Georgia Department of Transportation

Tier I Environmental Impact Statement
Atlanta-Chattanooga High Speed Ground Transportation (HSGT) Study

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SCOPING SUMMARY REPORT

FINAL REPORT

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Table of Contents

Figures

Tables

1. Introduction

The National Environmental Policy Act of 1969 (NEPA) requires that the potential environmental impacts of an action be assessed for every federal action that could "significantly affect the quality of the human environment." The law applies to any project where there is federal action, including federal financial assistance, the issuance of a permit, or a requirement for federal approval. Following the enactment of NEPA, regulations issued by the Council on Environmental Quality (CEQ) noted that Environmental Impact Statements (EISs) shall "provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment" (40 Code of Federal Regulations [CFR] Parts 1500-1508). An EIS is required when it is apparent from the beginning of the project, or through subsequent analysis, that the proposed project is likely to have a major effect on the human environment.

The Georgia Department of Transportation (GDOT) is preparing a Tier 1 EIS for the Atlanta to Chattanooga High Speed Ground Transportation (HSGT) corridor with the assistance of the Tennessee Department of Transportation (TDOT) and with the Federal Railroad Administration (FRA) and the Federal Highway Administration (FHWA) as the federal co-lead agencies. The FRA and FHWA are operating administrations within the United States Department of Transportation (USDOT). FRA has oversight responsibility for the safety of railroad operations nationwide. The FHWA administers the highway transportation programs of the USDOT in accordance with the Department of Transportation Act (49 U.S. Code (USC) §104 and USC §101 et. seq.). As such, it also coordinates the development of highway programs with other modes of transportation. At this time, cooperating federal agencies include, but are not limited to the United States Army Corps of Engineers (USACE), FRA and FHWA, who have determined that an EIS is appropriate to satisfy the NEPA requirements.

Preparation of the Tier I EIS, together with its eventual circulation and review and comment, is designed to ensure that all viable alternatives for the project are evaluated, including a "No-Build Alternative." Additionally, all substantial transportation, social, economic, and environmental impacts are assessed; and public involvement and comments are solicited to assist the decision-making process. The evaluation of alternatives helps to ensure that the environmental impacts, benefits, costs, and trade-offs among alternatives are in compliance with federal and state requirements and addressed according to FRA and FHWA procedures and CEQ NEPA regulations.

When preparing an EIS, Scoping is one of the first steps of the process. The Scoping Phase is used to identify reasonable and feasible concepts to be evaluated in the EIS, to determine environmental impacts to be assessed, and to gain insight on how stakeholders would like to be involved throughout the study. Scoping includes outreach to both the agencies and the public to identify possible issues at the outset of the project and also typically coincides with the agency Early Coordination process. The FHWA and FRA published a Notice of Intent (NOI) on August 22, 2007, to prepare a Tier I EIS. A copy of the NOI is included in ***Appendix A***.

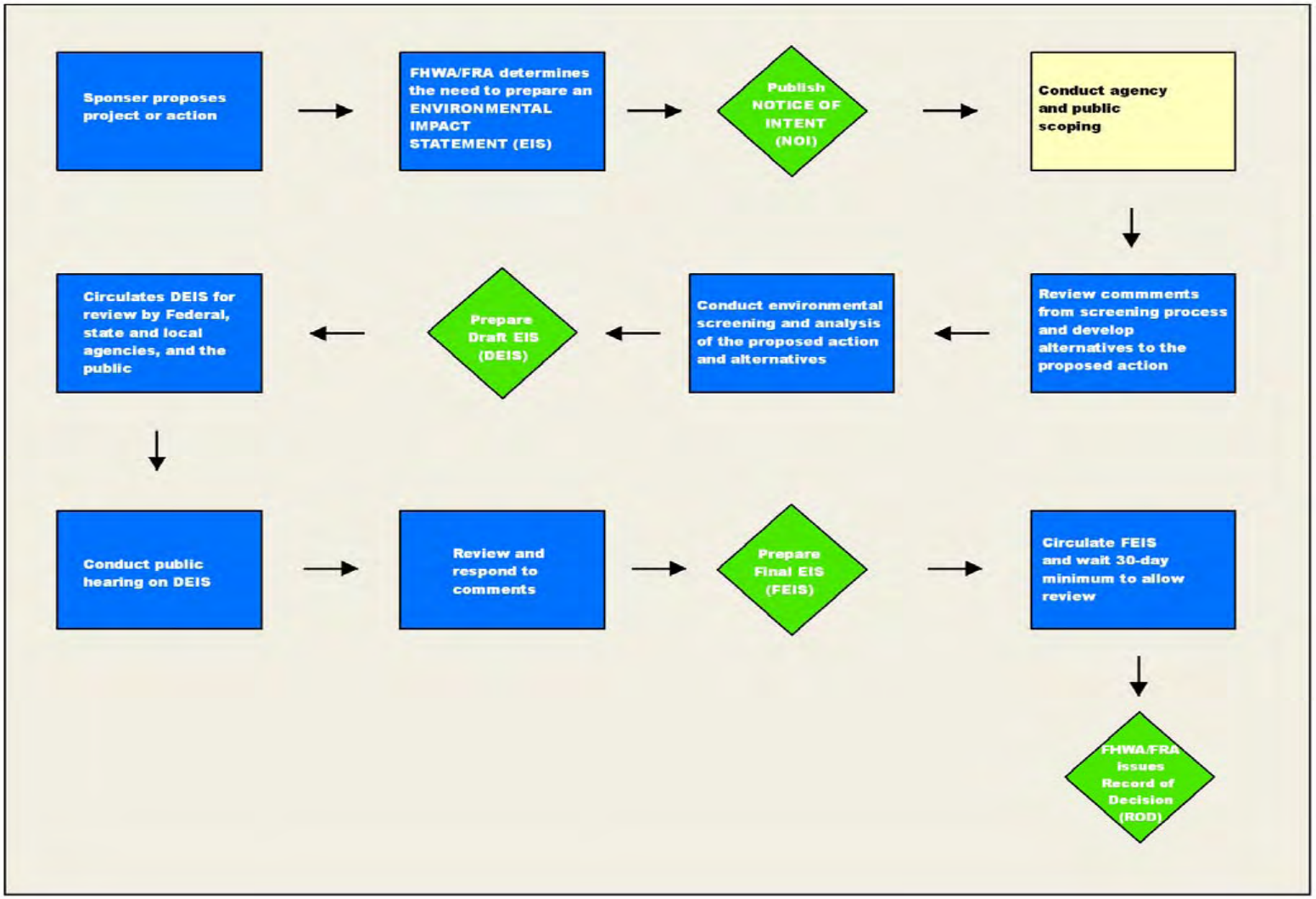
A copy of the legal advertisement published prior to the scoping meetings is included in ***Appendix B***. Three comments were received regarding the NOI, two from the U. S. Fish and Wildlife Service (USFWS), dated October 4, 2007 and September 25, 2007; and one from the City of Atlanta Department of Aviation dated October 3, 2007. Copies of the comments are included in ***Appendix C.*** The USFWS (Tennessee Office) comment noted the various federally endangered or threatened species that are known to occur in the region including the snail darter and the large-flowered skullcap, and requested that these species be considered as the project is being planned. The comment from the Department of Aviation noted plans to expand the Hartsfield-Jackson Atlanta International Airport (HJAIA) terminal to the west and requested to meet with the project team to ensure that they are aware of these specific plans and other proposed improvements to the airport**.**

The Tier I EIS will be prepared at a level of detail appropriate for a programmatic analysis with the main goal being determination of a preferred HSGT technology, a general corridor location, general station locations, potential environmental impacts of the preferred alternative, and identification of a phased implementation plan. A Tier II EIS would be required prior to advancing the project to the design and construction phases.

The 30-day scoping comment period formally closed October 4, 2007. This date marks the completion of the scoping process. This Scoping Summary Report formalizes this step in the EIS process. The remaining steps in the EIS process include Alternatives Analysis and environmental impact evaluation, preparation of a Draft EIS (DEIS), presentation of findings to the public and agencies, preparation of the Final EIS (FEIS) summarizing comments on the DEIS, and finally FRA and FHWA would issue a decision on the FEIS as part of a Record of Decision (ROD). See ***Figure 1*** for a graphical representation of this Planning and Project Development Process.

This scoping summary report also provides a brief project background, and a review of transportation networks and HSGT-related studies, economic data and federal air quality requirements for the Atlanta to Chattanooga corridor. These baseline data combined with an explanation of the HSGT project need and purpose, and the HSGT conceptual alternatives serve to inform and prepare stakeholders for participation in the scoping process. The last two sections of the report detail the stakeholder outreach and participation activities, and the results of these processes.

Figure 1: Tier I EIS Planning and Project Development Process



1.1 Project Background / History

The concept of HSGT service between Atlanta, Georgia and Chattanooga, Tennessee has been a subject of study for approximately ten years. Initially, the GDOT studied this corridor as part of a 1997 Intercity Rail Plan. The Atlanta to Chattanooga Corridor was first considered for high-speed rail service as part of the federal Magnetic Levitation (Maglev) Deployment Program funded by the FRA to demonstrate Maglev technology in the United States. Georgia was among several states that participated in the program. The Atlanta Regional Commission (ARC), in association with GDOT and the Georgia Regional Transportation Authority (GRTA), analyzed the 110- mile Atlanta to Chattanooga corridor over a four-year period, from 1999 to 2003. The purpose of this process was to explore mobility options and determine the feasibility for a high-speed passenger service. TDOT prepared a statewide rail plan in 2003, which recommended high-speed rail connectivity with neighboring states.

A search for existing studies related to the I-75 corridor between Atlanta and Chattanooga revealed nearly one hundred studies, maps and documents related to transportation and land use. Of those studies, eight were determined to be highly relevant background information for the Atlanta to Chattanooga study. The documents that are listed below, as well as the various Federal state and regional studies, and city and county comprehensive plans, will be utilized for existing and future conditions analysis throughout this study. The key initial documents include:

- Georgia Intercity Rail Plan Final Report, March 1997
- Atlanta to Chattanooga Maglev Deployment Study Environmental Assessment, February 2000
- Atlanta to Chattanooga Maglev Deployment Study Phase II EIS, March 2002
- Concept Design Report for the Multi-Modal Passenger Terminal, February 2002
- Atlanta to Chattanooga Maglev Deployment Study Phase II Addendum, March 2002
- High Speed Trains Nashville – Chattanooga – Atlanta, November 2003
- Chattanooga Hamilton County/North Georgia Trans Plan 2030, Long Range Transportation Study (LRTP) – June 2005
- ARC Envision 6/Mobility 2030 Regional Transportation Plan (RTP), May 2006

1.2 Key Initial Document Summaries

The following provides a brief summary of these key studies.

1.2.1 Georgia Intercity Rail Plan Final Report

This study was commissioned by the GDOT in June of 1994 to assess the potential for serving longer distance rail passenger trips using existing rail lines. The study focused on “intercity” rail passenger trips, defined as those greater than 60 miles long in Georgia and adjacent states. Intercity travel characteristics were determined from over 17,000 traveler surveys at key locations for Amtrak, air, auto and bus locations.

After identifying potential core and extended rail networks, the study goes on to assess each line's potential for carrying high-speed trains, their ridership and revenue potential, as well as benefits and costs to the regional economy. The Atlanta to Chattanooga rail line was identified early in the study as a possible intercity corridor for an extended network, but was eliminated from further analysis because it did not meet the thresholds.

Conclusions and recommendations from this study emphasize the need for high-speed service (such as the 180 mph typical of high-speed rail) in order to attract large numbers of auto users.

1.2.2 Atlanta to Chattanooga Maglev Deployment Study Environmental Assessment (EA)

An EA of Maglev high-speed passenger service was initiated in the 110-mile Atlanta to Chattanooga corridor in August of 1999. FRA initiated the Maglev Transportation Technology Deployment Program in an effort to demonstrate the feasibility of Maglev technology in the United States. The study was administered by the ARC who was selected in a national competition by the FRA to be one of seven areas in the United States to demonstrate the feasibility of maglev technology.

Alignments Studied

The study examined potential alignments for high-speed passenger service in the corridor for engineering, environmental, and economic feasibility as well as local support for particular connections and destinations. The seven alignment segments studied include:

Segment A: Begins at the proposed Atlanta Multi-Modal Passenger Terminal (MMPT) and extends northward to the Cartersville area, along I-75.

Segment B: Continues from Cartersville to Lovell Field Airport in Chattanooga, generally following I-75.

