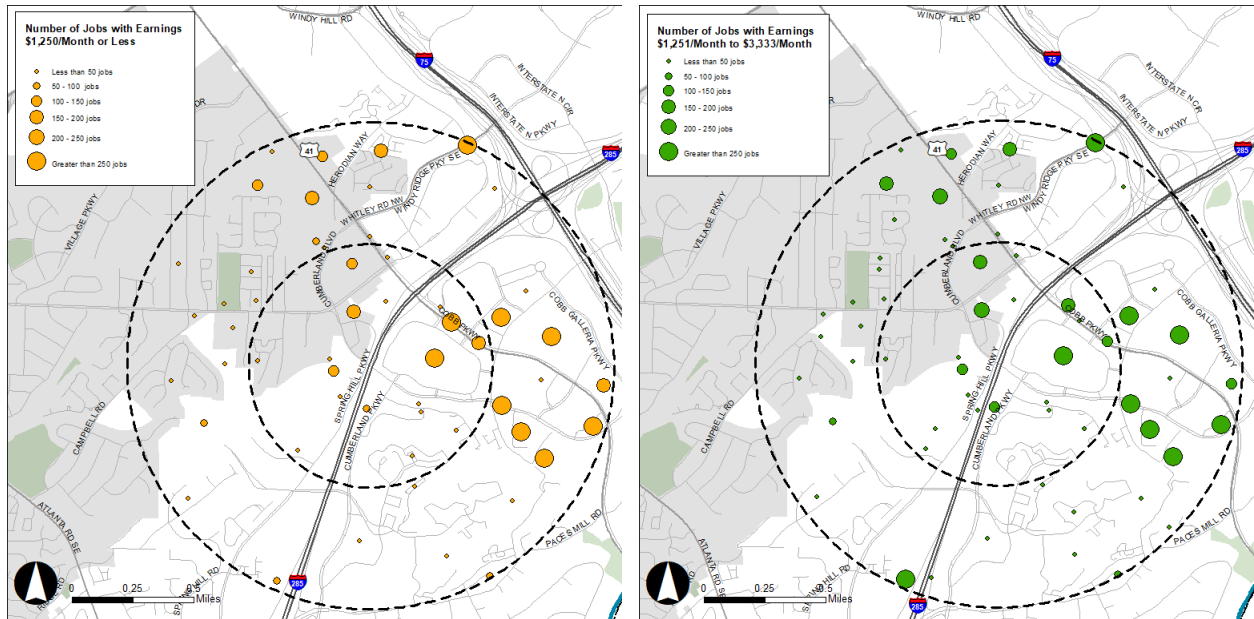


Figure 19: Cumberland Boulevard Station Area - Low and Medium Wage Jobs

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Figure 20 shows data related to median household income and average auto ownership in the Cumberland Boulevard station area. A majority of locations in the station area contain households with a median income in the range of \$60,000 to \$80,000 per year, which is consistent with the regional median household income of \$72,000. Most locations in the station area contain households that own at least one auto (approximately 90 percent).

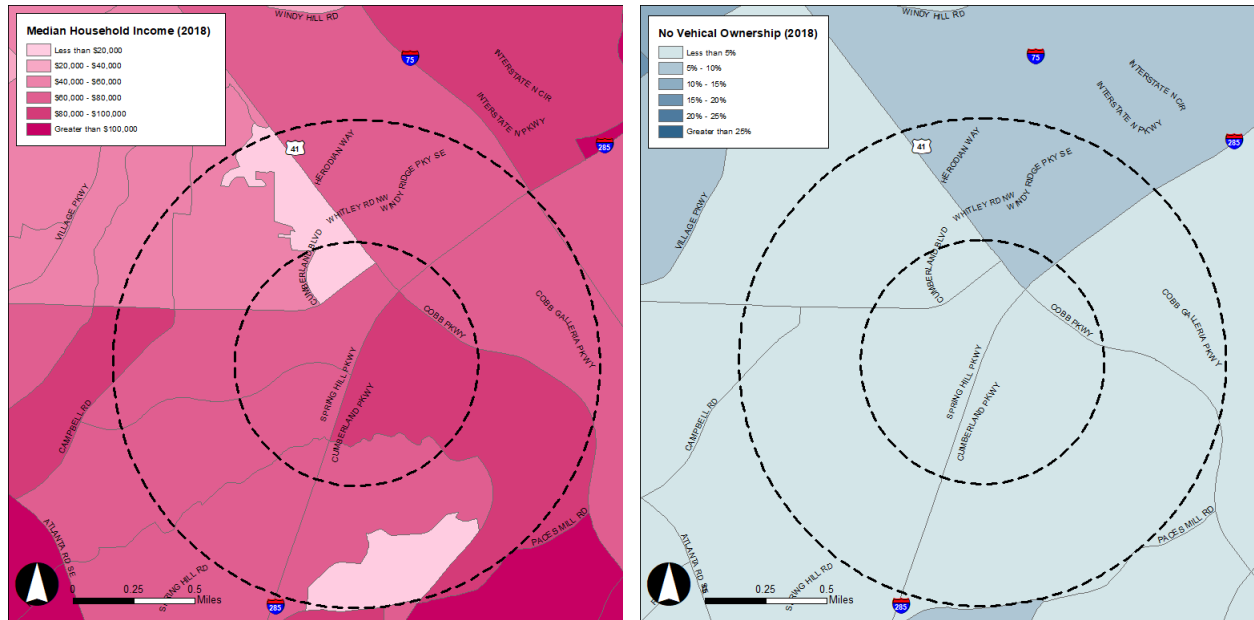


Figure 20: Cumberland Boulevard Station Area – Income and Auto Ownership

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Less than 10 percent of households in the Cumberland Boulevard station area include seniors (age 65 or greater), although a higher percentage of senior households are located farther south of the station area. Locations in the station area north of Windy Ridge Parkway contain a relatively high number of racial and ethnic minority households. Senior and minority households within the Cumberland Boulevard station area are shown in Figure 21.

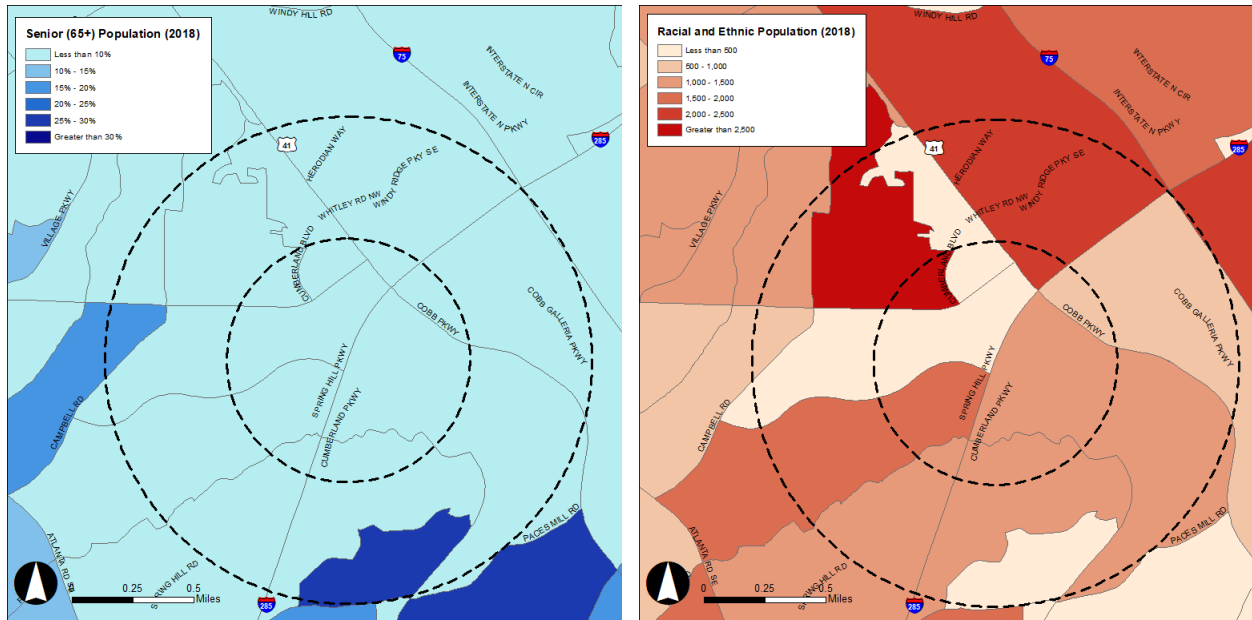


Figure 21: Cumberland Boulevard Station Area - Senior and Minority Households

While senior populations are low, a significant number of new residents in Cumberland may be young singles and professionals due to the growing number and market for multifamily development around the district's growing entertainment attractions.

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Cumberland Parkway Station Area

Locations with the greatest population density in the Cumberland Parkway station area are located east of I-285, consistent with the location of existing multifamily development. Population projections indicate additional population growth west of I-285 and north of Cumberland Parkway. Estimates of existing and future population are shown in Figure 22.

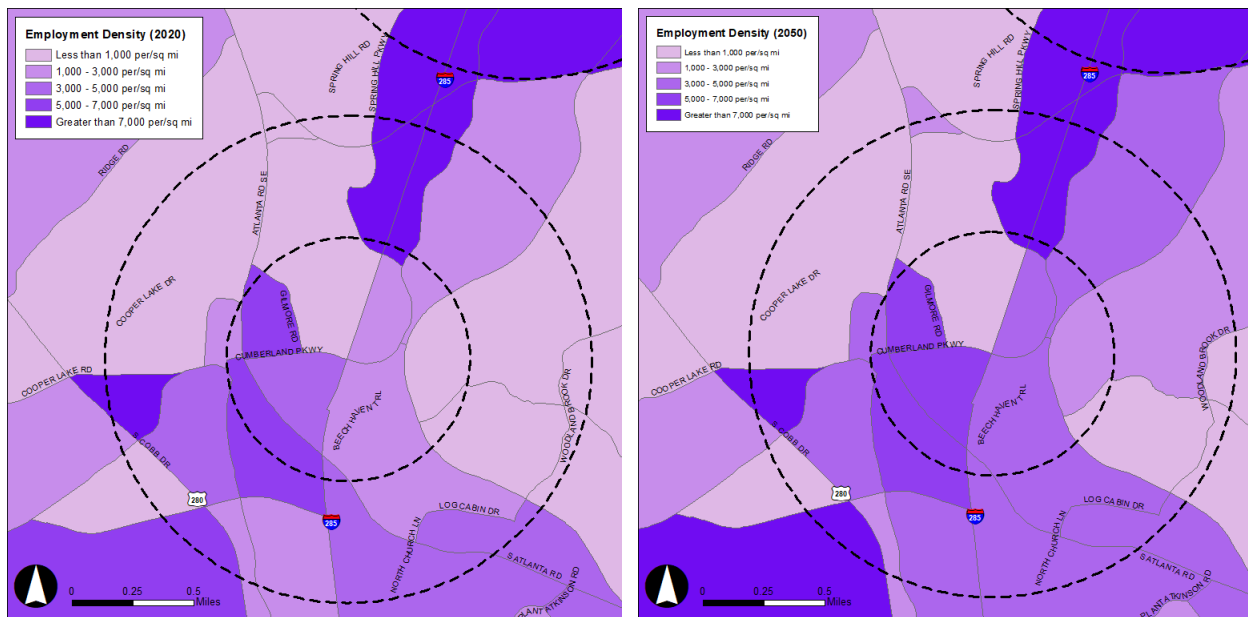


Figure 22: Cumberland Parkway Station Area - Existing and Future Employment

Employment is sparse within the Cumberland Parkway Station Area. There are pockets of employment density north of the station area along the I-285 corridor. Employment projections show additional growth south of the station area along the US 280/Cobb Drive corridor. There are not many low (\$1,250 per month or less) or medium (up to \$3,333 per month ranges) wage jobs within the station area, which is simply a reflection of the lack of jobs overall. Existing and future employment is shown in Figure 23 and wage information is shown in Figure 24.

