



6.0 PROJECT PURPOSE AND NEED

6.1 Transportation Challenges

As presented in this report, the I-20 East Corridor faces several major challenges. This document details how the study area's unique existing and planned transportation system, travel markets, demographics, land uses, and development trends all contribute to the challenges facing this corridor both today and in the future. The data presented here illustrates the need for transit investments that address these challenges. These challenges are summarized below.

Traffic congestion causes delay and slow travel times

- The ARC model estimated a total of 2.6 million daily person trips that originated and terminated within the study area in 2005. By 2030, the number of trips associated with the corridor is expected to increase to 3.5 million trips, an increase of 36 percent. These levels of growth within the corridor will continue to drive a steady increase in traffic volumes and congestion, further increasing delay and reducing travel times.
- Traffic volumes on study area roadways are projected to increase significantly by 2030 as development in the area continues to increase. Volumes on I-20 in 2005 ranged from 76,800 AADT in the rural, eastern end of the study area to 195,000 AADT in Downtown Atlanta. By 2030, AADT on I-20 is projected to increase by up to 64 percent to volumes of up to 269,100 vehicles per day. Similar or greater increases in volume are projected for many of the area major roadways.
- A degradation in LOS is projected for most major roadways in the study area. The LOS on I-20 in 2005 ranged from D to F among study area roadway segments. By 2030, LOS is projected to worsen on more than half of these roadway segments, and only one segment is projected to operate at D or better, the level considered acceptable for urban areas. This projection for 2030 roadway conditions is typical in the study area for major east-west roadway segments, most of which are projected to operate at LOS E or F.

Inadequate access to downtown and other employment centers

- Downtown and Midtown Atlanta represent the largest concentrated destination for travel within the corridor. The results of this analysis reveal that the largest concentration of peak hour trips originating in the corridor are destined for Downtown and Midtown Atlanta. This is especially true for transit trips, with 49 percent of transit trips originating in the corridor destined for Downtown and Midtown Atlanta. As automobile and transit travel times to central Atlanta continue to lengthen, access to this important employment center will become increasingly difficult.
- The projected 46 percent increase in study area employment establishes the basis for an increasing need for additional capacity in the transportation system. Furthermore, through discussions with area stakeholders, the I-20 East Transit Initiative has identified inadequate access to existing employment centers as a corridor issue.
- Automobile and transit travel times limit mobility and access within much of the corridor. These travel times are expected to increase significantly by 2030. Much of the study area already experiences long travel times to and from downtown. These



travel times are expected to increase significantly in the future. By 2030, most of the corridor west of I-285 is expected to experience automobile travel times to central Atlanta of greater than 50 minutes with much of this area experiencing travel times of 60 - 80+ minutes. Because transit in the corridor is projected to continue to consist of bus service in 2030, the same is true for transit travel times.

Limited east-west roadways; I-20 is the only real choice

- With the exception of I-20, there are limited roadway options for drivers traveling east-west in the study area, and of these, few extend across a significant portion of the study area or offer multiple lanes. Since the existing transportation network does not provide a viable parallel route to I-20 for traversing the study area, the need exists to increase travel choices for east-west mobility in the corridor.
- East-west travel along I-20 is the predominant travel pattern within the corridor. Results of a select link analysis illustrate that the majority of peak hour automobile trips traveling eastbound and westbound on I-20 continue their trips along I-20 rather than diverting on I-285 to the north or south.
- By 2030, the largest source of trips coming into the study area will be from Rockdale and Newton Counties to the east. Approximately 10 percent of all trips destined for the study corridor will come from these areas. This represents a 113 percent increase in trips from Rockdale and Newton Counties from 2005 to 2030. With I-20 the main option for travel into the study area from these counties, congestion will continue to increase, causing mobility and access to decrease. This confirms the need for transportation improvements to address east-west mobility along I-20.

Limited planned transportation projects in corridor to accommodate growth

- While there are planned and programmed roadway capacity projects in the study area, the lack of east-west movement is projected to remain an issue due to the projects' emphasis on north-south roadways. There are no projects planned to add general use lanes or HOV/managed lanes to I-20 by 2030. With limited planned improvements to I-20 or parallel facilities, east-west mobility in this growing study area will continue to degrade.

Insufficient transit service for a growing demand

- Transit travel is expected to increase significantly in the corridor. In 2005 there were 143,700 daily transit trips in the I-20 East Corridor. By 2030, it is projected that there will be 253,000 daily transit trips in the study area each day, a 77 percent increase from 2005. Transit travel growth will far outpace the 36 percent growth for trips of all modes, which includes automobile trips. Over the past five to ten years, significant increases in ridership have been seen on express bus services offered by GRTA and MARTA that travel on I-20 East. These increases have occurred despite the fact that these buses operate on congested roadways. This demonstrates the strong demand for transit service within the corridor despite the fact that the existing transit service is not travel time competitive.

Automobile and transit travel times limit mobility and access within much of the corridor. These travel times are expected to increase significantly by 2030. Much of the study area already experiences long travel times to and from downtown. These travel times are expected to increase significantly in the future. By 2030, most of the corridor west of I-285 is expected to experience automobile travel times to



downtown of greater than 50 minutes with much of this area experiencing travel times of 60 - 80+ minutes. The same is true for transit travel times.