Segment C: Begins at the west end of the HJAIA paralleling the Metropolitan Atlanta Rapid Transit Authority (MARTA) rail line, then west to Camp Creek Parkway and north to I-285, then joins the Segment A and B routes at I-75.

Segment D: Begins at the proposed Southern Crescent Transportation Service on the east side of HJAIA, then heads south and west to follow I-285 along the perimeter of the airport to Camp Creek Parkway where it extends northward joining Segment B.

Segment E: An alternative to Alignment B, departing from the I-75 corridor in Cartersville and follows the CSX Railroad corridor north. Near Chatsworth, the alignment turns northward toward I-75, then connects to and follows Segment B to Lovell Field in Chattanooga.

Segment F: An alternative to the southern portion of Segment A, beginning at the Southern Crescent Transportation Service Center and heading north along I-75. Just north of University

Avenue, this alignment heads northwest, following the Norfolk Southern (NS) rail line to the vicinity of the proposed MMPT.

Segment G: Segment G represents a shift of the downtown portions of segments A and F westward to follow a segment of Northside Drive in the area of World Congress Center, Phillips Arena and the Georgia Dome.

EA Preferred Alignment

Discussion of choosing the preferred alignment mentions a preference to serve downtown Atlanta instead of following I-285. Segments A, B, E, F and G met this criterion. The preferred alignment follows Segment F from the east side of the HJAIA and heads north until it reaches Interstate 20, where the recommended alignment transitions to Segment G. At the north end of Segment G, the recommended alignment follows Segment A, northward to Town Center (the terminus of the project in the EA Alignment). If the project were constructed, the Maglev System would continue northward on Segment A, and then follow Segment B to Chattanooga.

Station Locations

Four potential station locations were identified for Maglev trains at HJAIA, Vine City, Galleria, and Town Center. The EA document did not explore station locations north of Town Center.

1.2.3 Atlanta to Chattanooga Maglev Deployment Study Phase II EIS

The ARC received funding for the additional environmental and planning work and began the study in mid 2001. The additional work studied alternative alignments and train technologies in greater detail between Town Center and Lovell Field in Chattanooga, using Maglev technology as the baseline. Other technologies studied were Accelerail 90, 110, 125 and 150, and New High-Speed Rail (HSR). This study did not examine environmental impacts by alignment and did not screen environmental impacts for the preferred alignment.

Alignments Studied

Five alignments were reviewed and recommended for further study. Options included the I-75 alignment (the June 2002 Project Description alignment), the CSX Railroad alignment, two western alignment options (Alignment WA and WB) which connect to Rome, Georgia and an eastern alignment (Alignment EA) through Chatsworth, Georgia. These alignments were assessed based on their capital costs and financial performance relative to ridership projections and cost recovery abilities relative to the capabilities of the various technologies.

Preferred Alignment

A preferred alignment, which generally follows the I-75 highway alignment (the Project Description alignment) was selected due to several factors, including optimal grades necessary to achieve top Maglev design speeds, while maximizing potential ridership and revenue. Because significant ridership would relate to HJAIA, the study concluded that a corridor route must offer

direct service to Hartsfield Airport. Use of existing railroad corridors in the study area was not recommended.

Station Locations

More detailed station-area plans were developed in this study at four locations: Town Center, Cartersville/Cassville, Dalton/Carbondale, and Lovell Field. It appears that a station at Ringgold was discussed, but not explored in any detail.

The Preferred Technology

Maglev technology was selected as the "Preferred Technology" due to its ability to attract a higher number of passengers (because of theoretical faster travel times) and a greater ability to self-fund, including capital leases and potential for joint development. However, it was surmised that the relatively close performance of new HSR technology compared with Maglev warranted further consideration, especially if it allowed a connection with a larger regional network of train service. Accelerail 150 was also identified as an alternate technology.

A major finding that led to a narrowing of the alternatives was that travel times on the train between Town Center and Chattanooga could not exceed 65 minutes without losing riders to an alternate travel mode. That study concluded that significantly higher capital cost of Maglev was offset by the higher ridership and revenue forecasts for the faster technology. However, detailed investment level capital costs, operations and maintenance costs and patronage forecasting were not completed for this study.

Travel time comparisons between Atlanta and Chattanooga airports by technology and by alignment varied from a low of 29.2 minutes for Maglev on the I-75 alignment to a high of 113.1 minutes with New HSR on one of the western alignments, the WA alignment. All technologies performed well with higher speeds on the I-75 alignment compared with other alignments

1.2.4 Atlanta to Chattanooga Maglev Deployment Study Phase II Addendum

This document summarizes the findings of the Phase II planning and environmental study and provided detailed alignment maps and station plans as well as operating and cost comparisons between alternatives. A possible timeline for Maglev implementation was also presented as part of this study.

1.2.5 Concept Design Report for the Multi-Modal Passenger Terminal

An oversight committee comprised of board members for the GDOT, the Georgia Regional Transportation Authority (GRTA), and the Georgia Rail Passenger Authority (GRPA), formed the state's Rail Passenger Program Management Team (PMT). The PMT members adopted Concept 6 of the MMPT project as the official Concept Design of the MMPT project.

Five component parts of the MMPT include:

1. A main terminal for trains of both the Georgia Rail Passenger Program and Amtrak with a regional Commuter Bus Terminal A-North, consisting of 10 stalls above the tracks and train terminal concourse.
2. Commuter Regional Bus Terminal B-South consisting of 10 stalls on top of the MMPT parking deck providing 700 parking spaces.
3. An Intercity Bus Terminal on top of the Replacement Parking Deck, (replaces the existing 1850 space CNN deck to accommodate the new commuter rail track layout).
4. Direct pedestrian connections to MARTA's Five Points Station fare gate level, MARTA's Philips Arena Station plaza level, and between the Regional Bus Terminal B and the Main Train Terminal.
5. Two additional roadways – Alabama Street Extension (between Forsyth Street and Centennial Olympic Park Drive) and the new North-South Street (between Martin Luther King (MLK) Drive and Alabama Street extension) to accommodate increased bus and other vehicular traffic in the immediate MMPT area.

The net square feet programmed for the MMPT is 1,118,168 for two buildings and site structures (train and bus platforms, new roadways, etc.) including the two parking decks. Order-of-magnitude cost estimate for the full-build design is $309 million. A potential "Phase I" operational segment to accommodate the first two commuter rail lines could be built for about $25 million dollars. The MMPT is planned for the years 2010 to 2025 with a phased construction during that period.

1.2.6 High Speed Trains Nashville-Chattanooga -Atlanta

In December 2000, TDOT developed the Rail Plan for Tennessee. The Intercity Passenger Rail component of the Rail Plan was completed in early 2003. A key conclusion of that study was the recommendation that the Federally designated high-speed rail corridor from Atlanta to Chattanooga be extended to include Nashville, with an eventual connection to Louisville, Kentucky.

Technology alternatives for high-speed ground transportation were not explored in this study. An assumption of steel wheel technology was used as the basis for travel time estimates, ridership forecasts and public benefits. A goal for the project was to meet the FRA's criteria of sustained running speeds of 90 miles per hour or greater in the corridor. Alternatives were not evaluated for the Chattanooga to Atlanta segment because this portion was covered in the earlier Maglev study.

1.2.7 Chattanooga, Hamilton County / North Georgia Trans Plan 2030 LRTP

The Chattanooga Urban Area's transportation planning boundary includes the municipalities of Chattanooga, Collegedale, East Ridge, Lookout Mountain, Red Bank, Ridgeside, Signal Mountain, Soddy-Daisy and Walden and unincorporated Hamilton County in Tennessee. It also includes the north Georgia counties of Dade, Walker and Catoosa Counties. The cities of Rossville, Fort Oglethorpe, Lookout Mountain, Chickamauga, and Ringgold fall within this north Georgia boundary.

Adopted in June of 2005, the Chattanooga Hamilton County North Georgia "TransPlan 2030", includes 380 roadway, pedestrian and bicycle projects totaling $1.316 billion. Additional safety, bridge, Intelligent Transportation System and transit projects and planning studies total $543 million. The Atlanta to Chattanooga Maglev passenger rail project is mentioned as a possibility in this plan; however no specific funding is identified for this effort. Rail safety funding of $1.2 million per year is set aside to improve about 20 crossings per year. Public Transportation 5307, 5309 and 5311 monies continue to be funded at historic levels for existing public transit needs. New road construction projects receive the bulk of funding at $1.347 billion for the Tennessee and Georgia portions combined.

1.2.8 ARC Envision 6 Needs Assessment Report

The RTP is a long-range plan which includes a balanced mix of projects, such as bridges, bicycle paths, sidewalks, transit services, new and upgraded roadways, safety improvements, transportation demand management initiatives and emission reduction strategies. The Envision 6 Transportation Plan covers the years through 2030 and is slated for adoption by the ARC Board in 2007.

The corridors portion of the Needs Assessment Report focuses on eleven freeway corridors within the Atlanta region, representing 20 of the top 25 congested facility segments identified in the "2004 Congestion Management System". Mobility 2030 is the planning process developed by the ARC to focus on specific investment strategies for these transportation corridors in the creation of the RTP.

In 2005, the I-75 north corridor had the second highest total population and employment of all corridors. It also featured the highest densities of all radial interstate corridors in the region. The I-75 corridor is projected to experience a 41% increase in households and a 25% increase in employment between 2005 and 2030. The I-75 north corridor has the second highest daily truck vehicle miles traveled (VMT) of all corridors as well as the second highest percent of daily truck VMT (23.2%). I-75 north between South Marietta Parkway and I-285 has the highest truck volumes of any freeway segment in the region. By the year 2030, over 100,000 daily trucks are expected.

The planned Bus Rapid Transit (BRT) system in the corridor is expected to more than double daily corridor transit ridership from 15,000 in 2005 to 37,000 in 2030. New transit service and High Occupancy Vehicle (HOV) lanes in the corridor increase home based work trip transit mode share from 4% to 6% and HOV mode share from 13% to 15%. In 2005, 49% of I-75 lane miles outside of I-285 experience more than 4 hours of daily congestion. In 2030, the number of lane miles with greater than 4 hours of congestion increases to 68%.

After the extension of the HOV system and the BRT corridor are complete, I-75 will be effectively built-out. An additional 24 projects are identified in the 2030 Aspirations Plan that is not funded within "Mobility 2030". Six of these projects are related to improvements to US41/Cobb Parkway from Bartow County to the Cumberland/Galleria area. These projects include 16 miles of widening and some grade separation at major intersections, improvements along US41 will act to draw some traffic away from I-75 north and serve as an alternate route in

the event of major delays. Other projects within the "Aspirations Plan" include improvements along arterials accessing I-75 north, such as Barrett Parkway and Bells Ferry Road; and transit, including the potential for rail transit in the corridor and transit along the Marietta Boulevard corridor from Cumberland/Galleria to the Cumberland business district.

2. Existing Conditions

The study corridor generally parallels Interstate 75 from HJAIA in the Atlanta metropolitan area, to Chattanooga, Tennessee. The study area consists of rolling topography dissected by numerous rivers and streams. This area is heavily urbanized, primarily within and around the City of Atlanta and the City of Chattanooga, but also includes suburban and rural areas within the corridor. The study area is contained partially or entirely in the following counties: Hamilton County, Tennessee; and Clayton, Fulton, Cobb, Cherokee, Floyd, Bartow, Douglas, Paulding, Polk, Murray, Whitfield, Gordon, Chattooga, Walker, and Catoosa Counties, Georgia. A map of the study area is provided as *Figure 2*.

2.1 Population and Income

According to data from the U.S. Census, the population in the project corridor has increased from 2,766,800 in 1990 to 4,603,08 in 2006. It is projected that the project corridor population will reach 5,222,153 between the years 2015 to 2030. That increase translates into an 88.87% growth from the year 1990. The project corridor's average income of $41,875 falls in-between the Georgia ($42,433) and Tennessee ($36,360) average incomes. The percentage of households living below the poverty level in the project corridor is 13.48%, which is above Georgia at 9.90% and Tennessee at 10.30%. Population data is provided as *Tables 1 and 2*.

2.2 Visitors

The Atlanta and Chattanooga areas combined have over 23 million visitors to their cities each year. According to the Atlanta Convention and Visitor's Bureau, 20 million visitors come to the Atlanta area annually. The Chattanooga area draws 3.3 million visitors each year.