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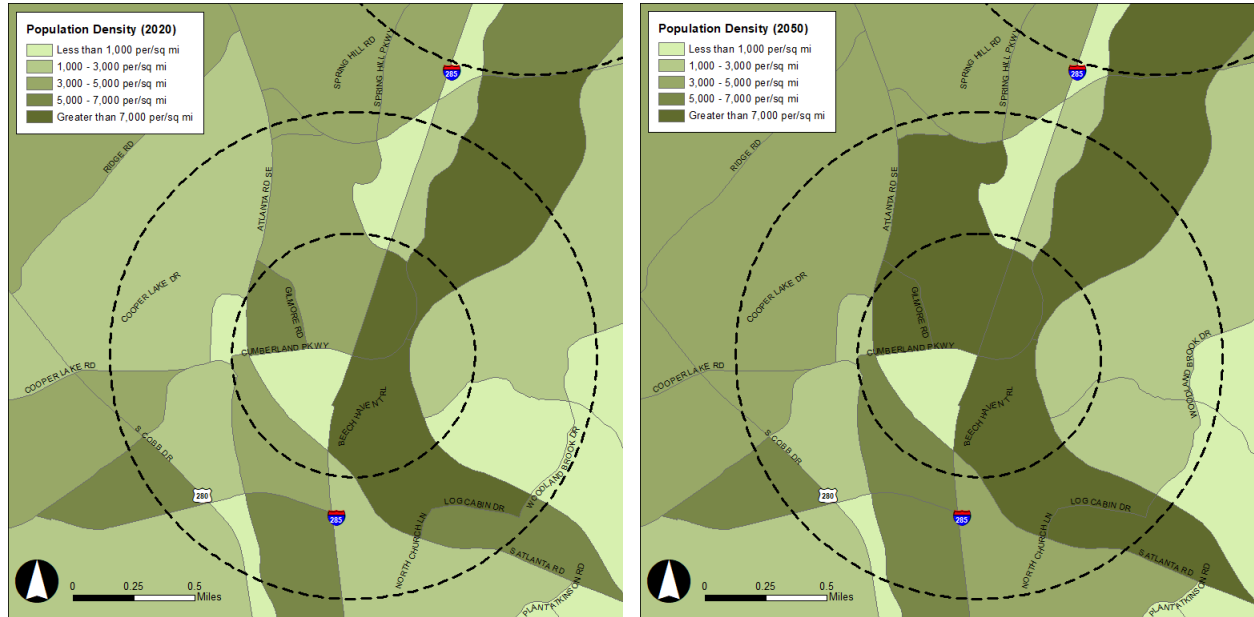


Figure 23: Cumberland Parkway Station Area - Existing and Future Population

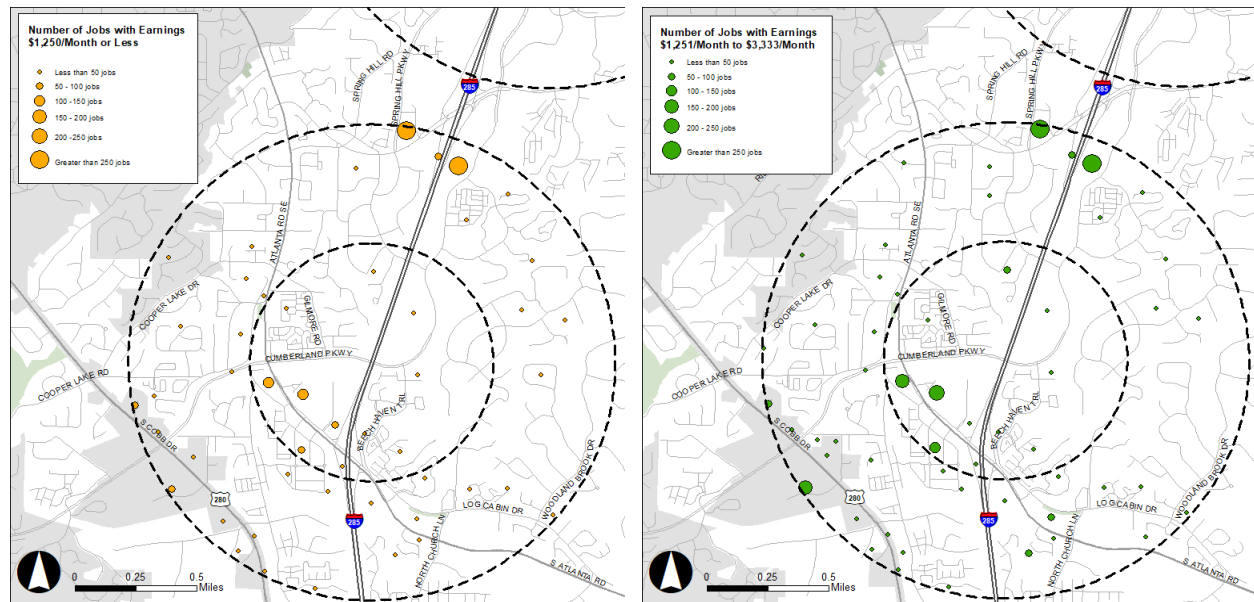


Figure 24: Cumberland Parkway Station Area - Low and Middle Job Wages

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Figure 25 shows data related to median household income and average auto ownership in the Cumberland Parkway station area. Most location in the station area contain households with a median income in the range of \$80,000 to \$100,000 or greater than \$100,000 per year, which exceeds the regional median household income of \$72,000. Most location in the station area contain households that own at least one auto (approximately 90 percent).

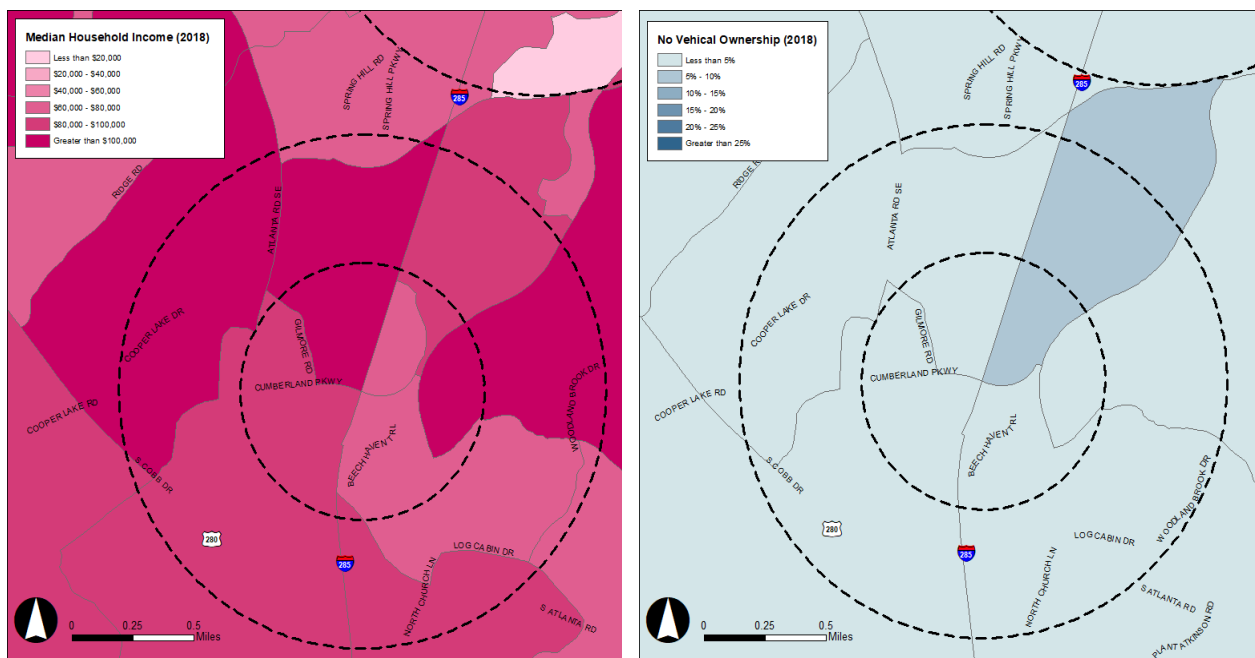


Figure 25: Cumberland Parkway Station Area - Income and Auto Ownership

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Transportation Systems

Passengers will access I-285 Top End Transit stations through a variety of modes: walking and cycling for origins and destinations in close proximity and fixed-route transit and rideshare or connecting transit services for origins and destinations at intermediate to long distances. This section inventories existing transportation systems, including transit routes and ridership, trails, sidewalks and bicycle facilities to assess existing levels of modal connectivity.

In general, both the Roswell Road and Cumberland Boulevard station areas are well served by fixed-route transit, largely in the form of local bus routes. Service within the Roswell Road station area is highlighted by heavy passenger activity along the Roswell Road corridor associated within the many retail activities and multifamily developments within walking distance. The Cumberland Boulevard station area includes the Cobb County Transfer Center, which is served by multiple CobbLinc and MARTA routes. Passenger transfer activity is heavy at the center, but light in other locations within the station area. The Cumberland Parkway station area is served by only one CobbLinc route and experiences little to no passenger activity.

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Roswell Road Station Area

The Roswell Road station area is located within the City of Sandy Springs and includes the interchange of I-285 and Roswell Road. Figure 27 shows existing transit routes within the station area. MARTA Bus Routes 5, 87, and 148 currently serve this area. MARTA's heavy rail Red Line and Xpress Route 400 run along SR-400, which is beyond the one-mile station area radius, but are an important element of the overall transit context.

