DeKalb County
TRANSIT MASTER PLAN

DeKalb County Transit Master Plan

Final Report - August 2019

Prepared for

DeKalb County
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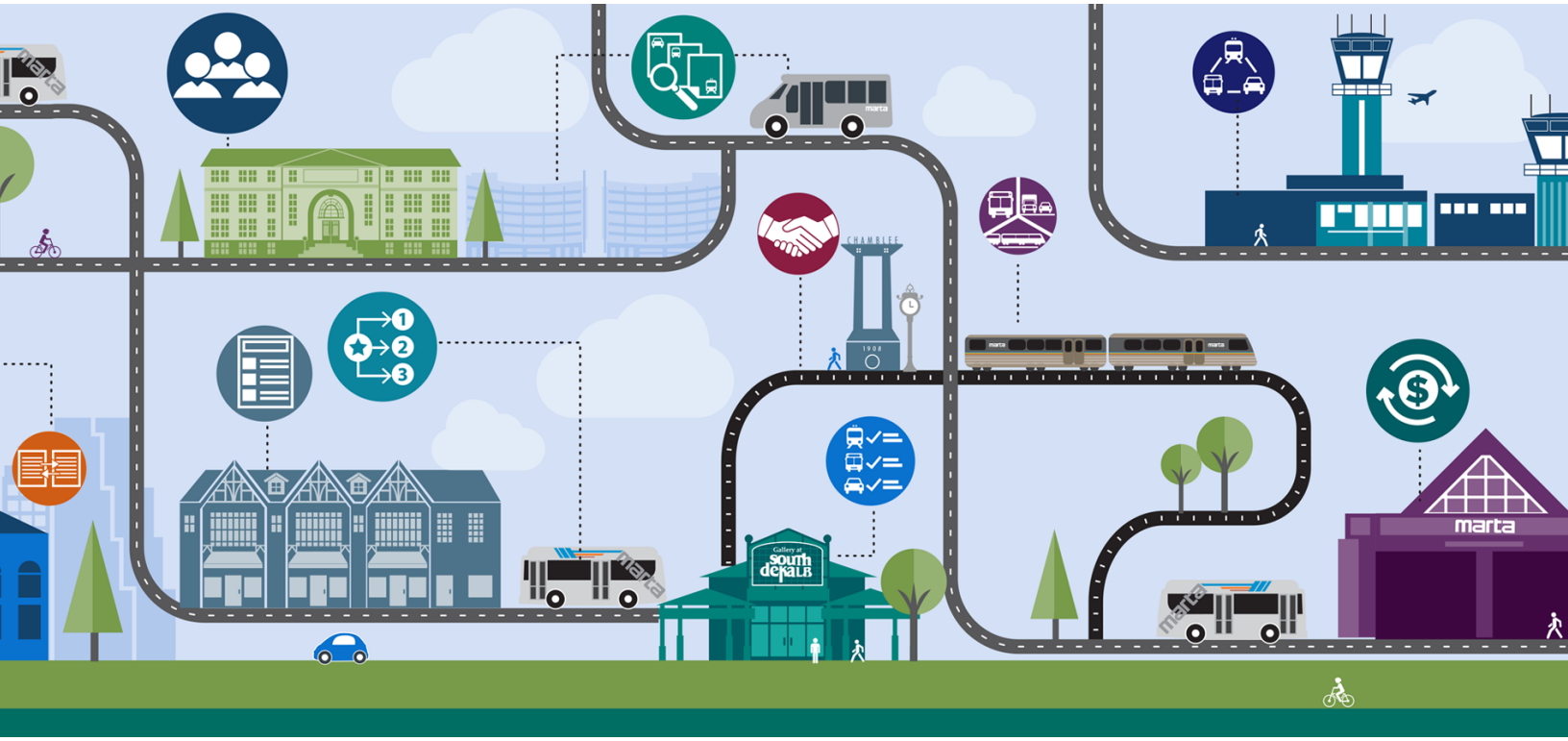

DeKalb County

TRANSIT MASTER PLAN

What is DeKalb County's Transit Master Plan?

The Transit Master Plan's purpose is to address DeKalb County's mobility challenges, help to enhance future development opportunities, and improve the quality of life within each of DeKalb County's cities and unincorporated communities, both north and south. The plan identifies transit service enhancements for today and expansion opportunities for tomorrow to create a 30-year, cost-feasible vision for transit investments in DeKalb County

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1 Introduction

Background

This report represents the second and final report in the two-volume DeKalb County Transit Master Plan (TMP). The first report, entitled *Baseline Condition: An Assessment of Transit Needs and Markets*, was completed in November 2018. This report provided an overview of the state of travel and transit conditions in DeKalb County, as well as insights into the current and future needs for transit investments. The identified needs and markets set the foundation for developing the transit investment scenarios provided in detail as part of this final report.

DeKalb County, and the cities within DeKalb County, successfully requested the Atlanta Regional Commission (ARC) to fund a DeKalb TMP for transit expansion as a component of the DeKalb County Comprehensive Transportation Planning program. Ultimately, the plan will serve as the guiding document to support more detailed transit planning and expansion in DeKalb County. Additionally, it will serve to provide guidance to County officials and the Metropolitan Atlanta Rapid Transit Authority (MARTA) on the strategic direction for securing additional funding for future transit investments necessary to implement the plan. Its projects will feed into the Regional Transit Plan to be completed by the Atlanta-Region Transit Link Authority (The ATL).

- This final report documents the technical steps, as well as public/stakeholder outreach and education that led to the following key DeKalb TMP outcomes: Development of the universe of transit project concepts
- Evaluation of transit concepts to define four transit investment scenarios
- Financial planning and modeling to deliver each scenario
- Final plan recommendations and steps toward implementation

Project Goals

The identification of goals for the DeKalb TMP was fundamental and a critical step completed early in the plan development process. A key input to the development of these goals was the range of comments and policy issues identified during the TMP's initial round of public/stakeholder outreach. The goals developed and used throughout the TMP helped to define

the overall vision and facilitate the assessment of transit investments, as well as the scenarios considered in the DeKalb TMP. The goals are found in **Figure 1-1**.

Figure 1-1: DeKalb Transit Master Plan Goals

Live, work, play and use transit

Focused on creating an environment where transit is a seamless part of living, working and playing in DeKalb County. By creating a robust network of complementary modes that include **different types of transit** solutions, the plan will **improve residents' quality of life** and businesses' bottom lines.

Ensure that the transit vision is affordable and effective

Create an environment to **listen, educate, and collaborate** with residents, local businesses, cities, and DeKalb County, together we can develop a prioritized list of well-defined, realistic, and feasible transit improvements to guide us for the next few years and beyond.

Make sure thriving and emerging areas have transit service

Defined **fiscally sensible solutions**, the Master Plan will **bolster economic development** activities in currently prosperous areas and encourage investment in those areas identified for future growth so that all areas of the County will benefit from future transit improvements.

Make sure transit is available for everyone

Provide mobility options for all DeKalb County residents. The recommendations will balance the needs of **discretionary riders** who could choose to commute via private automobile instead of transit with the needs of more **transit-dependent riders** such as seniors, individuals with low incomes, underserved residents, persons with disabilities, and youth.

2 State of DeKalb Transit

History of DeKalb Transit

In the early 1960s, the Metropolitan Atlanta Transit Study Commission recommended that a five-county transit system be implemented to better serve the Greater Atlanta region. The study was in response to tremendous growth occurring in the City of Atlanta and the counties of DeKalb, Clayton, Cobb, Fulton, and Gwinnett. This recommendation led the Georgia Legislature to pass the MARTA Act of 1965 on March 10 of that year. The original Board of Directors was determined to be 11 members: four City of Atlanta representatives, two DeKalb County representatives, two Fulton County representatives, one Cobb County representative, one Clayton County representative, and one Gwinnett County representative. The first meeting of the Board was held on January 3, 1966.

The Act specified that MARTA "shall exist for the purposes of planning, designing, leasing (as lessee), purchasing, acquiring, holding, owning, constructing, improving, equipping, financing, maintaining, and administering a rapid transit system within the metropolitan area, and operating same, or contracting therefor, or leasing (as lessor) same for operation by private parties." By 1971, only the City of Atlanta, DeKalb County, and Fulton County had passed referenda to fund MARTA. Clayton, Cobb and Gwinnett did not support it. A sales tax was ultimately passed by City of Atlanta, DeKalb County, and Fulton County to support MARTA. The state legislature limited MARTA's spending on operations to fifty percent of the revenue from the sales tax. DeKalb County leaders supported this restriction because they were concerned that capital investments might be limited to the City of Atlanta. The State of Georgia did not provide any funding for MARTA.

DeKalb Transit Today

Today, MARTA serves DeKalb, Fulton, and Clayton counties, and the City of Atlanta. MARTA provides both bus and rail transit services, and total 2018 systemwide weekday daily ridership is more than 500,000 trips. MARTA's rail lines provide connections to some of the major activity centers in the region such as Downtown Atlanta, Midtown Atlanta, Perimeter Center, Buckhead, Mercedes Benz Stadium, City of Decatur, and Hartsfield-Jackson Atlanta International Airport (HJAIA). The rail network also provides connections to educational institutions such as Georgia Institute of Technology and Georgia State University.

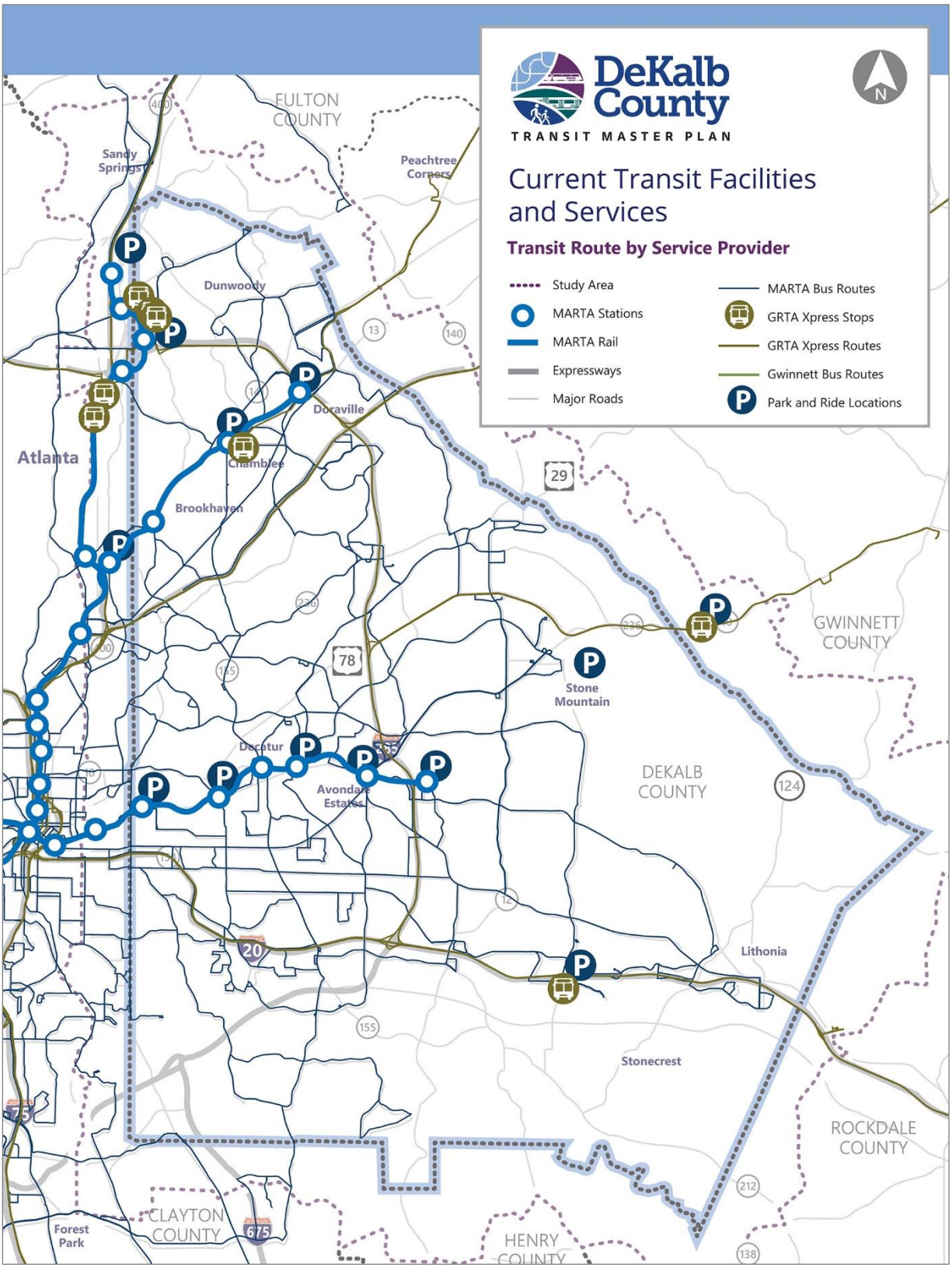
Local bus routes serve several functions. They act as the feeder system to MARTA rail stations, local circulators, connections to major activity centers, and express routes that serve the region's central business districts. MARTA completed a Comprehensive Operations Analysis (COA) for its bus routes in 2016 and has since adopted several changes in operations to optimize its transit service.

MARTA is the primary operator of transit service (bus and rail) within DeKalb County. However, the State Road and Tollway Authority (SRTA)/Georgia Regional Transportation Authority (GRTA) Xpress and Gwinnett County Transit provide additional commuter bus services in the county. **Map 2-1** provides an overview of the current transit network operating in DeKalb County. Additional details on the state of the transit system in DeKalb County can be referenced in the previous report entitled *Baseline Condition: An Assessment of Transit Needs and Markets*. The baseline assessment identified several unmet riders' needs to be addressed in DeKalb County including the following:

- Expansion of paratransit services
- Improvements to bus service in popular corridors
- Mobility centers to better accommodate bus-to-bus transfers
- Expanded local bus services, circulators and on-demand service
- Bus-to-rail transfer improvements
- First mile/last mile infrastructure improvements

The last two decades of planning for capital investment in high-capacity transit has not led to any major investments in DeKalb County; thus, the intent of the DeKalb TMP is to establish a concise, locally supported transit plan adopted by the County and supported by each of its municipalities. The DeKalb TMP defines transit investment strategies that address state-of-good repair requirements, expansion priorities, regional connectivity, equity, and economic development. These strategies consider potential funding opportunities at the federal, state, and local levels, as well as support private investment opportunities. The sections that follow detail the foundation for conducting the DeKalb TMP and the factors that collectively lend themselves to the final set of conclusions and key recommendations.

Map 2-1: Transit Services in DeKalb County

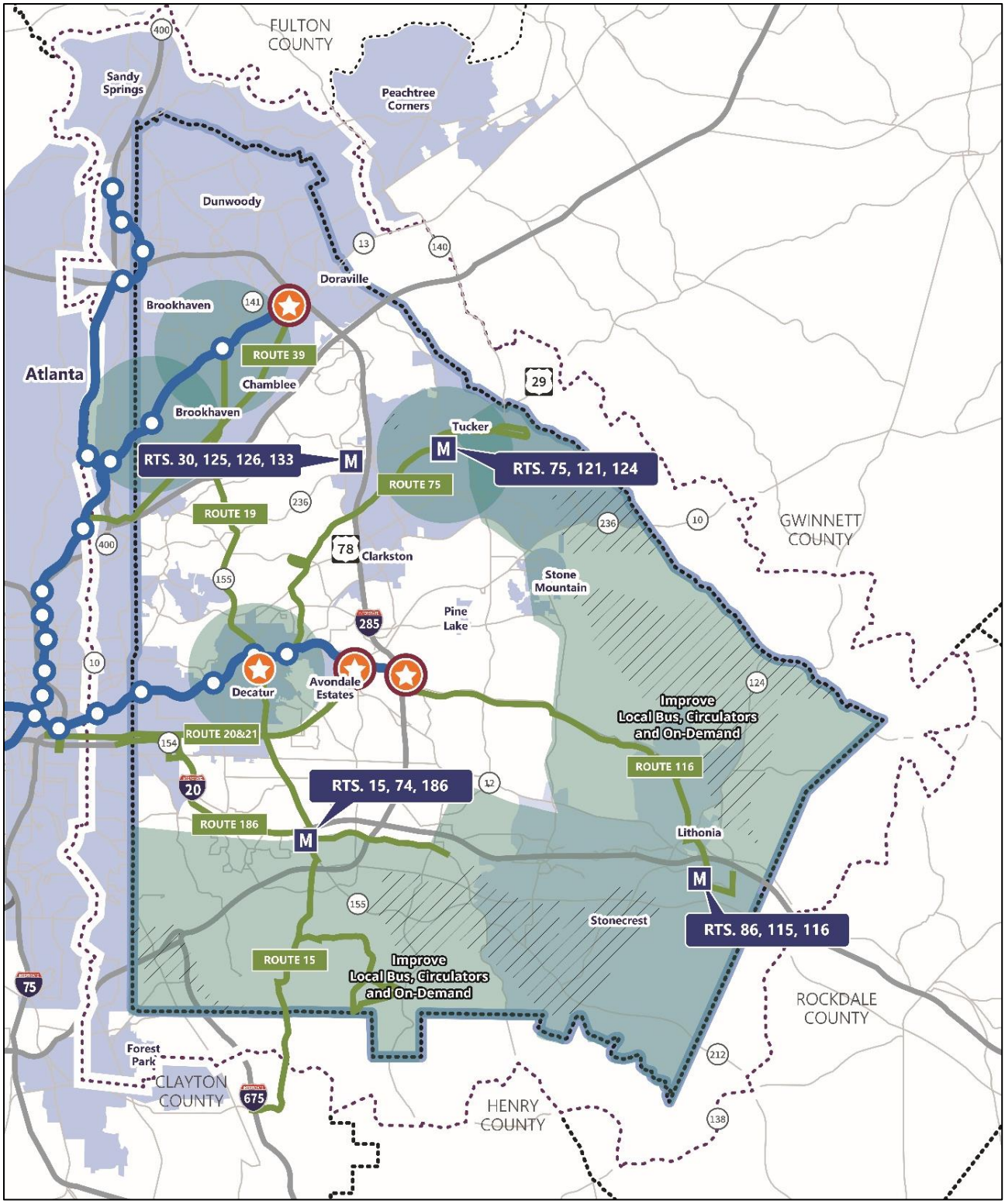


Current Unmet Rider Needs

After receiving public input and completing a comprehensive review of the existing MARTA system, land use trends and travel conditions, the DeKalb TMP has identified a series of unmet rider needs to be addressed. These needs are illustrated in **Map-2-2** and include the following:

- **Expansion of paratransit services** – This is needed in unserved areas in south and east DeKalb. This would serve significant aging-in-place and disabled populations and could be provided via MARTA Mobility and/or mobility-on-demand contracted services.
- **Improvements to bus service in popular corridors** – Enhanced service is particularly needed on Routes 39, 186, 21, 121, 15, 19, 75, and 116. Improvements may include increased frequency of service, higher capacity buses, extended hours of operation, improved shelters and more rider amenities.
- **Mobility centers –** Four locations have been identified for mobility centers: The Gallery at South DeKalb, Stonecrest, downtown Tucker, and Northlake Mall. These centers would facilitate bus-to-bus transfers, provide covered shelter, Breeze card kiosks, restrooms, vending, bike racks, and real-time bus arrival information. Multi-modal mobility connections to car-sharing and bike-sharing services would also be provided.
- **Expand local bus services, circulators and on-demand service** – Expanded services are particularly needed in underserved areas in south and east DeKalb. Mobility and circulation improvements are also needed in town centers such as Decatur, Chamblee, Stonecrest, Tucker, and Brookhaven.
- **Bus to rail transfer improvements –** These improvements may include improving real-time passenger information and wayfinding and better aligning bus and train arrivals to reduce transfer time. Station improvements may include increasing bus bay loading capacity and improving passenger amenities such as restroom access and vending.
- **First mile/last mile infrastructure improvements –** Improved pedestrian and bicycle connections are needed to transit stops and stations.

