City of Smyrna
Transit Analysis and Feasibility Study

Technical Memorandum #4

Improvement Strategies and Evaluation Process

Draft

SMYRNA *Connects*

March 2020

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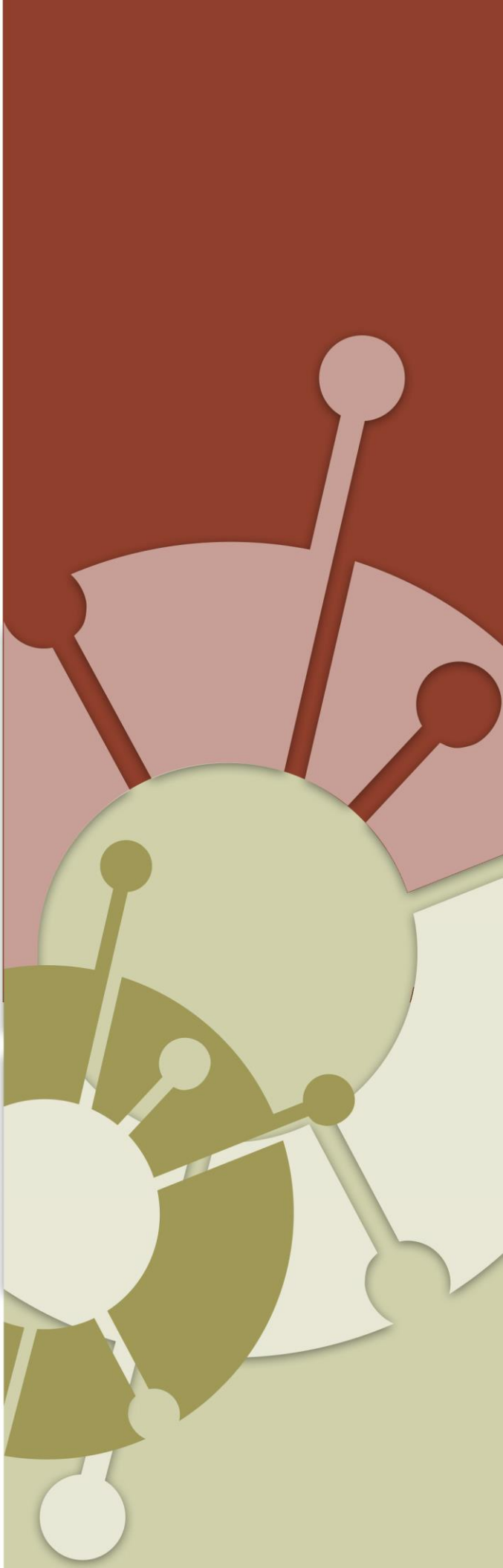
Section 1: Introduction

This technical memorandum for the City of Smyrna's Transit Analysis and Feasibility Study, dubbed *Smyrna Connects*, presents the draft improvement strategies for the City towards developing an overarching, consensus-driven transit vision for the city and its adjacent areas. These transit improvement strategies are intended to help the City in its efforts to reach its overall objectives of economic development and growth, traffic mitigation, livable communities and corridors, and connected and walkable communities.

Although meaningful strategies can be developed that are community-supported and backed by sound data analysis, policy support (both locally and regionally) and fundability are key factors needed to bring them to reality. Therefore, an evaluation process also is proposed to prioritize these strategies so this study effort will result in a practical and implementable list of priorities for the City of Smyrna that truly reflect a vision for the city's growth and improvement over time.

The technical memorandum presents the service, capital/infrastructure, technological, and policy strategies for the City's consideration for improving transit in the next 20 years. An alternatives evaluation process, including various public input and data-based criteria and measures that could be used to assess each of the applicable strategies, also is presented.

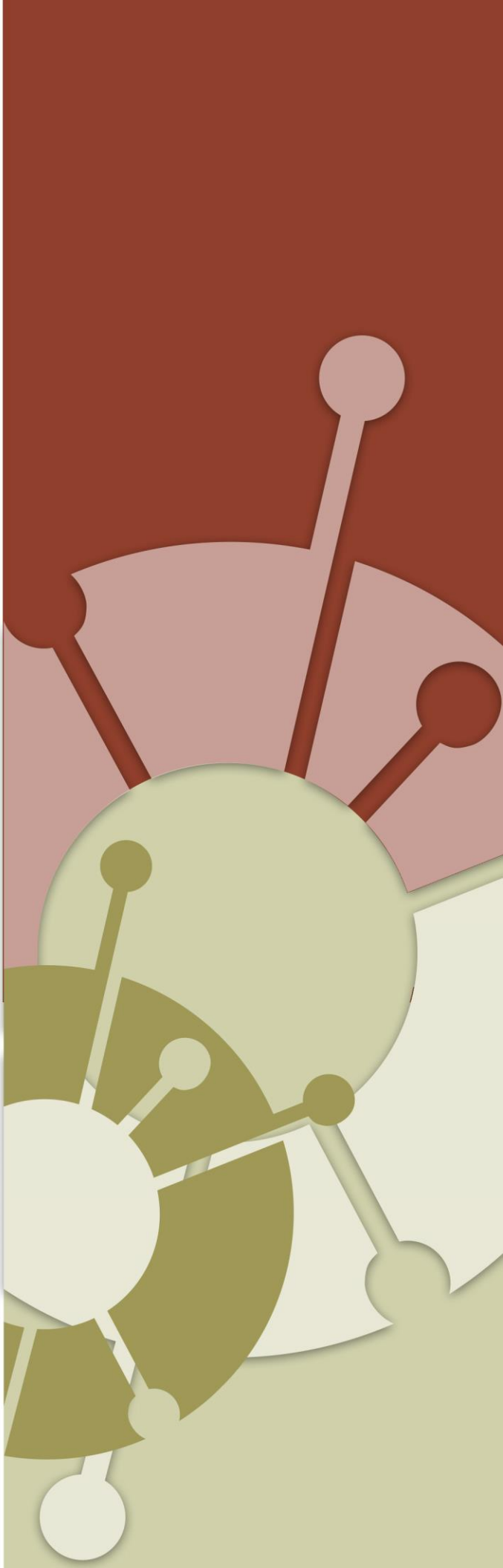
Once these strategies are reviewed/refined and prioritized using the evaluation criteria, a careful analysis of costs and financial resources will be conducted in the subsequent steps of the *Smyrna Connects* study.



Section 2: Toolbox of Improvement Strategies

This section summarizes the transit improvement strategies to address the needs developed and presented previously in Technical Memorandum 2. These needs were developed based on findings from data analysis, input from the community and stakeholders, and policy direction from the City and the larger region. These needs, as noted below, provide the basis for developing a toolbox of improvement strategies for public transit in Smyrna for the next 20 years:

- **Develop a high-frequency commuter network** – These premium and regular transit routes should connect to a regional network of premium/express transit services and facilities on key corridors in the city with service every 15 minutes or less.
- **Establish rapid internal and adjacent hub connectivity** – Establish a branded shuttle/van service with fast connectivity for intra-city travel and to the adjacent Cumberland CID.
- **Improve transit infrastructure/capital facilities** – Add new transfer facilities and relocate the current Cumberland Transfer Center to provide an easy, convenient, and safe transfer experience.
- **Implement a transit marketing campaign** – Develop and implement a coordinated marketing strategy that includes participation of various stakeholders/agencies and use of local and regional resources.
- **Develop a transportation network company (TNC)-based after-hour rides program** – Develop a voucher program for using ride-hailing services from TNCs such as Uber and Lyft to get around when regular service is not available.



The improvement strategies for addressing these core needs are presented in the remainder of this section.

Factors Guiding Development of Strategies

In addition to guidance from project and City goals in general, Smyrna's geographic location, diverse population and needs, and proximity to the Cumberland CID warrant a toolbox of well-thought-out transit strategies for the next 20 years. The following factors were strongly considered in guiding and shaping these strategies.

Economic Development

With a revitalized Downtown District that continues to expand and an adjacent $4.4 billion commercial/residential hub with an additional $1.5 billion investment planned over the next decade, economic development has been a major focus of City leadership and staff. With many commercial and residential developments planned along city arterials and major roadway improvements scheduled, transit strategies that complement and elevate the City's economic development efforts are crucial.

Figure 2 1: Factors Guiding Development of Smyrna Connects Strategies

Livability and Equity

Smyrna continues to be an attractive place to live for a variety of people. Its Downtown District provides walkability and access to many amenities and civic centers. Connecting transit to the Downtown and its activities and amenities as well as the city's extensive trail network can support the livability goals. In addition, strategies that cater to the northern part of the city, with more baby boomers, and the southern part of the city, with younger populations, while also serving the city's low-income and other disadvantaged or underserved populations are also essential.

Local Needs and Regional Obligations

Ensuring that the desires and needs of the City are met while staying consistent with regional goals is also crucial. Locally, the strategies should address the community's needs to be connected quickly and internally in addition to connecting to activities and economic opportunities adjacent to the city. As Smyrna grows with the Atlanta region, regional connectivity will be critical to an economically and socially successful region.