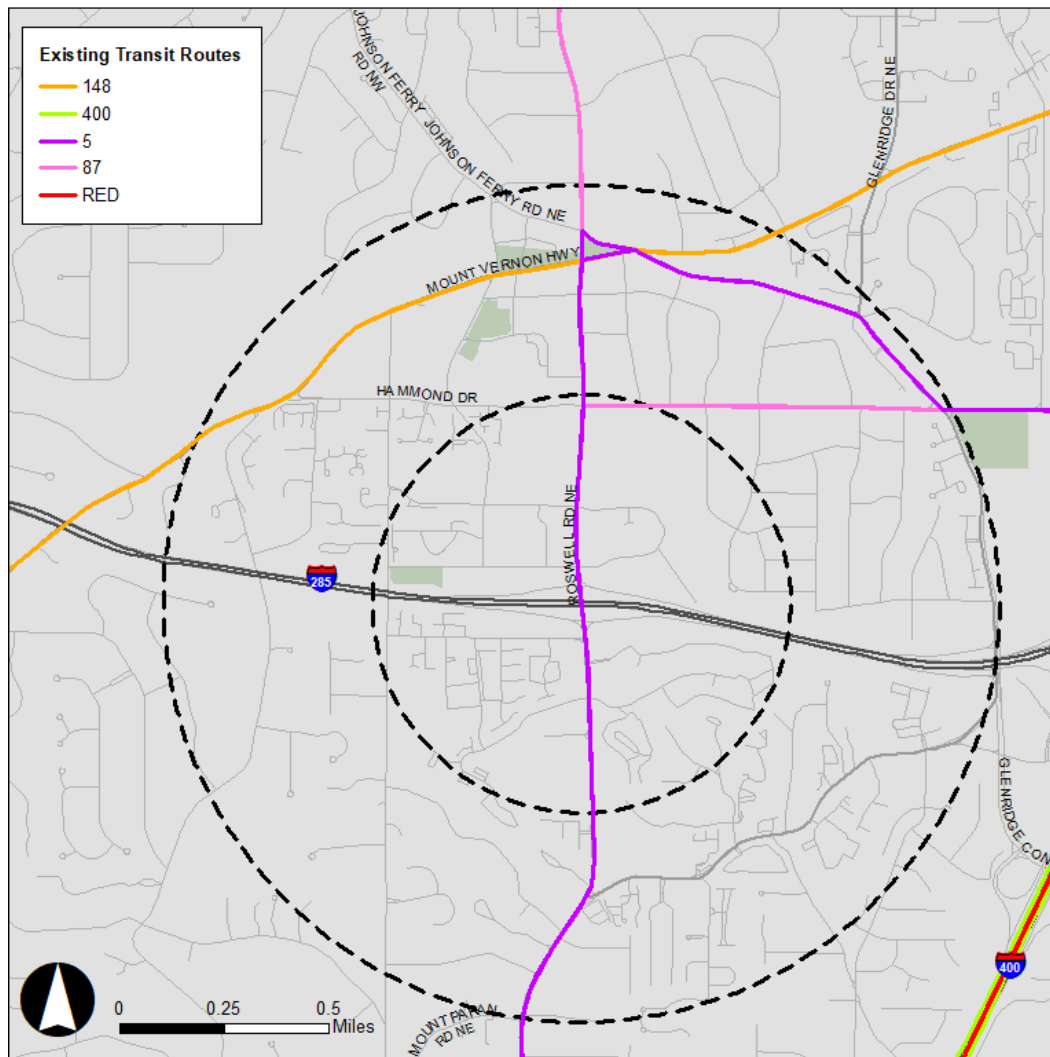


Figure 27: Roswell Road Station Area – Existing Transit Routes

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Transit ridership for Routes 5 and 87 is illustrated in **Error! Reference source not found.**. The data shown in Figure 28 is the average weekday ridership from February 2020, prior to the COVID-19 pandemic which significantly reduced transit ridership. Of the three station areas reviewed in this document, Roswell Road station area has the highest existing activity, with some stops exceeding an average of 80 daily boardings. The most utilized stop is at Roswell Road and Lake Placid Drive, just south of I-285 and Roswell Road.

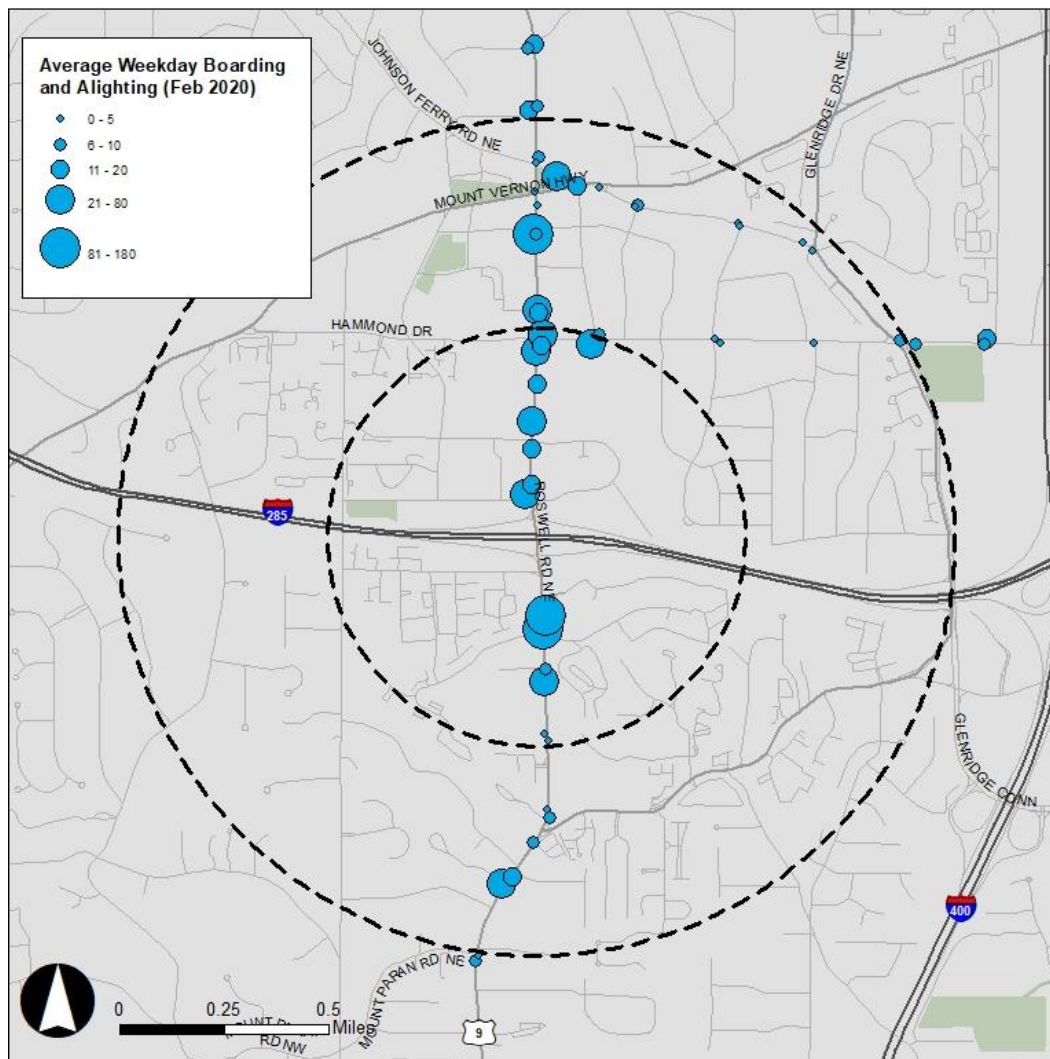


Figure 28: Roswell Road Station Area – Existing Transit Ridership

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Within the Sandy Springs station area, Roswell Road includes sidewalks on both sides of the road. The sidewalks are generally four or five feet in width within no or minimal (grass strip) buffer from the travel lanes. Beyond Roswell Road there are numerous sidewalk gaps in the street network, presenting a challenge to get from anywhere in the station area to Roswell Road.

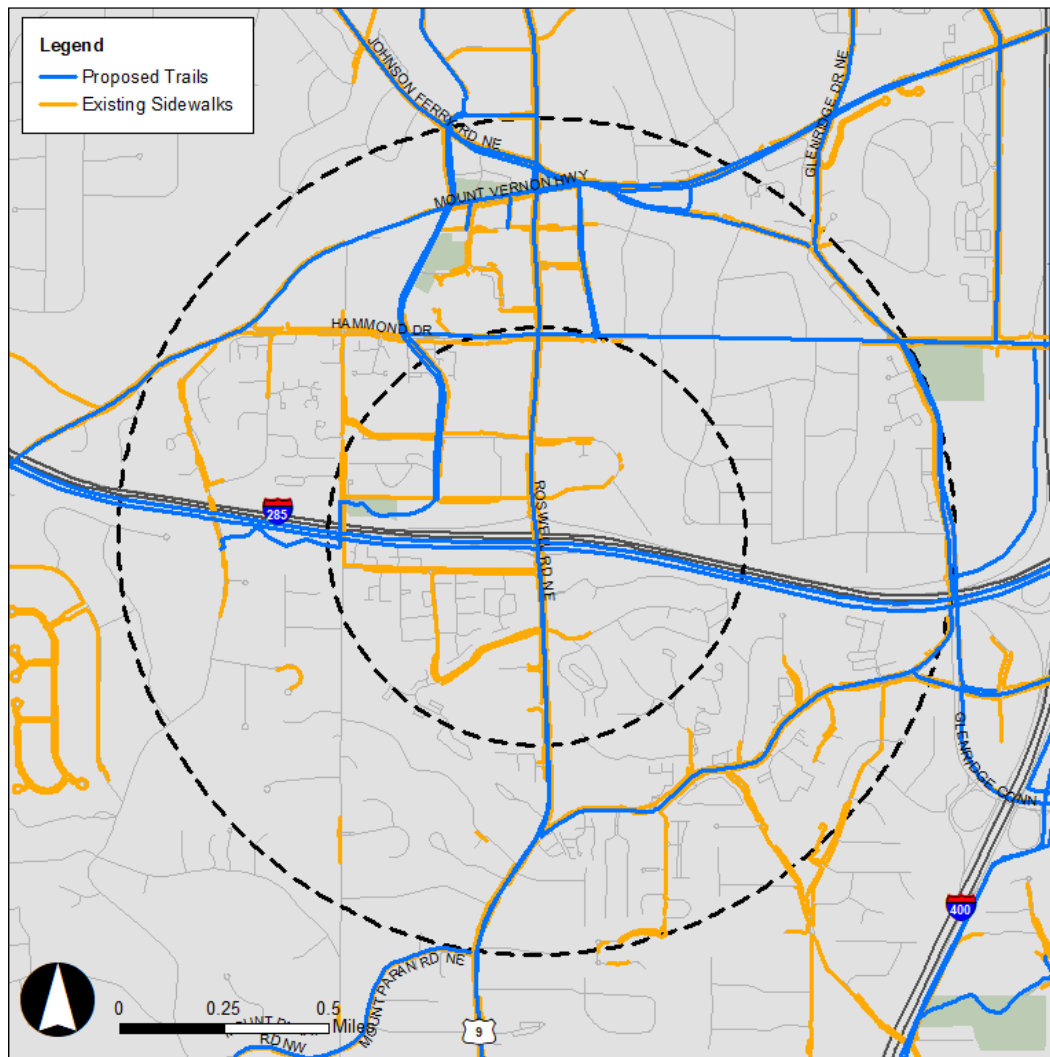


Figure 29: Roswell Road Station Area – Sidewalks and Trails

There are no side paths, trails or other bicycle facilities in the Roswell Road station area, but many are planned. The North Fulton CTP proposes a multi-use trail along I-285, bicycle and pedestrian improvements along Mount Vernon Highway and Roswell Road and a sidepath along Glenridge Drive. The Sandy Springs Trail Master Plan also

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proposes a sidepath along Hammond Drive. Existing sidewalks and proposed bicycle and pedestrian facilities are identified in Figure 29.

Maps outlining the Roswell Road station area roadway functional classifications, number of lanes, and traffic counts can be found in Appendix A.

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Cumberland Boulevard Station Area

The Cumberland Boulevard station area is located to the west of the I-75/I-285 interchange and is not currently served by a high-capacity transit service. This station area does include the Cobb County Transfer Center, a major hub for local bus services south of Cumberland Mall. Figure 30 shows existing transit routes within the Cumberland Boulevard station area. CobbLinc operates four services/routes in this area: Circulator Blue and Circulator Green, Rapid Route 10, Route 10, and Route 20. MARTA Bus Route 12 also operates along Northside Parkway/US-41.