Map 2-2: Current Unmet Rider Needs

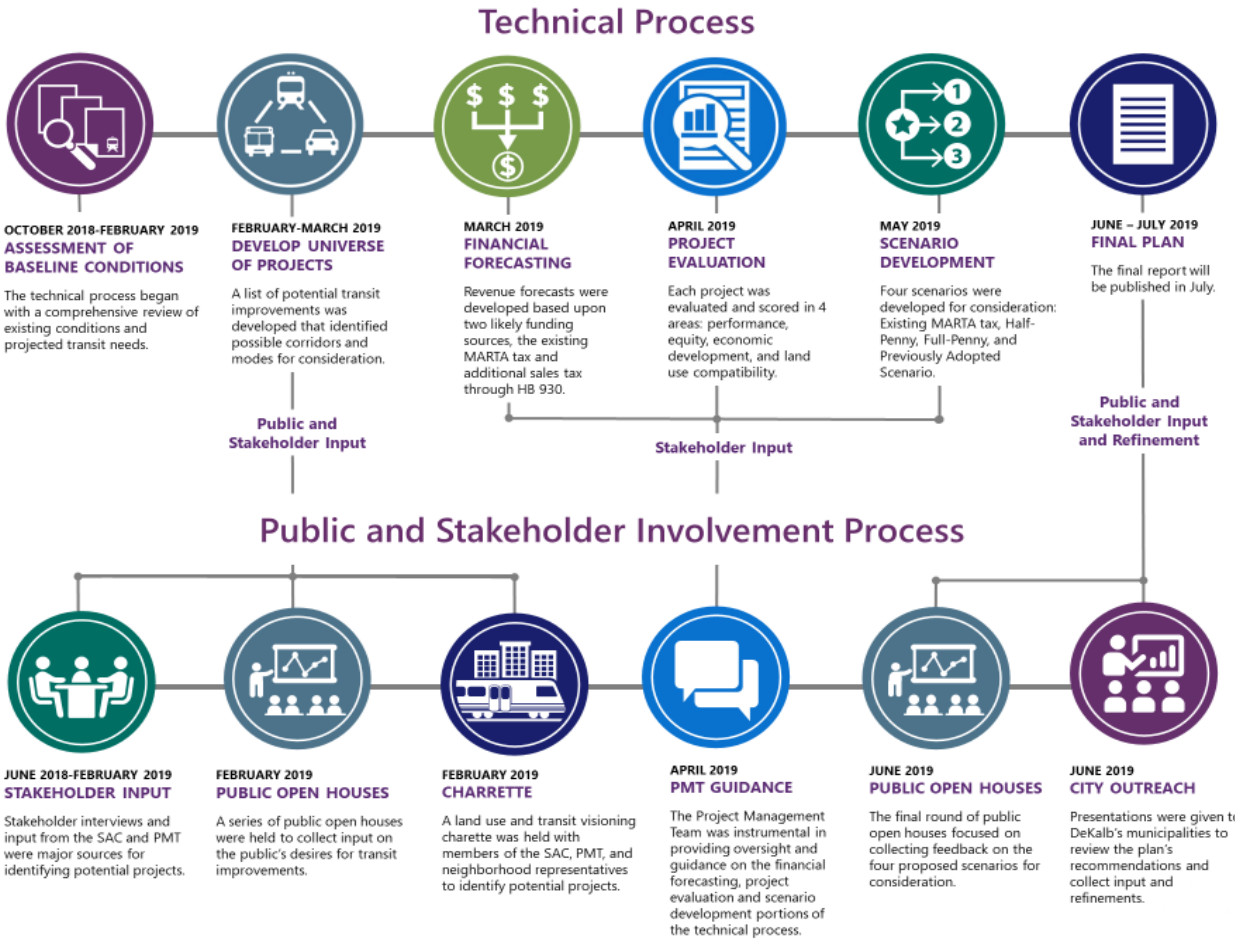


3 Approach

The DeKalb TMP used two concurrent processes to develop the plan: a technical process and a public involvement process.

These two processes converged and informed each other throughout the development of the TMP. At key points, public and stakeholder input was incorporated to help guide the technical process. The relationship between both processes is illustrated in **Figure 3-1** and highlights key connection points.

Figure 3-1: DeKalb TMP Technical and Public Involvement Processes



Technical Process

The technical process was divided into six main efforts, with each one building upon the previous steps. These efforts include:

- Assessment of baseline conditions
- Identifying the universe of projects
- Project evaluation
- Financial forecasting
- Scenario development
- Scenario evaluation

ASSESSMENT OF BASELINE CONDITIONS

The technical process began with a comprehensive evaluation of existing conditions and projected needs, which has been documented in a previous report entitled *Baseline Conditions: An Assessment of Transit Needs and Markets*. This was a major technical effort that focused on providing an overview of the present state of transit in DeKalb County, as well as insights into the current and future needs for transit. Identified needs in this report were used to help develop transit improvement scenarios.

This assessment was wide ranging and focused on travel trends, an overview of the existing transit system, economic development potential, and policy analysis, among other items. An analysis of transit market segments, transit needs, travel patterns, and major transportation corridors was also included in the assessment.

IDENTIFYING THE UNIVERSE OF PROJECTS

After assessing the baseline conditions, a universe of projects was identified for further evaluation. Projects were added to the universe through both technical or public involvement processes. The universe focused on high-capacity transit options.

PROJECT EVALUATION

Evaluation criteria were developed to reflect the values of the project goals (**Figure 1-1**). Each project in the universe of projects was evaluated against these measures to determine the project's potential benefits and estimated costs. These criteria measured performance (ridership), economic development potential, equity, and land use compatibility. Cost estimates were also developed for each project at this phase of the technical process. A variety of planning tools, models, and analysis techniques were employed to assess each project. A scoring system was developed to aid in project comparisons. The evaluation process is described in further detail in **Chapter 4** of this report.

FINANCIAL FORECASTING

Revenue forecasting was another major technical effort of the DeKalb TMP. Forecasts were developed based upon two potential funding sources: the existing MARTA Sales Tax and the House Bill (HB) 930 Sales Tax. These forecasts projected the revenues available for transit expansion if DeKalb County passed a half-penny or full-penny sales tax, along with reasonable

assumptions of funding from the Federal Transit Administration (FTA) Capital Investment Grants (CIG) program. Projected revenue levels were then used to fiscally constrain well-performing projects in the universe of projects into a set of financially feasible transit scenarios. Detailed information on this process is provided in **Chapter 5** of this report and in **Appendix B**.

SCENARIO DEVELOPMENT

The next step of the technical process involved developing potential transit system scenarios for DeKalb County. Through guidance provided by the Project Management Team (PMT), four scenarios were developed:

- **Existing MARTA Penny Scenario** (also known as Existing MARTA tax), which assumes a continuation of the one-penny MARTA tax with no additional sales tax funding for transit
- **Half-Penny Scenario**, which assumes a continuation of the one-penny MARTA tax and that the County passes an additional half-penny sales tax for transit under HB 930
- **Full-Penny Scenario**, which assumes a continuation of the one-penny MARTA tax and that the County passes an additional full-penny sales tax for transit under HB 930
- **Previously Adopted Scenario**, which assumes a continuation of the one-penny MARTA tax and an unidentified additional funding source capable of generating revenue well in excess of the revenue generated by the full-penny HB 930 sales tax

The development of these scenarios in most cases involved combining high-performing projects into transit networks that matched funding levels projected through financial forecasting. This process is described in greater detail in **Chapter 5.**

SCENARIO EVALUATION

The final phase of the technical process involved scenario evaluation. The four scenarios were compared against each other in terms of benefits and costs to aid the public and decision makers in understanding the trade-offs between them. The evaluation focused on transit access, mobility, economic development potential and ridership. These comparisons will be highlighted during a period of continued public and stakeholder education/outreach occurring after the formal DeKalb TMP process concludes. The results of the scenario evaluations are provided in **Chapter 6**.

Public Involvement Process

The public involvement process used to develop the DeKalb TMP ran concurrently with the technical process. It was a comprehensive and robust process that informed the technical work at critical points. This process was comprised of 13 major traditional and innovative engagement activities:

- Public open houses
- Stakeholder Advisory Committee (SAC) meetings
- Stakeholder interviews
- PMT meetings
- Peer city tour in Minneapolis
- Focus groups

- Transit and land use visioning charette
- Project share (Pecha-Kucha Style)
- Project website
- Online survey
- Fact sheets
- Pop-up events
- City outreach and input presentations

This section provides an overview of the major components of the public involvement process. A detailed report of the activities performed is provided in **Appendix A**.

PUBLIC OPEN HOUSES

Three rounds of public open houses were held during the DeKalb TMP planning process. Each round consisted of three identical meetings held in different parts of the county. The first round was held in October 2018 and focused on education. Information on the study purpose, goals, and potential transit modes was presented. Technical background data on existing transit conditions, economic development, transit needs, and travel patterns was also provided.

Figure 3-2: Public Open House

Public open house attendee plays an educational transit mode matching game.

The second round of meetings, held in February 2019, focused on getting input from the public on desired transit projects and existing needs. At these meetings the interactive planning tool, SketchTransit, was used to record the desired transit projects noted by participants. A mode game and videos were also employed to educate attendees on the various transit modes being discussed. The third round of meetings was held in June 2019 and focused on presenting the four draft scenarios to the public for consideration and feedback.

STAKEHOLDER ADVISORY COMMITTEE (SAC)

The project was guided by the SAC, which included representatives from local agencies, community groups and jurisdictions. A series of four SAC meetings were held throughout the planning process, which focused on providing education and receiving stakeholder feedback on project identification and scenario development.

STAKEHOLDER INTERVIEWS

A series of stakeholder interviews were held at the beginning of the project to gain insight into the background and history of transit planning efforts in the county. Interviews were held with elected officials from across the county, as well as the county's representatives on the MARTA Board of Directors. These interviews provided the study team with important information on critical transit needs and issues of concern.

PROJECT MANAGEMENT TEAM

The PMT was heavily involved in guiding the development of the DeKalb County TMP. This group was comprised largely of elected officials and executive leadership from the County's municipalities and County government. This team of decision makers provided valuable input on the political realities and concerns affecting transit improvements. The PMT met on a bi-weekly basis throughout the planning process and was kept up-to-date and well informed on plan development activities. This group had a major impact on the technical approach, scenario development and final outcomes of the TMP.

PEER CITY TOUR

In September of 2018, a peer city tour was held in Minneapolis-St. Paul, Minnesota. Representatives from the county government, municipalities, Community Improvement Districts (CIDs) and regional planning agencies toured transit expansion efforts in the cities and met with local planners and elected officials to discuss lessons learned. This tour provided education and exposure to transit modes that do not currently exist in the Atlanta region, such as Bus Rapid Transit (BRT), Arterial Rapid Transit (ART), and Light Rail. This tour was helpful for stakeholders and elected officials to visualize how new transit technologies could operate in the County and serve the travel needs of residents.

Figure 3-3: Minneapolis Peer City Tour

Peer city tour attendees meet with local transit planners in Minneapolis.

FOCUS GROUPS

Focus group discussions were held to address the concerns of two groups: the small business community and individuals with disabilities. Participants were led through a facilitated discussion to understand how transit affects individuals within these groups. As an example, these meetings were helpful in

identifying the specific challenges and barriers that disabled persons encounter when trying to access transit services.

TRANSIT AND LAND USE VISIONING CHARRETTE

In February of 2019, the County hosted an ambitious interactive transit and land use visioning charette. This workshop was attended by members of the SAC, PMT, transportation, land use and economic development professionals, as well as other community leaders. The meeting began with an informative presentation that explained the differences between transit modes and the principles of Transit-Oriented Development (TOD). A brief overview of transit-related economic development efforts was also provided. Facilitated break-out sessions were held where participants could plan their ideal transit systems and economic development vision using the SketchTransit tool and other base map data and resources. This exercise was used to identify potential projects and major transfer locations between projects.

Figure 3-4: Transit and Land Use Visioning Charrette

Charrette attendees work together to identify transit projects and plan a county-wide transit system.

PROJECT SHARE

In March of 2019, a project share meeting was held to facilitate the sharing of information between project teams working on related planning efforts in proximity to DeKalb County. In response to the large number of parallel planning efforts occurring simultaneously to the DeKalb TMP the need for an information-sharing workshop was recognized. Brief five-minute presentations (Pecha-Kucha style) were provided by each team and group discussions were held after. Presentations were given on the ATL Regional Transit Plan, DeKalb County Comprehensive Plan, I-20 East TOD Plan, Clifton Corridor, Fulton County Transit Master Plan, Connect Gwinnett Transit Plan, GDOT Major Mobility Investment Program, GDOT Statewide Transit Plan, and Atlanta's Transportation Plan.

PROJECT WEBSITE

The project website was a powerful interactive tool to facilitate public education and provide opportunities for public input. All materials presented at public open houses and SAC meetings were available on the website. The project website also included an interactive transit mode game, survey, and email comment portal. The website will continue to be available to the community well beyond the close of the formal TMP process.

ONLINE SURVEY

An online survey was administered and open from August 2018 to March 2019. The survey asked respondents about their experience with transit in DeKalb County, solicited input on how to improve services, and gauged support for an additional sales tax for transit. Responses were collected through the website, e-blasts, and at public open houses and pop-up meetings. The 877 responses were used to understand the public's desires for additional transit investments.

FACT SHEETS

Two fact sheets were developed at the beginning and near the conclusion of the planning process. The summer 2018 fact sheet provided an overview of the TMP process, major goals, MARTA service facts, and information about how to get involved. The summer 2019 fact sheet detailed the evaluation process and presented information on the four scenarios. Fact sheets were available at the public open houses, pop-up meetings, and workshops held throughout the planning process. These fact sheets were also made available on the project website for individuals who could not attend public meetings.

POP-UP EVENTS

The study team attended numerous community events throughout the planning process to promote the DeKalb TMP. A pop-up informational kiosk was set up at these events to educate the public about the plan and elicit public feedback from those who may not regularly attend public meetings. The intention of attending these events was to meet residents where they are in their everyday lives. Some of these pop-ups were held at the Central DeKalb Senior Center, Black History Celebration, and Waters Edge Home Owners Association to mention a few.

Figure 3-5: Display Booth at Community Event

CITY OUTREACH AND INPUT PRESENTATIONS

City outreach was key to the development of the TMP. The project engaged the cities through various means: four members of the DeKalb Municipal Association (DMA) served on the PMT, three presentations were made to the DMA, and a project presentation was made at each city's council meeting in the early summer 2019. These presentations provided an overview of the planning process, outcomes, draft recommendations, presented the four scenarios for consideration and solicited any questions. Resolutions of support were collected from each jurisdiction.

4 Project Evaluation

Overview

This chapter describes the process used to identify and evaluate potential transit projects. The first step in the process began with identifying the universe of projects for consideration. Project definition primarily included corridor and mode identification, but for the purposes of comparison project definitions also had to include planning-level detail such as a broad description, length, potential number of stations, and generalized operating plan. After definition, each project was evaluated across the DeKalb TMP's four major goal areas: land use compatibility, economic development potential, equity, and performance (ridership).

Universe of Projects

The development of the universe of projects involved amassing potential projects from a variety of sources including prior planning efforts, public involvement, stakeholder input, and technical analysis. Previous planning efforts included both MARTA corridor studies and projects identified in MARTA's COA.

A significant number of potential projects were identified through the public involvement process. Many projects were identified at the TMP's second series of public open houses held in February 2019. At these meetings, an interactive planning tool, SketchTransit, was used to record projects proposed by members of the public. There was a high level of consensus on proposed projects and major travel corridors in need of service. There were also numerous novel concepts identified during this process such as mobility on-demand and microtransit services for areas and corridors throughout DeKalb County.

In addition to public input, stakeholder input was another major source for potential projects. Projects were identified through stakeholder interviews, SAC meetings, focus groups, and municipal engagement. Input from stakeholders on the PMT was also factored into the project development process.

Technical analysis was used to identify additional projects. These projects were designed to address the transit needs identified in the *Baseline Conditions: An Assessment of Transit Needs and*

Markets report. Projects included improved transit service on major travel corridors identified as underserved and/or transit service that focused on travel patterns not currently being served by transit.

The universe of projects is displayed in **Map 4-1** and contains 40 individual transit projects: 3 heavy rail transit (HRT) projects, 9 light rail transit (LRT) projects, 13 bus rapid transit (BRT) projects, and 15 arterial rapid transit (ART) projects. Maps that display these projects by mode are provided in this chapter as well. As noted previously, project definition included corridor and mode. To ensure optimal results, multiple modes were proposed on the same corridor.

FATAL FLAW ANALYSIS

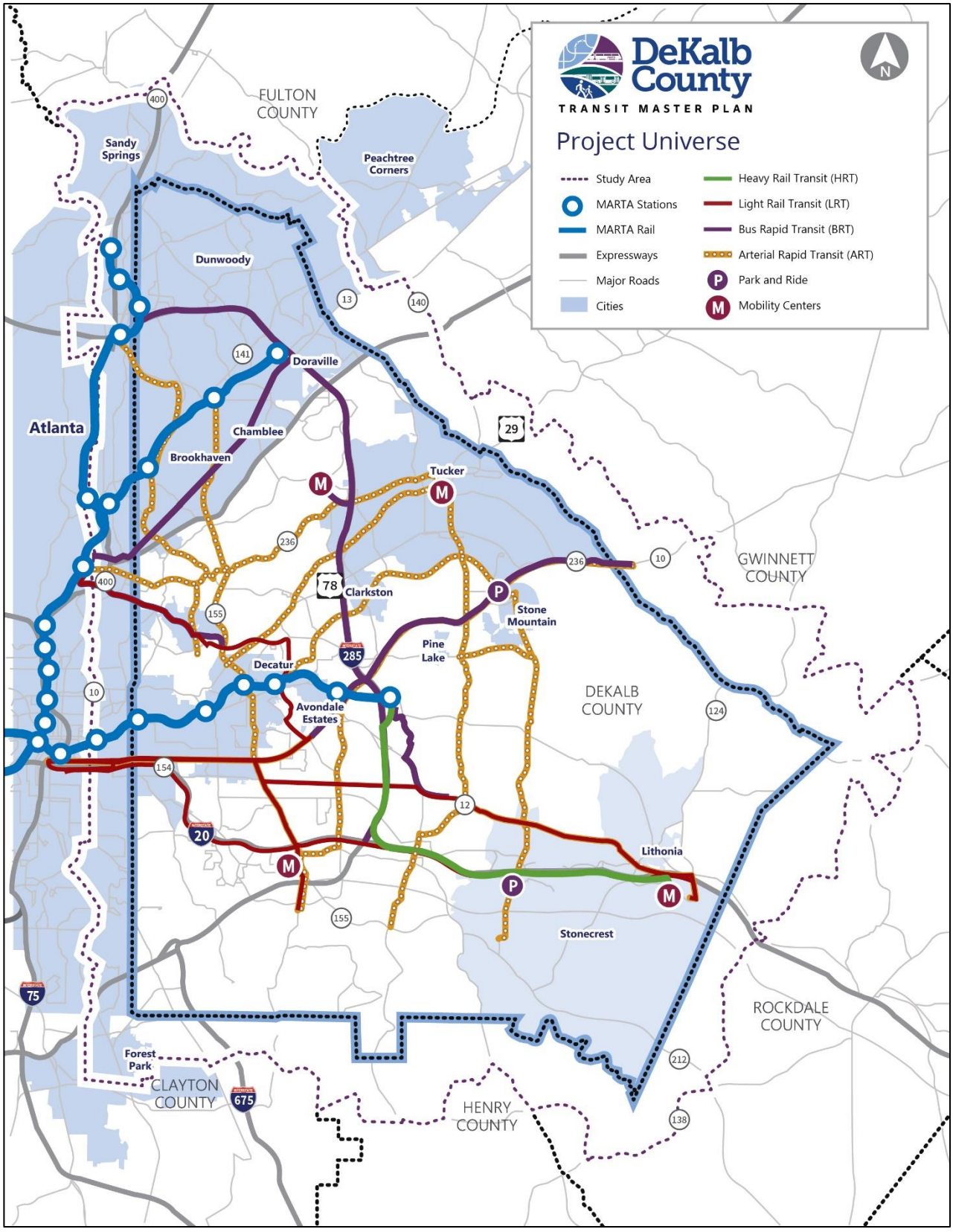
All potential projects were screened through a fatal flaw analysis to determine if they should proceed for additional evaluation. This screening was used to eliminate projects that were determined to be impractical. This analysis was necessary as many projects were identified by the general public and stakeholders, who understand their travel needs, but may not understand the limitations of various transit modes. It relied on a combination of planning judgement and technical analysis. Several projects identified by the public were not feasible due to potential for physical constraints (i.e., limited right-of-way and/or a high potential for numerous and significant property impacts). Other projects were screened out because they failed to connect origins to a significant number of destinations.

