

Cobb County Northwest Atlanta Corridor Alternatives Analysis Initiation Package

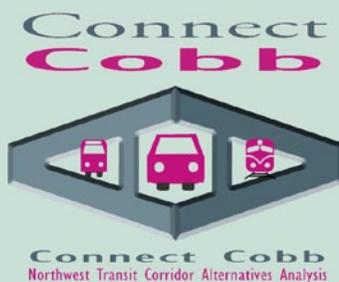
initiation package

prepared for

Federal Transit Administration

prepared by

Cobb County Department of Transportation



Cobb County...Expect the Best!

December 30, 2011

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1.0 Introduction and Corridor Overview

Cobb County Department of Transportation is conducting an Alternatives Analysis (AA) to study transit needs and improvement alternatives along the Northwest Atlanta Corridor. This Initiation Package has been prepared to:

- Inform study stakeholders of the AA;
- Describe the study area and the need for transit improvements;
- Summarize the approach that will be used to evaluate and screen alternative improvements in the corridor; and
- Identify the initial set of alternatives that are being considered as part of this study.

■ 1.1 Description of the Northwest Atlanta Corridor

As shown in Figure 1.1, the Northwest Atlanta Corridor extends roughly 25 miles northwest of Atlanta (Fulton County) into Cobb County. The northern terminus is in Acworth. The southern terminus is in midtown Atlanta. The corridor includes four of the county's six municipalities: Smyrna, Marietta, Kennesaw, and Acworth.

The Northwest Atlanta corridor is home to a diverse range of activity centers, including two state universities, an active military base, two national parks and other historic and recreational sites, as well as residential enclaves and major commercial centers, such as Cumberland Galleria and Town Center. Transit service in the corridor is provided by Cobb County Transit (CCT) along U.S. 41; other service is provided by the Georgia Regional Transportation Association (GRTA) and the Metropolitan Atlanta Rapid Transit Authority (MARTA). CCT Route 10 has been cited as one of the busiest public transit bus routes in the Southeastern United States. The vitality of Route 10 lies not only in the fact that it serves the main trunkline of the corridor, but also that it connects directly to MARTA rail at the MARTA Arts Center Station in midtown Atlanta. This connection provides access to major regional destinations, such as Atlanta Hartsfield-Jackson International Airport, the Georgia World Congress Center, and the Georgia Dome and Phillips Arena. Route 10 operates on 15-minute headways during the peak hours on weekdays and on 30- to 60-minute headways during the off-peak hours and Saturdays. Service is not provided on Sunday.

2.0 Corridor Problems and Needs

The southern end of the corridor within the City of Atlanta’s Midtown and Atlantic Station Districts is characterized by predominantly medium to high-density mixed-use development. As it moves northwest, the corridor passes through low-density residential areas and over the Chattahoochee River en route to the multiuse Cumberland/Vinings area near the convergence of I-75, I-285, and U.S. 41. This area, at the southern end of Cobb County, could be described as an “Edge City” characterized by multistory office buildings, large shopping centers, multifamily housing, and other activity centers such as the Cobb Energy Performing Arts Centre. North of this point, the U.S. 41 corridor is predominantly commercial, with long stretches of strip retail traversing the cities of Smyrna, Marietta, and Kennesaw as well as additional activity centers such as Dobbins Air Reserve Base, Southern Polytechnic State University, Life University, and Kennesaw State University (KSU), the third-largest university in Georgia. As the U.S. 41 corridor continues north of Kennesaw into Acworth, the amount of developed land decreases and the corridor transitions to a semirural or exurban condition, especially after passing Lake Acworth. The I-75 corridor, which generally parallels U.S. 41 to the east, provides interchange access to shopping and office destinations such as Town Center and Cumberland, while serving as the primary route for commuters and travelers alike between the northwestern reaches of Metro Atlanta and its inner core.

■ 2.1 Current Travel Markets

Travel patterns in the corridor suggest a very strong market for trips between Cobb County and neighboring Fulton County where Atlanta is the county seat as well as the State capital. In both 2010 and as forecast by the Atlanta Regional Commission (ARC) for 2040, Fulton County is the most common destination for trips originating in Cobb County (not including trips that begin and end in Cobb County alone). Furthermore, more of these trips between the two counties are made on transit than for any other set of destinations within the 10-county ARC region. Still, that transit share currently is small, with less than four percent of work trips in this market made on transit.