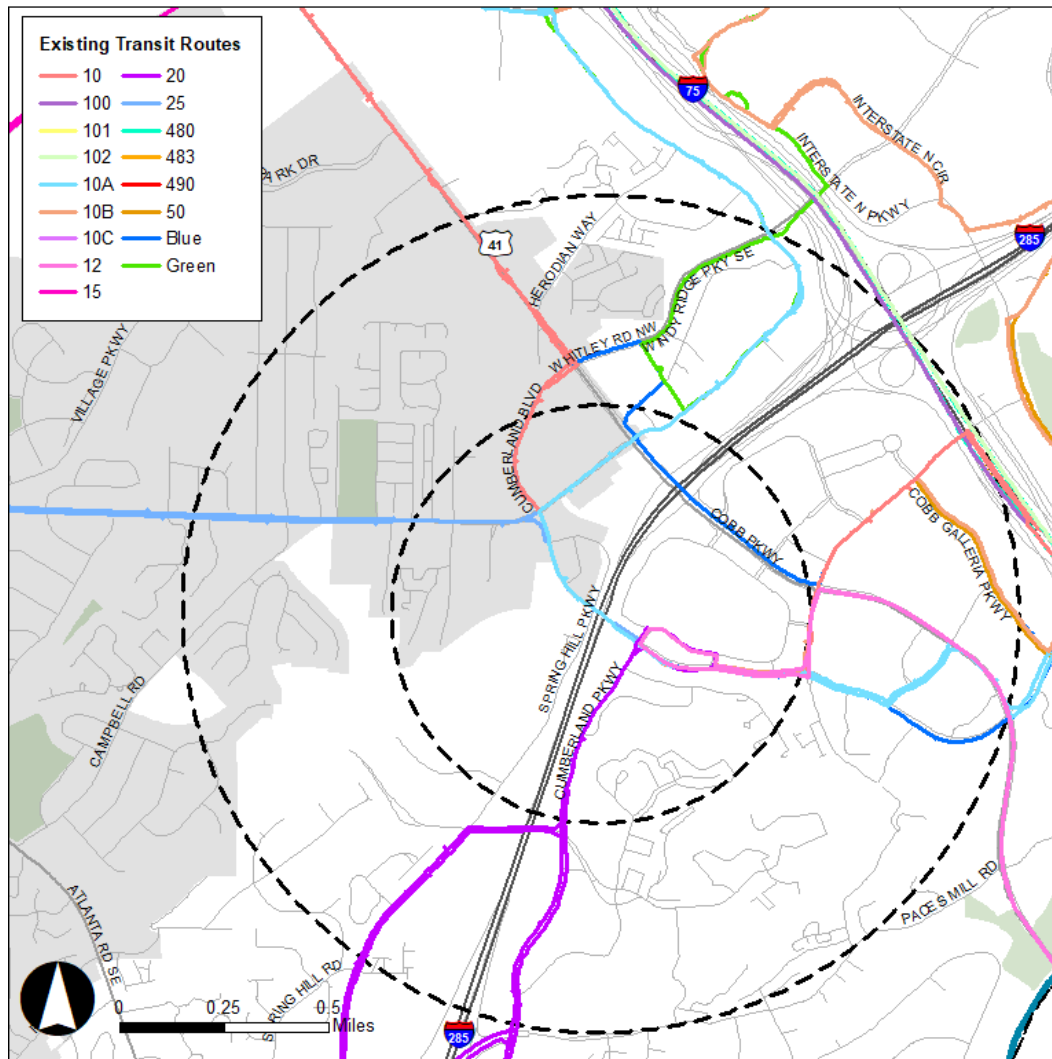


Figure 30: Cumberland Boulevard Station Area – Existing Transit Routes

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Average weekday boarding is shown in Figure 31. This data is from February 2020 prior to impacts of COVID-19. The vast majority of passenger activity occurs at the Cobb County Transfer Center. MARTA Route 12 along Northside Parkway/US-41 has the highest ridership with average daily boardings exceeding 25 passengers. The CobbLinc routes experience lower activity, with most stops' daily boardings less than 5 users.

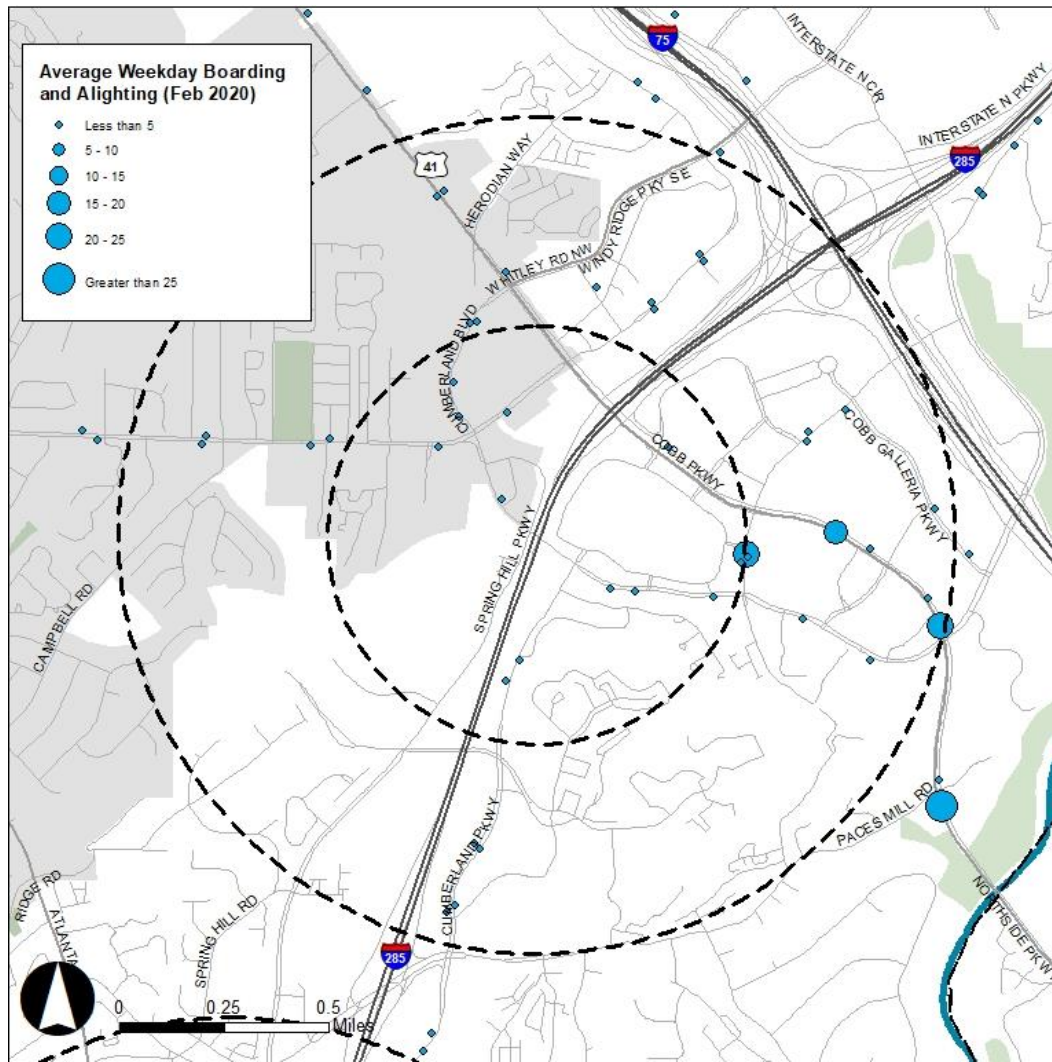


Figure 31: Cumberland Boulevard Station Area - Existing Transit Ridership

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Most of the major arterials in the Cumberland Boulevard station area include sidewalks, including Cumberland Boulevard, Cumberland Parkway, Cobb Parkway, Windy Ridge Parkway and Spring Road. Additionally, several trail systems traverse the station area, including the Silver Comet Cumberland Connection along Spring Hill Parkway and Cumberland Parkway, the Mountain-to-River Trail along Cumberland Boulevard and Spring Road and a trail along Circle 75 Parkway. A system of pedestrian bridges connects the Cumberland Boulevard to the Cobb Galleria over Cobb Parkway and the Cobb Galleria to the Battery over I-285.

Beyond this network along major arterials, the station area lacks a more granular network of bicycle and pedestrian facilities within major developments. Additionally, a lack of crossing opportunities and large, multilane intersections exacerbate walking and cycling challenges.

The Cobb County Greenways and Trails Master Plan proposes a handful of new connections to help complete the major trail network. This includes a proposed trail along Cobb Parkway north of Cumberland Boulevard and a trail within the railroad right-of-way southwest of Cumberland Boulevard. Existing sidewalks and proposed bicycle and pedestrian facilities are identified in Figure 32.

Maps outlining the Cumberland Boulevard station area roadway functional classifications, number of lanes, and traffic counts can be found in Appendix B.

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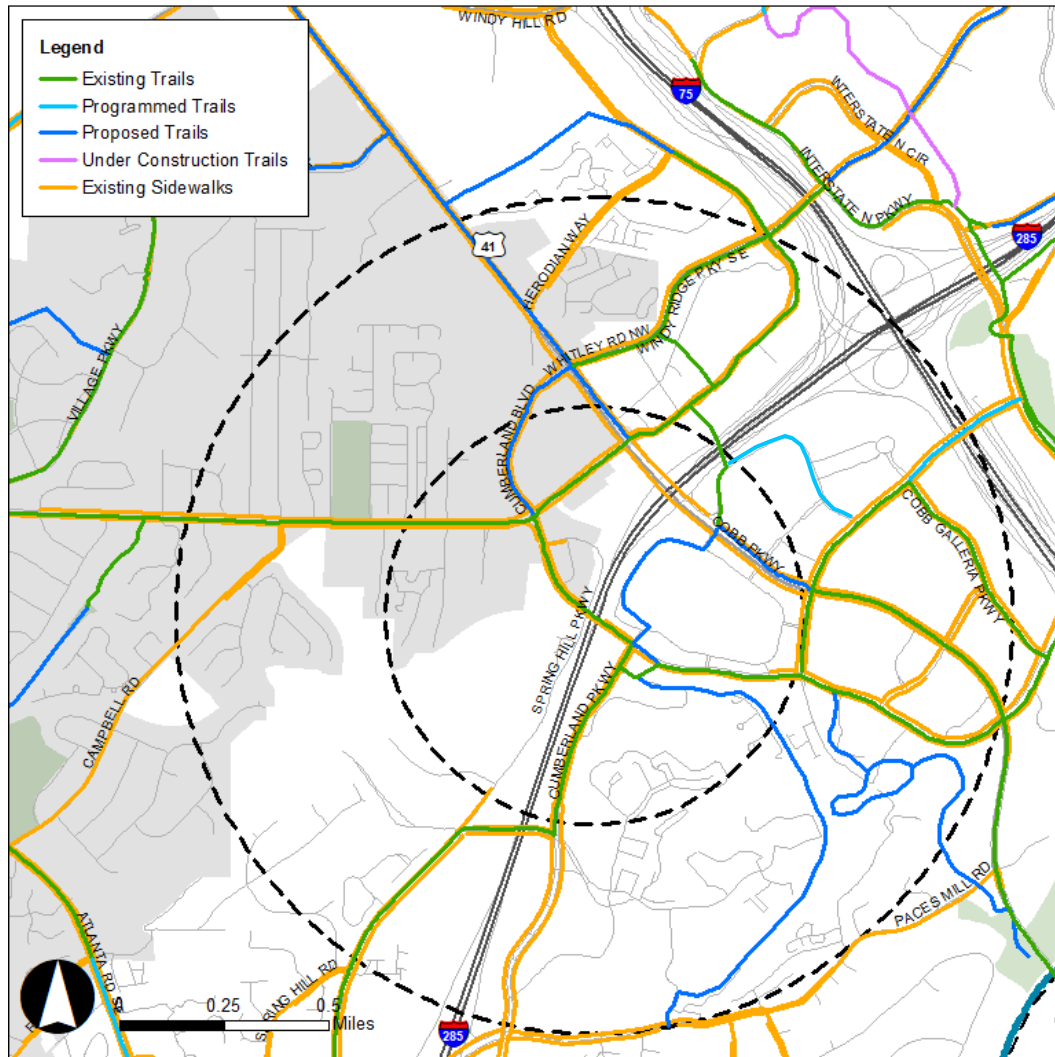


Figure 32: Cumberland Boulevard Station Area – Sidewalks and Trails

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Cumberland Parkway Station Area

The Cumberland Parkway station area is located along I-285 south of I-75. CobbLinc Route 20 services this area and operates along Cumberland Parkway. This route provides a connection to the Circulator Routes, Rapid Route 10, and MARTA Bus Route located north of the Cumberland Parkway station area in the Cumberland Boulevard station area. Figure 33 shows existing transit routes within the Cumberland Parkway station area.