DEFINITION OF TRANSIT MODES

For the purposes of the DeKalb TMP, only modes that are proven and have received federal support through FTA funding were considered. High-capacity transit improvements in this plan focused on four modes: HRT, LRT, BRT, and ART. In addition, paratransit, mobility on-demand, express and local bus modes were also included as complementary to the network of high-capacity transit projects included in the transit system scenarios.

As technological advances in transportation occur, consideration of additional modes and services may be warranted. The TMP evaluated modes that could be implemented today, but scenarios did not preclude the incorporation of future technological advancements.

Map 4-1: Universe of Projects



Heavy Rail Transit (HRT)

Figure 4-1: Heavy Rail Transit

HRT trains carry more people and travel at faster speeds than LRT trains, but they are more expensive to build. HRT trains operate on tracks in exclusive right-of-way, so they are not affected by automobile congestion.

Typically, trains are powered electrically from a third rail, which requires it to be separated from automobile traffic. HRT can operate at ground level, on an elevated structure, or below ground; however, the running-way must be contained and protected to avoid public access to the electrified third rail.

HRT frequency is typically 15 minutes or less. Passengers pay to enter stations (not the train itself) which speeds the boarding process. Passengers board from platforms that are level with the train's floor which helps people of all abilities to board more easily.

Stations are typically spaced at least a mile apart, but may be closer together in dense urban areas, such as Downtown or Midtown Atlanta. Stations in urban areas offer access for pedestrians, bicyclists and drop-off passengers. Stations in suburban areas typically offer all of those access options plus parking areas. Stations may offer amenities like ticket vending machines, customer service kiosks, directional signs, real-time train arrival information, restrooms, vending machines, etc.

Light Rail Transit (LRT)

Figure 4-2: Light Rail Transit

Light rail trains carry fewer people and travel at slower speeds than HRT, but LRT systems are less expensive to build. Because they are powered electrically from an overhead wire, LRT trains do not require grade separation from automobiles. LRT can operate in a designated right-of-way or in mixed traffic. If operated in mixed traffic, congestion may be a concern.

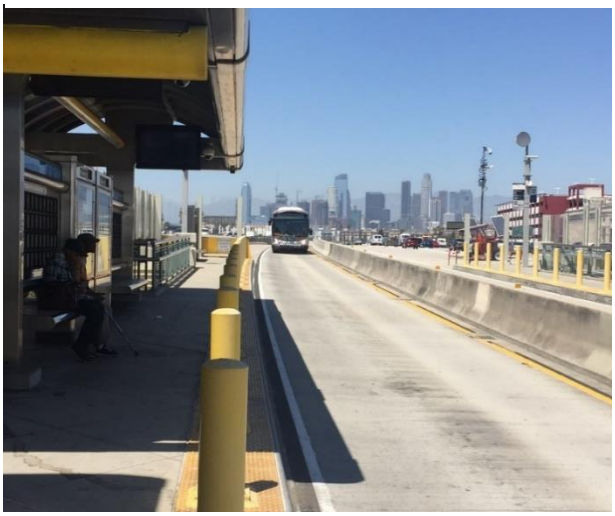
LRT is most often operated at ground level, but they can operate below ground. LRT frequency is typically 15 minutes or less.

Passengers may pay to enter stations (not the train itself) which speeds the boarding process. Passengers board from platforms that are level with the train's floor which helps people of all abilities to board more easily. Stations are typically spaced at least a mile apart but can be closer in urban areas. Stations may offer amenities like ticket vending machines, directional signs, real-time train arrival information, restrooms, etc.

Bus Rapid Transit (BRT)

BRT is a bus mode that is designed to operate like a train. To reduce the impacts of congestion, BRT vehicles operate in a designated transit lane or in managed lanes within limited access facilities. BRT vehicles carry fewer people and travel at slower speeds than trains, but BRT infrastructure is much less expensive to build.

Figure 4-3: Bus Rapid Transit



Buses can be fueled by gasoline, diesel, compressed natural gas, electricity, or a hybrid of fuel sources. BRT vehicles are often articulated, allowing for greater capacity, and more stylized than local buses. They are most often operated at ground level, but can operate below ground.

BRT frequency is typically 15 minutes or less. Passengers pay to enter stations (not the bus itself) which speeds the boarding process. Passengers board from platforms that are level with the bus's floor which helps people of all abilities to board more easily. Stations are typically spaced about 1/3-mile apart but can be closer in highly developed urban areas. Stations offer amenities like ticket vending machines, directional signs, and real-time bus arrival information.

Arterial Rapid Transit (ART)

ART is a frequent bus service with strategic enhancements to improve its speed and reliability. ART vehicles operate on regular streets in mixed traffic such that they are affected by automobile congestion, but they incorporate short bus-only lanes adjacent to major intersections to reduce delays.

Figure 4-4: Arterial Rapid Transit

ART vehicles carry the same number of people as BRT vehicles, but they tend to travel at lower average speeds due to being in normal traffic lanes. ART infrastructure is less expensive to build than BRT because a dedicated travel lane is not needed.

ART frequency is typically 15 minutes or less. Buses are often articulated, and can be fueled by gasoline, diesel, compressed natural gas, electricity, or a hybrid of fuel sources. ART systems may also employ technology to reduce delay caused by traffic signals.

Passengers may pay at select stations, which speeds the boarding process. Passengers board from platforms that are level with the bus's floor which helps people of all abilities to board more

easily. Stations are typically spaced about 1/3-mile apart and offer amenities like ticket vending machines, real-time bus arrival information, etc.

Project Evaluation Measures

Each project in the universe of projects was assessed across four evaluation measures consistent with the goals of the DeKalb TMP. These measures focused on land use compatibility, economic development potential, equity, and performance (ridership). **Figure 4-5** illustrates how the TMP's goals were translated into project evaluation measures. This section includes a brief description of the measures applied under each evaluation followed by the project scoring and evaluation results.

Figure 4-5: Translating TMP Goals into Project Evaluation Measures

LAND USE COMPATIBILITY

Land use compatibility is an important consideration in assessing the feasibility of a transit project. By properly matching a corridor's land use density and intensity with the appropriate transit mode, a maximum ratio of benefits to costs can be achieved. For example, higher density corridors are more appropriate for high-capacity modes (HRT, LRT, BRT), while lower density corridors may be more appropriate for moderate capacity enhancements (ART) or local bus services.

Land use compatibility in the TMP is measured by using a mapping tool called SketchTransit. This GIS-based tool provides a land use compatibility score based on how transit supportive the underlying land uses are along a project corridor for a particular transit mode. The SketchTransit tool has been calibrated with appropriate land use density thresholds for each mode. The tool provides a score for each transit project, which indicates if land uses along a corridor are "very supportive," "supportive'," or "less supportive" of the transit mode proposed in each project.

ECONOMIC DEVELOPMENT POTENTIAL

Each project was evaluated for its economic development potential, which assesses how well each project serves designated economic development zones. These zones are a collection of locations throughout the county where DeKalb County or its municipalities are focusing growth and redevelopment including empowerment zones, enterprise zones, emerging employment centers, Community Improvement Districts (CIDs), Livable Centers Initiatives (LCIs), and ARC-designated Activity Centers. These areas are displayed in **Map 4-2** and are consistent with the recently completed *Decide DeKalb 2023 Strategic Economic Development Plan Update*.

The evaluation measure used was an average economic development score. This score was developed by calculating the acreages of economic development zones served by each project. This was calculated through spatial analysis techniques in ArcGIS. Acreages were totaled for areas a half-mile around high-capacity transit stations and a quarter of a mile around moderate-capacity transit lines for each potential project.

Acreages were totaled for five different economic development zone categories: Emerging employment centers, ARC-designated activity centers, LCI areas, Empowerment Zones, and CIDs. Each project was scored on a scale of 0-2 contingent on the relative acreage of zones served. These scores were averaged to develop the evaluation measure used for economic development.

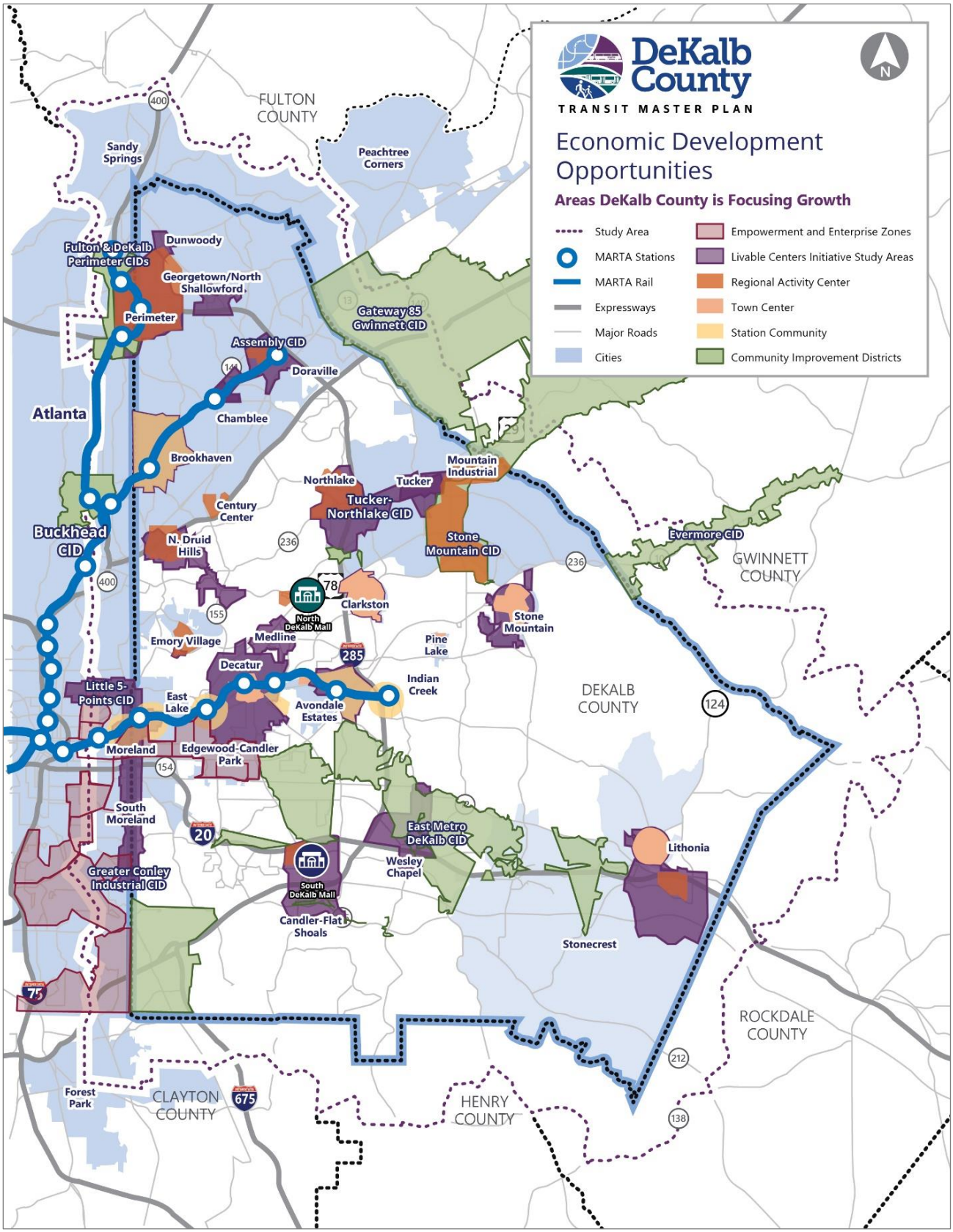
EQUITY

A major goal of the plan is to provide transit solutions that equitably serve the transit needs of all DeKalb County residents, particularly those in disadvantaged groups and in areas of the County that are currently underserved by transit. Equity was assessed by how well projects serve designated Equitable Target Areas (ETAs). The ARC defines ETAs as areas with high concentrations of low-income and minority populations. Mileage was calculated by measuring the length of the corridor bisecting an ETA or skirting its perimeter. Mileage for projects bisecting an ETA was doubled as those projects provided greater penetration into the ETAs. Mileage for projects skirting an ETA were measured. DeKalb County's ETAs are shown on **Map 4-3**.

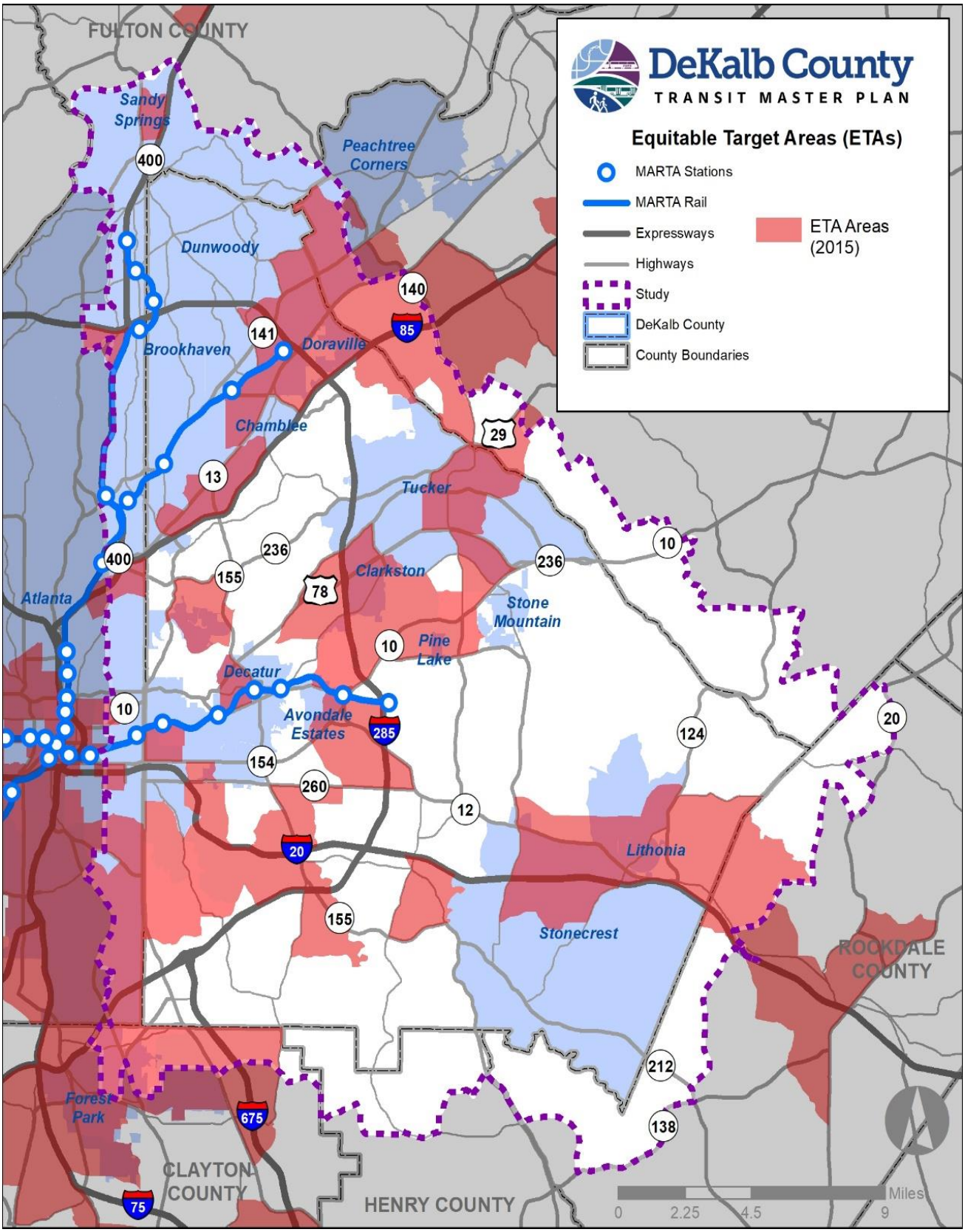
PERFORMANCE (RIDERSHIP)

Project performance was measured through ridership projections. These estimates were developed through a spreadsheet model that was calibrated for each transit mode. The model required a variety of project specific inputs: existing and projected population and employment within the project service area, project corridor miles, average travel speed, number of stations and anticipated headways.

Map 4-2: Economic Development Target Areas



Map 4-3: Equitable Target Areas



performance than total project ridership as it serves to highlight the projects with the highest levels of ridership density.

PROJECT SCORING

This section provides detail on the methodology used to calculate an overall project score, which was based on the four individual evaluation measures. First, the modes were segregated so that moderate-capacity projects (i.e., ART) were compared only to other moderate-capacity projects. ART projects were evaluated separately because they vary from the other modes in important ways. By their very nature, they are designed to serve corridors that are less dense and, as a result, ridership projections are lower for these projects than BRT, LRT or HRT. If ART projects were compared directly with the high-capacity modes, it was highly probable that they would receive the lowest project scores.

The high-capacity modes (HRT, BRT and LRT) are all well suited to serve dense urban corridors or heavy commuter corridors as they have the capacity to carry large numbers of riders. These projects were evaluated together because they can provide a similar level of transit service within a given travel corridor. Because the universe of projects contains a number of corridors with multiple modes indicated, a direct comparison of all high-capacity transit projects will help identify the most appropriate mode for each corridor.

After dividing the projects by capacity type, the results for each evaluation measure were categorized. In most cases, the results from an evaluation measure are divided into three categories: high, medium, and low. The economic development measure is an exception with only two categories: high and low. Categories are indicated by shading levels. Darker colors represent higher scores.