Technological and Environmental Innovation

Smyrna has repeatedly been described as an innovative and desirable place to live, work, and visit. Technologically-advanced and innovative strategies may be needed to stay consistent with this identity, especially if the city wants to continue attracting younger populations. In addition, with 304 acres of green space and an eco-conscious population, the City's focus on the environment should also be reflected in its transit strategies.

Phasing of Transit Improvements

Phasing of improvement strategies is important for a practical and implementable plan that can carry out the vision for Smyrna's growth over time. It not only allows the City to further evaluate the strategies it selects, but it also can ensure that adequate funding is in place. Also, with meaningful phasing, Smyrna could be well-positioned to communicate the components of its transit vision to County and regional planning efforts. The strategies can be presented to Cobb County for consideration in its update to the overall countywide transportation plan, which includes a transit element. In addition, the strategies for Smyrna can be presented to the Atlanta-region Transit Link Authority (ATL) for its consideration as it continues to update its transit plan for the region.

Also, the Georgia Department of Transportation (GDOT) is advancing a managed lane project on the top end of I-285, with lanes expected to open by 2032. A feasibility study is underway by surrounding cities for implementing BRT once the lanes are open. All these regional initiatives provide an opportunity for Smyrna to provide input and have influence with a phased implementation plan for transit. In addition, the phased strategies may feed into the projects Cobb County may be developing for the Transit Special Purpose Local Option Sales Tax (T-SPLOST) referendum by 2021.

The phases of *Smyrna Connects* improvement strategies to meet the transit needs and regional timelines are defined as follows:

- **Short-term (1–2-year) recommendations** are strategies that include enhancements to existing transit services provided by CobbLinc, new services, and any infrastructure and policy improvements that are higher priority, easier to implement, and/or lower-cost or cost-neutral in nature to facilitate implementation in the more immediate future **by the end of 2022**.
- **Mid-term (3–7-year) recommendations** either are not as immediate in terms of priority or the needs are sufficiently extensive and costly to require some level of additional planning

and time to implement. These strategies may make sense over the next 2–8 years, ***from 2023 through 2029***.

- **Long-term (8–20-year) recommendations** include mobility needs that may require greater financial commitments, changes in existing policies or operational philosophy over a greater period of time, or new premium services that may require longer implementation times, so phasing must occur in the latter half of a 20-year plan timeframe, **from 2030 to 2040**.

Toolbox of Strategies

The *Smyrna Connects* improvement strategies summarized below lay the foundation for making transit a viable travel option in Smyrna are presented below. Each of these "tools" is categorized in to the three phases described previously based on the type and extent of the improvement, necessary natural succession, and sound judgment. For each phase, service strategies are listed, followed by infrastructure, technology, and policy strategies to support implementation of these service strategies.

It is important to note that the draft strategies identified here are Smyrna's recommendations to CobbLinc and its other regional partners on how the City wants to improve travel options for its residents and visitors. As the City does not operate, manage, or fund regular transit services and may not intend to do so in the near future, it will need to coordinate with CobbLinc and other partners to assess the feasibility of incorporating the majority of these strategies into their individual transit plans.

Short-term Strategies (1–2 Years)

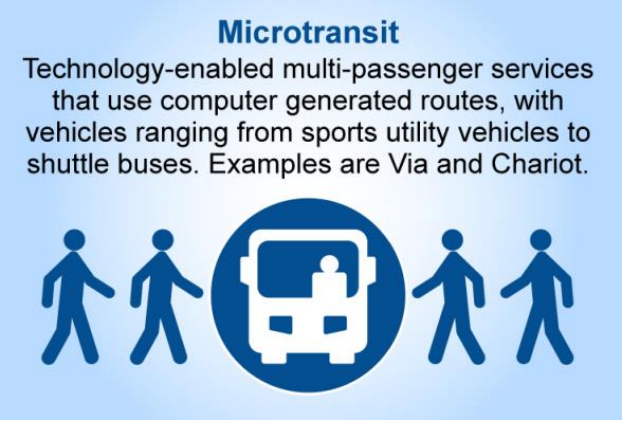
Several strategies are identified to improve transit service in the short term and begin to lay the foundation for making transit a more viable travel option in Smyrna. Several service-related improvements are recommended for implementation within the next 1–2 years to start addressing the key needs identified previously. In addition, infrastructure, technology, and policy strategies are identified to support implementation of the service improvement strategies listed below. Map 2-1 shows the short-term service strategies for the *Smyrna Connects* 20-year plan.

In the short term, the key focus will be to improve the frequency of current bus services on key arterials to every 30 minutes and add a new layer of mobility options to set the stage for the next phases. The following improvement strategies were identified:

- **Increase service frequency to 30 minutes on routes** – this would increase the service frequency on Concord/Spring Road to a bus every 30 minutes from the current frequency of every 60 minutes. Although improving CobbLinc Route 25 to 30-minute frequency is also identified as a need by CobbLinc as part of its recent service efficiency analysis, it was not implemented immediately but was included as a mid-range recommendation by CobbLinc with no set time frame. *The Smyrna Connects 20-year plan recommends that the City work with CobbLinc to establish 30-minute service on Route 25 within the next 1–2 years.*

Map 2-1: Smyrna Connects Short-Term Service Strategies

- **Implement Mobility on Demand (MOD) microtransit in three zones** – As a pilot to assess public interest in shared mobility services and establish a ridership base for potential circulator-type transit services in the future, three areas were identified for establishing microtransit services in the city. The service will be provided with non-bus-like vehicles/vans (during public outreach, using non-transit-looking vehicles was preferred over using typical transit buses in Smyrna), preferably electric, where riders can quickly book a ride using an app or call a number to request a ride.



Source: GAO Report 18-539

FTA defines microtransit as "IT-enabled private multi-passenger transportation services (such as Bridj, Chariot, Split, and Via) that serve passengers using dynamically-generated routes and may expect passengers to make their way to and from common pick-up or drop-off points. Vehicles can range from large SUVs to vans to shuttle buses. Because they provide transit-like service but on a smaller, more flexible scale, these new services have been referred to as microtransit."

Excluding the modified walk access area of current CobbLinc routes, all other area in the zones identified in Map 2-1 will be connected. (A transit walk access area was defined for *Smyrna Connects* as being 1/8-mile or a 2-minute walk from a bus route to make it a more comfortable walk than the ¼-mile threshold typically used in the industry).[1] The MOD zones described below were identified based on demand analyses and findings from *Smyrna Connects* public outreach:

  - *Smyrna East MOD Microtransit* – Encompasses the area between Atlanta and Windy Hill Roads and Cobb Parkway and areas on both sides of Spring Road. This app-based service would connect eligible riders in this high population/employment area to locations within the designated MOD zone.
  - *Smyrna West MOD Microtransit* – Includes areas west of Atlanta Road, north of Concord Road, and on both sides of Windy Hill Road and South Cobb Drive. The traditional transit market segments and residents/workers in this zone who are without easy access to current CobbLinc services will be connected to locations in the zone and to CobbLinc routes 15, 20, and 25.

[1] FTA defines a ¼ -mile buffer as a comfortable walking distance of access transit, commonly considered to be the transit walk access buffer. This plan assumes a 1/8-mile buffer to make using transit even more convenient and easy in Smyrna.

- *Smyrna South MOD Microtransit* – Includes the area between the East-West Connector, Highlands Ridge Road, and South Cobb Drive. The service would provide easy access to key points and transit stops from jobs and homes in this area.

These services would also serve as first/last-mile service for the arterial route network currently provided by CobbLinc. For such riders, the service could be free, as they have already paid or will pay fare for regular bus service. The service will use geofencing to ensure that the population living/working close to the CobbLinc routes (defined as within 1/8-mile) are excluded. The *Smyrna Connects* plan recommends two possible options for establishing this service:

- *CobbLinc Service* – Includes working with CobbLinc and using its current service provider, First Transit, to operate this service. With its presence in the area as the service provider for CobbLinc and having maintenance and other facilities, First Transit should be considered for providing this service if it fits the technological needs and financial framework. Technological needs include the ability to power an on-demand service, including a rider app, a driver app, administrative consoles/dashboards, etc. Another option may be to partner with a transportation technology company to provide the technology platform and CobbLinc/First Transit procuring the vehicles, recruiting drivers, and managing ongoing operations.
- *Transportation Technology/Service Company* – In recent years, several TNC-type transit providers have entered the transit service industry by providing technology-based MOD services. Based on research conducted for this study, using a transportation technology company such as Via, TransLoc, or Freebee that has experience providing such services may be the best strategy in Smyrna, especially given the community's desire to have "non-transit-looking" transit. Options typically provided with Via and other similar providers include the following:
  - *Technology-Only Option* – The company provides the technology to power an on-demand service, including providing technology platforms, a rider app, a driver app, an admin console, and access to data dashboards and reports. The company would train CobbLinc on how to use these tools and provide support and service optimization to help partners throughout the duration of the service. The City would need to partner with CobbLinc/First Transit for procuring vehicles, recruiting drivers, and managing ongoing operations.
  - *Service and Technology Option* – The City or CobbLinc would directly hire the transportation technology company to provide the technology and support described above and also to fully operate the service. The company would procure vehicles and recruit drivers and would provide customer support,

vehicle maintenance, etc. The City would operate as a strategic partner to ensure that the company is meeting the City's goals/expectations.