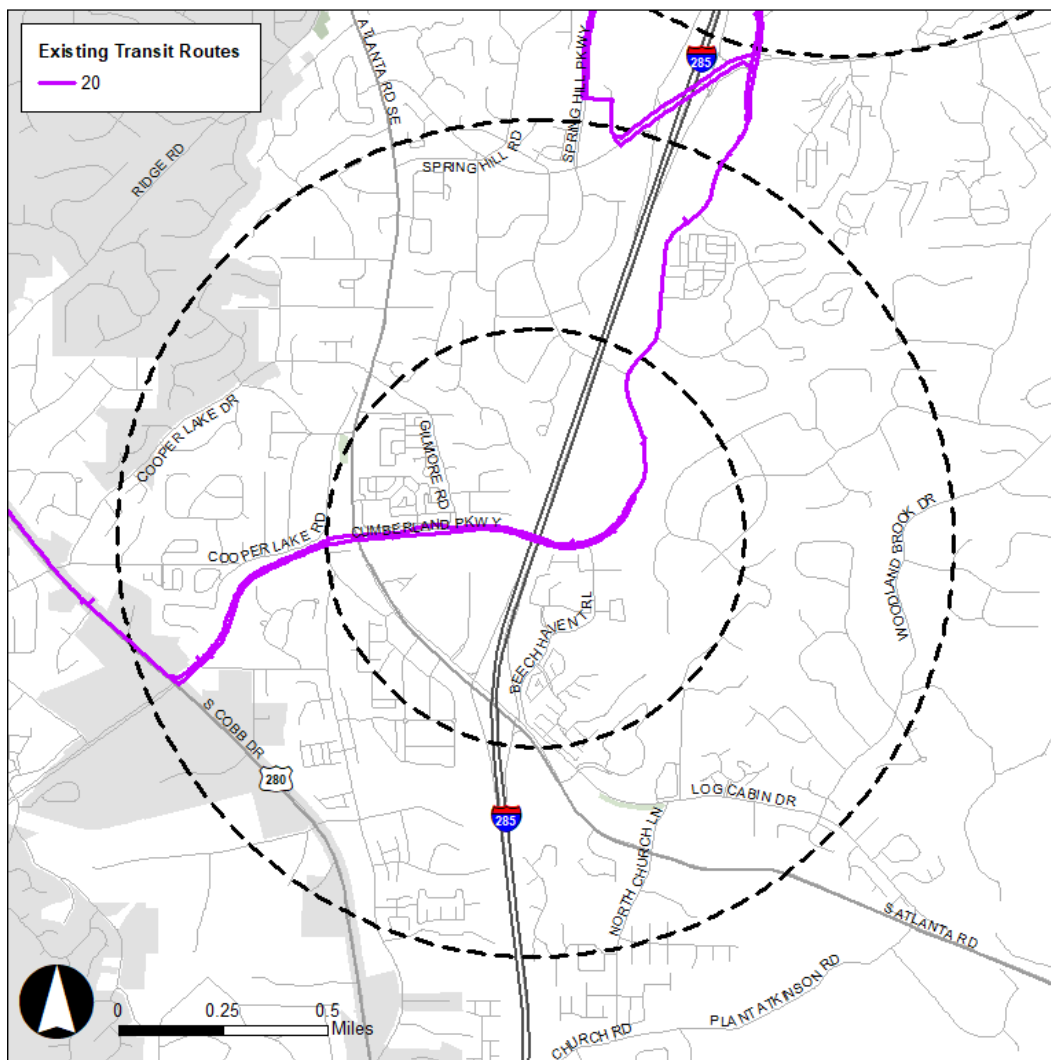


Figure 33: Cumberland Parkway - Existing Transit Routes

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Average weekday boarding and alighting is presented in Figure 34. This data is from February 2020 prior to impacts of the COVID-19 pandemic and illustrates ridership for the Cumberland Parkway station area. Daily activity is very low with for all stops on CobbLinc Route 20 in the station area.

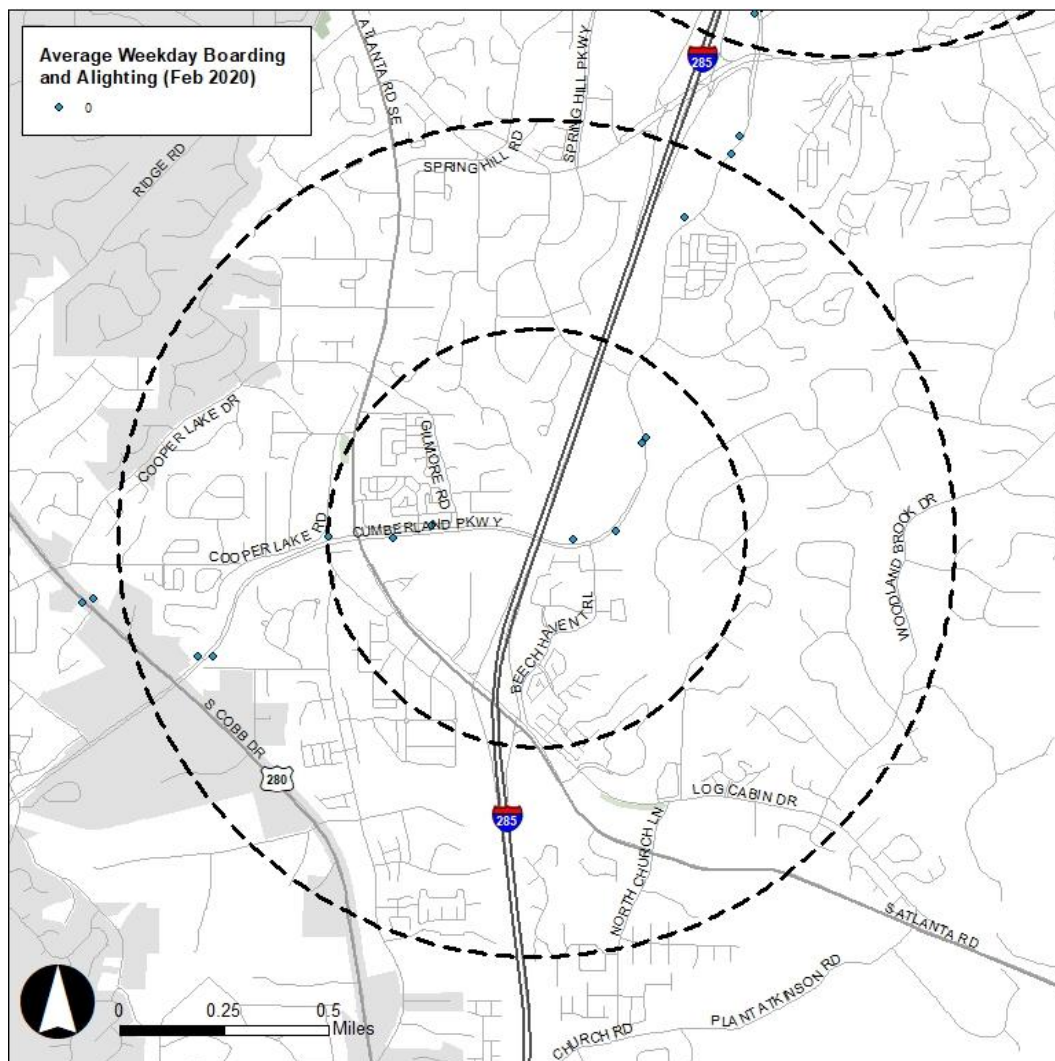


Figure 34: Cumberland Parkway Station Area - Existing Transit Ridership

Most of the major arterials within the Cumberland Parkway station area include sidewalks, including Cumberland Parkway, Atlanta Road and Cooper Lake Road.

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Additionally, the Silver Comet Trail Cumberland Connector runs along Atlanta Road and Cumberland Parkway on the west side of the station area. Virtually all of the collector and local streets lack sidewalks and/or bicycle facilities. Thus, walking and cycling connectivity is a challenge.

The Cobb County Greenways and Trails Master Plan proposes a multi-use trail along the railroad right-of-way that traverses the southern edge of the station area. Existing and proposed bicycle and pedestrian facilities are shown in Figure 35.