2.3 Major Highway Network

Three major highways connect the metropolitan Atlanta area with the northwest Georgia and Chattanooga metropolitan areas. These three routes are Interstate 75, US 41 and US 27. Interstate 75 is one of the most heavily traveled interstates in Georgia as well as in the entire nation. Traffic volumes north of Atlanta on I-75 for 2005 ranged from the low to mid 100,000s in Bartow County to the mid 80,000s near the Tennessee border. According to the Georgia Interstate System Plan, completed in 2004, most of I-75 north of Atlanta is projected to exceed available capacity. By 2035, volumes on I-75 will continue to exceed capacity, even assuming that the additional lanes have been implemented.

Figure 2 Map of Study Area

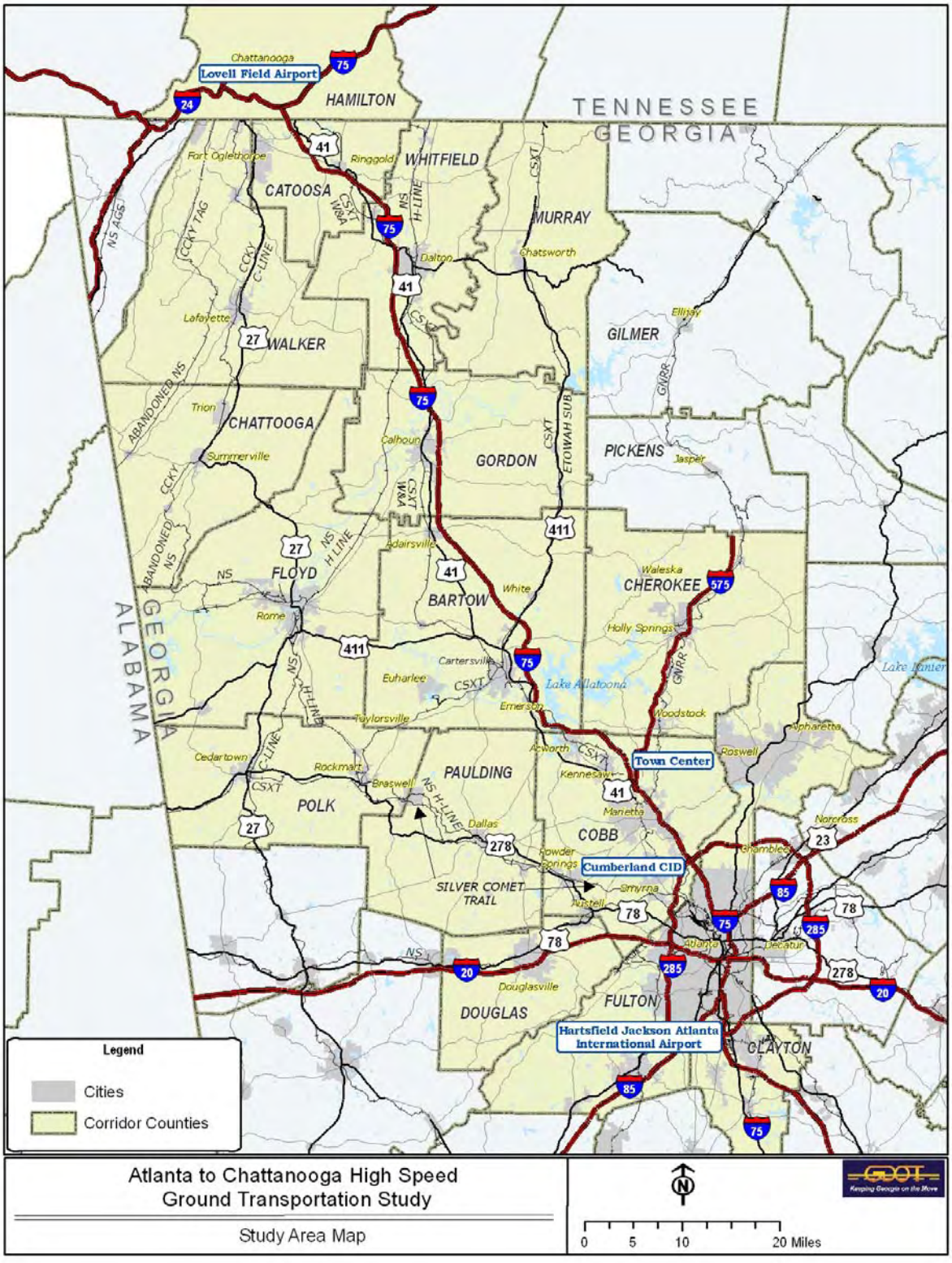


Table 1: Corridor Population Growth by County

County	1990 Census	2000 Census	Estimated 2006 Population	2025/2030 Projected Population (See Note)	Population Change Since 1990	Percentage Population Change
Bartow	55,915	76,019	91,266	134,409 (2)	78,494	140.38%
Catoosa	42,464	53,282	62,016	101,319 (1)	58,855	138.59%
Chattooga	22,242	25,470	26,442	34,114 (1)	11,872	53.37%
Cherokee	90,204	141,903	195,327	213,951 (2)	123,747	137.18%
Clayton	181,436	236,517	271,240	299,916 (2)	118,480	65.30%
Cobb	447,745	607,751	679,325	763,889 (2)	316,144	70.60%
Douglas	71,120	92,174	119,557	218,551 (2)	147,431	207.29%
Fulton	648,776	816,006	960,009	1,145,902 (2)	497,126	76.62%
Floyd	81,251	90,565	95,322	157,090 (1)	75,839	93.33%
Gordon	35,067	44,104	51,419	85,435 (1)	50,368	143.63%
Hamilton	211,000	307,896	312,905	352,285 (1)	151,334	66.95%
Murray	26,147	36,506	41,398	83,246 (2)	57,099	218.37%
Paulding	41,611	81,678	121,530	221,839 (2)	180,228	433.12%
Polk	33,815	38,127	41,091	72,735 (1)	38,920	115.09%
Walker	41,398	61,053	64,606	89,032 (1)	47,634	115.06%
Whitfield	72,462	83,525	92,999	126,185 (2)	53,723	74.13%
County Total	**2,104,643**	**2,794,576**	**3,226,452**	**4,099,898**	**1,993,017**	**94.80%**
Georgia Total	6,478,149	8,186,453	9,363,941	12,017,838 (2)	5,539,689	85.51%
TN Total	4,877,185	5,689,283	6,038,803	7,380,634 (2)	2,503,449	51.32%
Sources: 2000 U.S. Census and American Community Survey 2006 Update; Chattanooga-Hamilton County Regional Planning Council; North Georgia Regional Development Center; Catoosa Regional Development Authority; Atlanta Regional Commission						
Note: Projection Years: (1) 2025; (2) 2030						

Table 2: Corridor Overall Population Growth by City

City	Census 1990	Census 2000	Estimate 7/1/2006	Projection * Year*	Actual Change * 1990 to Projection Year	% Change * 1990 to Projection Year
Atlanta, GA	394,017	416,474	486,411	602,783 (3)	208,766	52.98%
Chattanooga,TN	152,466	155,554	155,190	175,755 (2)	23,289	15.27%
Cartersville, GA	12,035	15,925	17,407	44,121 (3)	32,086	266.60%
Dalton, GA	21,761	27,912	33,045	117,400 (2)	95,639	439.49%
Douglasville, GA	11,635	20,065	28,870	28,870	17,235	148.13%
Kennesaw, GA	8,936	21,675	30,936	48,487 (2)	39,551	442.60%
Rome, GA	30,326	34,980	36,142	36,000 (1)	5,674	18.71%
Smryna, GA	30,981	40,999	48,632	69,039 (2)	38,058	122.84%
City Total	662,157	733,584	836,633	1,122,255	460,098	69.48%
County Total	2,104,643	2,794,576	3,226,452	4,099,898	1,993,017	94.80%
Study Corridor Total	**2,766,800**	**3,528,160**	**4,063,085**	**5,222,153**	**2,455,353**	**88.87%**
Georgia Total:	6,478,149	8,186,453	9,363,941	(3) 12,017, 838	5,539,689	85.51%
Tennessee Total:	4,877,185	5,689,283	6,038,803	(3) 7,380,634	2,503,449	51.32%
Sources: 2000 US Census and American Community Survey 2006 Update						
Chattanooga Hamilton County RPC						
North Georgia Regional Development Center						
Cartersville Comprehensive Plan update						
Dalton Comprehensive Plan						
Atlanta Regional Commission						
ProjectionYear 1 = 2015, 2 = 2025, 3 = 2030						

Presently, there are 83 roadway improvements or expansions planned or currently in progress along the 110-mile corridor. Many of these improvements are along I-75. However, even with these improvements, many of these facilities are projected to operate at or above capacity. In addition, analysis of accident data on I-75 shows a trend for increasing numbers of accidents and injuries over time as this facility grows more congested

Portions of US 41 are four lanes from Atlanta to Chattanooga, with two lanes in more rural sections. North of Atlanta, the daily traffic volumes in 2005 ranged from a low of 5,000 to a high of 40,000. While not as heavily traveled as I-75, US 41 is also expected to equal or exceed capacity within the next 20 years, despite several proposed multi-lane improvements.

Traffic volumes along the US 27 corridor range from a low of approximately 5,000 Average Annual Daily Traffic (AADT) to a high of around 40,000 AADT in Rome in 2005. The future (2025) Level of Service (LOS) for the corridor is approaching or exceeding capacity.

2.4 Aviation

HJAIA bears the distinction of being the world's busiest passenger airport with five runways, 29,550 public parking spaces, 76.3 million domestic passengers and eight million international passengers in 2006. Lovell Field currently serves ten major airports via six different airlines. Atlanta's Hartsfield is Lovell Field's number one connecting hub, accounting for 28% of Chattanooga's local outbound travel. A total of 503,468 passengers enplaned and deplaned in Chattanooga in 2006. Lovell Field has a current parking capacity of 1,226.

2.5 Railroads

There are three main railroad lines (W&A, CSX and NS "H" Line) connecting Atlanta and Chattanooga. A third line (NS C-Line) connects Rome and Chattanooga and the northern portion of a fourth line (TAG Line) originally connected Chattanooga, Tennessee, and Gadsden, Alabama.

2.6 Transit

The major transit systems operating along or near the corridor include, but are not limited to, MARTA, Cobb County Transit (CCT), GRTA, C-Tran (Clayton County), Rome Transit Department (RTD), and Chattanooga Area Rapid Transit Authority (CARTA). MARTA operates 464 buses, 812 rail cars and 98 demand response vehicles for 142,385,899 trips annually. CCT operates 54 buses and 12 demand response vehicles offering an estimated 3,854,413 trips to its riders annually.

GRTA operates 58 buses, 55 vanpools and four demand response vehicles offering 2,231,859 trips for its passengers annually. C-Tran operates 24 buses and five routes within Clayton County, Georgia. RTD operates 24 buses, and four demand response vehicles providing 830,502 trips to its riders annually. CARTA operates 49 buses, 12 demand response vehicles, and two sky-rail trains providing 2,529,157 trips to its passengers annually.

In addition to these more urban transit systems, Greyhound operates bus service between Atlanta and Chattanooga, with eight daily departures from Atlanta Monday through Saturday and six departures on Sundays. The most recent passenger data, which was collected from October 1, 2006 to September 30, 2007, reports over 149,805 passengers and 3,639 buses have traveled between Atlanta and Chattanooga.

2.7 Air Quality

Ten counties in the project study area have been designated as nonattainment areas for not meeting National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA). Bartow, Cherokee, Clayton, Cobb, Douglas, Fulton and Paulding Counties are all part of the Atlanta Nonattainment Area for ozone and $PM_{2.5}$ (particulate matter with an aerodynamic diameter of 2.5 microns or less). Floyd County constitutes the Rome Nonattainment Area for $PM_{2.5.}$ Catoosa and Hamilton Counties are part of the Chattanooga Nonattainment Area for $PM_{2.5}$ and are part of the Chattanooga Early Action Compact (EAC) area for ozone. This EAC requires the development of a comprehensive air quality plan to implement control strategies to achieve and maintain the 8-hour ozone NAAQS. EAC areas must meet all terms and milestones in their EACs to defer the effective date of a nonattainment designation. To date all EAC milestones have been met and as long as this continues, the nonattainment designation for this EAC will be deferred until April 15, 2008.

Until October 16, 2007 a portion of Murray County was a nonattainment area for ozone. The designated portion included the portion of the county included in the Chattahoochee National Forest. This 8-hour nonattainment area was re-designated by the U.S. Environmental Protection Agency (EPA) as a maintenance area on October 16th. EPA also approved a revision to the Georgia State Implementation Plan including the 8-hour maintenance plan for the Murray County area on this date.