As noted earlier, CCT Route 10 along U.S. 41 provides this transit service between Cobb and Fulton Counties, connecting to the MARTA rail system at the Arts Center Station. Other transit routes operated in the corridor include CCT 100, 101, and 102; GRTA 480, 481, 490, and 491; and MARTA Route 12. Today, travel on these existing routes is cumbersome, and the ability of these routes to operate reliably in the future will be compromised by increasing congestion. For example, a trip made on transit from the Dobbins Reserve Air Base to the MARTA Arts Center Station today takes nearly two

hours, depending on the time of day. That same trip made by automobile takes less than 30 minutes. In the future, the transit travel time is forecasted to deteriorate by up to 15 percent, assuming no significant transit improvements in the corridor.

■ 2.2 Growing Congestion

Trips to and from the vibrant activity centers throughout the corridor, including trips destined to midtown Atlanta, have caused traffic congestion on the corridor's major roadways – U.S. 41 and I-75 – to increase over the past decades and travel times to deteriorate. The Northwest Atlanta Corridor is among the region's most congested travel corridors with existing estimates of average annual daily traffic (AADT) exceeding 250,000 on I-75 north of I-285 and existing AADTs in excess of 30,000 along U.S. 41 northward from I-285 to Kennesaw.

This congestion is the result of growth in population and employment in the corridor. Between 2000 and 2010, the Atlanta metropolitan statistical area (MSA) which is comprised of 28 counties saw a 28.1 percent increase in population. Cobb County saw a 13.2 percent increase during this period, while the population of City of Atlanta grew by a much smaller amount, at only 1.4 percent. This demonstrates that while Atlanta is not experiencing much if any growth, the outlying counties are still growing, and at substantial volumes.

Over the next 10 years, the population of Cobb County is forecast to grow by 9.1 percent, adding 60,000 new residents. Employment will grow at an even faster rate, 17 percent, which means 360,000 new jobs. Both population and employment growth is expected to be focused along the I-75 corridor.

Meanwhile, efforts are underway to focus new and redevelopment in the corridor, targeting moderate to high-density mixed uses. This focus is described in the County's 2007 Comprehensive Land Use Plan, which identifies a strong transit presence and supportive pedestrian infrastructure as key elements in helping to advance more a more intense, dense development pattern. This new development will further increase corridor trip making, and by 2030, it is estimated that trip times on U.S. 41 will increase by over 40 percent in the peak commuting periods.

Efforts to manage new growth have been undertaken by Cobb County officials. These include:

- Establishment of redevelopment overlay districts in the Cobb County zoning regulations that permit pedestrian-oriented mixed uses, with special focus on redevelopment sites served by transit;
- Creation of a new green technology industry, which already has announcement by GE Energy that it will open its Smart Grid Technology Center of Excellence near the

company's existing Marietta headquarters in Cobb County, a project that represents a \$15 million investment and will create 400 jobs by 2013; and

- Cobb County's EDGE (Economic Development for a Growing Economy) initiative, which has included a strategic visioning exercise, collection of market data, and a competitive assessment. That work is informing preparation of a five-year economic and community development strategy for the county.

■ 2.3 Initial Purpose and Need Statement

An initial purpose and need statement based on the corridor issues and needs summarized above has been developed. Stakeholders in the AA process are working with Cobb County to further refine the purpose and need statement, which focuses on public transportation improvements that can best serve future demand, by building an integrated regional network that can support existing and future needs in the Northwest Atlanta Corridor.

3.0 Evaluation Framework

Using the needs identified in the corridor, a preliminary set of goals, objectives, and evaluation measures has been developed. The measures address five major goal categories for corridor improvements. Those goals are transportation and air quality; land use; economic development/redevelopment; environment; and financial. Table 1 lists each of these goal categories and associated objectives. Measures that could be used to assess how well each of those objectives is met also are listed.