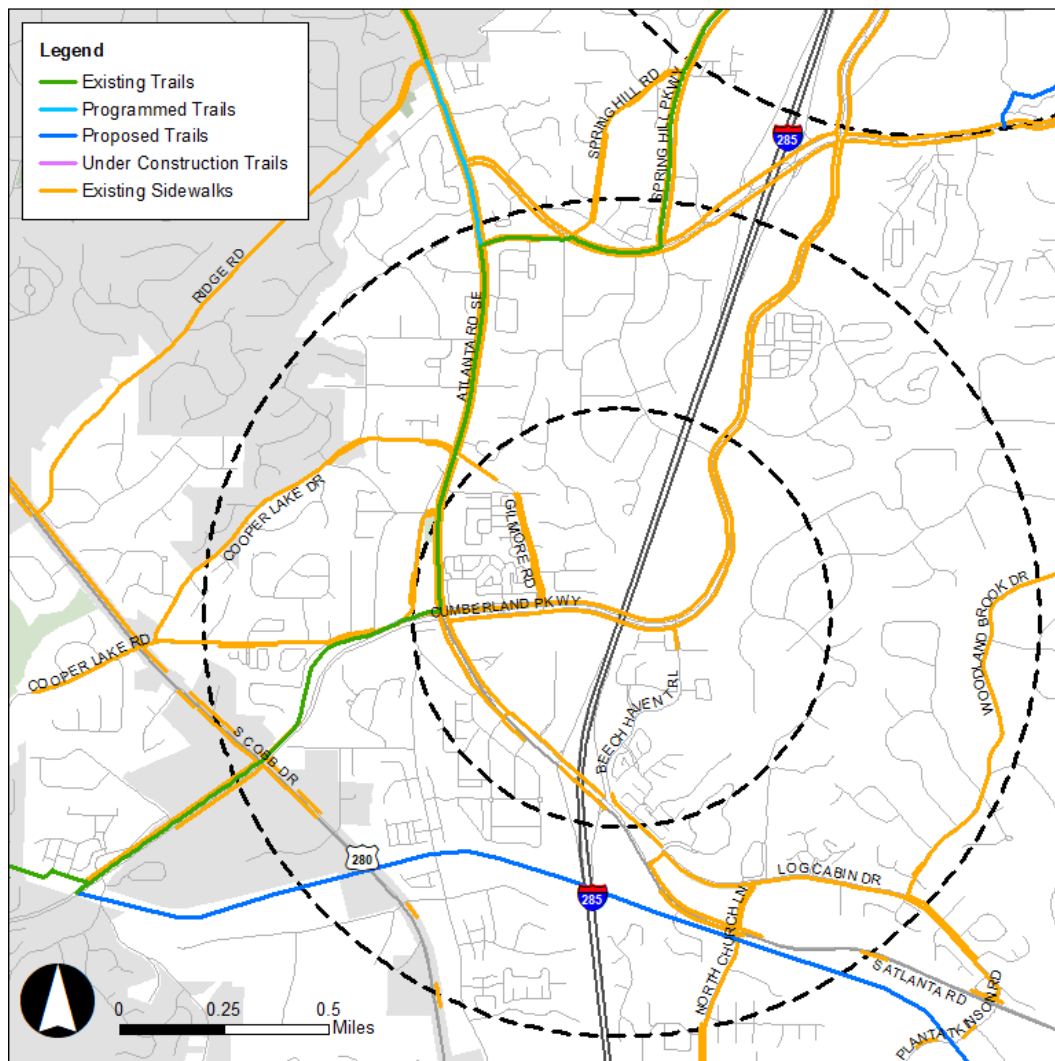
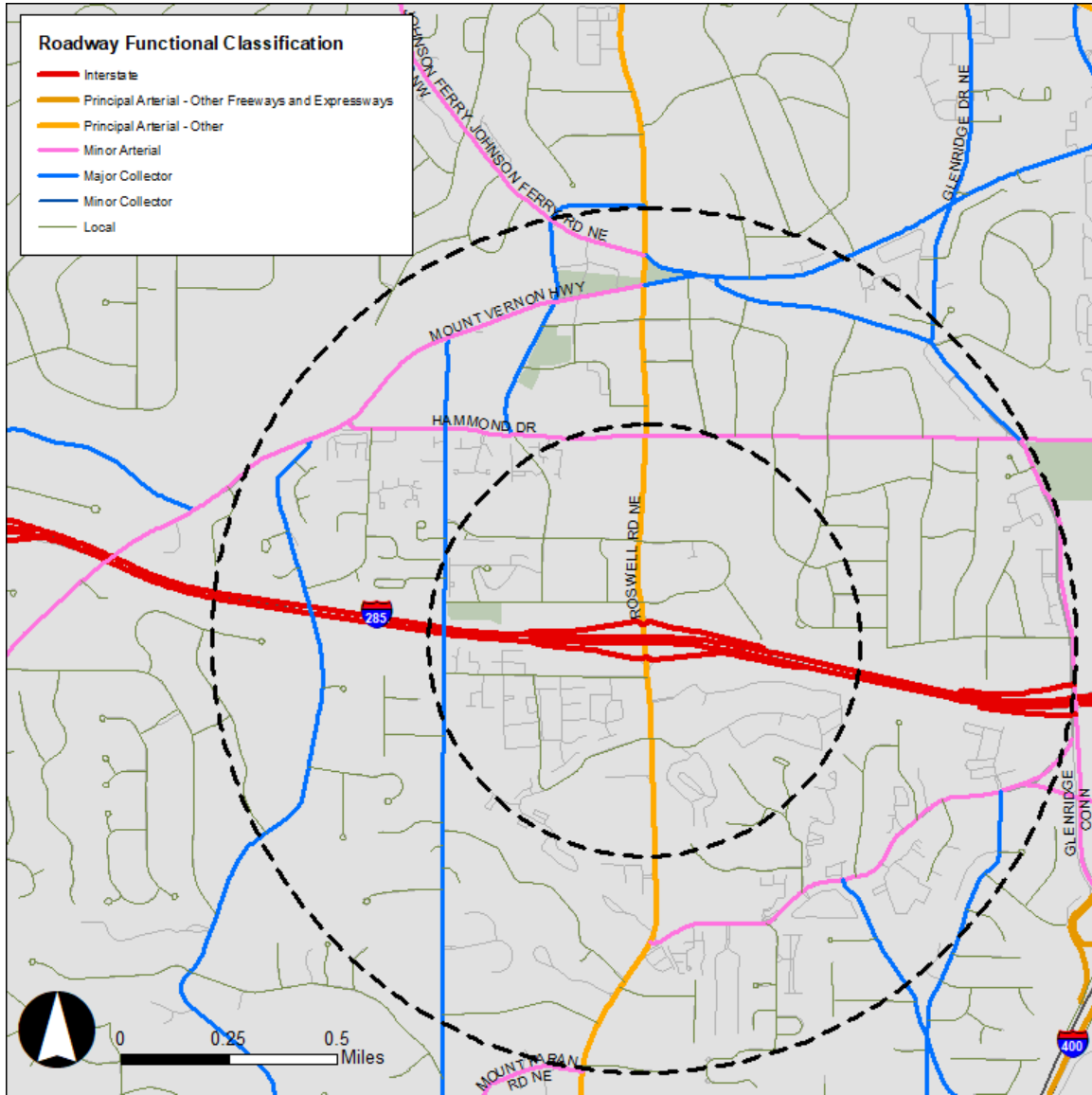


Figure 35: Cumberland Parkway Station Area – Trails and Sidewalks

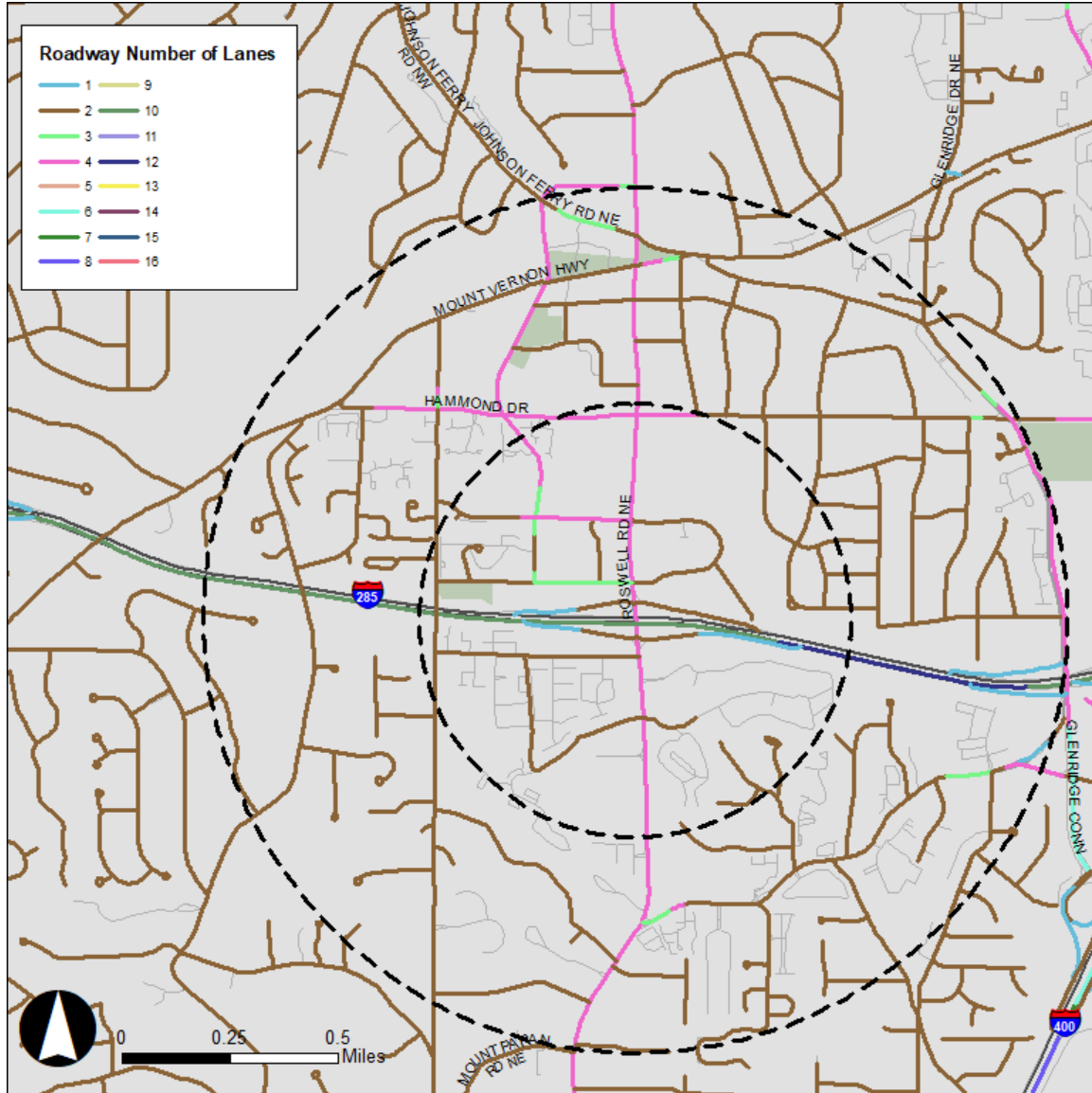
Maps outlining the Cumberland Parkway station area roadway functional classifications, number of lanes, and traffic counts can be found in Appendix C.

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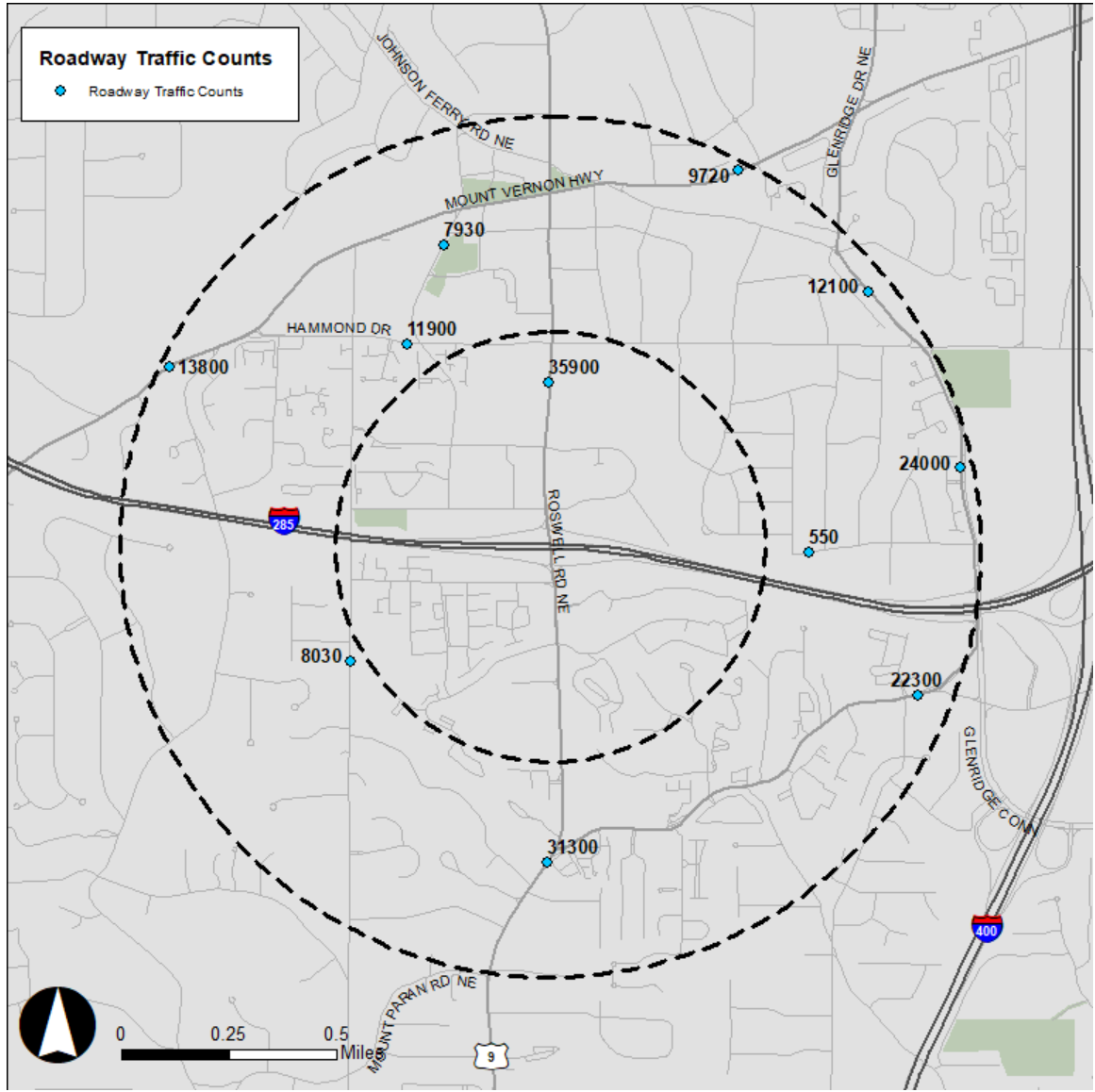
Appendix A: Roswell Road Roswell Road - Functional Classification