3. Project Need and Purpose

The growth in both population, employment and tourism in the Atlanta to Chattanooga corridor is projected to increase significantly resulting in increased travel demand for both goods and people. The transportation infrastructure that will serve this demand, including highways, transit and aviation are all projected to be at or above capacity, despite proposed improvements programmed to expand these facilities.

The overall purpose of the Atlanta to Chattanooga HSGT system is *to enhance intercity passenger mobility in northwest Georgia, and part of Tennessee, by expanding passenger transportation capacity, increasing overall personal and business mobility and providing an alternative to highway and air travel in a manner that is safe, reliable, and cost-effective while avoiding, minimizing, and/or mitigating effects on affected neighborhoods and the environment.*

Currently, the state and interstate highway systems within the corridor are operating at or near capacity, especially within and adjacent to Atlanta, Rome, Dalton and Chattanooga areas. Although capacity improvements to the state and interstate roadway system along the corridor are either currently underway or planned for the near future, they will not address all of the future capacity or mobility needs for the region. The increased traffic volumes and accident rates in the study corridor further emphasize the need for alternative transportation. Social and economic demands will continue to call for a provision of alternative transportation choices for those individuals, who cannot or choose not to drive, as well as those travelers and commuters looking for alternatives to congested highways.

The following paragraphs outline the deficiencies and transportation issues that define the need for the Atlanta to Chattanooga HSGT.

3.1 Existing and Future Transportation Demand and Travel Growth

There is a need to provide mobility options to address existing and future transportation demand and travel growth in the corridor. The corresponding increase in the number of automobiles will far exceed the states' ability to provide enough safe, efficient, and environmentally acceptable solutions with the existing highway and airport infrastructure.

The Atlanta area is the ninth-largest metropolitan area in the United States and consists of up to 28 counties in Georgia. According to the US Census 2006 population estimates, the 28-county Atlanta metropolitan area is currently the fastest-growing metropolitan area in the United States based on numerical gains. The Georgia job market is one of the ten strongest in the nation. The Atlanta area is the economic engine for the State of Georgia, representing two thirds of the state's economy.

Chattanooga is the fourth largest city in Tennessee and the county seat of Hamilton County. The City of Chattanooga is located at the crossroads of three states: Alabama, Georgia, and Tennessee. Chattanooga is home to several Fortune 500 companies, such as Blue Cross/Blue

Shield of Tennessee, Brach & Brock Confections, Chattem Inc., Dixie Yarns, The Krystal Company, McKee Banking Company, North American Royalties, Olan Mills and the headquarters for the Division of Power of the Tennessee Valley Authority (TVA), which is the largest utility in the United States. The US Census 2006 population estimates show that Chattanooga/Hamilton County is the fifth fastest growing county the State.

Level of service (LOS) is a measure of traffic density (or a measure of congestion). The transportation LOS system uses the letters A through F, with A being best and F being worst to measure congestion on roadways. The peak hour volume (PHV) is the volume of traffic that uses the approach, lane, or lane group in question during the hour of the day that observes the highest traffic volumes for that intersection. See *Figures 3 and 4*, which identify LOS and PHV for I-75. The majority of the corridor operates, or will operate, at LOS E or F.

3.2 Provision of Person Trip Capacity versus Highway Capacity

A HSGT system cannot meet all of the future capacity needs of the major travel corridors within the study area and will not eliminate congestion, but will relieve some of the traffic problems, and may delay the need for future improvements, freeing funds for other network capacity improvements. In addition, HSGT service would provide mobility options to the traveling public.

Interstate 75 is one of the most heavily traveled interstates in the entire nation, typically second only to the I-95 corridor. Most of I-75 north of Atlanta is projected to exceed available capacity. Projects are currently planned to widen I-75. However, by 2030, volumes on I-75 will continue to exceed capacity. US Highway 41 is also expected to equal or exceed capacity within the next 20 years, despite several proposed multi-lane improvements. The US 27 corridor is also approaching or exceeding capacity.

3.3 Enhance Airport Access

HJAIA is consistently ranked as one of the world's busiest airports. About 250,000 passengers use HJAIA on an average day. As roads to HJAIA approach capacity, and the vehicular access from the north becomes congested and unreliable, a HSGT system, in conjunction with MARTA and other available transit modes, would provide an additional non-vehicular mode of airport access.

The six flights per day between HJAIA and Chattanooga's Airport, Lovell Field, account for 28% of its traffic. Lovell Field captures only 55% of the region's perspective enplanements. Since 80% of local passengers flying in and out of HJAIA live north of Interstate 20, Lovell Field may become a more desirable option for those in northwestern Georgia and far North Atlanta due to improved access provided by HSGT.

3.4 Maintain or Improve Regional Air Quality

There is a need to maintain or improve regional air quality. The *CAA of 1970* and the *CAA Amendments of 1990* require regional long-range transportation plans to support the achievement

and maintenance of air quality standards. These areas must demonstrate that proposed transportation improvements do not negatively impact the quality of the air.

The use of new technologies being considered for the HSGT and other approaches aimed at reducing the demand for trips in single occupancy vehicles, must be an integral part of all transportation plans and programs to ensure that these areas conform to federal air quality standards. Multi-purpose transportation corridors, such as high-speed rail lines in medians and designated lanes for high occupancy vehicles and local travel, are transportation strategies that can achieve a reduction in pollution levels.

3.5 Address Safety Deficiencies in Corridor

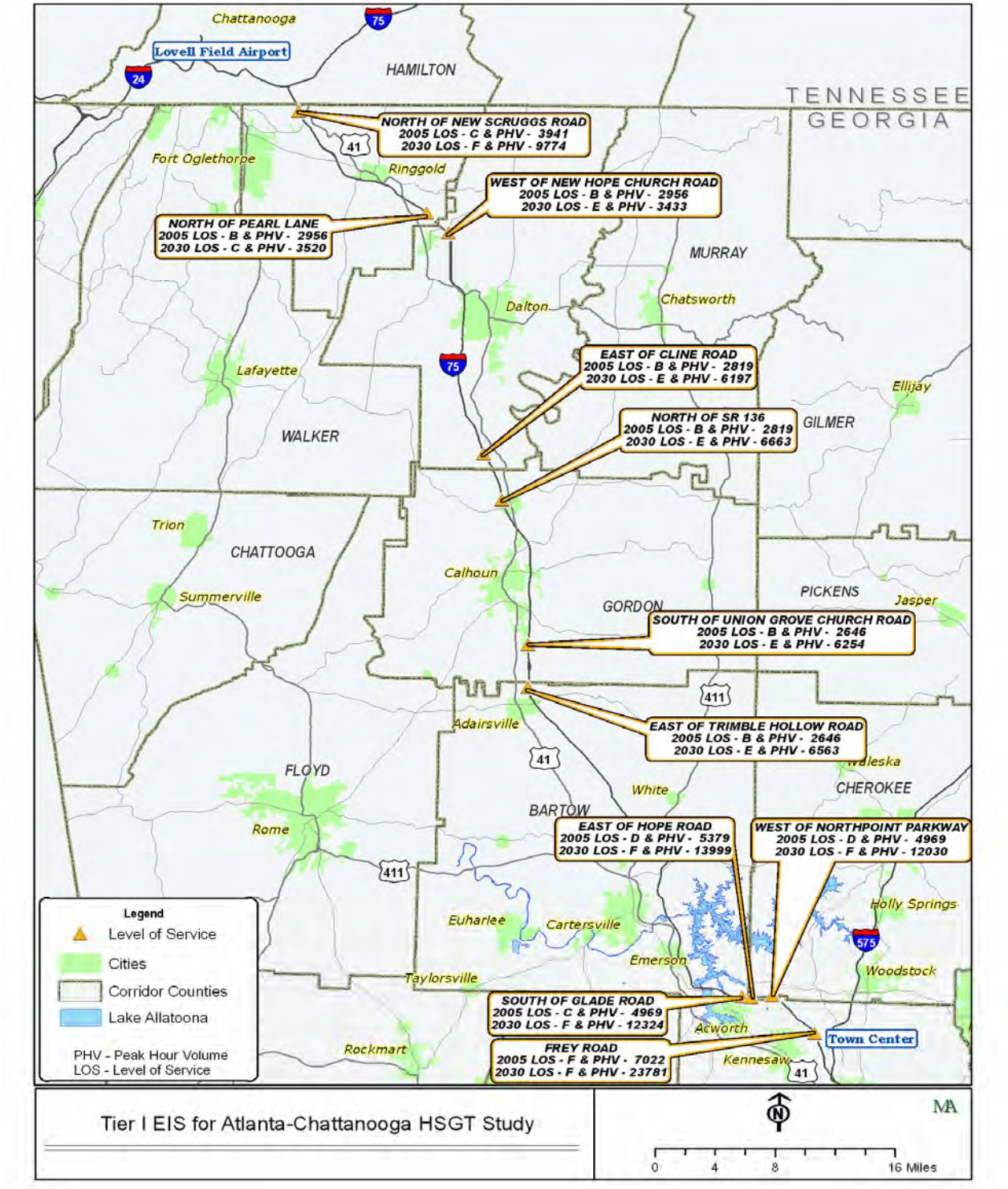
Safety is a paramount consideration in providing transportation capacity. Recent statistics indicate that passenger rail travel is one of the safest modes of transportation, while motor vehicle fatalities account for more than 90 percent of all transportation-related fatalities. Analysis of accident data on I-75 shows increasing numbers of accidents and injuries over time, as the study corridor becomes more congested.

In order to minimize the possibility of train-vehicular or pedestrian collisions and maximize safety, this HSGT project will incorporate grade-separated crossings and barrier intrusion systems. The HSGT system may contribute to a reduction in the accident rate as automobile and some truck trips (freight) are diverted from parallel highway facilities to the HSGT facility. Thus, accident rates are anticipated to decrease as a result of fewer vehicles on the roadway and a reduction in the number of vehicle miles traveled by the public.

3.6 Promote Economic Development

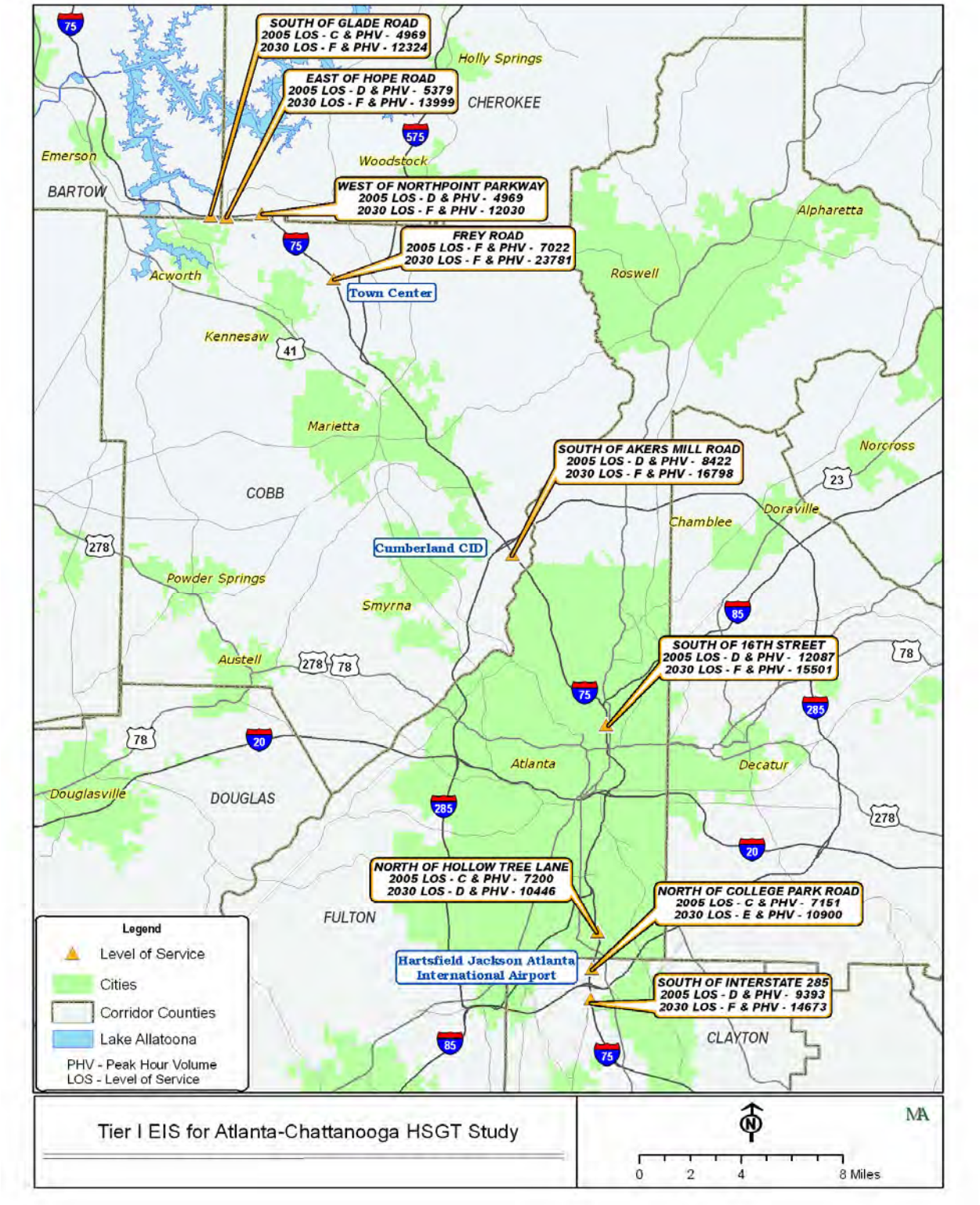
There is a need to promote economic development in the region within and between Atlanta and Chattanooga. The existing transportation system is one of the critical factors hindering economic development in the corridor. For years, the area has been hampered by an inadequate system of regional freeways that do not meet the demand of all users. Although there is potential for economic development at existing activity areas, efficient transportation access to these sites is not always present.