It is the intent to refine this set of goals, objectives, and measures in conjunction with ongoing outreach efforts, to ensure that the concerns and interests of corridor stakeholders are appropriately addressed in this evaluation framework. This input, which currently is being obtained through a series of five roundtable meetings, will refine the draft purpose-and-need statement described previously.

It is further expected that an initial screening of alternatives will be performed, to allow the study team and stakeholders to focus attention and more detailed technical analysis on the most promising set of alternatives. That initial screen is likely to be conducted using such information as forecast ridership, significant environmental impacts, and cost that can serve as proxies for more detailed measures. Those detailed measures will be applied to the smaller list of alternatives, to provide corridor stakeholders and decision-makers with a finer grained evaluation of how well each alternative achieves project goals and objectives.

Table 3.1 Evaluation Measures

Goals/Objectives	Measure
<i>Transportation and Air Quality</i>	
Reduce congestion/improve traffic flow	<ul style="list-style-type: none"> • Vehicle trips reduced • Trips diverted to off-peak times • Changes in travel patterns • Increased transit ridership • Increased walk and bicycle trips • Increased shared rides • Reduced single occupancy vehicle trips
Plan for current and future needs	<ul style="list-style-type: none"> • Increased transit capacity • Reduced walk times for transit • Increased travel destinations • Increased elderly, disabled, and choice riders
Reduce travel delay	<ul style="list-style-type: none"> • General travel time savings
Improve travel efficiency	<ul style="list-style-type: none"> • Increased riders per hour • Improved connectivity • Increased vehicles per hour
Improve safety	<ul style="list-style-type: none"> • Reduced vehicular crashes • Reduced bicycle and pedestrian crashes
Improve air quality	<ul style="list-style-type: none"> • Reduced emissions/fuel consumption
<i>Land Use</i>	
More efficient use of land	<ul style="list-style-type: none"> • Reduced parking needs • Improved bicycle and pedestrian infrastructure
Increase housing choices	<ul style="list-style-type: none"> • Diversity of housing and income levels • Better housing/jobs balance • Increased transit-oriented development • Increased location efficient housing
Promote active, healthy lifestyles	<ul style="list-style-type: none"> • Increased public facilities, such as parks, green space, health and education
Promote environmental justice	<ul style="list-style-type: none"> • Equitable distribution of community resources

Table 3.1 Evaluation Measures (continued)

Goals/Objectives	Measure
<i>Economic Development/Redevelopment</i>	
Stimulate local economy	<ul style="list-style-type: none"> • Increased employment and income levels • Net economic growth • Increased commercial/retail spaces • Decreased/stabilization of foreclosure rates
Promote job creation	<ul style="list-style-type: none"> • Number of jobs created/sustained; future growth • Creation of more mixed use complexes within walking distance of transit
Leverage public and private investment	<ul style="list-style-type: none"> • Revenue generated from land development
<i>Environment</i>	
Minimize impacts to natural resources	<ul style="list-style-type: none"> • Extent of impacts to wetlands, floodplains, historic resources, green space, etc. • Number of energy efficient and LEED certified facilities • Reduction in greenhouse gas emissions • Impacts on climate change
<i>Financial</i>	
Maximize cost efficiency and cost effectiveness	<ul style="list-style-type: none"> • Cost per mile • Total capital, operating and maintenance costs • Cost per trip • Cost-recovery ratio • Benefit/cost ratio
Develop a financially feasible project/leverage available resources	<ul style="list-style-type: none"> • Nontraditional funding options and resources • Farebox revenue • Federal and state funding • Public/private options and opportunities • Availability of local resources • Funding commitment by partners and stakeholders

4.0 Conceptual Alternatives

Previous planning studies of transportation needs in the Northwest Atlanta Corridor have identified potential transit improvements, most focused on alleviating traffic congestion on I-75. However, these improvements failed to gain support, primarily due to the lack of station stops in the City of Atlanta. This study revisits the needs of the corridor, and how best to serve activity centers and meet future demands.