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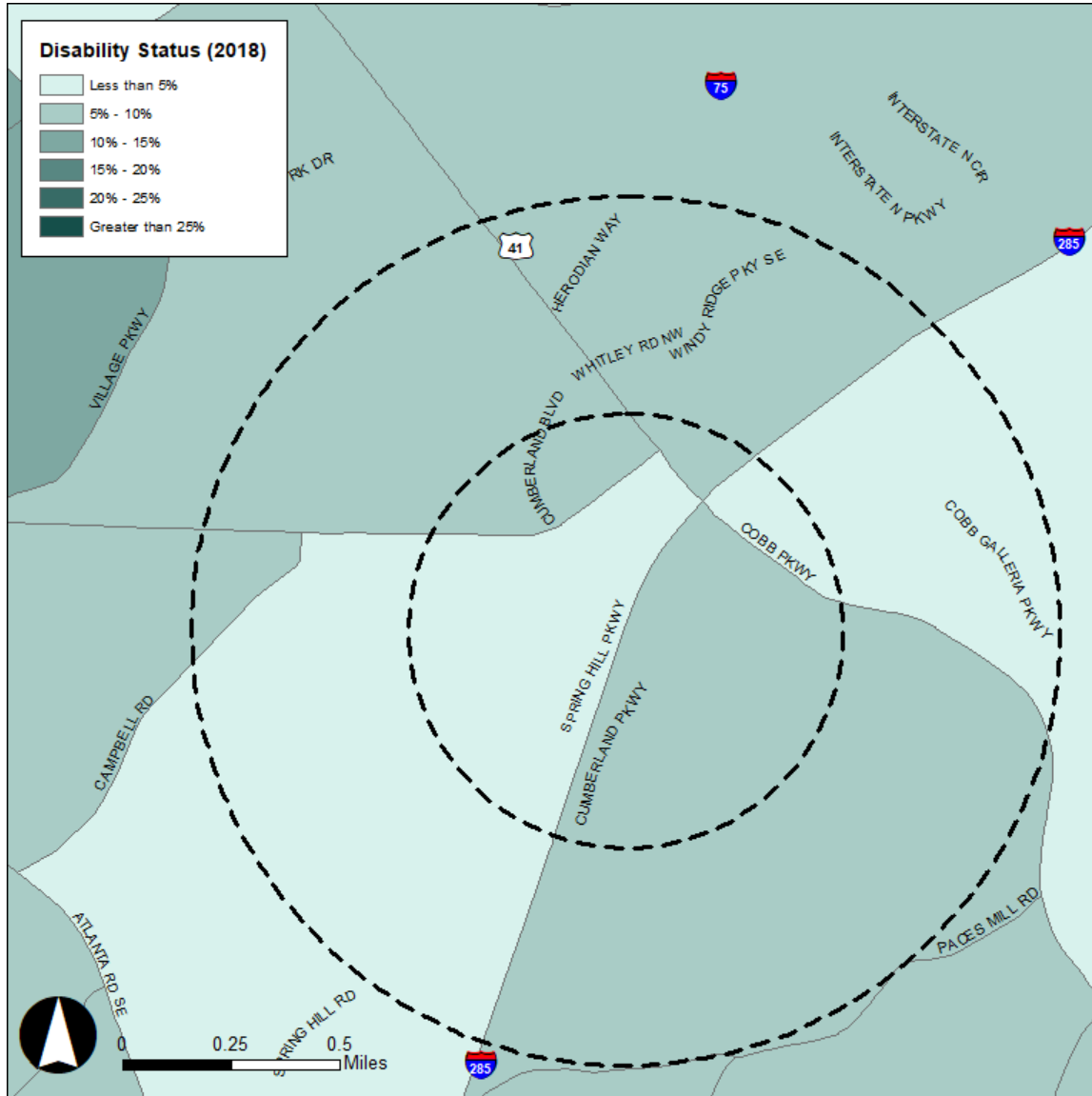
I-285 TOP END RAPID TRANSIT SEGMENT STATION PLAN



I-285 TOP END RAPID TRANSIT SEGMENT STATION PLAN

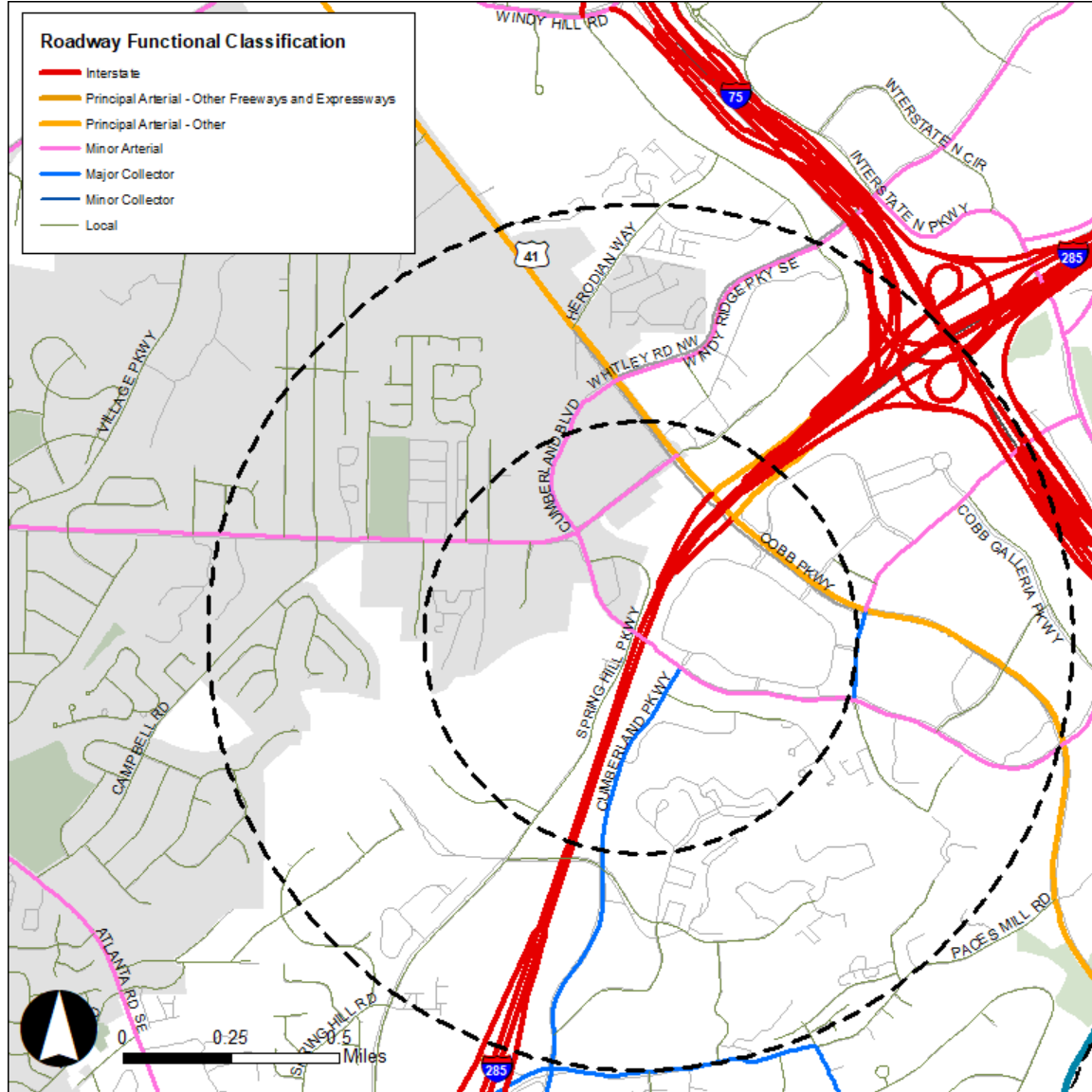
Appendix B Cumberland Boulevard

Cumberland Boulevard - Disability Status



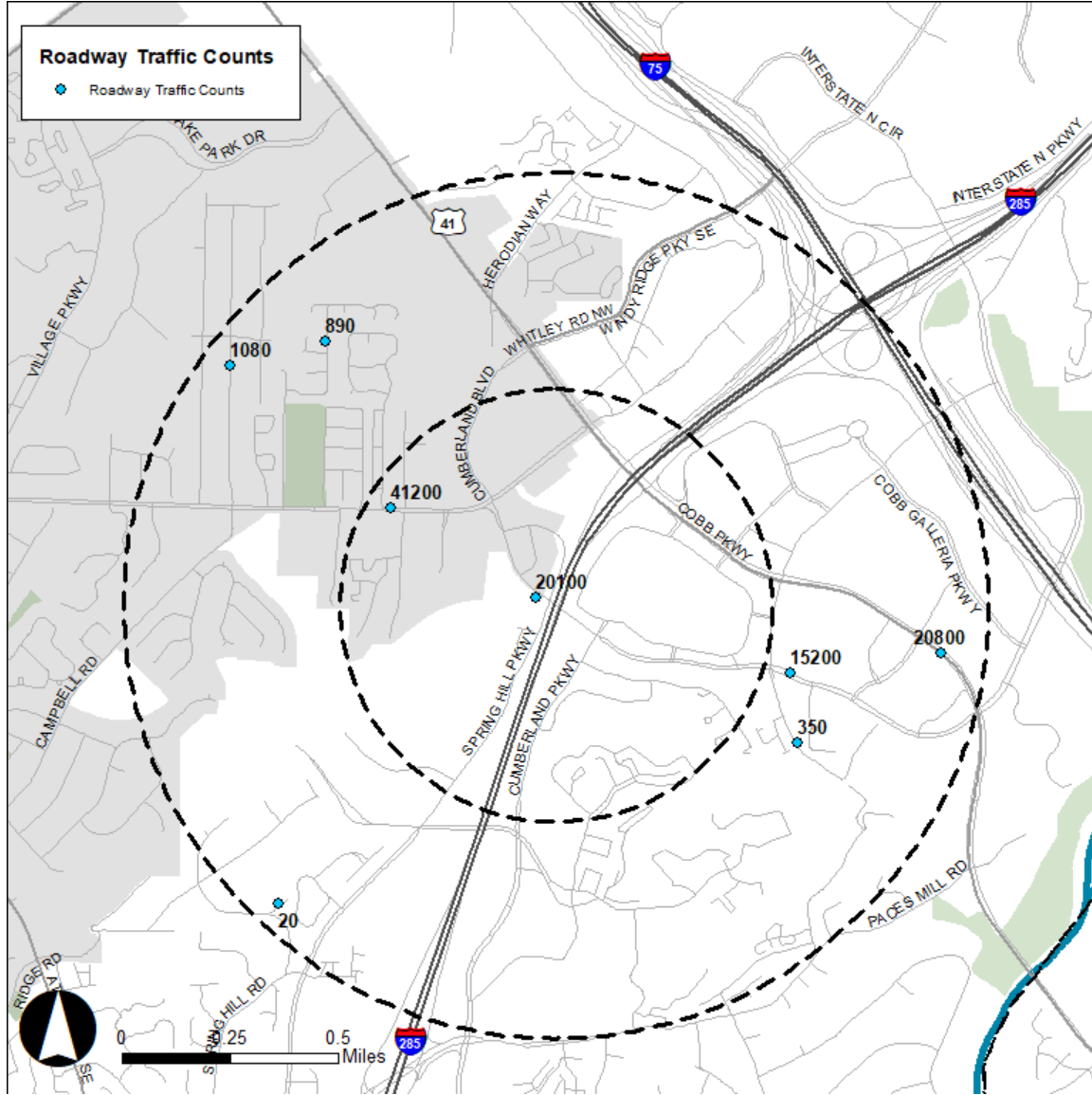
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Cumberland Boulevard – Roadway Functional Classification