Express buses operate in normal traffic

- Overall, existing and future transit travel times are considerably longer than automobile travel times, illustrating that current transit service is not travel time competitive.
- Transit travel times surrounding the existing MARTA heavy rail line are not expected to lengthen by 2030. However, by 2030 local and express bus service in much of the eastern portion of the corridor is expected to experience considerably longer travel times, primarily due to the fact that these services operate on congested roadways and there are few capacity-adding roadway improvements planned for the study area by 2030. Furthermore, no managed lanes or HOV lanes are planned along I-20 east of I-285 by 2030. This further highlights the need for travel time competitive transit service to address the mobility and access needs of the study area.

Areas of the corridor are in need of revitalization

- There are land use plans, redevelopment plans, and zoning ordinances in the City of Atlanta and DeKalb County, as well as from Livable Centers Initiatives (LCIs), that support and encourage transit oriented development, a goal of the I-20 East Transit Initiative.
- The analysis of projected land use changes demonstrates that there is sufficient land area to accommodate the projected growth and redevelopment. Much of the projected 117,000 new residents to the study area between 2005 and 2030 will be accommodated in the 56 percent growth in the eastern portion of the study area.
- A series of planning studies within the study area have recommended redevelopment activities along the I-20 East corridor, an example of which is the Candler Road/Flat Shoals Parkway Livable Centers Initiative, completed in 2007. This study, like many of the others, envisioned and is supportive of, transit supportive land uses comprised of high-density mixed-use centers.
- Redevelopment and reinvestment is a major identified need in the corridor. Major redevelopment areas include the South DeKalb Mall area and other commercial centers adjacent to I-20. Additional premium transit service in corridor would represent a major new investment in the area and would have the potential to catalyze new development in these areas.
- The previously identified light rail and bus rapid transit alignment and stations along I-20 are supported by the land use policy framework of DeKalb County. The policy framework calls for the redevelopment of commercial areas adjacent to I-20 as a series of mixed-use higher-density areas. The I-20 Overlay District lays the framework for ensuring TOD at proposed station areas along the alignment.

Limited transportation options for traditionally underserved populations

- There are neighborhoods of minority and low-income populations located throughout the study area. It will be important through the planning process to ensure these neighborhoods are not impacted disproportionately and that any transit improvements serve these neighborhoods where the population has been traditionally underserved.



- The study area has a higher percentage of zero-vehicle households (15.4 percent) than the Atlanta metropolitan area (7.3 percent) or the State of Georgia (8.3 percent). Although many of these zero-vehicle household neighborhoods are located along existing MARTA rail lines, there are numerous neighborhoods throughout the study area particularly along on near I-20.
- There are neighborhoods within the study area where the elderly and disabled populations make up between 15 to 25 percent of the population. Much of both the elderly and disabled populations in the western end of the study area reside near existing MARTA rail lines. However, in the eastern end of the study area, there are large areas with significant elderly and disabled populations that do not have access to premium transit. These areas would benefit from improvements in transit service. Increasing the accessibility of service to these populations would address a major need for the I-20 East Transit Initiative.

6.2

Need for the I-20 East Transit Initiative

Given the challenges facing the study area, improved transit service in the I-20 East Corridor is being investigated to address the following needs.

- **Improved Mobility and Accessibility in the Corridor**
 - Traffic congestion causes delay and slow travel times
 - Inadequate access to downtown and other employment centers
- **Additional Travel Options in the Corridor**
 - Limited east-west roadways; I-20 is the only real choice
 - Limited planned transportation projects in corridor to accommodate growth
- **Improved Transit Service in the Corridor**
 - Insufficient transit service for a growing demand
 - Express buses operate in normal traffic
 - Limited transportation options for transit dependent and elderly populations
- **Support Land Use and Development Goals within the Corridor**
 - Areas of the corridor are in need of revitalization

6.3

Purpose and Need Statement

While this Purpose and Need report addresses multiple challenges and needs, per FTA guidance, the following Purpose and Need Statement was developed to clearly and concisely address the primary transportation challenges faced by the I-20 East Corridor.

The purpose of the I-20 East Transit Initiative is to provide transit investments that enhance east-west mobility and improve accessibility to residential areas and employment centers within the corridor. The existing and future roadway congestion in the I-20 East corridor will have an increasingly detrimental effect on automobile and bus transit travel in the corridor. The proposed transit investments are intended to improve travel times and travel reliability by providing a rapid transit service for commuters traveling to and from central Atlanta.



6.4

Goals and Objectives of the I-20 East Transit Initiative

Based on the identified challenges and needs within the corridor and stakeholder input, the following goals and objectives were identified for the I-20 East Transit Initiative. These goals and objectives will guide the development and evaluation of transit alternatives to be considered in this study.

Goal 1: Increase mobility and accessibility

Objectives

- Improve travel times for east-west travel
- Improve accessibility within the corridor
- Improve connectivity with existing and planned transit investments
- Improve travel options within the corridor

Goal 2: Provide improved transit service within the corridor

Objectives

- Provide transit service with sufficient capacity to accommodate growing demand
- Provide travel time competitive transit service in the corridor
- Provide transit service for traditionally underserved populations

Goal 3: Support land use and development goals

Objectives

- Promote economic development/revitalization
- Support adopted local land use plans
- Encourage transit supportive land use and development patterns
- Provide transit investments that are supported by local stakeholders and the general public

In addition to the goals and objectives identified by through stakeholder input, two other goals have been identified for consideration in the development and evaluation of transit alternatives in the corridor. These additional goals and objectives are described below.

Goal 4: Promote cost effective transit investments

Objectives

- Provide transit service that can be implemented, operated and maintained with available resources

Goal 5: Preserve natural and built environment

Objectives

- Minimize impacts to social, natural, cultural and physical resources