- **Launch a transit marketing campaign (Phase I)** – Although it is important to make transit more convenient to use and attractive to appeal to new ridership, it is equally important to ensure that the community is aware of these services and how they work. Based on input from the general public and most project stakeholders, lack of awareness and education about currently-available services and facilities is a major hurdle to making transit a more viable option. Therefore, a carefully-coordinated and multi-year "all-hands-on-deck" marketing campaign strategy that involves local and regional agencies is recommended. The initial phase of the campaign to promote transit in Smyrna should include the following:
    - *Establish a Transit Cheerleader/Ambassador Program* – Coordinate with transit support/advocacy groups such as the Smyrna-focused transit advocacy group recently formed to advocate for more transit in the city to identify and train volunteers to promote transit awareness and use in the city. This low- or no-cost program would help promote the value and benefits of using transit to travel in Smyrna and connect regionally.
    - *Launch a social media-based transit awareness campaign* – Using social media has become a powerful tool to reach all demographics and age groups. Combined with a younger city population and a supportive community relations department, it could become an even more useful and effective avenue in awareness campaigns. The City's already-established social media platform can help change attitudes and interest at a lower cost than most other marketing efforts.
    - *Coordinate with/use regional resources* – Ample resources, such as Georgia Commuter Options, ATL outreach programs, and other agency efforts, may be available to piggyback on other marketing efforts in the city. All parties in the region identified the need to work together to elevate the transit use message. In addition, the strategic location of Smyrna in the northwest Atlanta region makes efforts to promote transit an effort of regional importance.
- **Evaluate existing transit infrastructure in the city** – Improving levels of transit service is important, and supporting infrastructure is also a necessity for improving the overall quality of transit services. Although no new facilities will be necessary or are recommended immediately, assessing the inventory of current bus stops and other supporting infrastructure such as bus stop amenities and sidewalk access as proposed in the South Cobb Study is recommended. There are more than 75 bus stops currently in the city, and transit support/ advocacy groups may provide a starting point for coordinating with CobbLinc to assess the condition of the current facilities and additional needs.

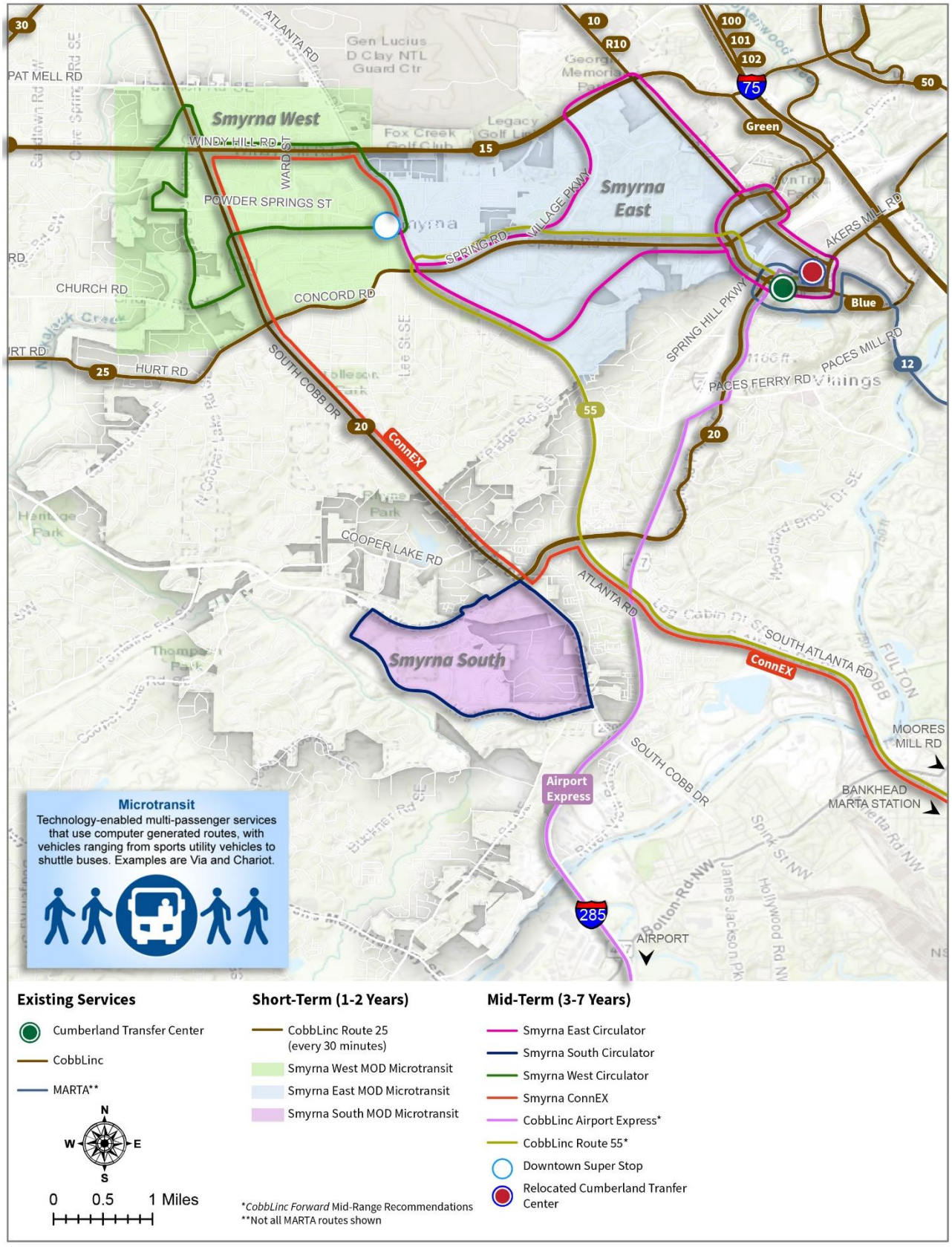
Mid-term Strategies (3–7 Years)

The most important phase of making transit a more viable travel option in Smyrna will begin with the strategies in this phase, which will set the foundation for a high-frequency commuter network on Smyrna's key arterials and a supportive feeder network and necessary facilities. The mid-term strategies are shown in Map 2-2. The mid-term network includes the following service, infrastructure, technology, and policy strategies:

- **Implement three city circulators** – To meet the need for a local network that quickly connects internally and with the adjacent Cumberland CID, three circulators are recommended that will build on the ridership and heightened interest in transit potentially gained from microtransit services implemented in the short term. The services will be provided every 30 minutes with branded, small, non-transit-like vehicles, preferably electric, that can be tracked in real time with an app.
    - *Smyrna East Circulator* – Serving the same general area as Smyrna East Microtransit, this circulator would connect riders east of Atlanta Road to the Cumberland area and Downtown Smyrna. The service will begin at Downtown Smyrna, operate mainly along Atlanta Road to Spring Road and Village Parkway, and connect to Cumberland Mall and the Cumberland Transfer Center, serving the Braves Stadium/Battery area. The circulator would also provide opportunities to transfer to the two CobbLinc circulators currently operating (and potentially operated by autonomous vehicles in the future) in the Cumberland CID.
    - *Smyrna West Circulator* – Similarly, the microtransit service potentially implemented in the short term would be converted into a circulator route in the MOD zone to the west of Atlanta Road. This service would operate from Downtown Smyrna/ Village Green on Atlanta Road and Windy Hill Road before serving the areas west of South Cobb Drive. It would provide a quick and convenient link for the population and businesses on the west side of Atlanta Road to connect to Smyrna Downtown and the east side of the city from there, reducing the need to rely on existing CobbLinc routes. To provide a "one-seat trip" from the west side of the city to the Cumberland area, this route may interline with the East Circulator once it reaches Downtown Smyrna.
    - *Smyrna South Circulator* – Although not a high priority, as the need for transit in this zone may be relatively less than in the east and west circulator service areas, a circulator could still function as a feeder to any current or future routes on South Cobb Drive. This would also connect workers and residents in this area to retail, work, recreation, and other services on that corridor.

  As previously noted, microtransit services in the short term are expected to function as forerunners of the circulators proposed for implementation in the mid-term. The MOD zones provide an opportunity to gauge if there is a demand for regularly scheduled transit and, if the

Map 2-2: Smyrna Connects Mid-Term Service Strategies



demand is there, to identify hot spots of demand so the circulators can be aligned/routed to maximize the ridership productivity.