The project scoring results are detailed in the following four tables and are organized by transit mode. These projects have been mapped in corresponding **Maps 4-4** through **4-7.**

Table 4-1: Arterial Rapid Transit (ART) Evaluation Matrix

Project Name	Transit Supportive Land Use	Economic Development Potential	Equity	Performance
Evaluation Measure	SketchTransit Land Use Compatibility Score	Economic Development Score Average	Project Miles that Serve ETAs	Projected Riders per Project Mile (rpm)
Score Ranges	Very Supportive Supportive Less Supportive	2.0-2.2 1.0-1.9	11.1-13.5 Mi. 5.3-10.6 Mi. 0-4.4 Mi.	260-740 rpm 140-180 rpm 60-120 rpm
Columbia Dr ART				
Memorial Dr ART (Seg. 1)				
Memorial Dr ART (Seg. 2)				
Memorial Dr ART (Seg. 3)				
Candler Road ART				
Clairmont Road ART				
Johnson Ferry Road ART				
North Druid Hills ART				
Ponce de Leon Ave ART				
Panola Road ART				
Lawrenceville Hwy ART				
LaVista Road ART				
Hairston Road ART				
Covington Hwy ART				
Clifton Corridor ART				

Map 4-4: Arterial Rapid Transit Projects

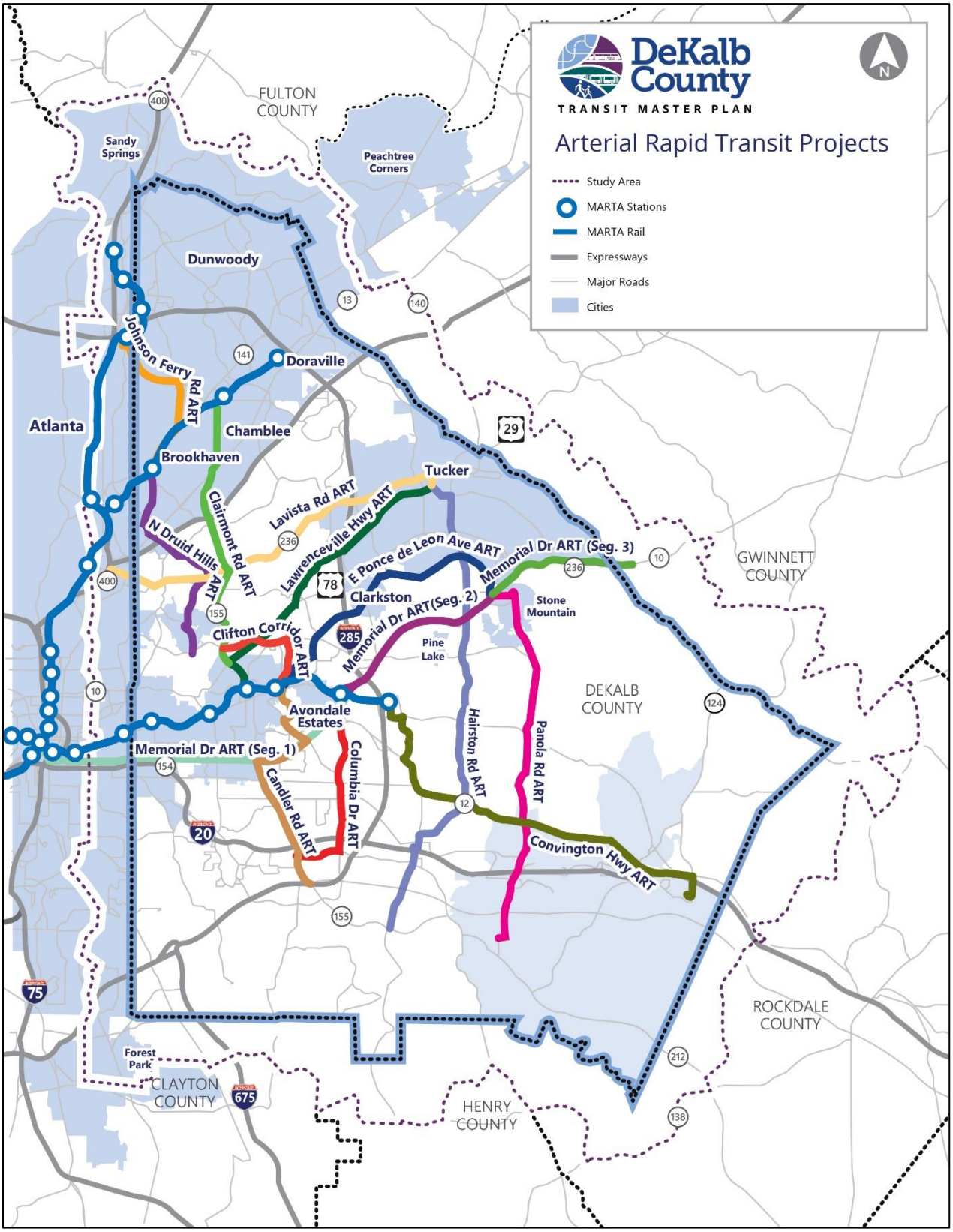


Table 4-2: Bus Rapid Transit (BRT) Evaluation Matrix

Project Name	Transit Supportive Land Use	Economic Development Potential	Equity	Performance
Evaluation Measure	SketchTransit Land Use Compatibility Score	Economic Development Score Average	Project Miles that Serve ETAs	Projected Riders per Project Mile (rpm)
Score Ranges	Very Supportive Supportive Less Supportive	2.0-2.8 1.0-1.9	22.0-42.6 Mi. 10.1-18.2 Mi. 0.8-9.4 Mi.	1,340-6,050 rpm 800-1,170 rpm 450-650 rpm
I-20 East BRT (Segment 1)				
I-20 East BRT (Segment 2)				
I-285 Top End BRT				
I-285 East Wall BRT				
I-285 BRT to Airport				
Memorial Dr BRT (Seg.1)				
Memorial Dr BRT (Seg. 2)				
Memorial Dr BRT (Seg. 3)				
Buford Highway BRT				
Clifton Corridor BRT (Segment 1)				
Clifton Corridor BRT (Segment 2)				
Candler Road BRT				
Covington Highway BRT				

Map 4-5: Bus Rapid Transit Projects

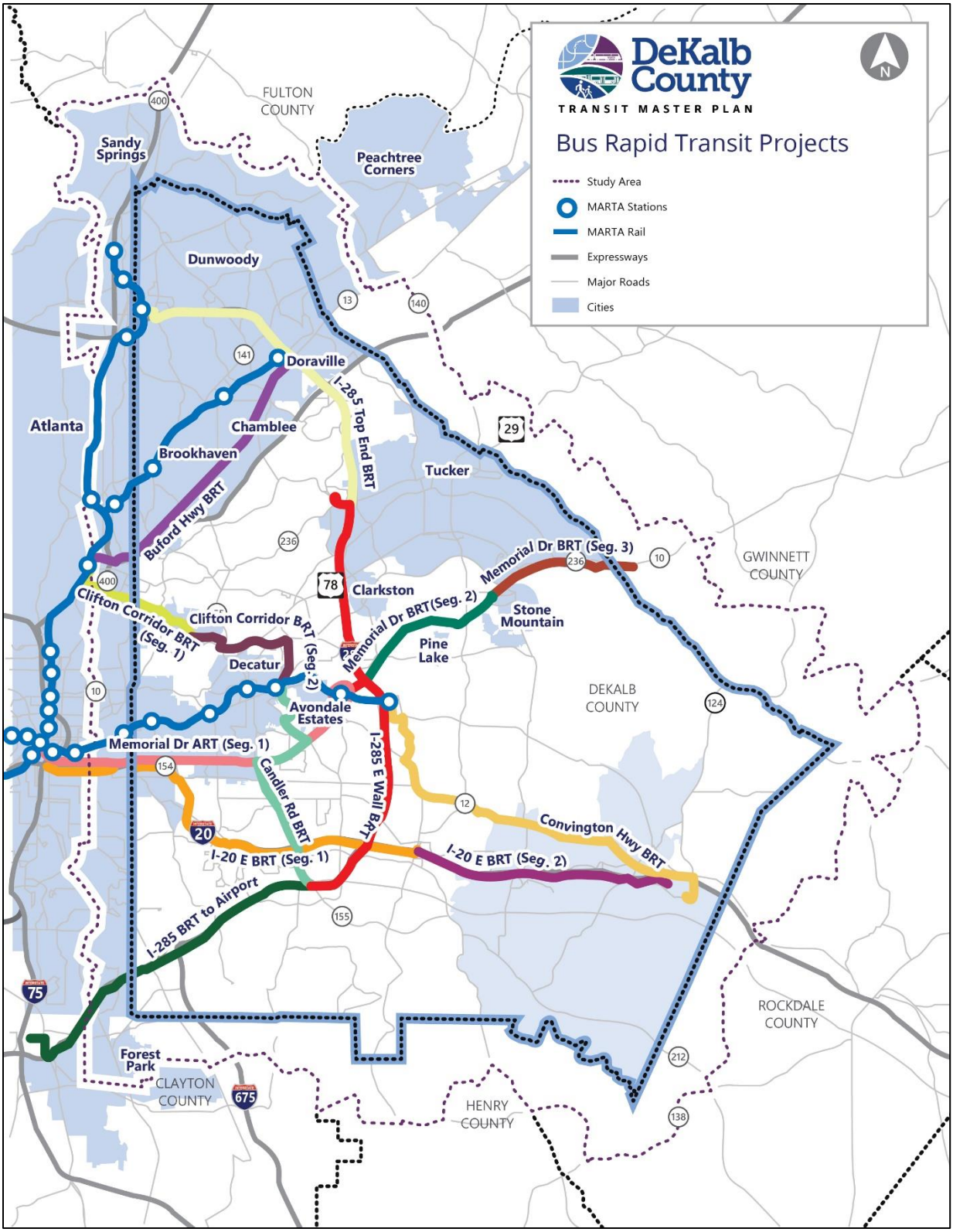


Table 4-3: Light Rail Transit (LRT) Evaluation Matrix

Project Name	Transit Supportive Land Use	Economic Development Potential	Equity	Performance
Evaluation Measure	SketchTransit Land Use Compatibility Score	Economic Development Score Average	Alignment Miles that Serve ETAs	Projected Riders per Project Mile (rpm)
Score Ranges	Very Supportive Supportive Less Supportive	2.0-2.8 1.0-1.9	22.0-42.6 Mi. 10.1-18.2 Mi. 0.8-9.4 Mi.	1,340-6,050 rpm 800-1,170 rpm 450-650 rpm
Clifton Corridor LRT (Segment 1b)				
Clifton Corridor LRT (Segment 2)				
Candler Road LRT				
I-20 East LRT (Segment 2)				
Downtown to Stonecrest LRT				
I-20 East LRT (Segment 1)				
Memorial Drive LRT				
Covington Hwy LRT				
LRT to Wesley Chapel Road				

Map 4-6: Light Rail Projects

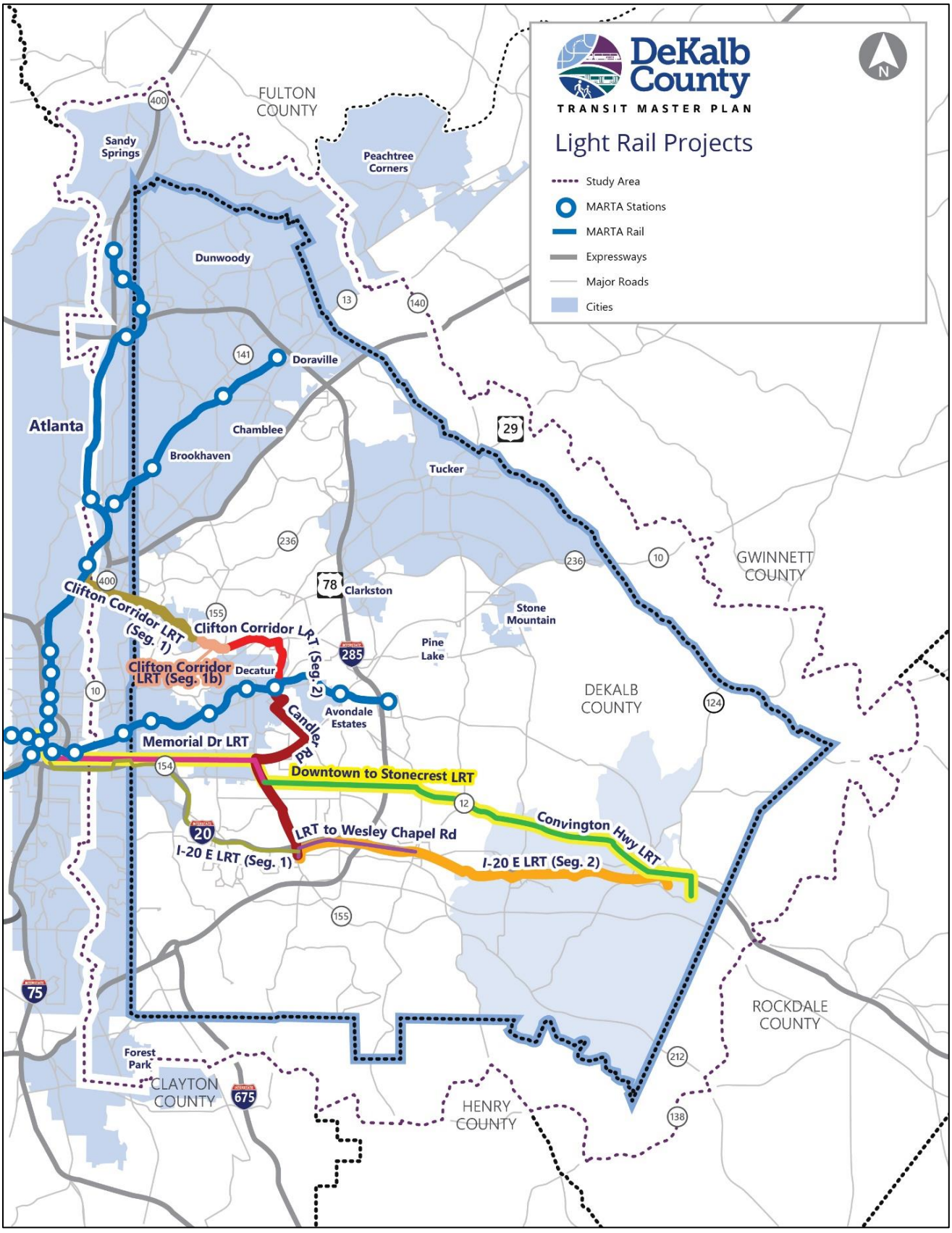
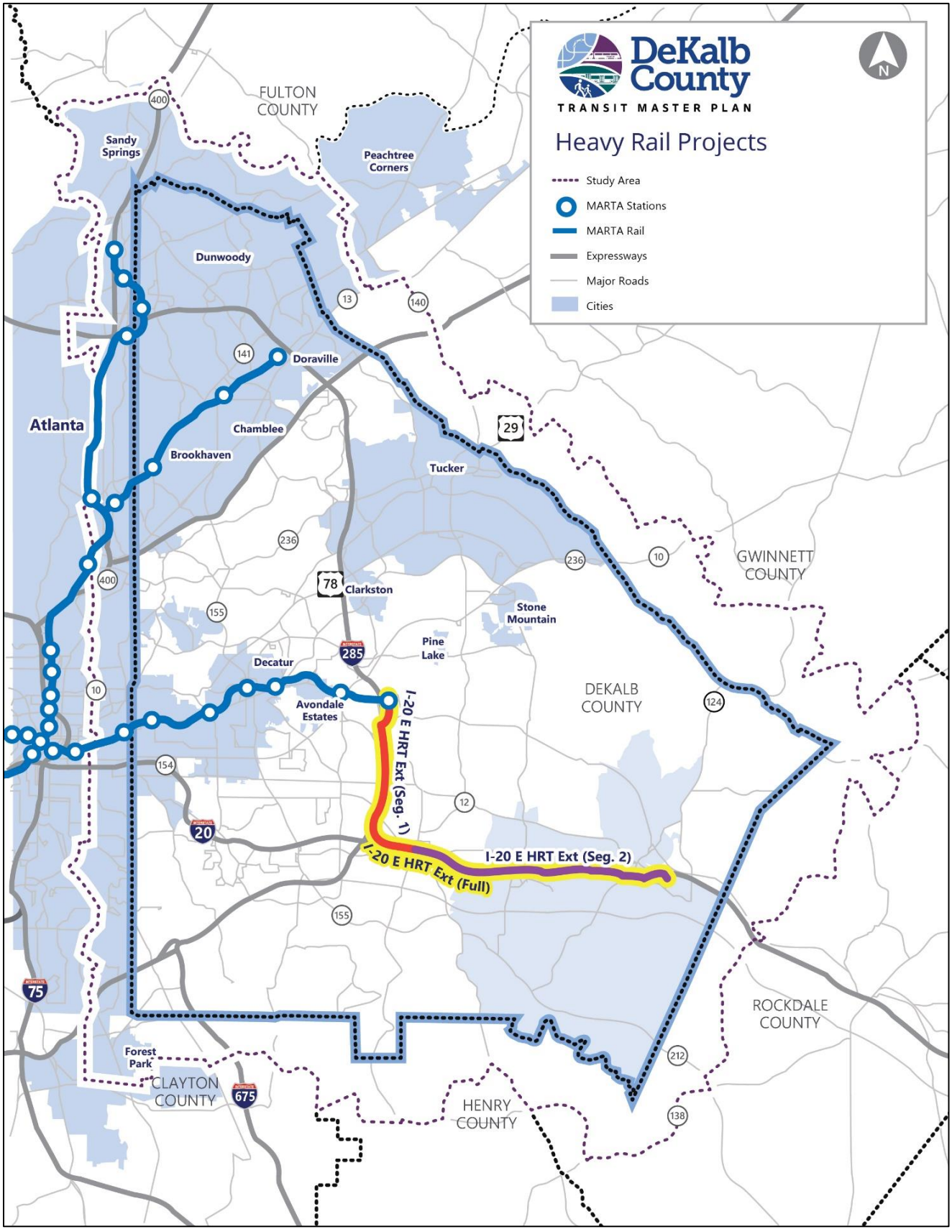


Table 4-4: Heavy Rail Transit (HRT) Evaluation Matrix

Project Name	Transit Supportive Land Use	Economic Development Potential	Equity	Performance
Evaluation Measure	SketchTransit Land Use Compatibility Score	Economic Development Score Average	Alignment Miles that Serve ETAs	Projected Riders per Project Mile (rpm)
Score Ranges	Very Supportive Supportive Less Supportive	2.0-2.8 1.0-1.9	22.0-42.6 Mi. 10.1-18.2 Mi. 0.8-9.4 Mi.	1,340-6,050 rpm 800-1,170 rpm 450-650 rpm
I-20 East HRT Extension (Full)				
I-20 East HRT Extension (Segment 1)				
I-20 East HRT Extension (Segment 2)				

Map 4-7: Heavy Rail Projects



5 Scenario Development

This section documents the technical process employed to develop the transit system scenarios for the DeKalb TMP. The process involved comprehensive financial forecasting and modeling along with interpretation of the results from the project evaluations discussed in Chapter 4.

Financial Forecasting

Federal, state, and local funding sources typically comprise the majority of funding for transit projects. The financial forecasting task analyzed the potential for DeKalb County to secure federal, state, and local funding. While discussion is provided for all three funding sources, the primary focus of the revenue analysis was to quantify the revenue potential of enacting an additional countywide sales tax for transit. The results of this analysis ultimately informed the scenario definition process.

FEDERAL

Securing federal funding for transit capital projects is a competitive process. At present, the federal government maximum funding level for capital is 50 percent, but projects are often funded with a smaller percentage of funding from the federal government. For the purpose of the DeKalb TMP, it was assumed an average federal contribution of 35 percent to capital costs and 0 percent to operations and maintenance (O&M) costs across the entire program of projects included in the four scenarios. This percentage was based on discussions with the PMT, MARTA and the ATL. It is possible that any given project could receive as much as 50 percent or as little as zero percent federal contribution to capital costs depending on the competitiveness of the project based on FTA rating criteria.

STATE

Historically, the State of Georgia has provided minimal funding for MARTA transit service. To be conservative, it is assumed that no future state contribution will be forthcoming for either capital or O&M costs of the program of projects. It is worth noting that the creation of the ATL may signal stronger state interest and support for transit funding in future years, but the level of that support is still largely unknown.

LOCAL

Historically, the main sources of local funding for the MARTA system were county-level sales taxes which were levied under the MARTA Act. Recently, another funding mechanism became available to fund transit: a sales tax under HB 930. These two funding mechanisms are explained further in the following sub-sections.

MARTA Act

Enacted in 1965, the MARTA Act enabled local counties to enact, via referendum, up to a one percent sales tax for transit funding. Currently, DeKalb County contributes the revenue from a one percent sales tax to the existing MARTA system (along with sales tax revenue from the City of Atlanta, Fulton County, and Clayton County), which supports debt service, O&M, and capital maintenance/rehabilitation/repair of the existing system.

Under the MARTA Act, MARTA collects the sales tax revenue and is responsible for issuing any debt backed by the sales tax. The current sales tax is authorized to continue through 2047 at the one percent level. In 2048, the sales tax is set to decrease to a half-penny level and then to cease entirely by 2058. While DeKalb County can vote via referendum to continue this funding stream, it cannot increase it. MARTA has indicated that the existing sales tax revenue from DeKalb County is needed for O&M, repair and rehabilitation of the current capital facilities, and debt service. There are no funds from the current sales tax to support major capital expansion improvements. **Table 5-1** provides a summary of the key MARTA Act sales tax characteristics.

Table 5-1: MARTA Act Sales Tax Characteristics

General Characteristics	
Enacted	1965
Rate	Up to 1 percent
Duration	Up to 30 years
Action Required	Referendum
Jurisdictions	DeKalb County, Fulton County, Clayton County, and City of Atlanta
DeKalb-Specific Characteristics	
Current Funding Level	1% through 2047, 0.5% 2048-2057
Use of Current Revenue	Committed to pay for O&M, capital rehab & repair, and debt service for the existing system
Sunset Date	2058

Amendment 15 to the Rapid Transit Contract and Assistance Agreement enables MARTA jurisdictions to approve a continuation of the MARTA tax for an additional 10 years, pushing the half-penny sales tax to begin in 2058 through 2067. For the purposes of scenario development, it is assumed that DeKalb County approves extend collections at the one percent level for the next 30 years.

House Bill 930

The Georgia State legislature passed HB 930 in 2018, which, in addition to creating the ATL, enables counties to levy an additional sales tax of up to one penny for transit service through a referendum. Under HB 930, either MARTA or DeKalb County can collect the tax and issue debt against it. **Table 5-2** provides the general characteristics related to HB 930.