Figure 3 Levels of Service North



LOS calculated by Moreland Altobelli Associates, Inc- Staff

Figure 4 Levels of Service South



LOS calculated by Moreland Altobelli Associates, Inc- Staff

Construction and eventual operation of the HSGT system will create jobs and associated economic development. With the proper placement of HSGT stations, there could be an impetus to redevelop any nearby undeveloped and underdeveloped sites, which creates employment opportunities. In addition, the development of an alternative transportation system in the region could help revitalize local industries, which in turn will create new employment opportunities and job markets.

3.7 Reduce Energy Consumption

Transportation energy consumption is expected to grow by 30 percent within the next 15 years. Americans consume disproportionate shares of the world's energy, perhaps as much as 34 percent. Nearly half of the oil Americans use is imported from other countries, creating a heavy dependence on foreign oil. Traffic congestion resulted in a total annual average cost of $69.5 billion, 3.5 billion hours of delay, and 5.6 billion additional gallons of fuel.

There is a need to reduce energy consumption, both nationally and locally. Transportation accounts for approximately two-thirds of all oil consumed in this country. Implementation of a HSGT system could result in potential energy savings from reduced vehicle travel, and consequently, could reduce some of the demand for oil. As compared to other potential modal improvements within the corridor, HSGT has the potential to utilize less energy per passenger.

3.8 Enhance Intermodal Connections/Relationships

HSGT offers an alternative transportation mode that could reduce congestion and increase regional mobility and intermodal connectivity. By diverting travelers from single-occupant automobile trips, HSGT would not only help reduce roadway congestion in the corridor, but connect to existing and planned transit systems within the corridor, including, but not limited to MARTA, CCT and CARTA. These connections will provide relief for local and sub-regional highway facilities, and provide additional access, through non-automotive means, to the corridor's airports.

The provision of HSGT service will create momentum for the development of a multi-modal, intermodal transportation system by assisting in servicing longer distant trips, by non-automotive means, that local transit cannot serve.

3.9 Address Social Demands of Various Population Groups

Senior citizens and those with disabilities depend on access to user-friendly transportation facilities and services for mobility between major urban centers and visitor attractions. Bus service is provided sporadically along the corridor, which offers senior citizens and the disabled no alternative transportation means other than vehicle travel.

Business travelers lose productive working hours and tourists lose valuable recreation time because of delays on congested roadways and in congested airports. In order to ensure efficient

and cost effective travel for business and tourist travelers, more than one mode of transportation is desirable.

3.10 Support Comprehensive Land Use Planning and Smart Growth Initiatives

The opportunities of intermodal connectivity, improved mobility, and economic activity offered by a HSGT system support local land use planning goals and smart growth initiatives.

Integrating land use choices with transportation choices is the best approach to addressing the corridor's challenges and to promoting healthy, sustainable regional economic development and quality communities. Communities across the country are attempting to provide a range of mobility options to increase travel by non-automotive means, which would result in higher quality and increased development at activity centers, and encourage compact urban growth and transit-oriented development. The HSGT would connect major regional activity centers and encourage compact urban growth.

A HSGT system provides for more effective linkages to important regional activity centers and major business development areas, provides for worker access to jobs, business access to markets, and resident access to services. In addition, the fixed-guideway element of HSGT has the potential to influence and support denser development patterns. This occurs directly by presenting joint development opportunities and indirectly by enhancing land values around transit centers and fixed-guideway stations.

3.11 Provide Link in Southeast US Region HSGT system

TDOT is currently evaluating the Nashville to Chattanooga corridor, and has studied in the past the Louisville to Nashville corridor for HSGT. The existing Norfolk Southern freight right-of-way to operate new high-speed passenger train service between Macon and Atlanta, Greenville, Spartanburg and Charlotte, North Carolina, with continuing service into Virginia and the Washington-New York-Boston Northeast Corridor is also being evaluated. Other nearby HSGT corridors that have been analyzed include, but are not limited to, Charlotte to Washington DC, Atlanta to Savannah, Savannah to Jacksonville, and Jacksonville to Miami.

With high-speed rail corridors in the planning stages to the east, west, and south of Atlanta-Chattanooga corridor, this corridor is a major piece in a future hub system of high-speed train service from Atlanta throughout the Southeast. There is a need to advance HSGT as a network.

4. Conceptual HSGT Alternatives

The alternatives to be evaluated in the Atlanta to Chattanooga HSGT project would include implementing the current transportation plans for the corridor, and would also evaluate alternatives that would construct a new very HSGT project. The alternatives presented during scoping included the No-Build Alternative and various Build Alternatives, which are described in more detail in the following section. This discussion is broken into two distinct categories, alignment and technology. A graphic depicting the conceptual alignments and the station locations is provided as *Figure 5*.

4.1 No-Build Alternative

For the purposes of this project the Baseline Alternative or the No Action as per CEQ will be the same as the No-Build Alternative. This alternative includes the existing network highway and transit system projects. In addition, projects programmed in the adopted plans, which also includes low-cost, operationally oriented transit improvements are assumed in the No Build Alternative.

4.2 Build Alternative(s)

Several alignments have been developed along a variety of corridors to serve the purpose and need of the project. All conceptual alignments that have been developed begin at the HJAIA and end in downtown Chattanooga, Tennessee, after stopping at Lovell Field Airport on the outskirts of Chattanooga. Potential project alignments for the build alternative will be evaluated and narrowed down through the Alternatives Analysis process. Because of the size of the corridor and the multiple connection points that could be made the corridor has been divided into three sections, South, Central, and North. The alternatives presented during the scoping process are described below by segment within each corridor section.

4.2.1 Southern Corridor

This corridor extends from the Atlanta Airport to south of the Cobb/Cherokee and Polk/Floyd county lines. A map of the Southern corridor is provided as *Figure 6*.

I-75 MEDIAN ALIGNMENT - This alignment was developed to serve the most densely developed portion of the corridor and can briefly be described with the following defining features:

- Four stations; Hartsfield Airport (Southern Crescent Transportation Center), Downtown Atlanta (Five Points area) Galleria Station, and Town Center Station
- Aerial structure in the median of I-75 from the Hartsfield Airport to one mile south of I-20
- Tunnel through downtown Atlanta with a deep underground station near Forsyth and Alabama Streets with the tunnel ending north of Bankhead highway

Figure 5. Conceptual Alignments and Station Location Map

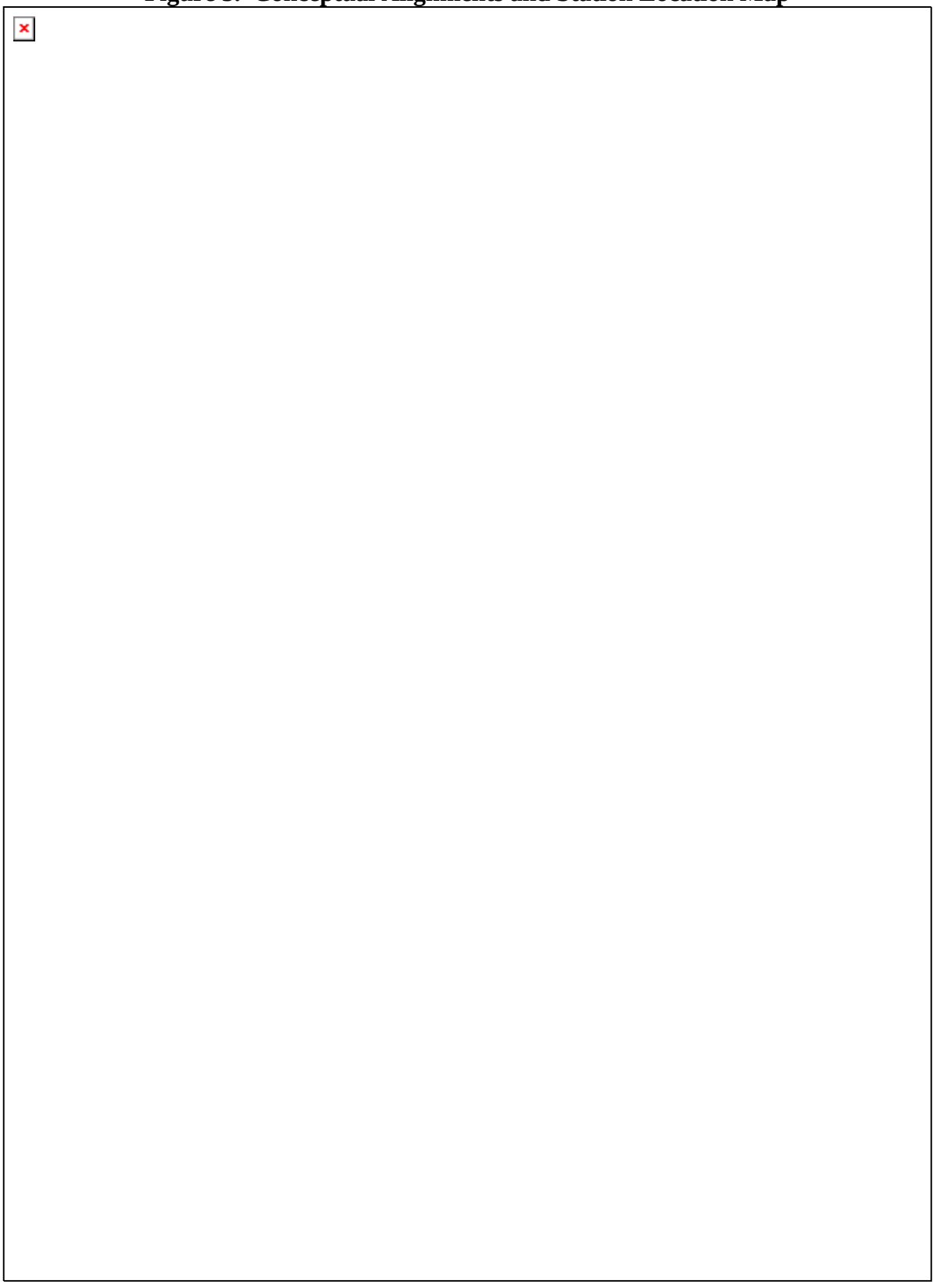
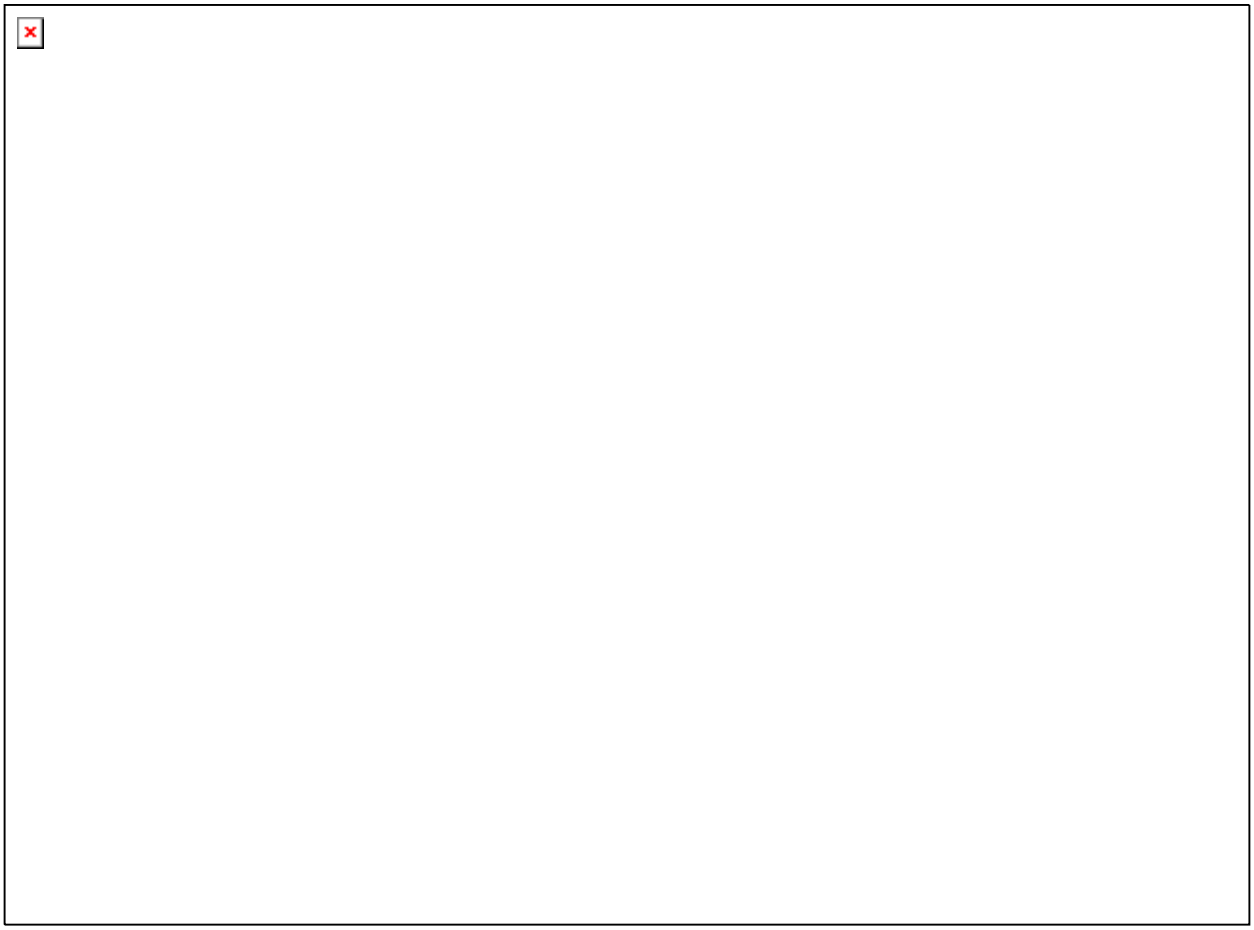