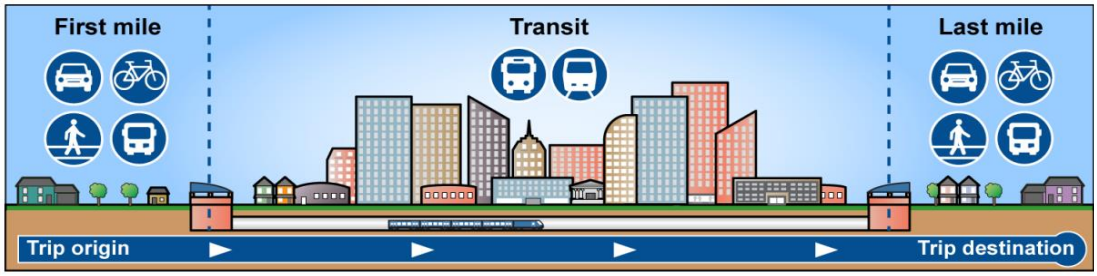
- **Implement Downtown Smyrna–Atlanta Express (Smyrna ConnEx)** – This route would provide another commuter alternative to connect Smyrna to Atlanta, providing a one-seat express route from Downtown Smyrna to MARTA's Bankhead station in Atlanta. In part, this also is proposed as a precursor to potential premium transit such as bus rapid transit (BRT) on South Cobb Drive in the future. This route would operate every 30 minutes and stop at all key locations along the route within the city, then become closed-door express service until it terminates at Bankhead station. Coordinated with existing CobbLinc services on Windy Hill Drive and South Cobb Drive, this service also would improve effective transit frequency to 15 minutes on most roadway segments on which it operates.

- **Implement CobbLinc Route 55** – This local route is already proposed in the CobbLinc Forward mid-term implementation plan and would connect the Cumberland Transfer Center to Moores Mill in Atlanta, operating on Spring Road and Atlanta Road. MARTA routes 1, 14, 37, and 60 currently serve Moores Mill, extending Route 55 reach to Midtown Atlanta, Downtown Atlanta, and the HE Holmes MARTA station. Route 55 would connect high-density residential areas along Atlanta Road to the employment and entertainment options in Cumberland and to MARTA. It would operate every 30 minutes, increasing the effective transit frequency to 15 minutes on Spring Road from Cumberland Transfer Center to Atlanta Road. CobbLinc may also partner with MARTA to interline this route with a MARTA route in Moores Mill to provide a direct, one-seat ride to the HE Holmes station or Midtown/Downtown.

- **Implement CobbLinc Airport Express (Route AX)** – A direct connection to Hartsfield Airport from Smyrna was mentioned as a need by *Smyrna Connects* stakeholders and the public. Regional travel flows also show travel demand between Cobb County and the airport. CobbLinc has already included an airport connection in its *CobbLinc Forward* mid-term recommendations; however, discussion with CobbLinc indicated that no timeline is set for implementing this service at this time. To provide an alternative mode for this travel demand for commuters and a direct connection to visitors during peak hours from the airport to the Cumberland area/Smyrna for economic development purposes, the City should work with CobbLinc to implement this non-stop airport express service in the next 3–7 years.

- **Reduce microtransit services to first/last-mile service** – With the implementation of three circulators in the mid-term, previously-discussed Smyrna Microtransit services would be scaled down to bring only eligible riders to and from bus stops, essentially reducing its service footprint and becoming only first/last-mile service for transit. Anyone in the designated zones who cannot access the transit routes with a maximum 2-minute walk (live/work more than 1/8-mile from a route) would still be eligible for this service. Using app-based geofencing technology or address information, those within 2 minutes of a bus route or outside the

designated MOD zone would be excluded and expected to rely on city circulators and CobbLinc routes.



Source: GAO Report 18-539

- **Deploy Transit Signal Priority (TSP)/Queue Jumps at selected intersections** – Increased congestion directly impacts the travel time of current and any new transit services, making them unattractive and unreliable, especially during peak travel times at intersections. Bus preferential treatments such as TSP and/or queue jumps have proven to expedite the movement of transit vehicles at busy intersections that are regularly backed up or get backed up at peak travel times. In Smyrna, TSP/queue jumps have been recommended for key intersections in City studies and proposed transportation plans for Cobb County, and ATL already included a plan to deploy TSP in Cobb County. In the mid-term, TSP/queue jumps are recommended at selected city intersections that are most optimal for supporting premium transit. This should help buses adhere to their schedules and improve their appeal over driving an automobile on the same corridor.
- **Update CobbLinc transit app** –Transit apps have gained popularity, as they can reduce wait times as people can use an app to time their walk or biking to a bus stop. It has also reduced travel time as people can adjust their trip choices in real time. Long and uncertain wait times and travel times are key reasons for people not choosing transit, and an easy to use transit app may also help attract new ridership. The City should coordinate with CobbLinc to update the CobbLinc's transit app with any new transit services added in the city. In addition, the City should also coordinate with the microtransit provider to either link the microtransit app with CobbLinc app or use one single app for all transit services operating in the city.
- **Improve the transit infrastructure** – Implementation of all the above transit services should be supported by necessary capital infrastructure improvements to ensure a more holistic approach of making transit work in the city. Based on bus stop amenities, infrastructure, and access reviews conducted and needs/gaps identified in the short-term, the city should work with CobbLinc and Cobb County on options to address those needs and gaps. In addition, the following major capital/infrastructure improvements are also recommended:
    - *Establish a downtown transfer station* - Establishing a transfer station to support the new transit services is proposed for Downtown Smyrna (Figure 2-1). For *Smyrna Connects*, a transfer station is an enhanced bus stop or "mini-hub" with more

advanced amenities, primarily including an information kiosk, real-time bus arrival information display, lighting, covered seating, and bike storage. This would reduce the need for significant land space in Downtown Smyrna while also reducing dislikes/concerns associated with large sprawling transfer facilities. In addition to helping bring more visitors and workers to Downtown Smyrna and improving its livability and walkability initiatives, a transfer station would provide a convenient transfer point in Downtown Smyrna, which is currently not served by transit. Input from the community and project stakeholders also showed support for connecting transit to the downtown area and improving walkability/access to its services. Establishing transit connectivity and a hub within Downtown Smyrna also supports the objectives of the ongoing *Smyrna B.O.L.D. — Building on the Legacy of Downtown* master plan to create a healthier, more walkable downtown that offers improved services. Expanded public transit connectivity to Downtown Smyrna can also become useful during community events such as the Jonquil Festival, allowing residents and visitors to access these events conveniently and solving some event parking issues.

Figure 2-1: Downtown Smyrna

- *Relocate Cumberland Transfer Center to Akers Mill Road* – Located outside the City boundary on the southside of Cumberland Mall, the Cumberland Transfer Center is the only major transfer center for the city's use at this time and is served by multiple CobbLinc routes and MARTA Route 12. The current location and configuration have created safety issues and routing difficulties for westbound routes, adding significant time delays for riders. Relocating the transfer station to the Cumberland Mall site adjacent to Aker Mills Road has been included in ATL plans (Figure 2-2). The proposed

facility would create a potential transit-oriented development that would include additional bus bays that are accessible to all routes, park-and-ride facilities, a mixed-use development, bicycle parking, a drop-off and pick-up area, and other bus rider amenities. The proposed new transfer center would also increase access to I-75 and the future I-285 Express Lanes and help facilitate more convenient and accessible transfers.