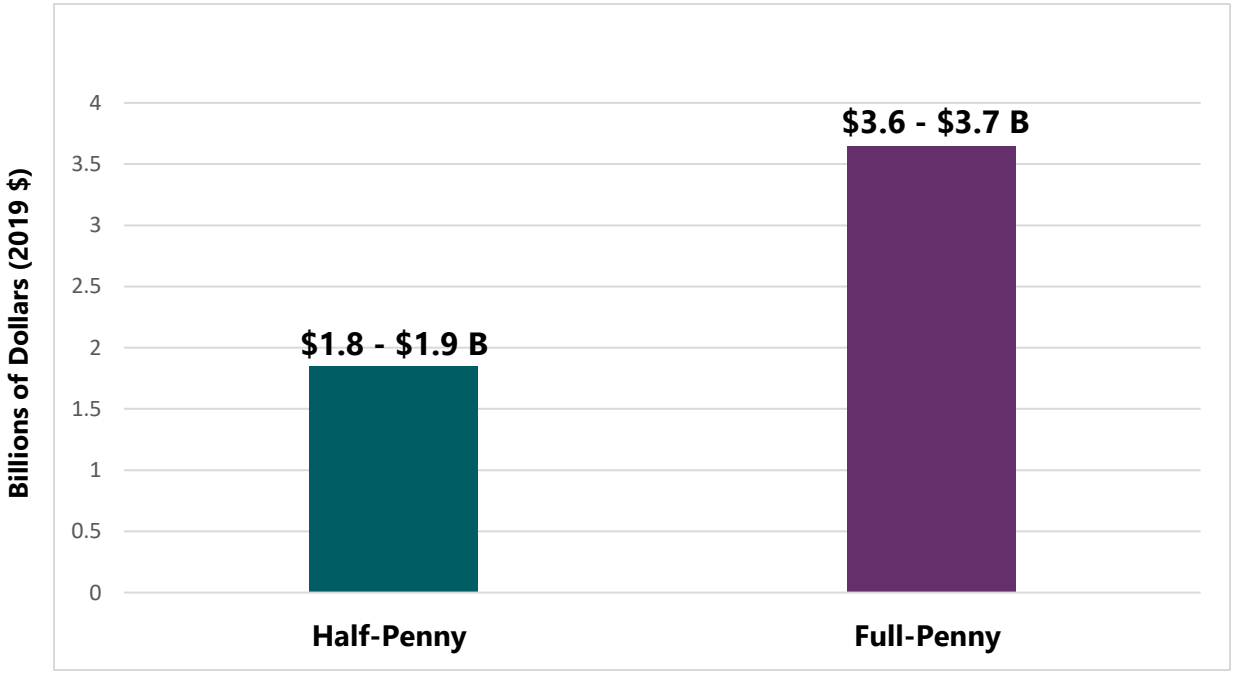
Table 5-2: HB 930 Sales Tax Characteristics

General Characteristics	
Enacted	2018
Rate	Up to 1 percent
Duration	Up to 30 years
Action Required	Referendum
Jurisdictions	DeKalb County, Fulton County, Clayton County, and City of Atlanta

Two of the scenarios developed for the TMP include assumptions about revenue generated under HB 930. The Half-Penny and Full-Penny Scenarios assume that DeKalb County passes a referendum to increase funding for transit beyond the current one percent collected under the MARTA Act.

Figure 5-1 provides a summary of the projected revenue from a half-penny sales tax and a full-penny sales tax for DeKalb County collected over a 30-year period. Revenues are displayed in 2019 dollars. The amounts presented in this graph reflect total projected sales tax revenue from FY 2021 – FY 2050, based on growth projections provided by Georgia State University (GSU) and modified by MARTA. See **Appendix B** for further detail on the methodology used to generate these projections.

Figure 5-1: Projected Sales Tax Revenue for the Half-Penny and Full-Penny under HB 930 (2019 $)



The half-penny scenario and the full-penny scenario represent the lower cost program and the highest cost program, respectively. Considering DeKalb County is limited to levying no more than a full-penny sales tax, the previously adopted scenario is not achievable based on the revenue potential of the full-penny levy via HB 930.

OTHER FUNDING AND FINANCING OPTIONS

There are funding mechanisms beyond sales taxes that could possibly be used to fund transit in DeKalb County. The TMP focuses on increased funding from sales tax revenues for several reasons: (1) there is new state enabling legislation, (2) precedent has been set for DeKalb County to use sales taxes to fund transit, and (3) the revenue projections for sales taxes are more definitive than some of the other options.

Other options that DeKalb County might consider include the following funding and financing mechanisms:

- **Value capture** refers to an approach that can be used to help pay for infrastructure project's capital or maintenance costs by recovering some of the financial benefits that an infrastructure project creates for the private sector and channeling them into a public fund. The most common revenue tools available for value capture tend to fall into three general categories: tax-increment financing (TIF), special tax assessments, and development-impact based fees.
- **Public-private partnership (P3)** is a contractual arrangement between a public agency and a private entity where the private entity provides funding or financing support for a service, asset, or facility for use by the general public, and the financial risk is shared between the two entities.
- **USDOT's Transportation Infrastructure Finance and Innovation Act (TIFIA)** program provides federal credit assistance in the form of direct loans, loan guarantees, and standby lines of credit to finance surface transportation projects of national and regional significance.

Appendix B provides additional detail regarding these funding and financing mechanisms.

Scenarios for Consideration

Four different transit scenarios were created based on four potential funding futures:

- **Existing MARTA Penny Scenario** (current state)
- **Half-Penny Scenario**
- **Full-Penny Scenario**
- **Previously Adopted Scenario**

Once the projected funding for each of these scenarios was calculated, four potential transit systems were assembled. These systems were based off a maximization of the best performing projects from the universe of projects that could be accommodated at each of the scenario funding levels. Project selection was refined by looking at those which best further the DeKalb TMP goals, facilitate regional system connectivity, address logical termini determinations, avoid cannibalization of existing transit lines and incorporate input received from stakeholders and the public.

It is important to note that costs are provided in base year dollars. Further analysis is required to determine the optimal delivery sequence for the scenarios. Once sequencing is finalized and the order in which projects are constructed is determined, project costs can then be escalated to year of expenditure (YOE) dollars to demonstrate the true costs to be incurred each year for both capital and O&M. Due to general inflation, escalation of the cost of construction materials, and other unforeseen growth related to cost factors, project costs will be higher the later the construction start date.

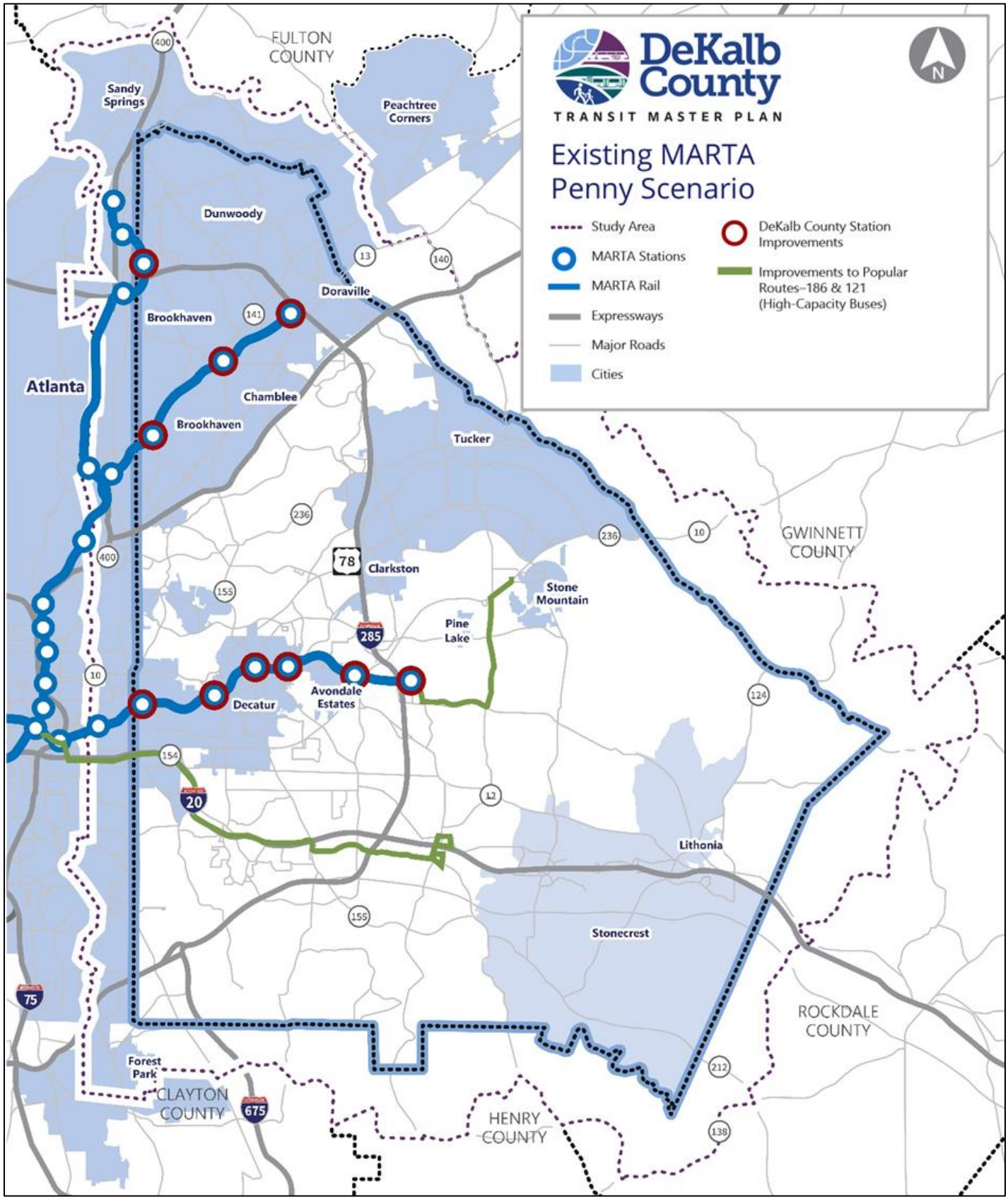
The following pages contain details on each of the four scenarios, their projects, and their estimated total capital and O&M costs.

EXISTING MARTA PENNY SCENARIO

The Existing MARTA Tax Scenario is illustrated in **Map 5-1**. This scenario focuses on maintenance, sustaining capital and operations of the existing system with no additional transit expansion projects.

The scenario is focused on maintaining a State of Good Repair within the existing system and does not contain available funding for additional moderate or high-capacity transit projects. This scenario will include rehabilitation to MARTA stations throughout DeKalb County. It also includes track and system rehabilitation, traction power/aux power rehabilitation, and railcar replacement. Improvements to the bus system would include high-capacity buses on I-20 East/Rainbow Drive (Route 186) and Memorial Drive (Route 121), bus replacements, upgraded bus shelters, benches, and potential funding for mobility centers.

Map 5-1: Existing MARTA Penny Scenario



HALF-PENNY SCENARIO

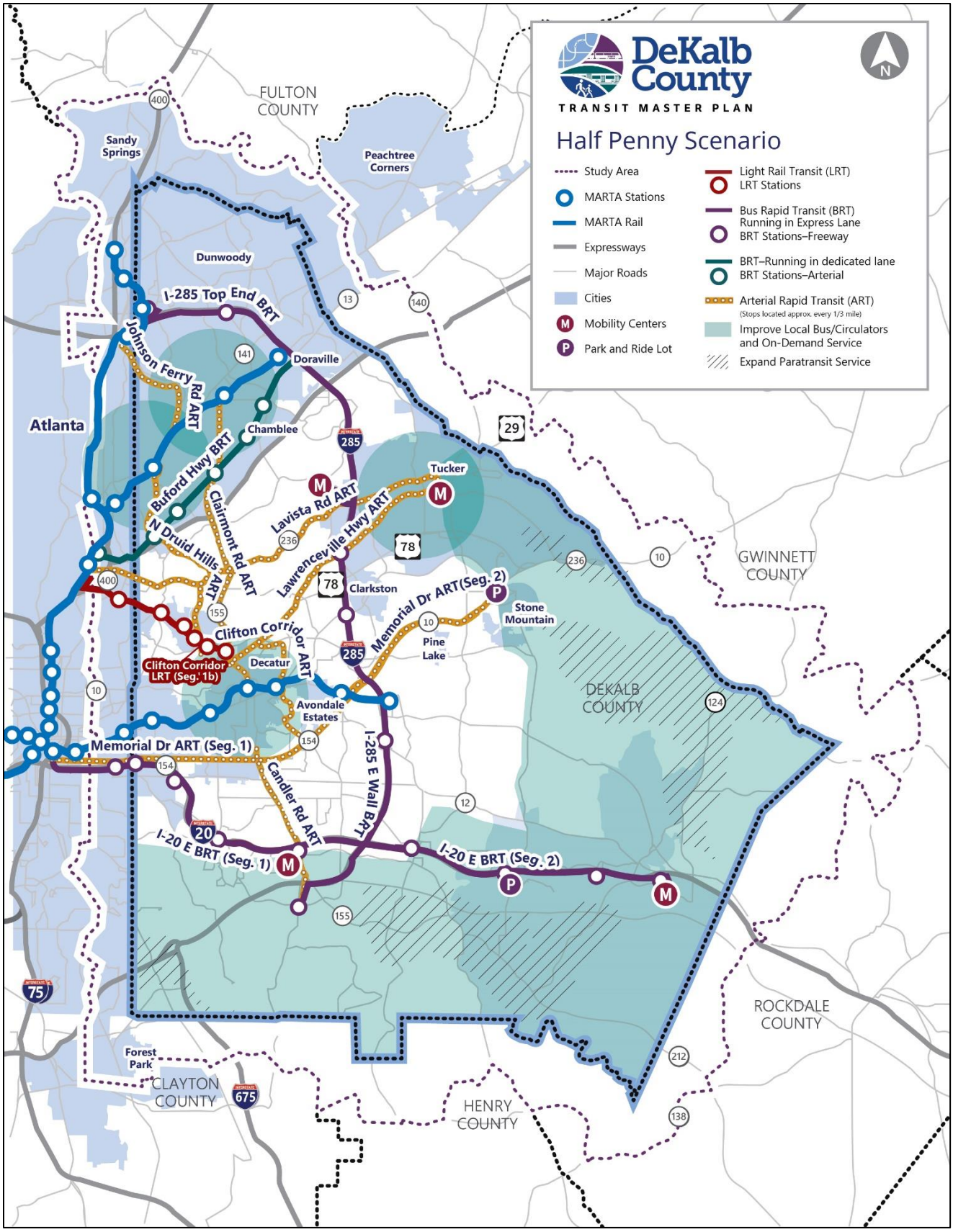
The Half-Penny Scenario is displayed in **Map 5-2**. This scenario features 15 projects: one LRT project, five BRT projects, and nine ART projects. This represents 139 total project miles. These projects are detailed in **Table 5-3**. The Half-Penny Scenario is funded through a half-penny sales tax increase. This scenario takes advantage of GDOT's investments in managed lanes along I-285 and I-20. This scenario focuses on building an interconnected network of BRT and ART projects.

In addition to the program of projects listed in **Table 5-3** this scenario includes a $120 million set aside for discretionary transit funding. This funding category is intended to be used at the discretion of DeKalb County for a variety of transit improvements. These improvements may include expansions to local bus service, paratransit service and on-demand services. Enhancements to last-mile/first-mile connectivity through additional sidewalk and bicycle facilities may also be funded through this set aside.

Table 5-3: Half-Penny Scenario Project List

Project	Extents	Total Capital Costs (2018 $)	Annual O&M Costs (2018 $)
Memorial Drive ART (Seg.1)	Five Points to Kensington Station	$28,000,000	$2,550,000
Memorial Drive ART (Seg. 2)	Kensington Station to Goldsmith P&R	$15,500,000	$1,450,000
Candler Road ART	Avondale Station to South DeKalb Mall	$18,200,000	$1,600,000
Clairmont Road ART	Decatur Station to Chamblee Station	$24,500,000	$2,200,000
North Druid Hills ART	Emory-CDC to Brookhaven Station	$18,000,000	$1,650,000
Lawrenceville Hwy ART	Decatur Station to downtown Tucker	$23,000,000	$2,000,000
LaVista Road ART	Lindbergh Station to downtown Tucker	$30,500,000	$2,700,000
Clifton Corridor ART	Avondale Station to Clairmont Road	$13,300,000	$780,000
Johnson Ferry Road ART	Brookhaven Station to Medical Center Station	$14,500,000	$1,300,000
I-20 East BRT (Segment 1)	Downtown Atlanta to Wesley Chapel Road	$84,400,000	$4,400,000
I-20 East BRT (Segment 2)	Wesley Chapel Road to Stonecrest Mall	$205,000,000	$2,700,000
I-285 Top End BRT	Dunwoody Station to Northlake Mall	$130,000,000	$3,100,000
I-285 East Wall BRT	Northlake Mall to GSU-Perimeter College	$180,000,000	$4,200,000
Buford Highway BRT	Doraville Station to Lindbergh Station	$220,000,000	$2,450,000
Clifton Corridor LRT (Seg. 1b)	Emory-CDC to Clairmont Rd at N Decatur Rd	$108,000,000	$1,150,000

Map 5-2: Half-Penny Scenario



FULL-PENNY SCENARIO

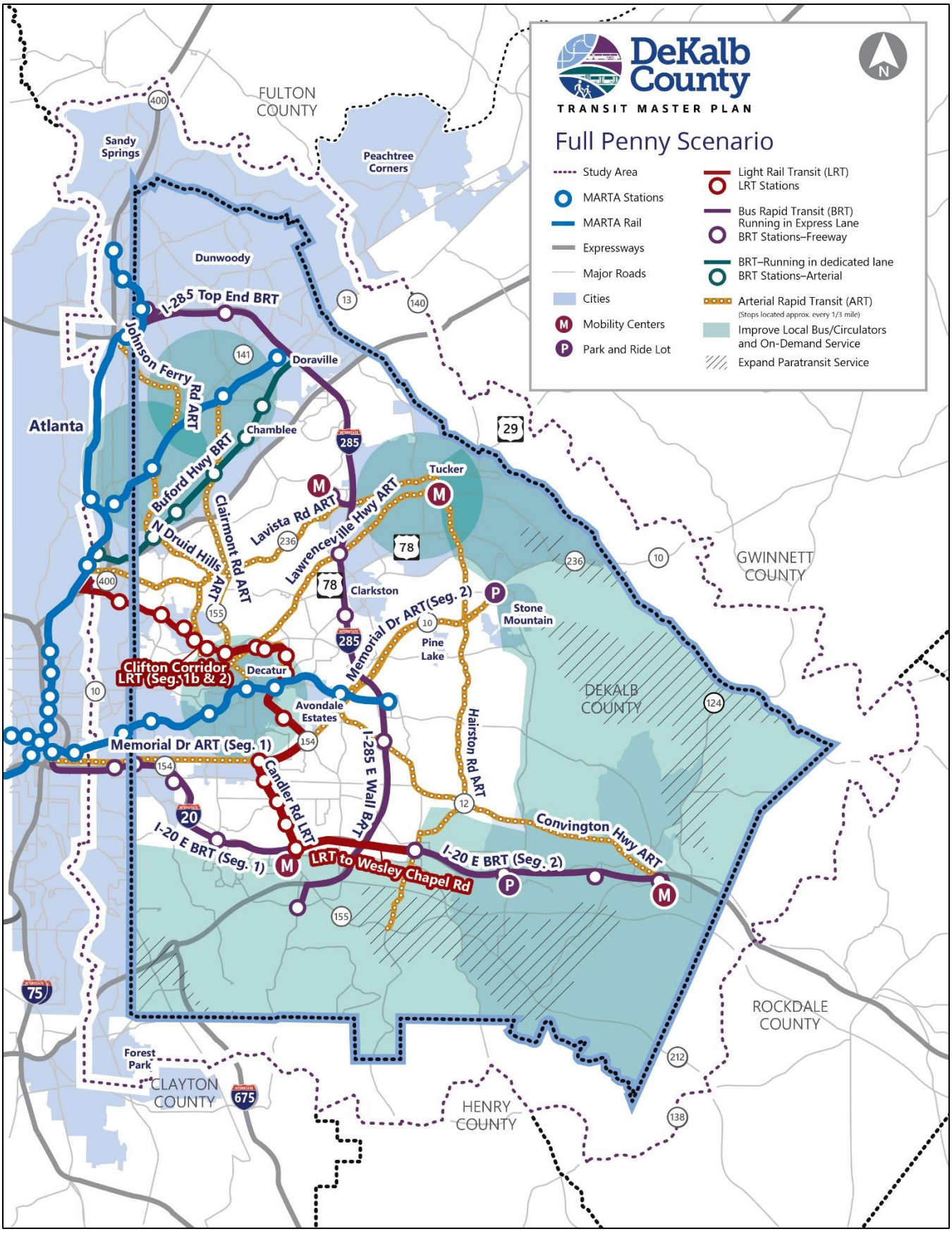
The Full-Penny Scenario is shown in **Map 5-3.** It features 16 projects in total: four LRT projects, four BRT projects, and eight ART projects. Overall this represents a total of 180 project miles. Individual projects in this scenario are detailed in **Table 5-4**.