Several conceptual alternatives have been identified, using the work performed in the previous planning studies as a basis and with a focus on serving key corridor markets. These “build” alternatives, which include low-cost improvements as well as fixed guideway bus and rail alternatives, are being presented to study stakeholders in a series of roundtables and as part of other outreach efforts. Refinements to these alternatives will occur, as the public outreach process advances and technical assessment of each alternative is conducted. As part of that outreach effort, discussion will also take place of how alternatives might be implemented in phases, to be responsive to the pace of available funding and/or new and redevelopment.

The conceptual build alternatives to be studied are as follows and shown in Figure 2:

- Transportation System Management Alternative;
- Alternative 1: Light Rail Transit – Acworth/KSU to MARTA Arts Center Station;
- Alternative 2: Light Rail Transit – Acworth to MARTA Arts Center Station;
- Alternative 3: Bus Rapid Transit – Acworth to MARTA Arts Center Station; and
- Alternative 4: Dedicated Busway – Acworth to MARTA Arts Center Station.

■ 4.1 Transportation System Management Alternative

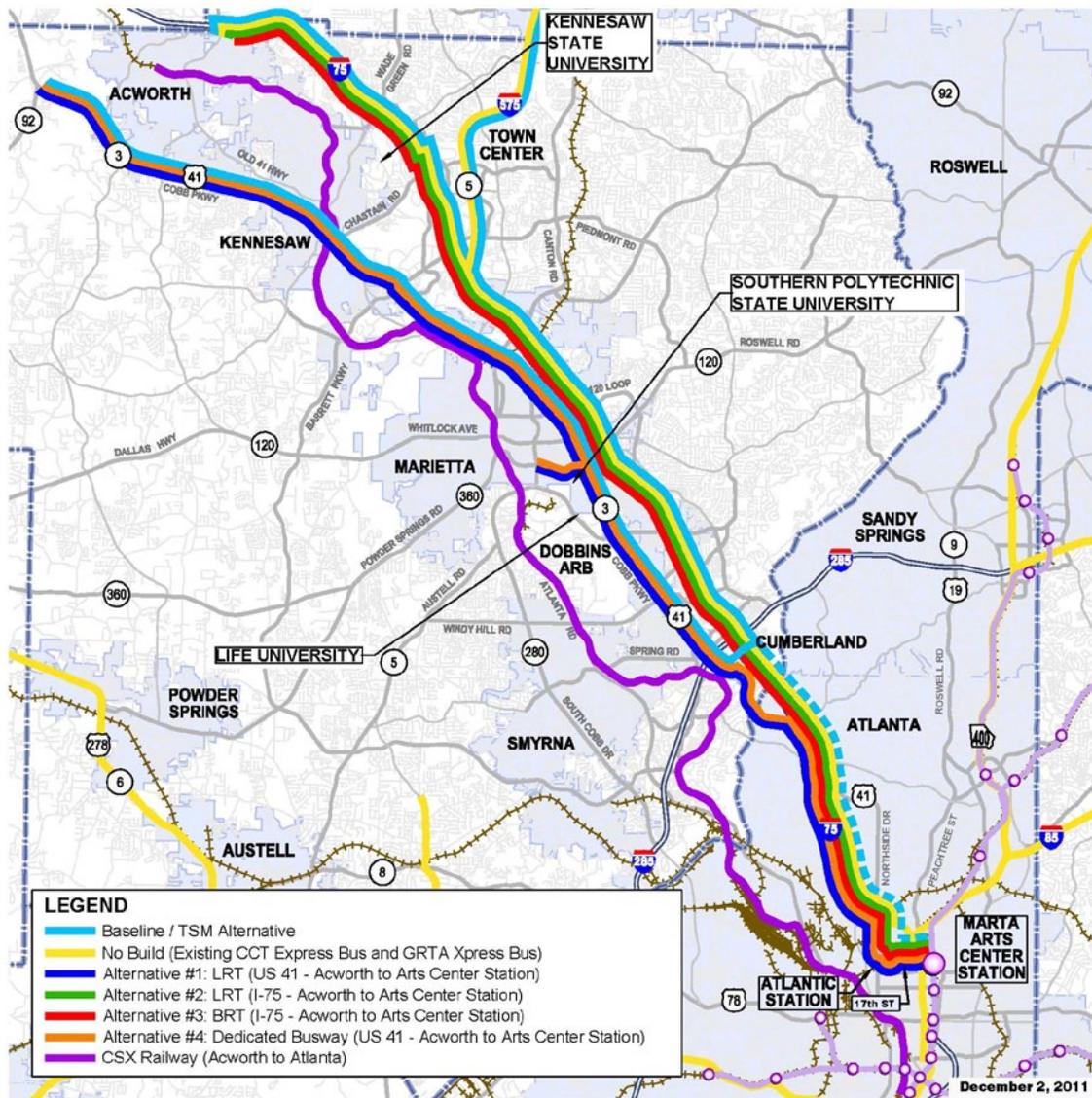
The Transportation System Management (TSM) Alternative represents the best that can be done to serve corridor markets and solve corridor needs, short of a major capital investment. The TSM Alternative focuses on lower-cost bus improvements, including queue jumpers and signal preemption improvements. Other features of the TSM Alternative include:

- Limited-stop bus service on U.S. 41 between the Acworth park-and-ride lot at State Route 92 and I-75 and the Cumberland Mall, through the cities of Acworth, Kennesaw, Marietta, and Smyrna.

- Local bus service on U.S. 41 between the Acworth park-and-ride lot and the Marietta Transfer Center.
- Local bus service on a single circumferential arterial (Barrett Parkway/East-West Connector/Cumberland Parkway) between Town Center Mall and Cumberland Mall, where the U.S. 41 corridor is linked.
- Transit circulator shuttles in the Cumberland Community Improvement District (CID), the south end of the Cobb County portion of the U.S. 41 corridor.
- Transit circulator shuttles in the City of Kennesaw/KSU and Town Center CID, the north portion of the U.S. 41 corridor.

The U.S. 41 corridor will include limited and/or local bus service to provide public transportation access between Acworth and Kennesaw. This new service is proposed to connect with existing express and local fixed route bus service operated by CCT providing access to midtown and downtown Atlanta. Local circulator bus service would be provided in the Cumberland and Town Center CIDs to link residential and commercial areas to transit routes serving the U.S. 41 corridor.

Figure 4.1 Conceptual Alternatives



4.2 Alternative 1: Light Rail Transit – Acworth/KSU to MARTA Arts Center Station

Alternative 1 is a 31.5-mile, double-track light rail transit (LRT) line extending from Acworth to midtown Atlanta. The LRT alignment would begin at Cowan Road in Acworth, then extend southeast through the City of Kennesaw and the KSU area. It would then travel along U.S. 41 through the cities of Marietta and Smyrna and the Cumberland CID. The LRT would utilize the right-of-way along I-75 between the

Cumberland CID and of Atlanta, terminating at the MARTA Arts Center Station. The alignment includes a total of 12 stations.

At Arts Center Station, the proposed LRT service would connect with the north-south lines of MARTA heavy rail service, which operates at 10-minute headways during the peak hours between North Springs/Doraville and Airport Stations. LRT service would operate at eight-minute headways during the weekday peak hours and 15- to 20-minute headways during the off-peak and weekends.

■ **4.3 Alternative 2: Light Rail Transit – Acworth to MARTA Arts Center Station**

Alternative 2 is a 20.8-mile, double-track LRT line extending from the Acworth park-and-ride lot in Cobb County to midtown Atlanta. The Alternative 2 LRT alignment would extend southeast within the I-75 right-of-way until it reaches North Marietta Parkway (Exit 265 Interchange). At this point, the alignment would follow U.S. 41 through the Cities of Marietta and Smyrna and the Cumberland CID; a route spur would be constructed along South Marietta Parkway into the CCT Marietta Transfer Center. From the Cumberland CID, the LRT alignment would utilize the right-of-way along I-75 into midtown Atlanta, where connections would be provided to the MARTA rail system at the Arts Center Station. A total of 13 stations would be constructed.

LRT service in Alternative 2 would be operated at 15-minute headways during the weekday peak hours and 20-minute headways during the off-peak and weekends.