Figure 2-2: Potential Site of Cumberland Transfer Center on Akers Mill Road

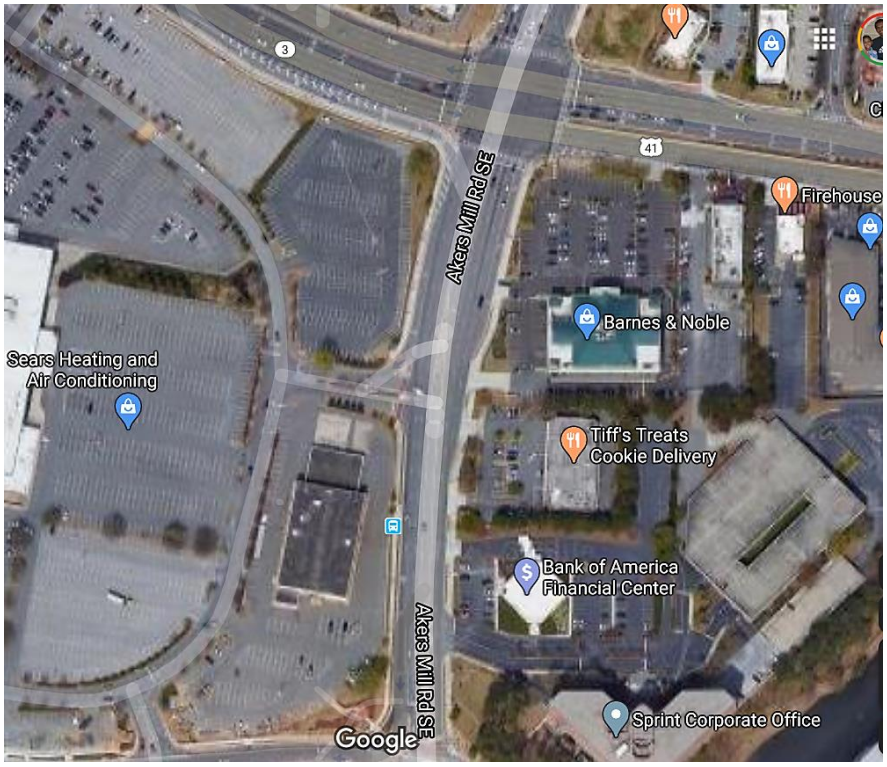
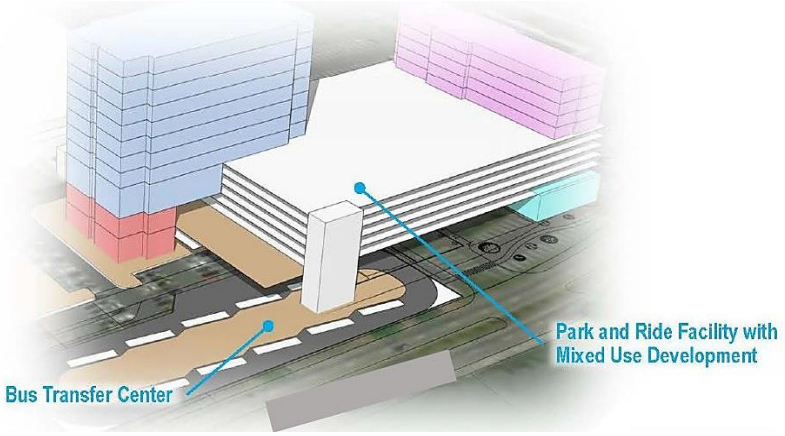


Figure 2-3: Proposed Cumberland Transfer Center on Akers Mill Road



Source: ATL Regional Transit Plan

- **Designate a City Transit Coordinator** – Identify existing staff or establish a new position within the City's Community Development Department or Administrative department to organize transportation services throughout the city and coordinate with regional stakeholders to improve mobility for both traditional and choice transit riders. The coordinator would be tasked with educating/training people on the enhanced transportation options in the community and would serve as the single point of contact on transit and related matters. In addition, this position would encourage or ensure "a seat at the table" for growth and land use discussions related to transit in the city. The position would help integrate transit into economic development in the city while increasing transit awareness and ridership, ultimately leading to a more independent lifestyle for residents and visitors who wish to use an alternative to automobile.
- **Launch Phase II of the transit marketing campaign** – Using a transit cheerleader/ambassador program, social media campaigns, and other available local and regional resources and working with CobbLinc closely, the City should launch a city-wide marketing/awareness drive prior to implementing the mid-term improvements. This may be necessary to ensure that the community is aware of the new improvements and the benefits and freedoms they would provide to both the traditional and choice transit riders.

Long-term Strategies (8–20 Years)

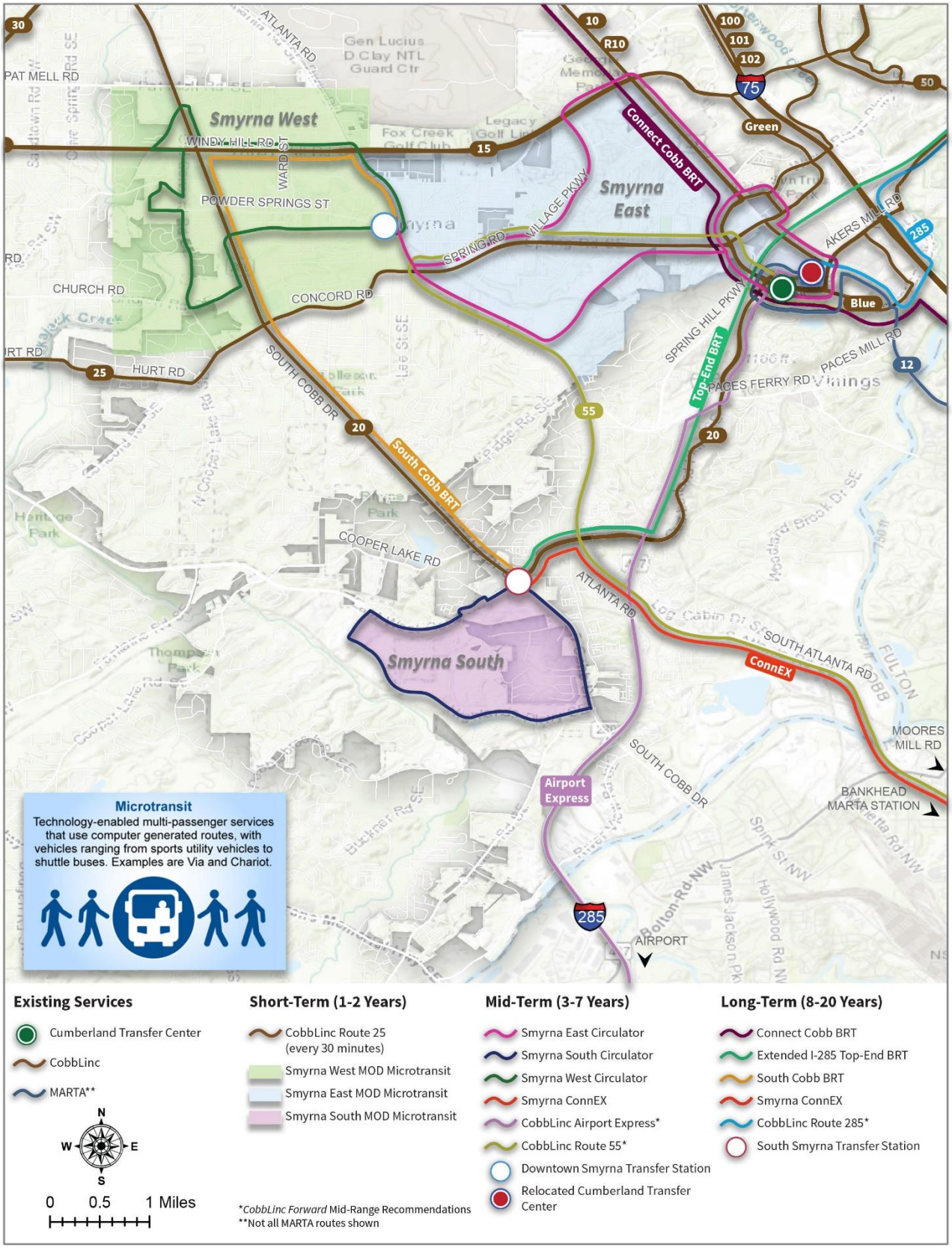
With the opening of the I-285 managed lanes and implementation of many regionally-significant transit projects, this phase brings many opportunities to advance the movement of people with transit within the region. Challenges would also grow with the need for better and quicker travel options and growth in traffic flows due to population, driverless cars, and delivery vehicles. Therefore, strategies that are efficient and that use technological and operational advancements in transit are essential.

To address these needs, strategies in this phase would build on or enhance some improvements included in the first two phases. Most important, they would add advanced technologies and premium transit concepts in Smyrna, elevating transit on some corridors to provide rail-like services in a rail-desired community. Map 2-3 shows the long-term strategies for *Smyrna Connects*.

The following strategies are recommended.

- **Implement South Cobb Drive BRT –** This improvement would provide a high-frequency premium transit connection from Downtown Smyrna to a new transfer station on South Cobb Drive at the East-West Connector. The service would originate at the proposed new transfer station in Downtown Smyrna and travel north on Atlanta Road and west on Windy Hill Road until turning to South Cobb Drive to head south. The South Cobb Drive BRT would provide

Map 2-3: Smyrna Connects Long-Term Service Strategies



premium transit service with branded rubber-tired bus vehicles along the 6-mile route, providing 15-minute service frequencies. The BRT service would be designed with exclusive lanes along South Cobb Drive and operate in mixed traffic (sometimes called "BRT Lite") along Windy Hill Road and Atlanta Road.

Example of a BRT vehicle that operates in a curbside running way stopped at a station featuring level boarding, a shelter, and bicycle parking.

Key features of the service would include bus preferential treatments such as TSP/queue jumps at needed/applicable intersections, off-board fare collection, branded stations with enhanced amenities (covered/ sheltered bus stops with real-time passenger information, WiFi, information kiosks, etc.), and branded low-floor BRT vehicles. The South Cobb Drive portion of the BRT would provide a rail-like feel and look with its own running way and branded stations. Overall, the service would offer fast service (with travel time saving from running on exclusive lanes and TSP at intersections) and frequent service to help promote transit use and attract riders.