The Full-Penny Scenario is affordable under an additional one-penny sales tax increase. This scenario seeks to leverage GDOT's investments in managed lanes for BRT on I-285 in DeKalb County. The Full-Penny also places an emphasis on building a light rail network that connects north and south DeKalb County. This scenario also includes a $220 million set aside for discretionary transit funding to be spent on projects at the discretion of DeKalb County.

Table 5-4: Full-Penny Scenario Project List

Project	Extents	Total Capital Costs (2018 $)	Annual O&M Costs (2018$)
Memorial Drive ART (Seg. 1)	Five Points Station to Kensington Station	$28,000,000	$2,550,000
Memorial Drive ART (Seg.2)	Kensington Station to Goldsmith P&R	$15,500,000	$1,450,000
Johnson Ferry Road ART	Brookhaven Station to Medical Center Station	$14,500,000	$1,300,000
Clairmont Road ART	Decatur Station to Chamblee Station	$24,500,000	$2,200,000
North Druid Hills ART	Emory-CDC to Brookhaven Station	$18,000,000	$1,650,000
Lawrenceville Hwy ART	Decatur Station to downtown Tucker	$23,000,000	$2,000,000
LaVista Road ART	Lindbergh Station to downtown Tucker	$30,500,000	$2,700,000
Hairston Road ART	SR 155 (Flat Shoals Pkwy) to downtown Tucker	$36,000,000	$2,700,000
Covington Highway ART	Stonecrest Mall to Kensington Station	$29,500,000	$2,700,000
I-20 East BRT (Segment 1)	Downtown Atlanta to Wesley Chapel Road	$84,400,000	$4,400,000
I-20 East BRT (Segment 2)	Wesley Chapel Road to Stonecrest Mall	$205,000,000	$2,700,000
Clifton Corridor LRT (Seg. 1b)	Emory-CDC to Clairmont Rd at N Decatur Rd	$108,000,000	$1,150,000
Clifton Corridor LRT (Seg. 2)	Clairmont Rd at N Decatur Rd to Avondale Station	$950,000,000	$3,550,000
Candler Road LRT	Avondale Station to South DeKalb Mall	$906,000,000	$5,700,000
LRT to Wesley Chapel Road	South DeKalb Mall to Wesley Chapel Road	$470,000,000	$2,950,000

Map 5-3: Full-Penny Scenario



PREVIOUSLY ADOPTED SCENARIO

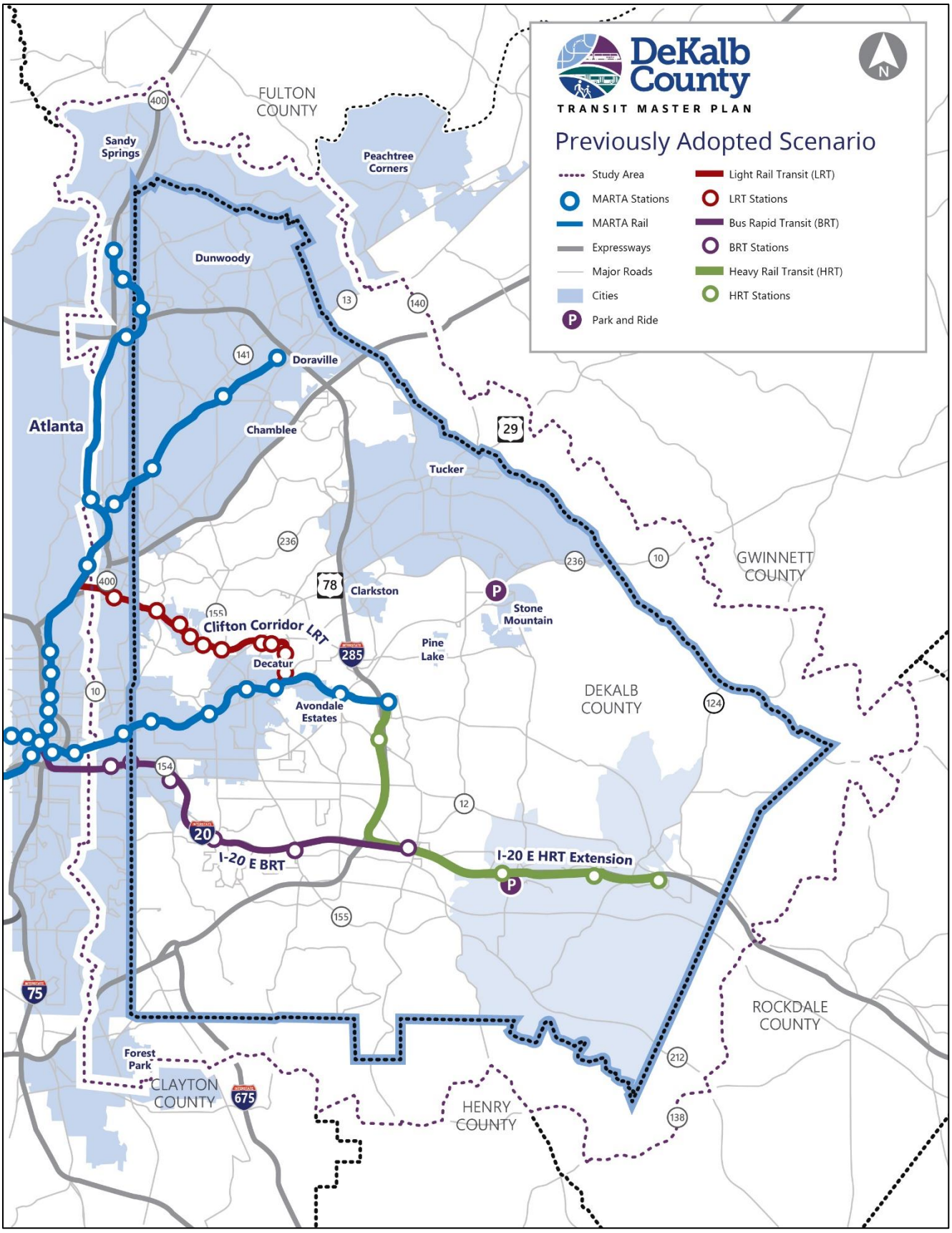
The Previously Adopted Scenario features three projects: one HRT, one LRT, and one BRT project. These projects comprise 37 total project miles. Individual projects are detailed in **Table 5-5** and these are displayed in **Map 5-4**.

This scenario incorporates projects adopted by the MARTA Board for I-20 East and the Clifton Corridor in 2012. This scenario is not affordable under an additional full-penny sales tax and would require additional funding to implement.

Table 5-5. Previously Adopted Scenario Project List

Project	Extents	Total Capital Cost (2018 $)	Annual O&M Costs (2018 $)
I-20 East HRT Extension	Indian Creek Station to Stonecrest Mall	$3,300,000,000	$35,200,000
I-20 East BRT in Exclusive ROW	Wesley Chapel Road to Five Points Station	$2,110,000,000	$6,400,000
Clifton Corridor LRT	Emory/CDC to Avondale Station	$1,058,000,000	$4,700,000

Map 5-4: Previously Adopted Scenario



6 Scenario Evaluation

Introduction

The DeKalb TMP defined four potential transit scenarios. To assist the community and elected officials in making informed choices between the scenarios an evaluation of each system was performed. This evaluation focused on two major goals; providing access and mobility to jobs and promoting economic development.

Although project evaluation was important to considering the individual merits of a project, no transit project operates in isolation. Transit projects function in a connected system and build upon the benefits provided by other proposed projects and those provided through existing transit services. Considering this, a system evaluation was necessary to measure benefits of each scenario.

Access to Jobs

An assessment of employment access provided by each scenario was conducted via Conveyal analysis. Conveyal is a software data tool that is used for evaluating the access benefits of transit projects or systems of projects. This data tool builds upon the access benefits provided through the existing transit system. Conveyal can evaluate transit access to a variety of destinations, some of which may include jobs, hospitals, colleges, community facilities, and grocery stores. The Conveyal analysis within the DeKalb TMP focused on access to jobs.

The Conveyal tool allows jobs access to be measured from specific locations within the county and/or region to be aggregated to a county-wide measure. Six locations were chosen throughout the county to determine access benefits from different parts of the county.

While providing access to jobs is a critical factor in the assessment of a transit system, mobility or the ability to access these jobs quickly is of particular importance. Reasonable travel times on

transit are required to entice riders who have a choice on which mode they choose to commute. For transit-dependent populations providing access to the greatest number of jobs in a timely and efficient manner should be a major policy consideration. This would expand employment opportunities, improve quality of life, and promote economic mobility for low income households.

The threshold of 60 minutes of travel via transit and walking was chosen as a reasonable comparison point for contrasting scenarios. Thresholds of less than 60 minutes failed to capture the full regional access benefits of some scenarios and differences between them were not as pronounced. A threshold of 45 minutes was examined, but with anticipated transfers the ability to reach regional job centers outside of the county is limited. A prime example of this is the current 35-minute MARTA rail travel time between the Indian Creek and Five Points MARTA stations. A travel threshold of 45 minutes from the Indian Creek station would provide access to only two major employment centers, Downtown and Midtown Atlanta. The difference between 45 and 60 minutes is considerable, as it relates to regional jobs access. At the 60-minute mark the entire region opens up significantly.

Six geographically-dispersed locations throughout the county were selected to evaluate jobs access from different parts of the county. These locations include the Gallery at South DeKalb, Tucker, Northlake Mall, Brookhaven, Mall at Stonecrest and Dunwoody. Locations adjacent to the MARTA heavy rail system were not included for comparison. These locations do not show pronounced differences in access to jobs benefits since they are already served by high-capacity transit.

Graphics have been developed to illustrate jobs access from these six locations within the county. These graphics show major employment centers that are reachable within 60 minutes of via transit and walking during the AM peak commuting period. They also show the total number of jobs reachable within this timeframe. Both are important metrics. Access to employment centers is particularly important to potential transit riders who have travel choices. The total number of jobs metric captures all jobs outside of these primarily white-collar employment centers. This is an important consideration as many transit-dependent riders utilize transit to access employment opportunities outside of these centers.

Figure 6-1 illustrates the jobs access benefits of the four scenarios from the Gallery at South DeKalb. This shows that the Existing MARTA Tax Scenario provides significantly fewer jobs access benefits than the other scenarios. Within 60 minutes via transit and walking only two major employment centers are reachable from the Gallery at South DeKalb. The other scenarios provide access to seven major employment centers.

Figure 6-1: Access to Jobs from the Gallery at South DeKalb (in 60 Minutes via Transit)

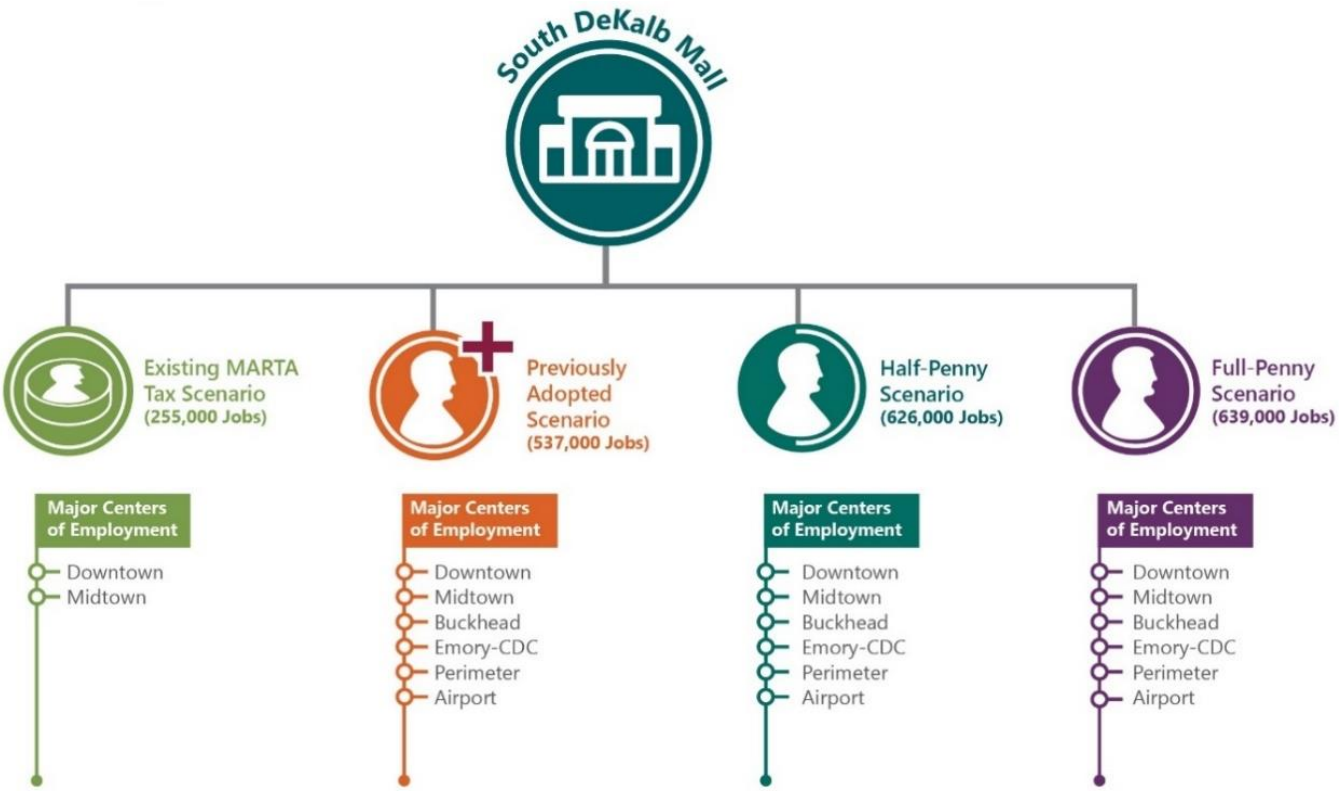


Figure 6-2 displays jobs access benefits from the Mall at Stonecrest. This shows that under the Existing MARTA Tax Scenario no major employment centers are reachable in 60 minutes. The Previously Adopted Scenario provides access to two employment centers and the Half-Penny and Full-Penny Scenario provide access to six employment centers.

Figure 6-2: Access to Jobs from the Mall at Stonecrest (in 60 Minutes via Transit)

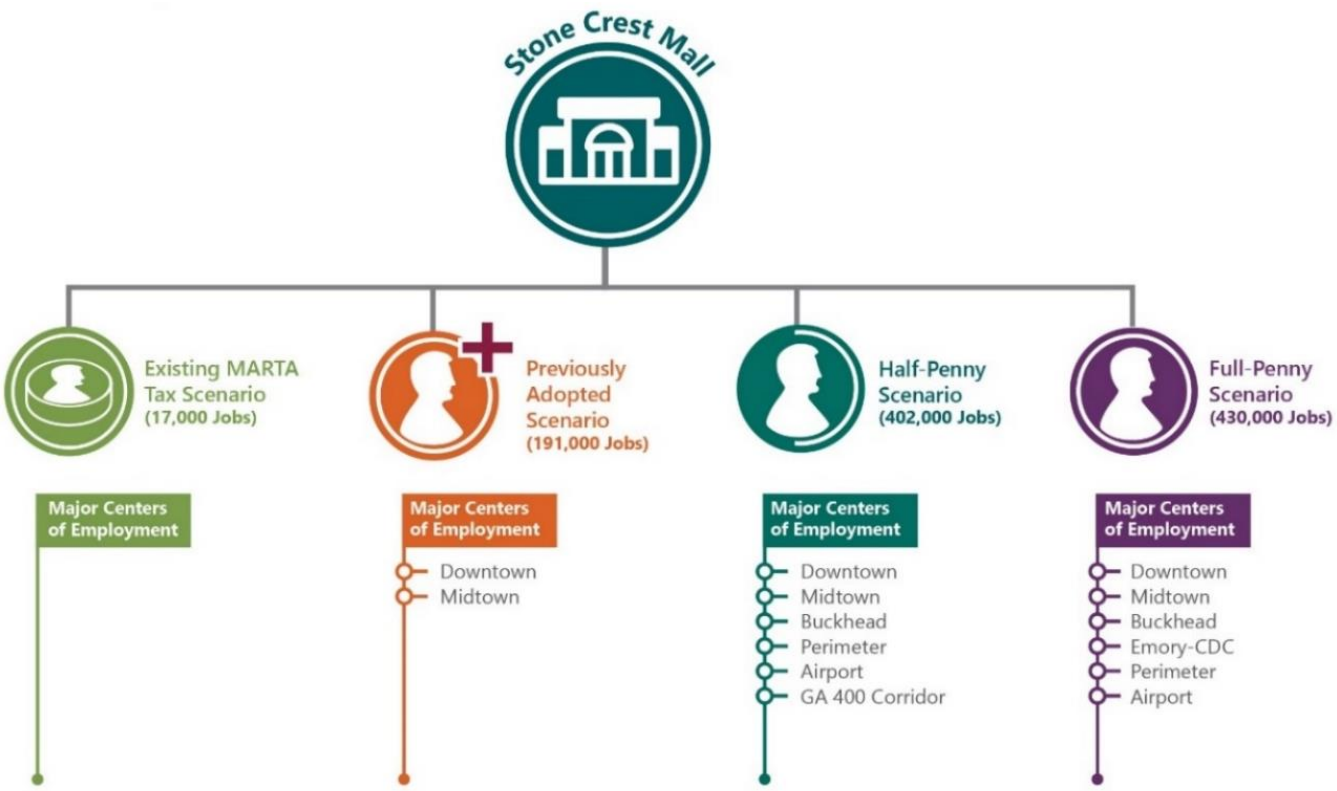


Figure 6-3 displays jobs access from Brookhaven (Clairmont Road at Buford Highway). This shows that under the Existing MARTA Tax Scenario and Previously Adopted Scenario five major employment centers are reachable in 60 minutes. The Half-Penny and Full-Penny Scenario provide access to seven major employment centers.

Figure 6-3: Access to Jobs from Brookhaven (in 60 Minutes via Transit)

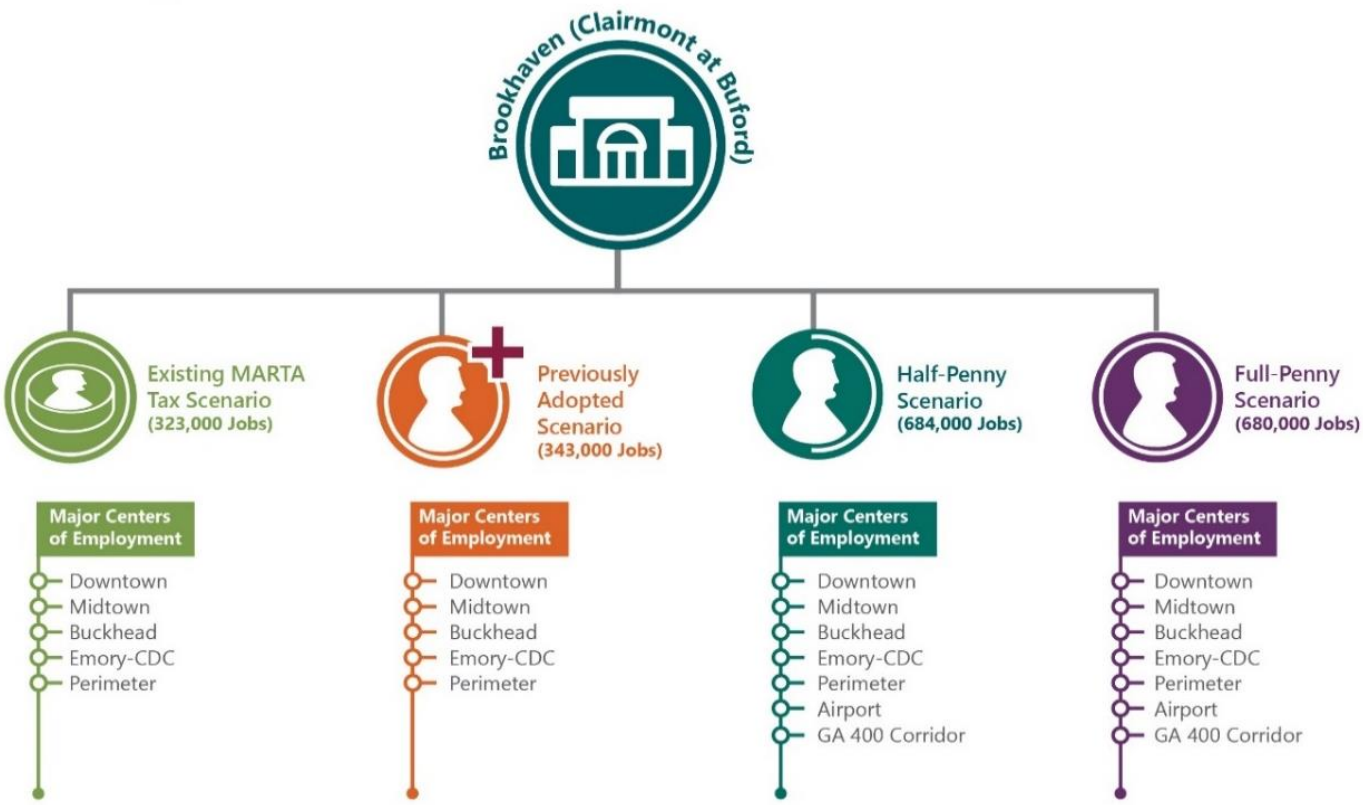


Figure 6-4 illustrates jobs access from Northlake Mall. This shows that under the Existing MARTA Tax Scenario and Previously Adopted Scenario no major employment centers are reachable in 60 minutes. The Half-Penny and Full-Penny Scenario provide access to six employment centers.