■ **4.4 Alternative 3: Bus Rapid Transit – Acworth to MARTA Arts Center Station**

Alternative 3 is a 22.6-mile bus rapid transit (BRT) line that generally follows the same alignment as Alternative 2. It begins at the Acworth park-and-ride lot in Cobb County and then extends southeast within the I-75 right-of-way until it reaches North Marietta Parkway (Exit 265 Interchange). At this point, the alignment would follow Franklin road and U.S. 41 through the Cities of Marietta and Smyrna and the Cumberland CID.

At the 285 Interchange with U.S. 41, the BRT alignment splits into two directions. One BRT line would follow U.S. 41, linking express bus service into the existing high-occupancy vehicle (HOV) lanes to connect at Akers Mill Road/I-75 interchange (Exit 258). The second BRT line, representing the trunk line of this alternative, would utilize the right-of-way along I-285 between the interchanges with Cobb Parkway (Exit 19) and Atlanta Road (Exit 16). It would then follow Atlanta Road and various streets in the City

of Atlanta to the MARTA Arts Center Station, where it will connect with the MARTA heavy rail system. A total of 21 stations are planned.

In many portions of the alignment, the BRT service would be operated in a guided busway with raised curbs; this allows buses to be guided throughout most of the corridor. Buses would be equipped with horizontal guide wheels similar to systems operated in Essen, Germany and Adelaide, Australia. There would no guided busway along I-75 and I-285; instead the service would operate in curbside bus lanes.

The BRT would take advantage of the “Smart Corridor” project proposed for U.S. 41, which will consist of traffic signal system upgrades and cross-jurisdictional traffic signal coordination. These improvements, which would allow for transit priority, would be made at 11 intersections along U.S. 41 between South Cobb Drive/Delk Road (SR 280) and the I-285 interchange.

BRT service in Alternative 3 would operate at 15-minute headways during weekday peak service hours and 20 minutes during the off-peak and on weekends. Local and express bus lines would feed into the BRT system at station locations, reducing the effective times between buses.

■ 4.5 Alternative 4: Dedicated Busway – Acworth to MARTA Arts Center Station

Alternative 4 is a 25-mile dedicated busway system along U.S. 41. An exclusive bus guideway would be constructed along U.S. 41 beginning at the northern intersection of U.S. 41/SR 92 and ending at the MARTA Arts Center Station in midtown Atlanta. This alternative is identical to Alternatives 1, 2, and 3, utilizing local arterial streets and I-75. Like Alternative 3, Alternative 4 would also encompass the “Smart Corridor” and queue-jump projects proposed for the U.S. 41 corridor.

The dedicated busway would be constructed with raised curbs equipped with horizontal guide wheels to guide the buses. This design is similar to guided busways in operation in Pittsburgh, PA and Ottawa, Ontario. Exclusive busways would be constructed along U.S. 41, South Marietta Parkway (busway spur), and Cumberland Parkway. The busway would travel in a separate right-of-way along I-75 and in curbside lanes along 14th Street and West Peachtree Street between Cobb County and the MARTA Arts Center Station. A total of 20 stations are planned.

Buses in Alternative 4 would operate at 15-minute headways during weekday peak service hours and 20 minutes during the off-peak and on weekends. Local and express bus lines would feed into the BRT system at station locations, reducing the effective time between buses.

5.0 Next Steps

In December 2011, Cobb County DOT launched a series of stakeholder roundtables. The first set of roundtables is intended to overview the study corridor and the AA process, and focus discussion around the goals and objectives, to identify and prioritize critical issues and refine the purpose and need statement. These roundtables are organized by the five categories of goals described in Table 1: transportation and air quality; land use; economic development; environmental; and financial. Subsequent roundtable series will cover the preliminary alternatives (February 2012), Tier I analysis results (April 2012), and Tier II analysis results (June 2012). These roundtables are an important means of informing study stakeholders and of receiving and using their input to support decision-making.

Other outreach conducted during the early phases of this AA includes resource agencies, to obtain input on the framework for assessing and screening alternatives. A tiered environmental process will be used to communicate detailed analysis of the most promising alternatives and ensure engagement by the full range of stakeholders and resource agencies in making the decision on the Locally Preferred Alternative (LPA) for the corridor.