Figure 6. Southern Corridor Map



- Aerial structure in Howell Mill Road and back into the I-75 median
- Aerial Station in the median of I-75 near the Galleria with patron access from either side of the highway
- At-grade section in the median from north of I-575 junction to the Town Center Station with patron access from above and either side of the highway

I-75 CORRIDOR ALIGNMENT - This alignment is similar to the I-75 median alignment from the Atlanta Airport to approximately two miles north of the I-75 / I-285 junction where it begins to weave in and out of the median on aerial structure in order to allow for higher speeds. Other differences include the following:

- Aerial structure from Delk Road to Town Center Station
- Requires right-of-way outside of and adjacent to the I-75 corridor
- Aerial Station at Town center spanning the I-75 highway

I-285 BY-PASS - This segment starts out at the existing Hartsfield Terminal and MARTA station and continues on Camp Creek Parkway to I-285, and includes the following features:

- At-grade along the west shoulder of I-285
- Grade-separated alignment with the local highway interchanges
- An Intermodal Station with MARTA near MLK Highway
- A Galleria Station on the west side of I-75

I-285 TO I-75 CONNECTOR - This segment attempts to alleviate the aerial structure along Howell Mill Road with a mostly at-grade section along the railroad corridor to I-285 and back to I-75.

ROME ALIGNMENT – This segment provides a potentially higher speed route from the Atlanta Airport to I-75. The alignment bypasses downtown Atlanta and the highly developed I-75 corridor north of Atlanta. The alignment follows Camp Creek Parkway to I-285 and utility corridors through rural areas.

4.2.2 Central Corridor

This corridor extends from the Southern Corridor past Calhoun along the I-75 corridor. A map of the Central Corridor is provided as *Figure 7*.

I-75 MEDIAN ALIGNMENT- This alignment stays in the median of I-75 in a mostly at-grade configuration. This alignment would require that some narrow sections of the existing median be widened by shifting the mainline of I-75 to the outside. This segment proposes one station in the median of I-75 near Cartersville.

I-75 CORRIDOR ALIGNMENT- This alignment is similar to the I-75 median alignment, but proposes to weave in and out of the highway corridor to obtain higher speeds. Other features are noted as follows:

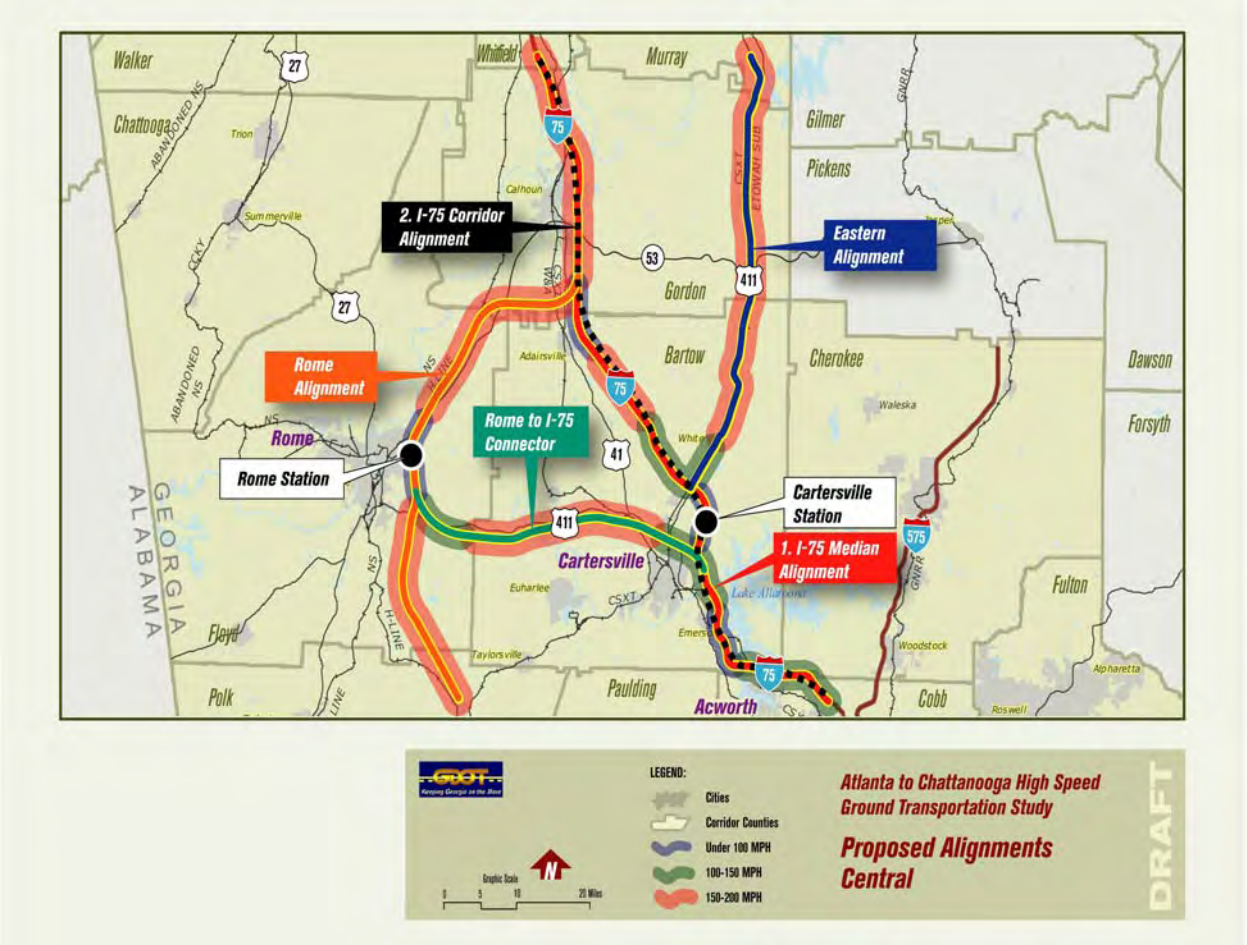
- It crosses Lake Alatoona with a high-speed curve passing through some residential areas
- It requires new right-of-way outside the I-75 highway
- It is a mix of at-grade, aerial structure and tunnel sections
- It has one station on the east side of I-75 near Cartersville

ROME ALIGNMENT - This alignment passes through rural areas with a high-speed alignment and serves Rome with a station. It is mostly at-grade and re-joins the I-75 alignment south of Calhoun.

ROME TO I-75 CONNECTOR - This segment provides a connection from the I-75 alignment to Rome. It is mostly at-grade with short sections of aerial and tunnel sections.

EASTERN ALIGNMENT - This alignment departs from the I-75 corridor north of Cartersville and generally follows the CSX corridor with a higher speed alignment. The alignment is generally at-grade with short sections of aerial structure. Please see *Figure 7*, which illustrates all of the alignment segments in the Central Corridor.

Figure 7. Central Corridor Map



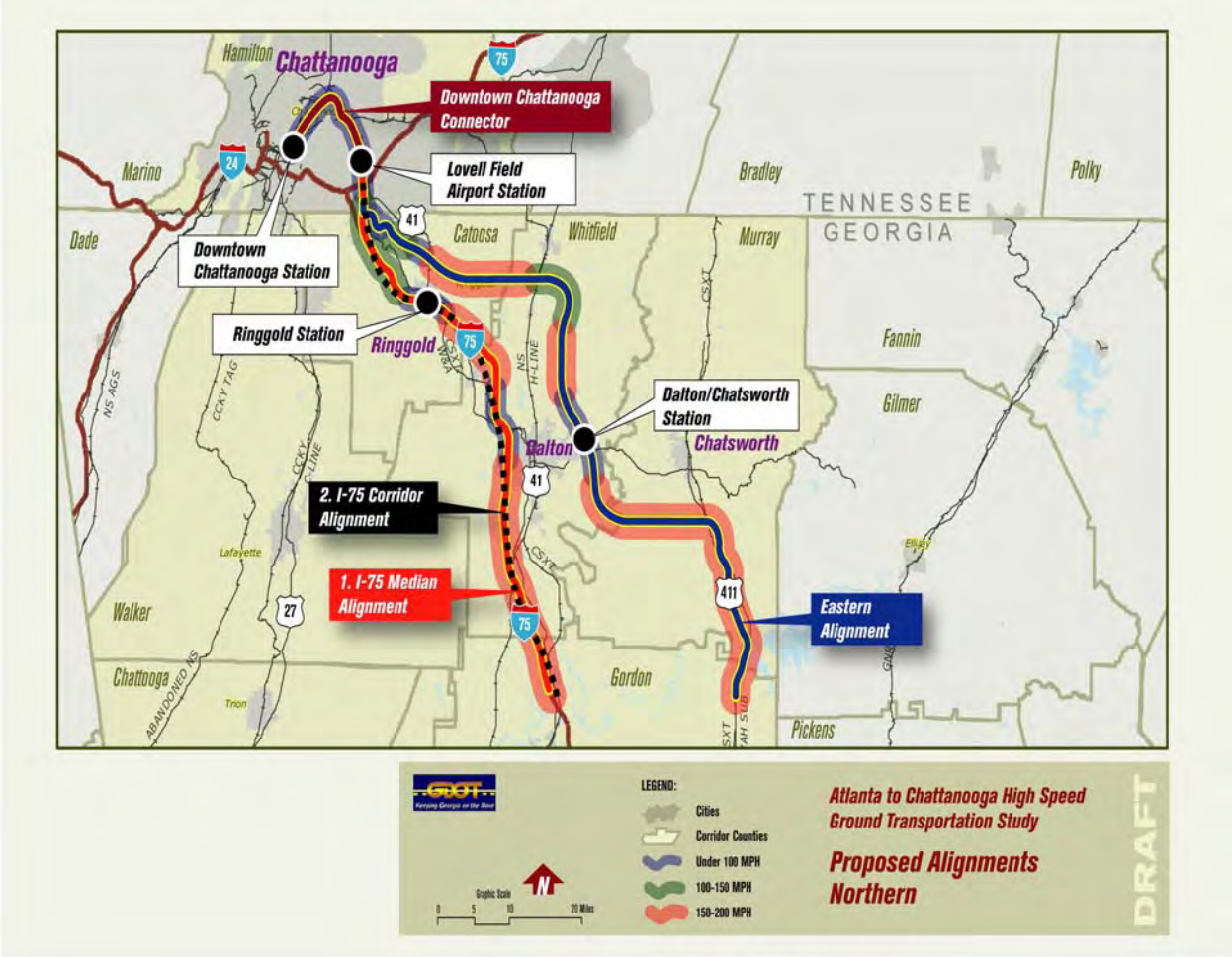
4.2.3 Northern Corridor

This corridor extends from Gordon County to downtown Chattanooga. A map of the Northern Corridor is provided as *Figure8*.