A total of 12 locations have been identified for potentially exploring to establish BRT stations. These would be spaced at every half a mile, on average (typical for BRT, as industry research has shown that people are willing to walk more to access primum transit). These locations were selected based on the following high-level planning criteria:

- Minimum distance of ¼–½ mile between stations
- Safe pedestrian access to BRT station (sidewalk access and pedestrian crossings nearby)
- Concentrations of residential, employment, commercial, recreational destinations or activity centers
- Connectivity to the existing and proposed transit networks

Further evaluations would need to be conducted to determine the practicality and suitability of these locations and identify possible sites for stations. Potential BRT stations/locations are shown in Table 2-1.

Local transit service is currently provided along South Cobb Drive via CobbLinc Route 20 and connecting routes 25 (Concord Road) and 15 (Windy Hill Road). As the proposed BRT service will not stop as frequently as regular bus service, CobbLinc routes 20 (South Cobb Drive) and 15 (Windy Hill Road) should continue to provide underlying local bus service

every 30 minutes to increase transit access to the South Cobb Drive BRT system. There may be a need to revise and consolidate the bus stops to provide for improved accessibility, mobility, and performance of all routes on these corridors.

Table 2-1: Proposed BRT Stations and Network Connectivity

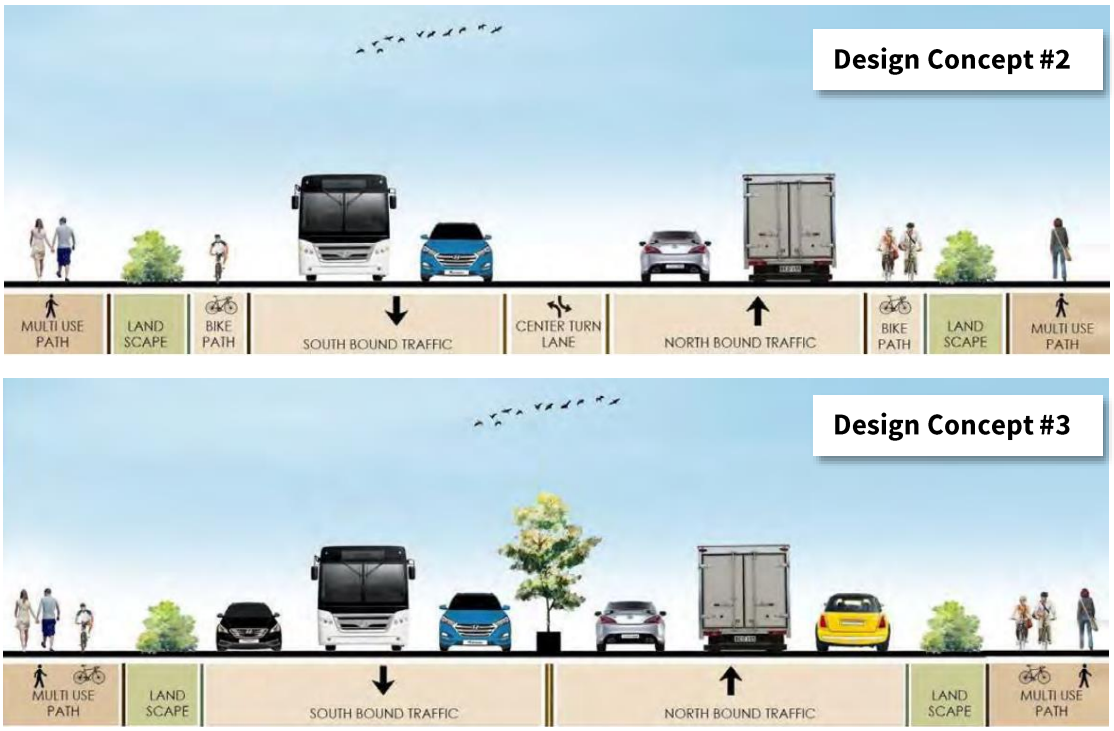
Proposed BRT Station	Transit Network Connectivity
Atlanta Road	
Downtown Smyrna Transfer Station	Smyrna East Circulator, Smyrna West Circulator
Belmont Boulevard	Smyrna West Circulator
Windy Hill Road	
Atlanta Road	CobbLinc Route 15, Smyrna West Circulator
SE Ward Street	CobbLinc Route 15, Smyrna West Circulator
South Cobb Drive	
Windy Hill Road	CobbLinc Route 15, Route 20, Smyrna West Circulator
Powder Springs Street	CobbLinc Route 20
Church Street	CobbLinc Route 20, Smyrna West Circulator
Concord Road	CobbLinc Route 20, Route 25
Wisteria Lane/ McCauley Drive	CobbLinc Route 20
King Springs Road	CobbLinc Route 20
Ridge Road	CobbLinc Route 20
Cooper Lake Road	CobbLinc Route 20
South Smyrna Transfer Station (East-West Connector)	CobbLinc Route 20, Smyrna South Circulator, Smyrna ConnEx, I-285 Top-End BRT

The South Cobb Drive Corridor Improvement Study recently completed by the City also has identified a need to enhance transit service and improve ridership along the South Cobb Drive Corridor. The study also has proposed bus queue jumping lanes at the intersection of Windy Hill Road and South Cobb Drive and installing bus bays along the corridor. The study also identified that this corridor has sufficient right-of-way (approximately 200 ft) available for enhancements without the need for additional property acquisition.

Typical roadway cross sections representing the preferred alternatives from the South Cobb Drive Corridor Improvement Study are shown in Figure 2-4. Although both preferred alternatives incorporate bicycle and pedestrian facilities as well as queue-jump lanes at key intersections to support transit operations, neither currently accommodates plans to include exclusive lanes for transit vehicles.

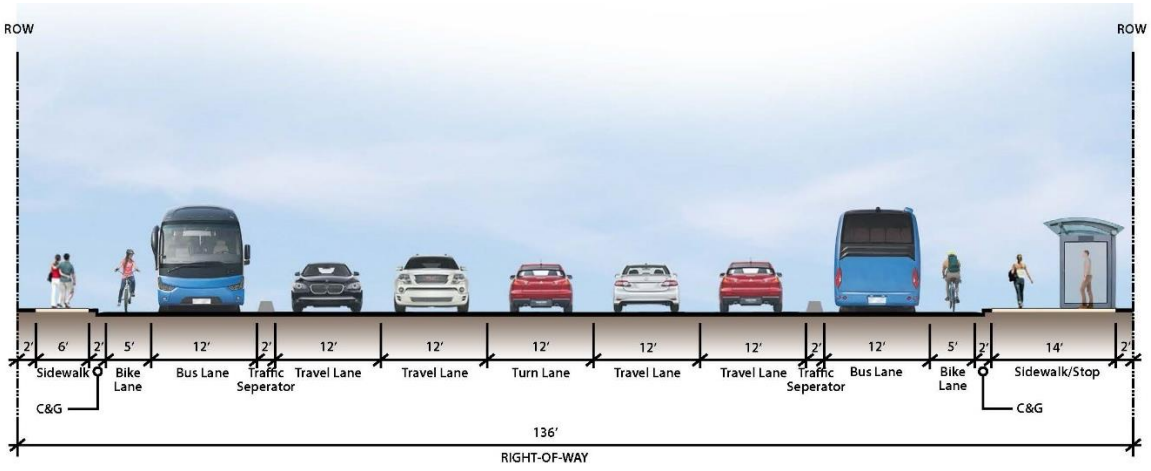
As preferred cross section alternatives from the South Cobb Drive Corridor Study do not accommodate an exclusive lane for transit vehicles, further studies may be necessary to develop corridor alternatives that includes such provisions. Figure 2-5 shows an example cross section of a configuration that accommodates two travel lanes in each direction and a center turn lane, exclusive bus lanes in each direction, and bicycle and pedestrian facilities.

Figure 2-4: Currently Recommended Roadway Cross-Sections for South Cobb Drive



Source: South Cobb Drive Corridor Improvement Study, City of Smyrna

Figure 2-5: Example Roadway Cross-Section with Curbside BRT Running Way



Source: VHB

With a growing need to serve both traditional and choice rider markets, its future economic development and growth potential as a major north-south connection in the city and Cobb County, the South Cobb Drive corridor provides an opportunity to implement premium transit in the city. BRT along the South Cobb Corridor should be designed to achieve the following:

- Provide fast and frequent premium service to major residential and employment areas in Smyrna.
- Promote local and regional connectivity between existing and future transit services and infrastructure.
- Use already-available right-of-way along the corridor without removing any travel lanes.
- Generate transit oriented/station area developments and become an economic/growth corridor for the city. Research on the real-estate and economic development impacts of existing transit systems in the US have found that areas within ½ mile of BRT increased their share of office space and multi-family residential development and achieved a slight premium for office rents.
- Improve the economic resilience of the city. Research also shows that, in addition to reducing travel costs for residents, areas along BRT corridors experienced large positive shifts in higher-wage jobs as well as an increase in manufacturing employment during the expansion after the 2008 recession.