Figure 6-4: Access to Jobs from Northlake Mall (in 60 Minutes via Transit)

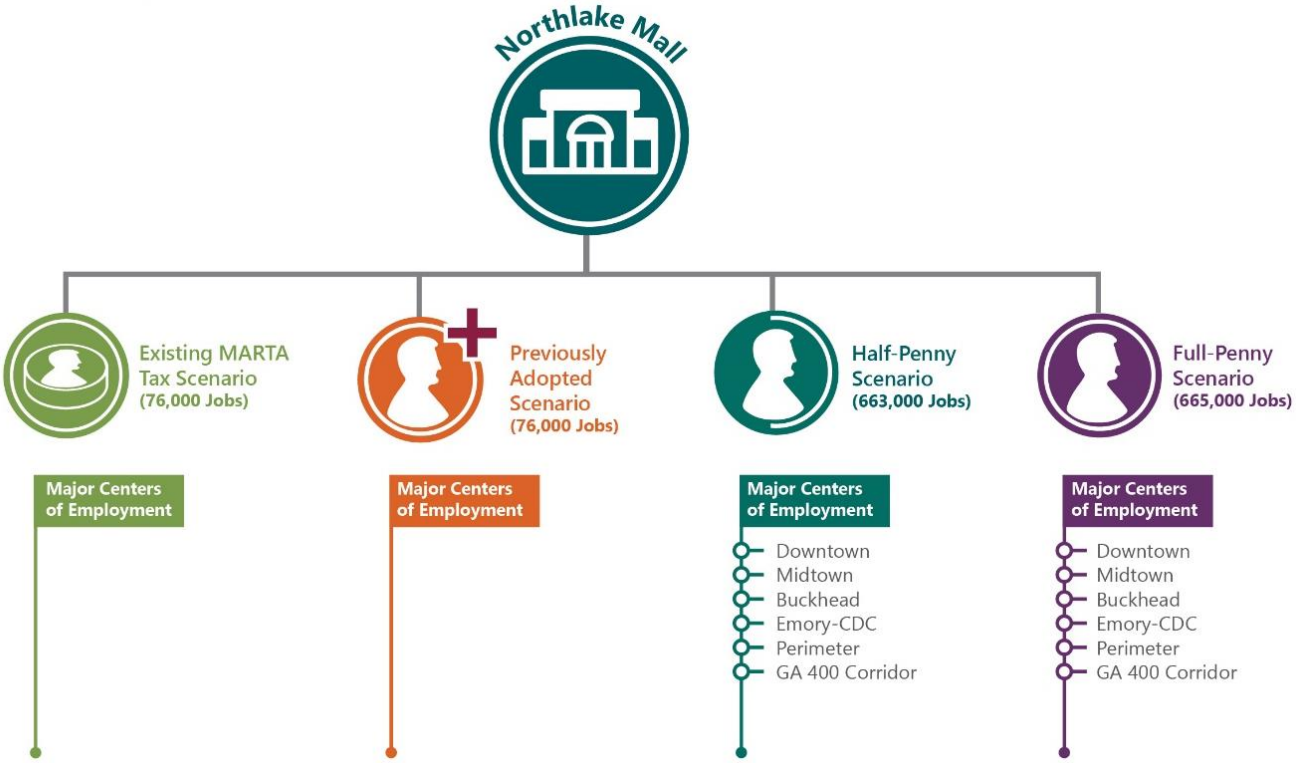


Figure 6-5 provides detail on jobs access from Downtown Tucker. This shows that under the Existing MARTA Tax Scenario and Previously Adopted Scenario no major employment centers are reachable in 60 minutes. The Half-Penny and Full-Penny Scenario provide access to five major employment centers.

Figure 6-5: Access to Jobs from Downtown Tucker (in 60 Minutes via Transit)

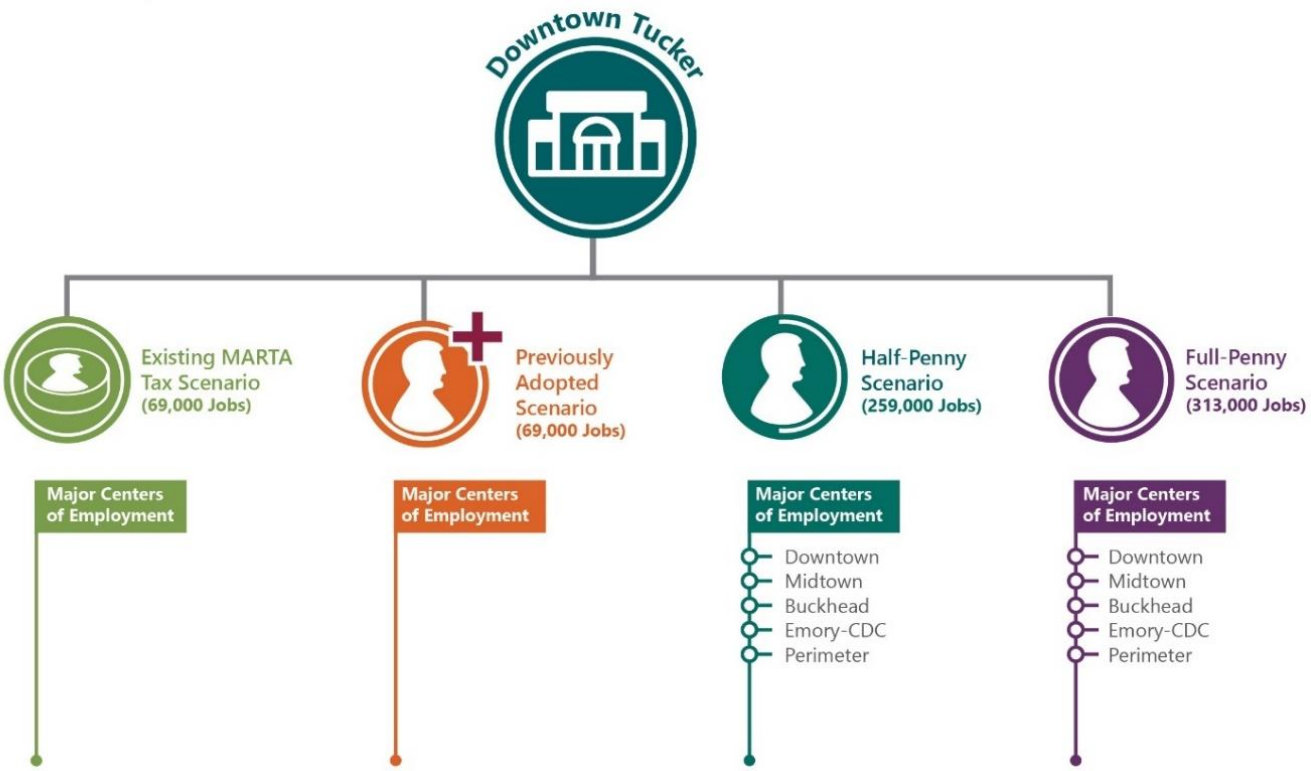
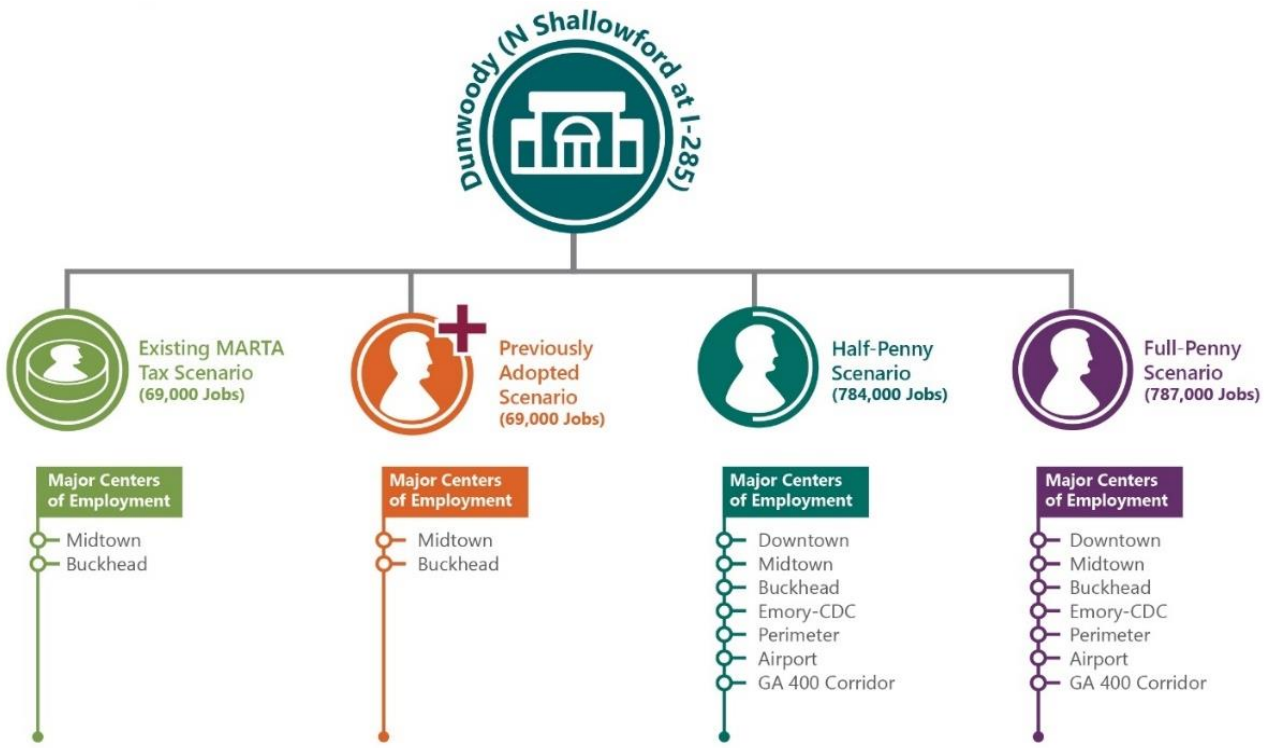


Figure 6-6 illustrates jobs access from Dunwoody. This illustrates that under the Existing MARTA Tax Scenario and Previously Adopted Scenario two major employment centers are reachable in 60 minutes. The Half-Penny and Full-Penny Scenario provide access to seven major employment centers.

Figure 6-6: Access to Jobs from Dunwoody (in 60 Minutes via Transit)



CONCLUSIONS

The Conveyal analysis demonstrates a significant difference between the four scenarios in relation to jobs access. The Existing MARTA Tax Scenario provides the least access to total jobs and major employment centers. This is followed by the Previously Adopted Scenario. While it varies by location these two scenarios provide similar access benefits overall. The Half-Penny and Full-Penny Scenarios provide major improvements to jobs access over the other two scenarios. There is a notable improvement in job access between the Half-Penny and Full-Penny Scenarios of approximately ten percent overall.

Economic Development Potential

Since promoting economic development is a primary goal of the TMP each scenario has been evaluated relative to its potential to generate economic activity. To measure economic development potential each scenario has been evaluated by how well they provide access to likely redevelopment parcels. It is assumed that major transit investments in these areas will help catalyze development by providing improved access, mobility and enhanced quality of life. While economic development potential can be notoriously difficult to predict and quantify, this analysis was undertaken to clarify the order of magnitude differences between the scenarios.

Likely redevelopment parcels are shown in **Map 6-1**. These parcels were defined as vacant commercial land that is being marketed for sale or lease through real estate listing services and/or large parcels (2+ acres) that are likely to be redeveloped due to age, high vacancy, or functional obsolescence.

Map 6-2 illustrates that likely redevelopment areas are dispersed throughout the county, with large clusters found in south and east DeKalb County. Areas with particularly high concentrations of redevelopment parcels are found along Covington Highway, Hairston Road, and Mountain Industrial Boulevard.

To quantify a project's redevelopment potential, access to likely redevelopment parcels was measured. A threshold of ¼ mile around ART lines and ½ mile around stations for BRT, LRT, and HRT was used. It was assumed that premium transit modes (HRT, LRT, BRT) would generate economic benefits across a wider geographic area than enhanced local bus or ART. Parcels within these buffer distances were totaled for each scenario and care was taken to ensure redevelopment parcels were not double counted. Acreage of redevelopment parcels was totaled in ArcGIS using spatial analysis techniques. Acres of likely redevelopment areas served by each scenario are totaled in **Table 6-1** below.

Table 6-1. Economic Development Potential by Scenario

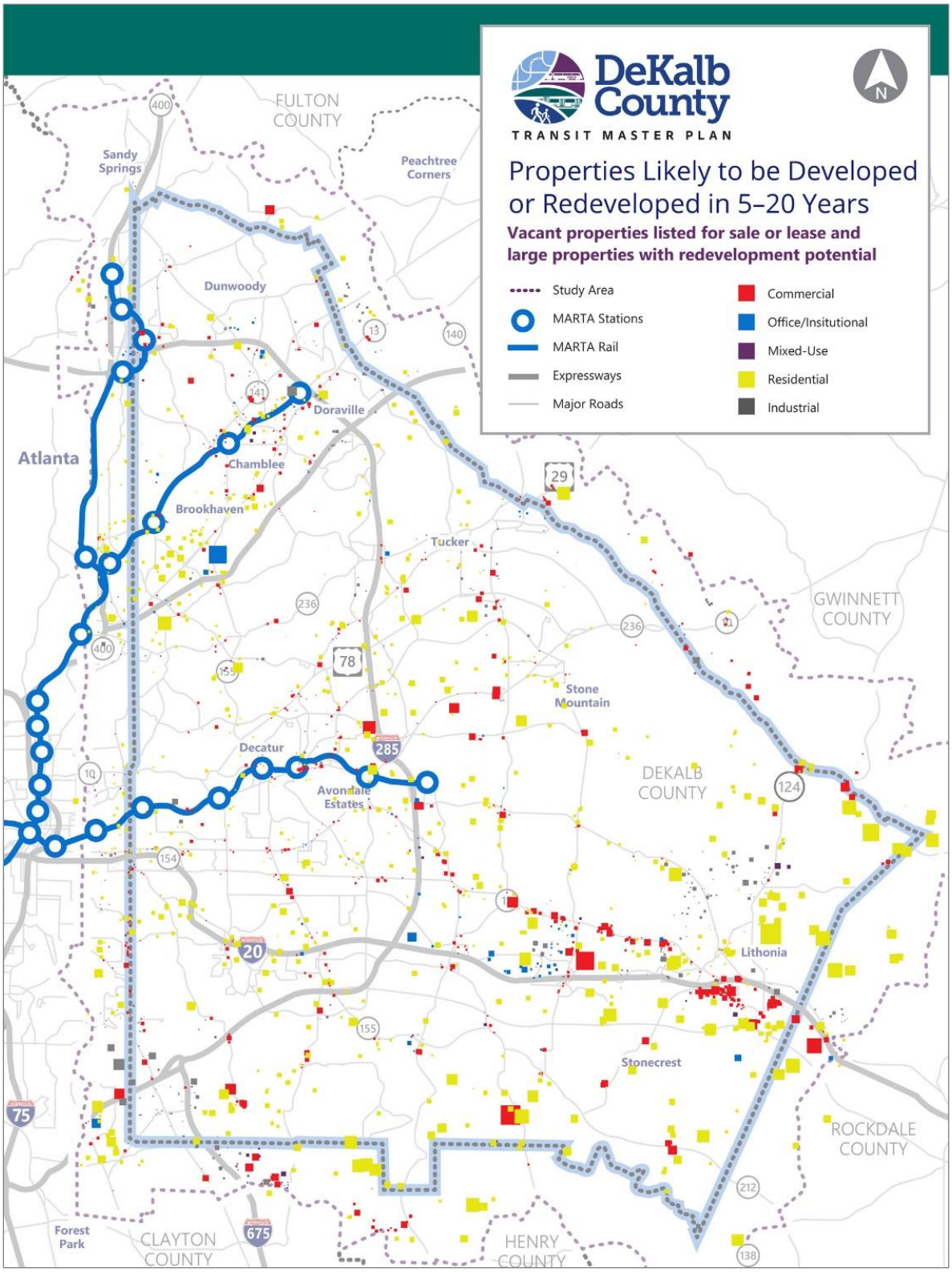
Scenario	Acres of Likely Redevelopment Areas Served
Existing MARTA Penny Scenario	394.3
Previously Adopted Scenario	808.6
Half-Penny Scenario	1,669.9
Full-Penny Scenario	2,762.1

The Existing MARTA Penny Scenario provides the least access to likely redevelopment parcels. This consists of parcels within a ½ mile of existing MARTA stations. This scenario is likely to generate the least amount of economic development benefits for the county, due to the lack of major new transit investment.

The Previously Adopted Scenario provides about twice the degree of access to likely redevelopment parcels as the existing MARTA penny scenario. This is primarily through parcels adjacent to I-20 East. While this is a noted improvement over the Existing MARTA Penny Scenario, it pales in comparison to the economic development potential of the Half-Penny and Full-Penny Scenario.

The Half-Penny and Full-Penny Scenarios provide considerably more access to likely redevelopment areas than the Previously Adopted Scenario. There is also a marked 60% difference between the Half-Penny and Full-Penny Scenarios, which is over 1,000 acres. This is largely the result of additional service provided in the Full-Penny Scenario along corridors such as Covington Highway, Hairston Road and Mountain Industrial Boulevard. The Full-Penny Scenario provides by far the greatest potential for economic development of the four considered.

Map 6-1: Properties Likely to be Developed or Redeveloped in 5-20 Years



Ridership Forecast

Forecast of ridership is one of the most important measures in characterizing the efficiency and utility of a transit system. A transit project that attracts more riders would have a dual benefit as it would yield high total ridership in addition to help reduce roadway congestion.

HRT, BRT AND LRT FORECAST

The FTA Simplified Trips on Projects Software (STOPS) was used to estimate ridership on high capacity transit projects (HRT, BRT, and LRT) that make up the transit system scenarios discussed earlier in this section. STOPS is a modeling framework developed by the FTA to efficiently evaluate ridership potential and patterns for transit projects. The model provides ridership information including total system-wide boardings, linked trips, and trips on the projects for transit planning analysis. The FTA STOPS Version 2.50 was utilized for the analysis presented in the section that follows.

STOPS can be run in two different configurations: synthetic and incremental. The synthetic approach uses the 2006-2010 ACS American Community Survey (ACS), Census Transportation Planning Products Program (CTPP) as the foundation for ridership estimates. The incremental approach relies on a local on-board travel survey as its starting point. In most instances, the incremental approach is the preferred implementation especially when a recent on-board survey exists. Implementation of STOPS for the DeKalb TMP was completed using the "incremental" approach in the model.

The STOPS model was calibrated based on transit routes and ridership data from 2015. Socio-economic data and trip tables from ARC's regional activity-based model were used in the implementation of the STOPS model. Most recent valid Generalized Transit Feed System (GTFS) data from MARTA, CobbLinc, Gwinnett County Transit and SRTA Xpress, for years 2018-2019, were used to create the existing transit system network in the region. GTFS files were also created for each system scenario described in the previous section. **Table 6-2** illustrates the key modeling assumptions used in the scenarios for the ridership assessment.