I-75 MEDIAN ALIGNMENT - This alignment mainly follows the median of I-75 and generally utilizes an at-grade configuration. Other features of this alignment include the following:

- This alignment would require that some narrow sections of the existing median be widened by shifting the mainline of I-75 to the outside.
- The alignment passes to the west of the I-75 corridor south of the Dalton area to avoid the more developed area, which would be accomplished with a mix of aerial and at-grade configurations.
- The Station is proposed to be located in the median with access from either side.
- It diverts from the I-75 median south of the I-24 corridor passing through residential and commercial areas to the Lovell Field Airport Station along Airport Road.

Figure 8. Northern Corridor Map



I-75 CORRIDOR ALIGNMENT - This alignment is similar to the I-75 median alignment, but proposes to weave in and out of the highway corridor to obtain higher speeds. Other features are noted as follows:

- The alignment is usually on the side of the highway corridor mostly aerial structure with long at grade sections and some tunnels.
- A Dalton Station is proposed on the east side of I-75.
- It diverts from the I-75 median south of the I-24 corridor passing through residential and commercial areas to the Lovell Field Airport Station along Airport Road.

EASTERN ALIGNMENT - This alignment continues in the CSX corridor in a mostly at-grade configuration, but would include some aerial structure sections.

- The alignment diverts from the CSX corridor south of Chatsworth through the rural areas.
- A Dalton Chatsworth Station is proposed near Chatsworth Road.

- North of the Station, the alignment is mostly at-grade with some significant tunnels and aerial structure sections.
- The alignment section ends at the Lovell Field Airport Station along Airport Road.

DOWNTOWN CHATTANOOGA CONNECTOR - This segment continues from the Airport Station to downtown Chattanooga following the railroad corridor in a mostly at-grade configuration. This segment includes a station located downtown near the railroad corridor.

4.3 Technology Alternatives

As described above the growth in both population and employment in the Atlanta to Chattanooga corridor is projected to continue resulting in increased travel demand for both goods and people. The transportation infrastructure that will serve this demand, including highways, transit and aviation are all projected to be at or above capacity within the next 20+ years, despite proposed improvements programmed to expand these facilities.

As indicated in the Draft Project Purpose and Need Statement in Section 3, the purpose of an Atlanta to Chattanooga HSGT system is to *enhance intercity passenger mobility in northwest Georgia, and part of Tennessee, by expanding passenger transportation capacity, increasing mobility and providing an alternative to highway and air travel in a manner that is safe, reliable, and cost-effective while avoiding, minimizing, and/or mitigating impacts on neighborhoods and the environment.*

Intercity passenger mobility has the potential to be provided by several modes. Based on past studies in this corridor it has been determined that HSGT is an excellent alternative mode when compared to highway (personal automobile, intercity bus) and air travel. HSGT can be provided by several different transportation technology options, ranging from diesel multiple units and commuter rail to Maglev. The various technology options and their applicability to this study are briefly discussed below.

4.3.1 Diesel Multiple Units (DMU)

DMU refers to a steel wheel on steel rail transit vehicle that is self-propelled, with the capacity to pull non-powered cars. Typically, these are European-style vehicles, which are utilized for regional and sub-regional passenger service, and are intended for low density, non-electrified lines up to 30 to 35 miles in length. Heavy duty DMU's have been in service in Europe for several decades, and were utilized in the past in this country for intracity rail and intercity rail. However, in this country, these cars were discontinued in the late 1940's, early 1950's, coinciding with the demise of intraurbans and trolleys. Recently, there has been renewed interest in DMU's, typically in cities that have old railroad spur lines, abandoned main lines or underutilized short lines that appear attractive for commuter rail. Some cities that have major rail lines, have found that DMU's have the potential to be a less costly alternative to Light Rail Transit or traditional push-pull commuter rail (see below). The issue until recently has been the crash strength of the DMU vehicles. The DMU's produced to date have been non-FRA compliant, and thus could not operate on the same track with freight or AMTRAK trains. However, recently advances in technology have allowed the development of FRA-compliant

vehicles. DMU technology has a maximum speed of approximately 70 miles per hour (mph), with an average operating speed of approximately 35 mph and is appropriate for regional and sub-regional intercity travel from suburb to urban core, but not for higher speed interstate, intercity travel. DMUs will not be evaluated in this study.

4.3.2 Commuter Rail

Commuter rail typically serves medium to high passenger volumes over medium to longer distances. The technology is steel wheel on steel rail. Commuter rail most often shares right-of-way with freight rail traffic. The traction power is provided by a diesel-powered locomotive, which pushes or pulls one or several passenger coach cars. Although the potential speed of this technology is 79 to 110 mph, because the general station spacing is approximately seven to 10 miles, the average operating speed is well under 59 mph**.** Typically, the distance between stops is greater than other forms of fixed guideway transit (heavy rail, light rail), and the number of stops at the destination (the urban core) is limited. Commuter rail is currently utilized throughout the United States as a regional transportation alternative to the automobile or intercity and express bus to access the urban core from outlying suburban communities. Recent commuter rail projects cover distances ranging from 31 miles in Nashville to 75 miles in South Florida and in Seattle. The State of Georgia is currently planning for commuter rail from Atlanta to locations such as Athens (72 miles, 11 stops), Gainesville (53 miles, 11 stops), Canton (43 miles, 8 stops), Bremen (52 miles, 6 stops), Senoia (38 miles, 7 stops), Madison (68 miles, 9 stops) and Lovejoy (26 miles, 7 stops) with an extension to Macon (103 miles, 13 stops). As with the DMU, this technology is appropriate for regional and sub-regional intercity travel from outlying areas to the urban core, but is not ideal for higher speed interstate intercity travel. Commuter rail will not be evaluated in this study.

4.3.3 Intercity Rail

Intercity Rail is provided in this country by AMTRAK, which serves medium to higher passenger volumes over long distances. This technology utilizes diesel-powered locomotives that are steel wheel on steel rail, with coach, first class, sleeper, dining and club cars. As with commuter rail technology, intercity rail as provided by AMTRAK shares the right-of-way with freight rail traffic. With commuter rail, this sharing of the track is not overly problematic, as commuter rail schedules are typically peak hour oriented and freight service can be scheduled around passenger service. With intercity rail, this is not the case. Intercity rail runs on daily scheduled service, and often crosses several state lines as well as railroad territories. Thus, because of freight service on the same track, intercity rail is often several hours off schedule. The average station spacing for intercity rail is typically 30 miles or more. While the potential speeds are limited to the class of the railroad, approximately 79 to 110 mph, the average operating speeds are 69 mph and below in order to comply with municipal speed restrictions, avoid conflict with freight traffic, and be compatible with unprotected corridors with multiple grade crossings and vehicular points of conflict, and alignment characteristics of the track. While this technology is appropriate for intercity travel, the slow average operating speeds, the shared track utilization, the multiple grade crossings and corresponding safety issues, and the

inability to provide a travel time competitive with automobile travel within the corridor, eliminates the consideration of this technology in this study.

4.3.4 "Low" High Speed Intercity Rail

"Low" High Speed Intercity Rail is provided in this country by AMTRAK, which serves the Northeast corridor between Boston, New York, Philadelphia and Washington D.C.. This technology utilizes both diesel and electric powered locomotives that are steel wheel on steel rail, with coach, first class, and club cars. Unlike commuter rail and intercity rail technology, high-speed intercity rail as provided by AMTRAK, when it operates at high speeds, is on exclusive track in a sealed corridor. The average station spacing for high-speed intercity rail is typically 75 miles or more. While the potential speeds are limited to the class of the railroad, approximately 79 to 110 mph, the potential speeds on the Northeast corridor can be as high as 150 mph, with the average operating speeds of 90 mph While this technology is appropriate for intercity travel, previous studies conducted in the Atlanta to Chattanooga corridor documented the inability of this "low" high-speed technology to provide a travel time competitive with automobile travel within the corridor. Pending a reaffirmation of the previous study's conclusion through patronage forecasting, it is anticipated that this technology would be eliminated from consideration in this study.

4.3.5 Very High Speed Rail (VHS)

VHS Rail serves higher passenger volumes over long distances. This technology utilizes electric-powered locomotives that receive energy from overhead wires to the vehicle. The vehicles themselves are steel wheel on steel rail, with coach, first class, sleeper, dining and club cars. Unlike commuter and intercity rail, this technology is on totally grade separated right of way, which eliminates potential points of conflict with pedestrians or other non rail vehicles. In addition, there is no shared use of the track with freight, so higher speeds and passenger schedules can be met. The station spacing can be as low as 30 miles, and average 50 to 75 miles in order to take advantage of the speed of the technology. Speeds of this technology are approximately 220 mph, although recent advances allow this technology to travel at speeds in excess of 320 mph. While the average operating speed of this technology is approximately 180 mph, there are several lines operating in Europe at average speeds of 200 mph Although this technology does not currently operate in the U.S., it is utilized throughout Europe and Asia including the TGV in France, the ICE in Germany, and the Shinkansen in Japan. This technology is well suited for intercity travel, and previous studies conducted in the Atlanta to Chattanooga corridor documented the ability of this high-speed technology to provide a travel time competitive with automobile travel within the corridor. The application of VHS technology within the corridor will be evaluated.

4.3.6. Maglev

Maglev serves higher passenger volumes over long distances. This technology utilizes either attractive or repulsive magnetic forces to lift and propel the train along a guideway. Maglev allows the vehicles to hover or float a small distance above the guideway, thereby eliminating

friction and rolling resistance. The power is supplied to the magnets through the track. Maglev uses a unique guideway and could also operate in a shared right-of-way similar to VHS systems. Like VHS, this technology is on totally grade separated right of way, which eliminates potential points of conflict with pedestrians or other non rail vehicles, and higher speeds and passenger schedules can be met. The station spacing can be as low as 30 miles, and average 50 to 75 miles in order to take advantage of the speed of the technology. Current systems under development are designed for maximum operating speeds above that of VHS technology, 310 mph and beyond. A Japanese maglev train has reached speeds of 360 mph While there are currently no Maglev systems in intercity revenue service, the German Transrapid system is currently in commercial operation in China on a track over 20 miles long between downtown Shanghai and the airport. In addition, the 25 mile closed loop test track in Elmsland, Germany had been in operation for over 20 years. This system has also been certified for use in Germany for a Hamburg-Berlin line, and a 23-mile line running from Munich Airport to the city center is approved for construction. This technology is appropriate for intercity travel, and previous studies conducted in the Atlanta to Chattanooga corridor documented the ability of this high-speed technology to provide a travel time competitive with automobile travel within the corridor. This technology will be considered in this study.

5. Scoping Process

The scoping process for the Atlanta to Chattanooga HSGT corridor is being conducted in accordance with 23 CFR 771.123 and 40 CFR 1501.7 to solicit participation from agencies, counties, municipalities, and the public under the NEPA process. The scoping process is used to identify the range of alternatives to be studied, the potential impacts to the human and natural environments, and the key issues and concerns to be addressed in the EIS. This section of the report documents the scoping efforts conducted for the Atlanta to Chattanooga HSGT Study and the results of those efforts.