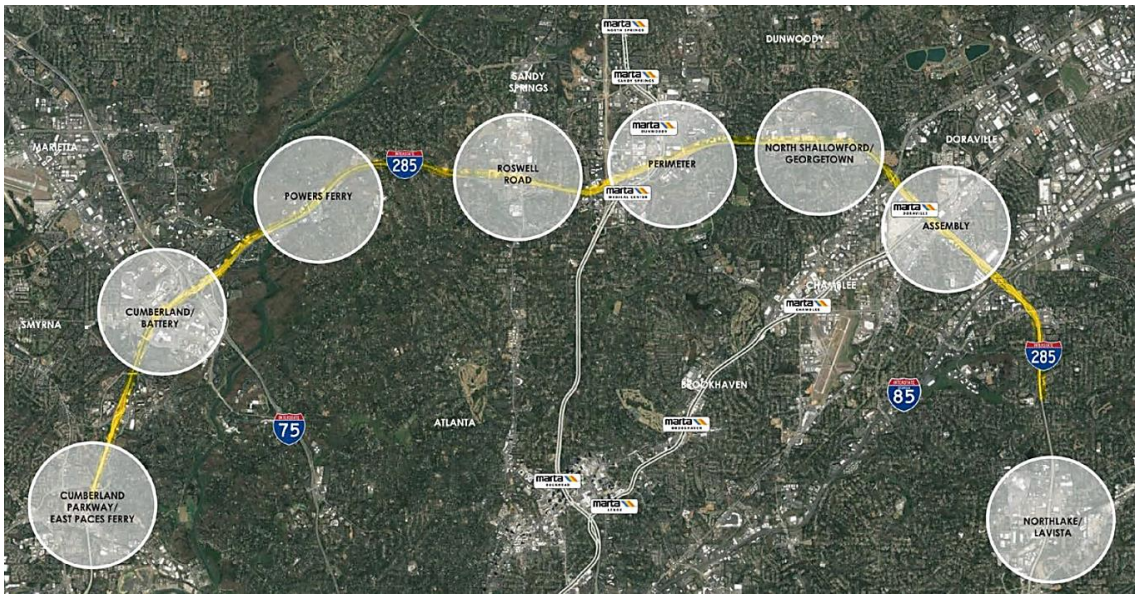
However, although the City, CobbLinc and their regional partners can come together to provide attractive transit options with premium transit, transit-supportive local land-use policies and development incentives may be necessary for the BRT to reach its full potential for spurring economic development.

With the advancement of technologies in the transportation industry, there may be a future opportunity to enhance and convert the BRT service to an autonomous bus system. As the cost of a bus operator is typically the largest percentage of bus operating cost, driverless vehicles show promise for future transit, specifically for exclusive-lane BRT. The South Cobb BRT designed with exclusive lanes and TSP would provide a controlled separation of operations from mixed traffic.

- **Extend I-285 top-end BRT to South Cobb Drive** –The feasibility of providing BRT service on the top-end portion of proposed I-285 managed lanes is being studied by the City of Smyrna and six other top-end cities as well as the Cumberland and Perimeter CIDs. If this service is implemented once the managed lanes open to general traffic in 2032, *Smyrna Connects* assumes that the I-285 top-end BRT service would be extended to South Cobb Drive from its currently planned west-side terminus at Paces Ferry Road. Figure 2-4 shows the BRT route alignment currently planned and station/access points for this east-west service. This route alignment would extend approximately 2 miles at the west end (Paces Ferry Road) further south on I-285 to the proposed interchange at I-285 and Cumberland Parkway and then along Cumberland Parkway to connect to the potential new South Smyrna Transfer Station at South Cobb Drive. Connecting with other services at this location, this extended I-285 BRT service would provide commuters from Smyrna with convenient and faster access to the Perimeter

Center area and beyond. However, early regional coordination may be necessary to ensure that this extension is added to the alignment currently considered for potential premium transit services on the new express lanes.

Figure 2-4: I-285 Top-End BRT Feasibility Study Area



- **Implement Connect Cobb BRT** – This proposes the addition of BRT along Cobb Parkway. A plan previously studied by the County recommends that the majority of the BRT system operate on dedicated lanes from the Kennesaw to the Cumberland areas. From the Cumberland area, service would continue to the MARTA Arts Center station via I-75 on existing high-occupancy vehicle (HOV) lanes and major roads in Atlanta. The Connect Cobb BRT has also been included in both Cobb County and ATL plans as a transit solution to serve the northwest corridor. When implemented, Connect Cobb will link Kennesaw and the Town Center area through Marietta, the Cumberland area, and Atlanta, providing much-needed travel options for thousands of daily riders.

- **Implement Smyrna-Atlanta Express (Smyrna ConnEx)** –BRT potentially could operate from Downtown Smyrna to south Smyrna; this modified Smyrna ConnEx route would begin at the intersection of the East-West Connector and South Cobb Drive instead of Downtown Smyrna. With the possibility of interlinking with South Cobb BRT to provide a one-seat ride to commuters, at least during peak hours, this route would connect with South Cobb Drive BRT to continue to provide a commuter connection to Bankhead station.

- **Increase frequency to 15 minutes on selected Smyrna circulators** – To establish rapid connectivity within the city and provide easy, quick, and convenient access to Downtown Smyrna and the Cumberland CID, both east and west circulators would run every 15 minutes.

- **Implement CobbLinc Express Route 285** – As a mid-range recommendation under the CobbLinc Forward plan, this route would connect the Cumberland CID and Perimeter areas with express bus service on I-285. Route 285 would use the completed I-285 managed lanes to connect the Cumberland Transfer Center to the Dunwoody MARTA station. As proposed in the CobbLinc plan, this route would operate every 30 minutes during weekday peak times and hourly at other times.
- **South Smyrna Transfer Station** – Establishing a transfer station on South Cobb Drive at the East-West Connector is essential to conveniently connect Smyrna ConnEx, South Cobb BRT, the extended I-285 top-end BRT, and the Smyrna South Circulator routes. This station would follow the same concept as the Downtown Smyrna station, providing a transit mini hub with a footprint smaller than a full-scale transfer station such as the current Cumberland Transfer Center. This station would become a regionally-significant transit hub due to its transit connections to Smyrna and Marietta to the north, top-end BRT to the east, and Smyrna ConnEx commuter service to the south. As a terminus of both South Cobb BRT and I-285 top-end BRT, this station will feature enhanced amenities and branding.
- **TNC-Based After-Hour Rides Program** – A recent study conducted for the Transit Cooperative Research Program (TCRP) of the National Academies of Sciences, Engineering, and Medicine has indicated that peak use of TNCs such as Uber and Lyft is on weekends and evenings. Input from *Smyrna Connects* outreach also has indicated that there needs to be some form of travel option for transit users after regular bus service hours in the evenings, especially on weekends. This improvement would establish a voucher-based subsidized ride program for travel after regular bus services end, making and expanding the availability of 24/7 transit options in the city.

Meeting the Needs

It is important to determine if the improvement strategies developed and presented will help Smyrna meet its transit needs identified for the next 20-years. Table 2-1 examines each of these service, technology, capital/infrastructure, and policy related strategies and how each of them address the transit needs.

Table 2-1: Smyrna Connects Needs and Strategies

Smyrna Connects Strategies	High-Frequency Commuter Network	Rapid Internal/ Adjacent Hub Connectivity	Transit Infrastructure/ Facilities	Transit Mktg/ Awareness	After-Hours Connectivity
Increase service frequency to 30 min on Route 25	●	●			
Implement MOD microtransit in 3 zones		●			
Launch transit marketing campaign (Phase I)				●	
Evaluate existing transit infrastructure network in city			●		
Implement 3 city circulators		●			
Implement Downtown Smyrna–Atlanta Express	●	●			
Implement CobbLinc Route 55	●	●			
Implement CobbLinc Airport Express (Route AX)	●				
Reduce microtransit services to FM/LM service		●			
Deploy TSP/queue jumps at selected intersections	●		●		
Update current transit app		●		●	
Improve transit infrastructure network in city			●		
Establish Downtown transfer station			●		
Relocate Cumberland Transfer Center to Akers Mill Rd			●		
Designate City Transit Coordinator				●	
Launch Phase II of transit marketing campaign				●	
Implement South Cobb Dr BRT	●	●			
Extend I-285 top-end BRT to S Cobb Dr	●				
Implement Smyrna–Atlanta Express	●				
15-min frequency on selected Smyrna circulators		●			
Implement CobbLinc Express Route 285	●				
Establish South Smyrna Transfer Station			●		
TNC-based after-hour rides program					●

Section 3: Evaluation of Improvement Strategies

The strategy development and evaluation process were structured to encourage consideration of a full range of improvement options for Smyrna. After the range of alternative strategies was developed to meet local needs, an evaluation framework to assess the strategies for practical applicability was developed, as summarized in this section. The process identifies criteria to help ensure that the advanced transit improvement alternatives are sufficiently logical, palatable, and actionable so that, once prioritized and phased in the Transit Master Plan, they will be implementable.