Table 6-2: Modeling Assumptions in Scenarios

Scenario	Socioeconomic Data	Transit System
Existing Regional Transit System	2015	Existing Transit System – MARTA, CobbLinc, Gwinnett Transit, SRTA
Existing MARTA Penny Scenario	2040	Existing Transit System
Half-Penny Scenario	2040	Existing Transit System & MoreMARTA Projects & Projects in Half-Penny Scenario
Full-Penny Scenario	2040	Existing Transit System & MoreMARTA Projects & Projects in Full-Penny Scenario
Previously Adopted Scenario	2040	Existing Transit System & MoreMARTA Projects & Projects in Previously Adopted Scenario

The forecast ridership developed utilizing the STOPS model for LRT, BRT and HRT is a count of each time a rider boards the proposed projects; **Table 6-3** provides a summary of this ridership forecast.

HRT was only considered in the Previously Adopted Scenario, where MARTA's Blue Line service was extended further east from Indian Creek Station to Mall at Stonecrest. This extension is estimated to add nearly 15,800 riders on the Blue line.

In the Half-Penny Scenario, LRT serves between Lindbergh Station and Clairmont Road at North Decatur; in the Previously Adopted Scenario LRT extends further east to Avondale station; and in the Full-Penny Scenario LRT extends further south to the Gallery at South DeKalb and further east along I-20 to Wesley Chapel Road. LRT in the Half-Penny Scenario is expected to have nearly 5,500 riders per day in 2040. LRT in the Full-Penny Scenario is expected to have just under 14,200 riders per day in 2040.

BRT on I-285 from Dunwoody Station and SR 155 (Flat Shoals Parkway) performs similarly in the half-penny and full-penny scenarios with estimated ridership of about 10,000 riders per day. This includes the I-285 Top End BRT and the I-285 East Wall BRT projects combined. The Previously Adopted Scenario includes BRT on I-20 East from downtown Atlanta to Wesley Chapel Road. Ridership on this route was estimated to be nearly 7,000 in 2040. The Half-Penny and Full-Penny Scenarios extend the BRT services further east to the Mall at Stonecrest. Ridership on this combination of I-20 East BRT to Wesley Chapel Road and Stonecrest Mall was estimated to be just under 10,000 in the Full-Penny Scenario. This decrease in ridership for the BRT along I-20 East is likely due to cannibalization effect of the LRT from South DeKalb Mall to Wesley Chapel Road. BRT on Buford Highway had an estimates ridership of about 4,600 in both the Half-Penny and

Full-Penny Scenarios. While the existing local route on Buford Highway is one of the highest performing routes in the MARTA system, ridership estimates in the model are based on station spacing and travel time on the route. Thus, ridership on Buford Highway may be higher based on a more optimal operating plan and station plan.

Table 6-3: Estimated 2040 Ridership on Major Projects

Major Projects	Existing MARTA Penny	Half-Penny	Full-Penny	Previously Adopted
I-20 East BRT (Seg. 1)				6,989
I-20 East BRT (Seg.1 and Seg. 2)		9,949	8,737	
Buford Highway BRT		4,576	4,580	
I-285 Top End BRT and I-285 East Wall BRT		10,203	9,881	
Clifton Corridor LRT (Seg. 1b)		5,536		
Clifton Corridor LRT (Seg. 1b and Seg. 2)				9,949
Clifton Corridor LRT (Seg. 1b and Seg. 2), Candler Road LRT, and LRT to Wesley Chapel Road			14,160	
MARTA Blue Line	87,447	84,747	84,729	103,221

ART FORECAST

In light of the high number of ART projects included in the system scenarios, a spreadsheet-based model was used to estimate ridership on proposed ART routes instead of the STOPS model. **Table 6-4** includes variables used in developing the forecast such as daily vehicle miles, population, total employment, service employment and fare. MARTA's 2016 data was used to calculate factors for daily vehicle miles and fare, while ARC's 2015 socio-economic data was used to calculate factors for population and employment. Daily number of passengers on the MARTA system was used to calculate these factors.

Table 6-4: ART Spreadsheet Ridership Model Variables and Factors

Scenario	Ridership Factor	Weight
Daily Vehicle Miles	0.23	35%
Existing MARTA Penny Scenario	0.104304	15%
Half-Penny Scenario	0.147806	20%
Full-Penny Scenario	0.358885	25%
Previously Adopted Scenario	0.000012	5%

Table 6-5 illustrates a summary of estimated ridership on proposed ART routes in 2040. ART-6 on Memorial Drive performs the best with nearly 11,500 riders per day. ART-10 on North Druid Hill Road also performs well with nearly 7,000 riders per day in 2040. As the ridership model depends on socio-economic data in proximity of the route, proposed routes in suburban lower density areas do not perform as well as routes in higher density areas. For example, while ART-6 has the highest ridership, its extension from Kensington Station, ART-17, has significantly lower ridership.

Table 6-5: Estimated 2040 Ridership on Arterial Rapid Transit Routes

Project Name	Extent To	Extent From	Total Ridership	Scenario
Memorial Drive ART (Seg. 1)	Kensington Station	Five Points	11,540	Half-Penny, Full-Penny
Memorial Drive ART (Seg. 2)	Kensington Station	Goldsmith P&R	1,960	Half-Penny, Full-Penny
Candler Road ART	Decatur Station	South DeKalb Mall	2,330	Half-Penny
Clairmont Road ART	Decatur Station	Chamblee Station	4,780	Half-Penny, Full-Penny
North Druid Hills ART	Brookhaven Station	Emory-CDC	7,070	Half-Penny, Full-Penny
Panola Road ART	Tucker Mobility Center	SR 212 (Browns Mill Rd)	2,670	Full-Penny
Lawrenceville Hwy ART	Decatur Station	Tucker Mobility Center	4,240	Half-Penny, Full-Penny
LaVista Road ART	Tucker Mobility Center	Lindbergh Station	3,920	Half-Penny, Full-Penny
Covington Highway ART	Stonecrest Mall	Indian Creek Station	1,790	Full-Penny

Table 6-6 provides a summary of system-wide ridership for the four scenarios. The Full-Penny Scenario is expected to have the highest ridership. The Previously Adopted Scenario out performs the Half-Penny Scenario. However, the Half-Penny Scenario has higher system-wide ridership than the Previously Adopted Scenario, mainly due to the inclusion of ART routes. The Full-Penny Scenario out performs Half-Penny with about 25 percent higher ridership on the proposed projects.

Table 6-6: 2040 Ridership Estimates for Build Scenarios

Scenarios	Existing MARTA Penny	Half-Penny	Full-Penny	Previously Adopted
Build Projects – BRT, LRT	N/A	30,264	37,358	16,935
MARTA Blue Line	87,447	84,747	84,729	103,221
Total Ridership on Build Projects (BRT, LRT, HRT)	N/A	27,564	34,640	32,709
Existing / No-Build excluding MARTA Blue Line	570,553	543,451	537,782	546,481
More MARTA / GA 400	N/A	45,014	45,020	44,893
Total Ridership excluding ART	658,000	703,476	704,889	711,530
Proposed ART Routes in DeKalb County	N/A	35,840	37,970	N/A
Total Ridership	658,000	739,316	742,859	711,530
Difference from No-Build	N/A	81,316	83,639	53,530

Due to the systemwide nature and cursory-level ridership assessment completed in the DeKalb TMP, it will be necessary to refine project ridership forecasts for the scenarios based on more detailed information such as modified station locations, service frequencies, conceptual engineering and alignment variations to be undertaken in subsequent transit planning and project development studies.

7 Factors for Success

Through the development of the TMP, five key recommendations were identified. These recommendations are needed to ensure that this study does not wind up on a shelf never to be heard from again. These recommendations are designed to build momentum, build trust, continue study, identify funding, and foster continued coordination.

Building Momentum

Building an effective transit system is not a fast endeavor. It can, and will, take a community decades to achieve a transit vision. It is important that residents see all steps toward the implementation of a transit network as a victory for them. An investment of this nature cannot succeed if residents only see investments within a quarter or a half mile of their home as a success. Residents must be able to perceive transit system investments on the opposite side of the county as an improvement for them as well.

It may be necessary to launch a **pro-transit public relations campaign** with a "One DeKalb" or similar message. The campaign should highlight the fact that any removal of cars from the road network is helpful to reducing congestion. It should also highlight the nature of the transit network where an investment in the southern part of the county may not directly benefit a resident in the northern part of the county today, but when the network is complete that same investment may enable a resident to seamlessly navigate from an origin in the northern part of the county to a destination in the southern part of the county or vice-versa. Understanding that fair is not the same as equal, transit investments may differ among areas of the county, but the goal is to be fair to all residents.

The campaign should engage community members who live in different parts of the county, are from different generations, are differently abled, and who have access to different financial

resources. Longer tenured members of the community must be comfortable apportioning benefits to newer members of the community.

Building Trust

Residents must trust MARTA and municipal leaders must trust county leaders. For example, county leadership must be transparent in the prioritization and investment processes related to transit and other matters in order to build trust with municipal partners. MARTA leadership needs to be transparent about historical spending, deficiencies of prior plans and its ability to deliver on plans. If residents do not feel that they can rely on leadership to be transparent, they will be unlikely to support additional investment in transit.

Given the rapid rate of technology advancements in transportation, a study such as this one with a 30-year horizon cannot be static. While it is imperative to continue to plan for future investments and improvements, implementation of this plan must consider opportunities to employ new modes of transit including autonomous and connected vehicles to not preclude future technological advancements in transportation. Great care was taken in the Master Plan to provide enough detail for decisions to be made, but not so much detail as to preclude future technology. For example, while a corridor may be identified in a scenario for BRT, it does not indicate if the vehicle has a driver or is autonomous. Neither option is precluded. (Note: While no recommendation was made with regard to fuel or driver, assumptions had to be made for the cost projections. For these purposes, current fleet and fuel requirements were assumed to be employed.)

This perspective of building momentum and trust leads to the first two recommendations of the DeKalb TMP. These recommendations underpin the need for additional public/stakeholder education and discussion around transit investments and priorities in DeKalb County.

Key Recommendations

RECOMMENDATION 1: ADVANCE FOUR TRANSIT SCENARIOS FOR FURTHER CONSIDERATION AND ADDITIONAL PUBLIC INPUT AND EDUCATION

It is the recommendation of the DeKalb TMP that the four transit scenarios be advanced forward for additional public and stakeholder input and education. These scenarios include the existing MARTA penny scenario, half-penny scenario, full-penny scenario, and previously adopted scenario. The public/stakeholder education and input process should be designed to increase the public's understanding on the travel benefits and impacts of the scenarios. Additionally, visualizations of how modes will integrate into the community such as 3D renderings, models and videos may be necessary. Education on future-proofing to address the impacts and opportunities of advancing technologies as part of the implementation of the DeKalb TMP is also recommended.

RECOMMENDATION 2: MORE PUBLIC/STAKEHOLDER EDUCATION AND INPUT ON PROJECT DELIVERY AND INNOVATIVE FINANCING OPPORTUNITIES

Throughout the DeKalb TMP process, the public, stakeholders and the DeKalb County leadership stressed the need for identifying transit funding opportunities beyond the HB 930 sales tax option. Thus, it is also recommended that DeKalb County and MARTA provide continued public education on the following three areas:

- Public-Private-Partnerships (P3)
- Value capture financing
- Competitive nature of the FTA capital investment grant process

These additional funding opportunities are illustrated in **Figure 7-1**.

Figure 7-1: Potential Funding Options beyond HB 930 Sales Tax

To shift the DeKalb TMP from study to action, DeKalb County and MARTA must secure an early "win" by implementing a project very quickly that can demonstrate to the public how transit can work. Leaders in other regions that have moved from analysis-paralysis to creating a forward-thinking transit system have indicated that it is important to prioritize a project for immediate implementation. By delivering a project early, it allows residents to see the impacts a transit investment can have on a community and activate a thirst in community members for more transit investment.

It should be highlighted that this project needs to be the easiest to implement, but not necessarily the "best" transit project. Often communities attempt to identify that transit project that will generate the most ridership, leverage the most funding from outside of local sources, or will serve the greatest number of people. Operating on the same psychological principle that suggests that someone in debt should pay off the loan with the smallest principle (as opposed to the one with the highest interest rate), a community should prioritize the transit project with the fewest barriers to completion. By identifying the project that can be implemented the fastest, the

community can move forward with a demonstration project that will awaken an appetite for more transit investment.

If DeKalb County and MARTA can identify a quick-turnaround project that can be funded immediately and move to implementation quickly, it could be the catalyst needed to drive a referendum as opposed to completed after the referendum. Often times funding is the biggest hurdle to implementation, such that a project that can be funded entirely with local funding can be implemented very quickly. Thus, the third and fourth recommendations of the TMP focus on more effectively addressing current unmet needs and advancement of expansion projects using current MARTA funding.

RECOMMENDATION 3: COLLABORATE WITH MARTA ON CURRENT UNMET NEEDS

Increasing coordination between DeKalb County and MARTA is recommended to ensure that transit projects to address current unmet needs are **delivered** using funds from the existing MARTA sales tax. Improvements to be delivered by MARTA should include:

- Paratransit expansion in south and east DeKalb
- Mobility centers
- Bus to rail transfer enhancement projects
- Last mile/first mile connectivity projects
- Improvements to bus routes that serve high ridership corridors
- Expanded local bus coverage, bus circulators, and mobility on-demand

Figure 7-2: Current Unmet Needs

RECOMMENDATION 4: COLLABORATE WITH MARTA AND AGENCY PARTNERS ON THE ADVANCEMENT OF EXPANSION PROJECTS CONSISTENT WITH THE DEKALB TMP

DeKalb County should coordinate with MARTA, GDOT, the ATL and other agencies to advance the definition (i.e., planning and design concept) of key projects included in the DeKalb TMP scenarios. Because BRT in managed lanes on I-285 is a key project concept of the DeKalb TMP, and the fact that the current GDOT schedule for delivery of these lanes is within the next few years, it is extremely important that DeKalb County and MARTA immediately collaborate with GDOT to define BRT design solutions that effectively integrate into GDOT's managed lanes projects without impacting the delivery schedule. Advancing the expansion projects consistent with the DeKalb TMP include:

- Re-evaluate I-20 East High Capacity Transit to Stonecrest
- Bus Rapid Transit in I-285 East Wall and Top End Express Lanes
- Bus Rapid Transit for Buford Highway

- Clifton Corridor Light Rail Transit
- Extension of Clifton Corridor–Central and South DeKalb Light Rail Transit
- Arterial Rapid Transit Network

Moreover, to implement future transit investment, zoning codes and land development regulations in DeKalb County and municipalities need to be aligned to support the investment. For example, a community may support an investment in light rail transit to spur economic development, but if the local zoning code will not allow higher density development the investment in transit may not be able to spur development. Additionally, compact, transit-oriented development (TOD) can also result in increased sales tax revenue. Effective TOD should be delivered as part of a complete transportation system that incorporates multi-modal access including pedestrian and bike infrastructure. These kinds of compact developments have traditionally increased retail activity and the overall tax base of the TOD area. The fifth recommendation of the TMP fosters these principles of aligning transit investment with land use policies.

RECOMMENDATION 5: ALIGN LAND USE, DEVELOPMENT CODES, AND TRANSIT EFFORTS

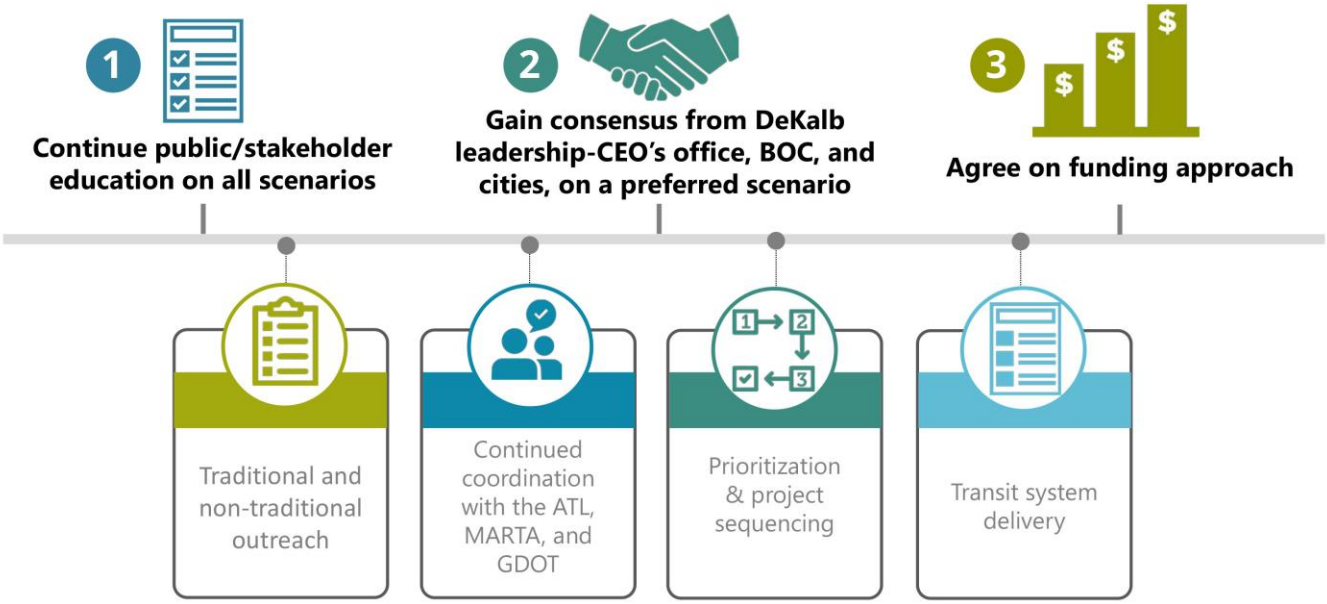
It is recommended that DeKalb County as well as the 12 cities within the county undertake efforts to better align land use and development policies to support transit investments. Transit supportive land use consists of land uses that support – economically and socially – the effective use of transit. Land use decisions and transit-oriented development investments promote transit usage, walkability and compact development forms and help to maximize exchange and activity within station areas and transit corridors. It is vitally important that the DeKalb County Comprehensive Plan is updated to include the DeKalb TMP high-capacity transit corridors, and direct growth in these areas. Zoning and land development codes also should be strengthened to incentivize private investment at station areas and enhance opportunities for securing FTA funds.

Steps to Implementation

The path forward includes three important steps necessary to achieve implementation of the DeKalb TMP. These steps are illustrated in **Figure 7-3**. As discussed, the County and MARTA should continue public/stakeholder education on the transit scenarios. Additionally, the DeKalb County leadership including the CEO's office, the Board of County Commissioners, and the 12 cities must work collectively to select a list of transit expansion projects to implement. Implementation will require agreement on a stable funding approach, which could include a combination of options such as a sales tax increase, state and federal funds, as well as private sector investments.

Each project requires a more detailed, in-depth analysis of the corridor and environmental impacts prior to advancing into engineering and construction. A funding plan must be identified for each project. Station area plans must be developed for each station.

Figure 7-3: Steps to Implementation



As projects are defined further, more detailed cost estimates will be needed. The cost estimates will be used in developing funding plans. These funding plans should consider all possible options for transit funding. Traditional sources such as sales and use taxes and federal grants should be explored as well as more innovative sources like P3, tax increment finance (TIF) districts, and value capture initiatives.

While the TMP expansion scenarios do not assume that every project receives federal funding, they are predicated on the fact that many projects do received federal funding. It is imperative that DeKalb County and MARTA secure federal funding in order to move forward with any of the expansion scenarios. Over the 30-year timeframe, the federal guidelines for securing funding may shift, but DeKalb County must continue to evolve to stay competitive.

To be successful, a transit expansion needs to engage a spectrum of community leaders who can serve as champions of the program. Political leaders are needed to move the political process forward, but beyond that leaders from the business, non-profit, and education segments of the community are also needed. Business leaders can assist with coordination to minimize impacts during construction. Non-profits are needed to work on ancillary projects like workforce housing. Leaders in education can ensure that student needs are met.

Finally, transportation needs do not end at geopolitical boundaries. DeKalb County and MARTA must work with its neighbors to identify transit solutions that work for DeKalb residents and neighboring county residents across the Atlanta region. Finding ways to jointly fund investments when they serve multiple jurisdictions will be paramount.