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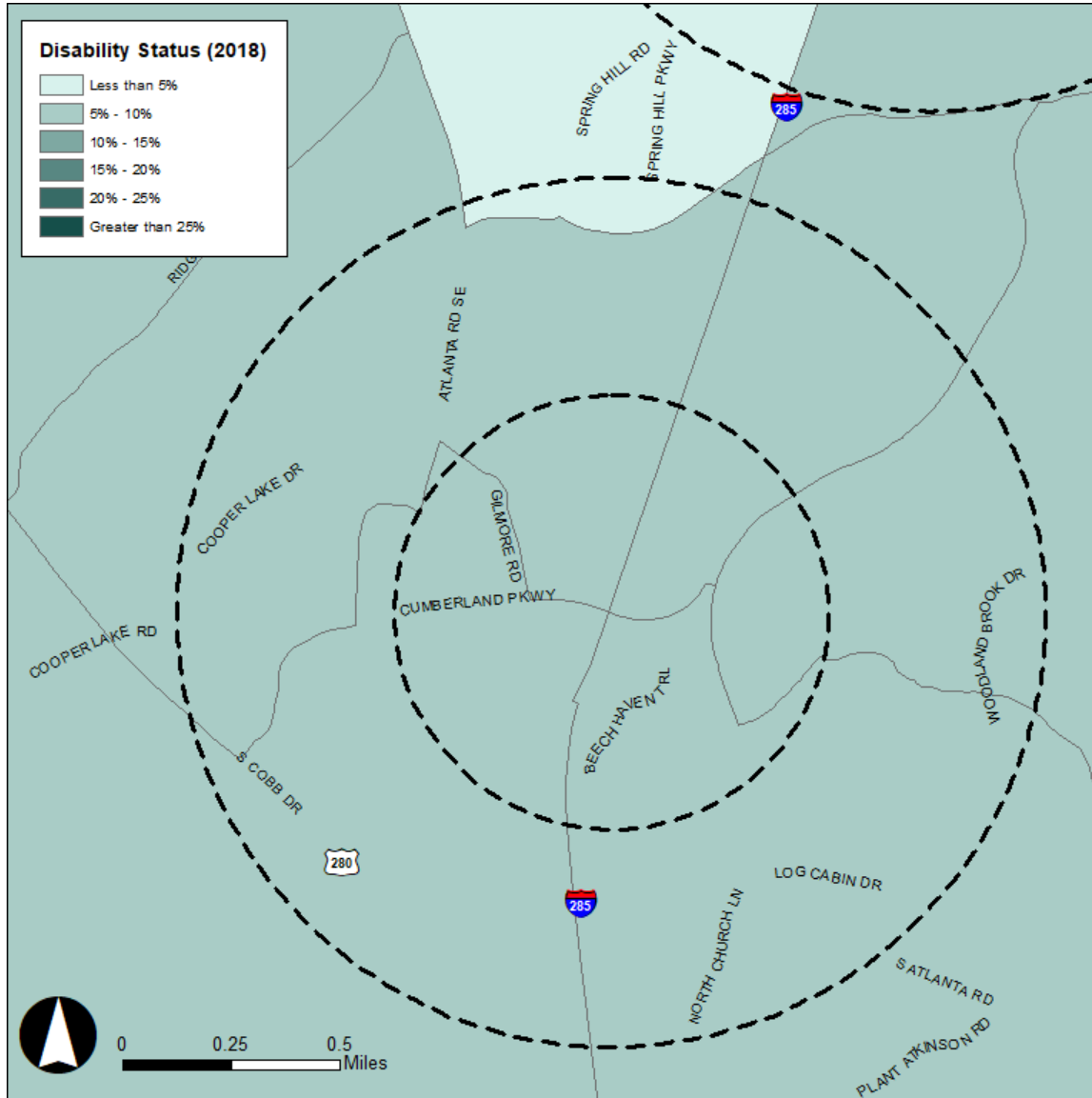
Cumberland Boulevard – Roadway Traffic Counts



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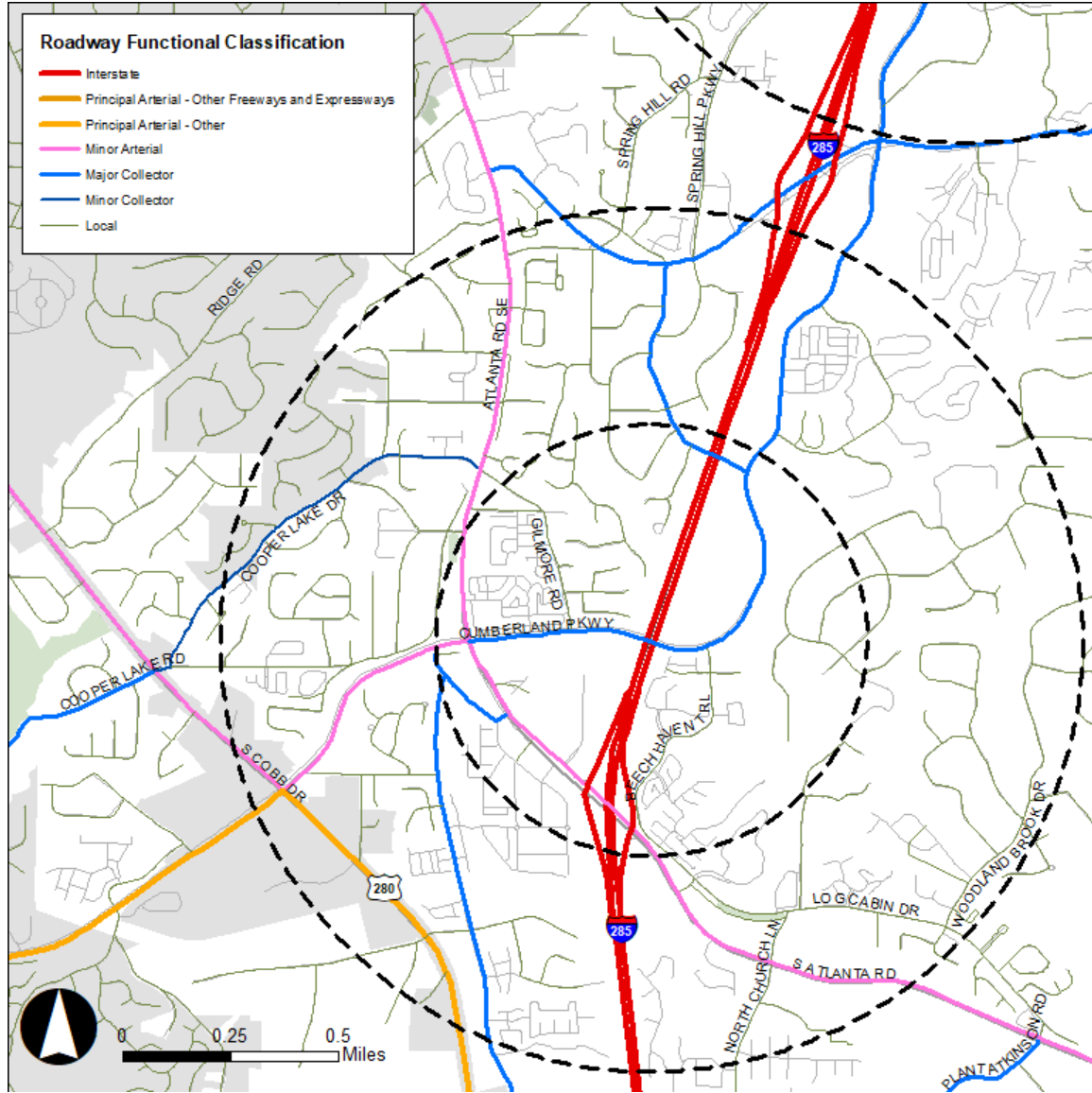
Appendix C Cumberland Parkway

Cumberland Parkway – Disability Status



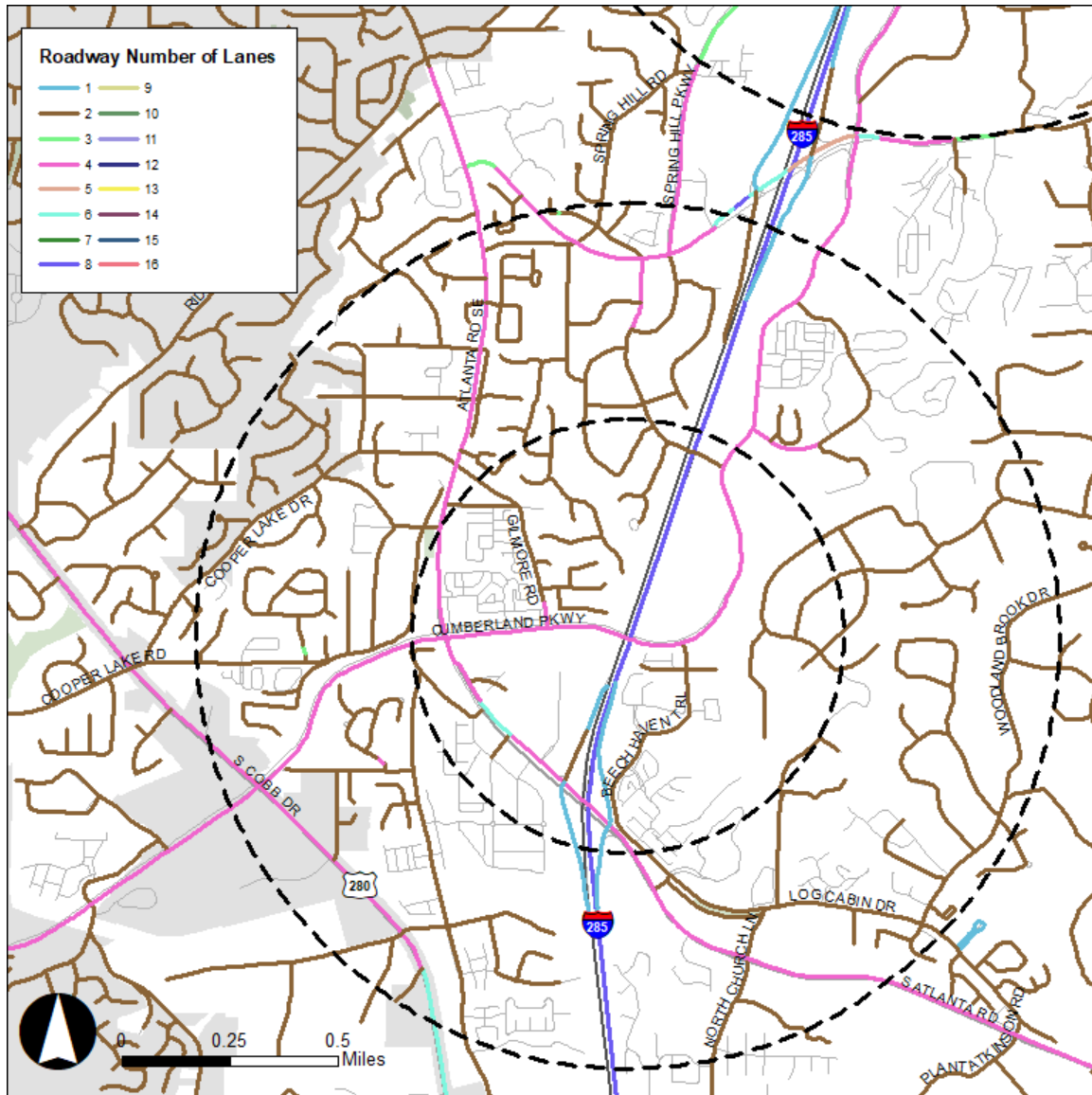
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Cumberland Parkway – Roadway Functional Classification



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Cumberland Parkway – Roadway Number of Lanes



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Cumberland Parkway – Roadway Traffic Counts