Evaluation Process

A hybrid qualitative/quantitative methodology was developed to evaluate and prioritize the service strategies presented previously. To prioritize and program these service improvements for potential implementation, it is important to weigh the relative benefits of each service improvement.

The remainder of this section identifies and defines the evaluation criteria that will be used in prioritizing the service improvements developed for *Smyrna Connects* and the methodology by which those criteria should be applied.

The four evaluation categories identified for use in the methodological process to rank the improvement strategies are described in Figure 3-1. Table 3-1 provides these evaluation criteria and their corresponding descriptions, the associated measure that will be used to evaluate each service alternative for that criteria, and the assigned weights for each measure and overall criteria. A description of each of these criteria and measures is provided below.

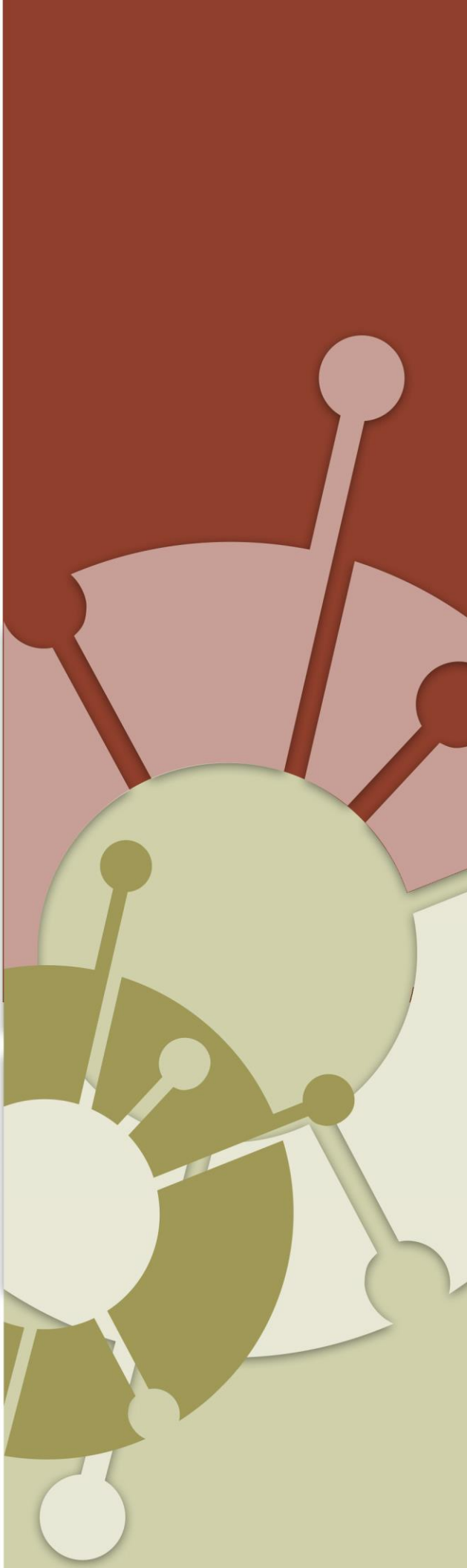


Figure 3-1: Strategy Evaluation Criteria

Table 3-1: Evaluation Measures and Weights

Criteria	Measure	Measure Description	Measure Weight	Criteria Weight
Public Support	Public Input	Priority rankings/outreach data on specific strategies	15%	30%
	Stakeholder Vision/Direction	Input/level of interest in specific strategies and general direction/vision on transit	15%	
Ridership Potential	Traditional Market Coverage	General overlap with traditional market gaps (areas with “High” or “Very High” Transit Orientation Index)	10%	30%
	Choice Market Coverage	General overlap with choice market gaps (Density Threshold Assessment areas with 6 or more jobs or dwelling units per acre)	10%	
	Ridership Productivity	TBEST model simulated 2040 normalized ridership	10%	
Regional Connectivity	Connections to Adjacent/Regional Hubs	Seamless connections to adjacent and regional hubs	15%	15%
Financial Feasibility	Cost Efficiency	Normalized Operating cost by strategy	10%	25%
	Political & Funding Support	Likelihood of securing stable operational funding	15%	

Public Support

Public support will be gauged using two measures to capture input from the general public and from the broad multi-agency stakeholder engagement conducted for *Smyrna Connects*:

- **Public Input** – Another phase of public outreach, including public workshops and a survey, will be conducted for *Smyrna Connects* to gauge the community's preferences on the strategies presented previously. Participants during this phase will be asked how they would prioritize transit improvements identified for the *Smyrna Connects* 20-Year plan. The level of interest in particular types of strategies will be determined based on upcoming outreach efforts.
- **Stakeholder Vision/Direction** – In the first phase of public outreach, members of the community with a vested interest were interviewed and asked what their overall vision of and direction for transit for Smyrna would be in the next 20 years. Discussions on the state of current conditions related to transit and specific changes, modes, technologies, and innovations they envision to achieve a more interconnected city and region were held with nearly three dozen city, county, and regional stakeholders. These qualitative data, combined with the direction/guidance from the *Smyrna Connects* Technical Advisory Committee, will be used to gauge the level of importance of the strategies.

Ridership Potential

For the evaluation of alternatives, results from the assessments of transit demand that were conducted and summarized previously, including the traditional and choice market assessments, will be used. In addition, relative ridership productivity will be used as a measure to gauge the ridership demand potential of each of the alternatives.

- **Choice Market Coverage** – The assessment of the choice transit user market (e.g., people who have access to an automobile but may decide to use transit instead) will be reviewed based on results from the choice market gap analysis, conducted and summarized previously. The service area of the *Smyrna Connects* network identified for the next 20 years will be analyzed together with results of the choice market gap analysis. A ¼-mile service area buffer (typical transit walk access buffer) will be used in GIS to assess how well the service improvements align with choice transit market gaps in the study area. For each service strategy, the extent of coverage of gaps in choice markets (areas with six or more jobs or dwelling units per acre) will be analyzed.
- **Traditional Market Coverage** – The assessment of transit demand in the traditional transit user market (transit-dependent riders such as low-income and zero-vehicle households, older adults, and youth) will be reviewed based on results from the traditional market gap analysis, also conducted and summarized previously. A similar process of overlaying the *Smyrna Connects* transit network service area with the results of

the traditional market gaps will be performed. For each service strategy, the general overlap with traditional market gaps (areas with "High" or "Very High" Transit Orientation Index) will be analyzed.

- **Ridership Productivity** – This will be measured in terms of annual passenger trips per revenue hour of service for each strategy. TBEST (Transit Boardings Estimation and Simulation Tool), a stop-based ridership estimation model, will be used to estimate relative ridership levels for the network of strategies previously identified for *Smyrna Connects*. To provide for an equal comparison between service strategy alternatives, passenger trips and revenue hours of service will be generated using output from T-BEST ridership data.

Regional Connectivity

Regional connectivity will be considered an advantage and will be given priority in the evaluation process. Improvement strategies will be considered regional if they are either improvements to existing services or entirely new services that extend beyond the City limits. Convenient, fast, and effective connections to adjacent commercial or residential hubs such as the Cumberland CID or connections to the larger Atlanta region are critical to make transit a more viable choice. Such strategies facilitating regional mobility also link commuters from Smyrna to other transit systems. Overall, a strategy that facilitates regional connectivity improves economic development within the city and beyond by helping to build a more interconnected region.

Financial Feasibility

This criterion is used to determine the financial feasibility of implementing a transit alternative. Cost estimates, policy support, and funding potential should be examined together to determine if an improvement strategy can be included in the overall transit plan without placing an overwhelming financial burden on the system and without simultaneously lowering the quality of the overall network. Two measures will be used evaluate the strategies in this criterion:

- **Cost Efficiency** – This measure is used to gauge how well the strategies will use the available financial resources. This is evaluated for each service improvement strategy using a standard transit industry efficiency measure, operating cost per passenger trip. Projected operating costs, which will be developed for each of the *Smyrna Connects* strategies, will be normalized with TBEST ridership data for use in the evaluation.

- **Policy & Funding Support** –This measure reviews the likelihood of securing stable operational funding for the recommended strategies. The funding potential for each service strategy will be evaluated based on the possibility of securing eligible sources at Federal, State, regional (including Cobb County), and/or City/local levels. Qualitative information on perceived policy support will be derived from discussions with project stakeholders, input from the TAC, and City, County, and regional transit agency staff.

Alternatives Evaluation

Once data from *Smyrna Connects* Phase II outreach are available, each strategy will be evaluated qualitatively or quantitatively, as applicable, using the criteria and measures presented in this section. The resulting strategy priorities will then be matched with any available and/or projected revenues from City, County, and regional transit plans to develop a financial plan and an implementation schedule for the next 20 years.

In developing the 20-year plan and corresponding implementation schedule, these priorities will be balanced with funding realities to determine to what degree that the community's vision to make transit a more viable option in Smyrna can be realized over the next two decades.