The scoping open houses were announced using newspaper advertisements and news releases. The advertisement appeared in the Atlanta Journal Constitution on September 2 and September 16. In addition, a report by the Associated Press was published and aired by most area media outlets. There were relevant individual news stories on the scoping open houses in at least three northwest Georgia newspapers: the Rome-News Tribune, The Daily Tribune-News of Cartersville, and the Chattanooga Times-Free Press. Some of these stories and reports were generated by pre-event news releases and others were coverage of the open houses themselves and the public's input.

5.1 Stakeholder Participation

Two agency scoping meetings and three public scoping open houses were held for the project. The agency scoping meetings were held in Atlanta and Chattanooga on September 18th and September 20th, respectively. The September 18th meeting was held at 10:00 A.M. at the GDOT Office of Environment/Location, in Atlanta. The September 20th meeting was held at 10:00 A.M. at the Hamilton County Public Library in Chattanooga.

The scoping meetings were announced in a Notice of Intent (NOI) that appeared in the Federal Register on August 22, 2007. A copy of the NOI and the legal advertisement is included as *Appendix A and Appendix B.* Other means of advertising included direct mailings to federal and state environmental regulatory and review agencies and local government officials, which also initiated the Early Coordination Process. Public Scoping open houses were held between 5:00 P.M and 7:30 P.M in Powder Springs, Rome, and Chattanooga on September 18th, 19th, and 20th, respectively. The invitations to stakeholders to participate in the scoping process are summarized in the following sections.

5.1.1 Public and Agency Open House/Meeting Format

<u>Public</u>

A series of three open houses for public input were held along the project corridor. A series of thirty exhibit graphic boards were displayed to help explain the project. There were individuals from the consultants available to answer questions of the attendees. A Scoping Booklet handout was given out to each of the attendees. A total of 75 people attended the three public

information open houses. Copies of the Public Meeting Summaries are provided as *Appendix D* and a copy of the Scoping Booklet is provided as *Appendix H.*

Agency

There were two meetings for agency input held in the corridor. The meetings started with GDOT giving an overview of the project, after which the various consultants gave a presentation explaining the scope of the project. After the presentation, there was a question and answer portion, where the agencies could ask questions, provide their input, or specify analysis that should be considered as part of the EIS process. A total of 17 people representing various agencies attended. Copies of the Agency Meeting Minutes are provided as Appendix E.

5.2 Mailings

State and federal environmental regulatory and review agencies, Native American tribal councils, municipalities, counties, floodplain administrators, and other government organizations and officials were notified of the scoping meetings and scoping process through a mailing. Copies of example letters and mailing lists are included in *Appendix F and G*. Federal and state agencies, regional government planning organizations, Native American tribes and associated agencies, counties and municipalities, and members of Congress contacted are listed below.

5.2.1 Federal and State Agencies

U.S. Army Corps of Engineers
U.S. Center for Disease Control - National Center for Environmental Health
U.S. Department of Agriculture, Natural Resources Conservation Service
U.S. Department of Homeland Security
  Federal Emergency Management Agency
U.S. Department of Housing and Urban Development
U.S. Department of the Interior
  Fish and Wildlife Service
  Geological Survey - Environmental Affairs Program
  National Park Service
U.S. Department of Transportation
  Federal Highway Administration
  Federal Railroad Administration
  Federal Transit Administration
U.S. Environmental Protection Agency – Region IV
Georgia Department of Natural Resources (GDNR)
  Division of Floodplain Management
  Environmental Protection Division
  Georgia Natural Heritage Program
  Historic Preservation Division - State Historic Preservation Office (SHPO)
Georgia Forestry Commission

Tennessee Department of Economic and Community Development – Community Development Division
Tennessee Department of Environment and Conservation
Tennessee Historical Commission – State Archaeologist and SHPO

5.2.2 Regional Government Planning Organizations

Atlanta Regional Commission (ARC)
Chattanooga - Hamilton County Regional Planning Council
Coosa Valley Regional Development Center (RDC_
North Georgia RDC

5.2.3 Native American Tribes and Associated Agencies

Absentee-Shawnee Tribe of Oklahoma
Alabama-Coushatta Tribe of Texas
Alabama-Quassarte Tribal Town of the Creek
Cherokee Nation of Oklahoma
The Chickasaw Nation
Choctaw Nation of Oklahoma
Coushatta Tribe of Louisiana
Eastern Band of Cherokee Indians of North Carolina
Eastern Shawnee Tribe of Oklahoma
Kialegee Tribal Town of the Creek Nation
Loyal Shawnee Tribe of Oklahoma
Miccosukee Tribe of Indians of Florida
Mississippi Band of Choctaw Indians
Muscogee (Creek) Nation of Oklahoma
Poarch Band of Creek Indians
Seminole Tribe of Florida
Seminole Nation of Oklahoma
Thlopthlocco Tribal Town
United Keetoowah Band of Cherokee Indians
Yuchi Tribe of Oklahoma
Advisory Council on Tennessee Indian Affairs
Bureau of Indian Affairs Eastern Agency
Tennessee Commission of Indian Affairs
Tennessee Native American Convention

5.2.4 Counties

Bartow County	Gordon County
Catoosa County	Gwinnett County
Chattooga County	Hamilton County
Cherokee County	Murray County
Clayton County	Polk County

Cobb County
Douglas County
Floyd County
Paulding County
Walker County
Whitfield

5.2.5 Municipalities

Acworth
Atlanta
Austell
Ball Ground
Canton
Cartersville
Cave Spring
Chattanooga
College Park
Dalton
East Point
Fairmont
Forest Park
Fort Oglethorpe
Hapeville
Holly Springs
Jonesboro
Kennesaw
Lafayette
Lawrenceville
Marietta
Nelson
Powder Springs
Rex
Ringgold
Riverdale
Sandy Springs
Smyrna
Varnell
Waleska
Woodstock

5.2.6 Chambers of Commerce

Atlanta Chamber of Commerce
Chattanooga Chamber of Commerce

5.2.7 United States Congress

Senator Saxby Chambliss
Senator Johnny Isakson
Representative Phil Gingrey

Representative John Lewis
Representative John Linder
Representative Tom Price

6. Scoping Meeting Results

Public Meetings

Three public meeting were held on September the 18th, 19th and 20th between 5:30 to 7: 00 PM. The following is a brief synopsis of the results of each of the open houses:

Powder Springs Public Scoping Public Information Open House, September 19, 2007-

A total of 13 people attended . From those attending, 10 comment forms, no letters and 2 verbal statements were received. An additional letter from the City of Atlanta's Department of Aviation was received during the ten-day comment period following the open house, totaling thirteen comments. They are summarized as follows:

No. Opposed	No. In Support	Uncommitted	Conditional
1	4	1	4

Rome Scoping Public Information Open House, September 19, 2007-

A total of 14 people attended. From those attending, 3 comment forms, no letters and 2 verbal statements were received. No additional comments were received during the ten-day comment period following the open house, for a total of 5 comments. They are summarized as follows:

No. Opposed	No. In Support	Uncommitted	Conditional
0	3	0	2

Chattanooga Scoping Public Information Open House, September 20, 2007-

A total of 49 people attended. From those attending, 24 comment forms, no letters and 1 verbal statement were received. No additional comments were received during the ten-day comment period following the open house, for a total of 25 comments. They are summarized as follows:

No. Opposed	No. In Support	Uncommitted	Conditional
0	20	3	2

Copies of the Public Meeting Summaries are provided as ***Appendix D.***

Government Agency Meeting

The Atlanta government agency meeting was attended by a total of 17 participants representing the following agencies and organizations; ARC, Chattanooga Enterprise Zone, Coosa Valley RDC, USACE Savannah District, US EPA Region IV, FHWA, GDNR-Historic Preservation Division, GDOT Planning Data and Intermodal Development and GDOT Office of Environment/Location

The topics that were raised at the Atlanta Agency meeting are as follows:

- Greyhound bus travel times and stops along the project corridor
- Concerns about available capacity along the CSX and Norfolk Southern rail lines
- Clarification on the freight component of the HSGT system
- Concerns over HSR using existing freight lines
- Concerns whether the project would meet the standards of the Etowah Conservation Habitat Plan
- Request to review the methodology and the level of detail proposed in the Tier I EIS
- Concerns over whether any reservoirs were located in the vicinity of the proposed corridor
- If the project would comply with Section 6002 of the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users regarding new obligations for a public comment process
- If other corridors were being considered other than rail corridors
- If the number and locations of stations limits potential speed
- If origin destination data would be incorporated into ridership projections
- Were there any preliminary cost figures and what those figures were
- How wide typical support columns would be in elevated sections
- Whether monorail systems had or would be considered
- How the project would be integrated with the Bus Rapid Transit Plans along I-75
- Where VHS or Maglev has been implemented in the US
- How high the elevated sections would have to be above ground
- If another alternative could be considered that served Cartersville instead of Rome
- If quickest route between Atlanta and Chattanooga is desired, then the Rome Alignment makes sense
- If a reduction in landings is expected at HJAIA was anticipated as result of the project
- Comparison of the energy usage of VHS and Maglev
- Was HSGT included in any municipality/county transportation plans?
- The projects effect on the State Implementation Plan
- The width of the anticipated or recommended corridor

The topics raised at the Chattanooga Agency meeting are as follows:

- The proposed station locations were questioned and it was thought that Dalton should have a station closer to town rather than the Chatsworth/Dalton station shown

- Additional GIS data was available and should be used as appropriate

Copies of the minutes from the agency meetings are provided as ***Appendix E*****.**

6.1 Scope Changes

One of the changes that came out of the scoping process is the inclusion of a Western Suburb Alignment, which would be located in the Southern Corridor. This Alignment has a potentially higher speed alignment from the Atlanta Airport to I-75. The alignment bypasses downtown Atlanta and the highly developed I-75 corridor north of Atlanta. The line follows Camp Creek Parkway and utility corridors through rural areas joining the I-75 corridor near Lake Altoona south of Cartersville. This alignment was added to the list of potential alternatives for consideration and analysis as part of the Tier I EIS along with the other alternatives identified in Section 4.2 of this report.

6.2 Next Steps

The purpose of the Scoping Phase for the Tier I EIS is to identify potential project alternatives that will be screened to determine if they are reasonable and feasible. The alternatives that are determined to best meet the project purpose and need while minimizing impacts to the social, cultural, and natural environments would then be evaluated further and in greater detail in the EIS. Another desired outcome of the scoping process is to identify the specific environmental impacts to be assessed, and to identify how the public would like to be involved throughout the study. After the close of the scoping period, GDOT evaluated the comments and input received from the agencies and the public regarding the project purpose and need, methodology to complete the study, station locations, alignments, technology, and sensitive ecological issues and made applicable changes to the study, which includes the ongoing development of an Agency Coordination Plan, and the addition of a new concept alignment to be considered as part of the analysis..

6.2.1 Evaluation Methodology

Based on a review of existing conditions, previous transportation studies, local land use and transportation plans, and input from the public, this study identified a wide range of potential alternatives for the implementation of a HSGT solution for the Atlanta to Chattanooga corridor. This “universe of alternatives” included both possible alignments (broken down into segments) and a range of transportation technologies. Potential alignment segments, station locations and different technologies would be evaluated further through a modeling process that compares factors including travel time, patronage, and operation and maintenance costs to name a few of the evaluation criteria. The various conceptual alternatives alignments would also undergo an environmental screening to identify potential environmental impacts associated with each alignment. Ongoing public involvement and stakeholder coordination would also be an important feature of the alternatives screening and development process.

6.2.2 Methodology for Narrowing Alternatives

In developing a methodology for the screening of alternatives for the project, the following general approach would be followed:

1. **Prepare a Universe of Alternatives –** A series of conceptual alternatives that represents all feasible connections between Atlanta and Chattanooga has been developed, on which the initial screening would be completed.
2. **Develop Measures of Effectiveness –** Measures of Effectiveness (MOEs) are used to compare the differences between the various alternatives and determine the extent that each meets the project purpose and need.
3. **Complete Preliminary Screening-** Alternatives would be evaluated based on the MOEs.
4. **Identify Environmental Areas of Concern –** Each of the alternative alignments would be evaluated to identify potential areas of environmental concern.
5. **Narrow Alternatives** – Those alternative that perform the best when compared against the MOEs, and are determined to have the least impact to areas of environmental concern would be advanced for further evaluation until a preferred alternative is defined. The preferred alternative will identify the corridor and the technology.
6. **Keep Stakeholders Involved** – Continued public outreach on this project will be an important part of the alternatives development and decision making process as they are narrowed. An upcoming round of public outreach is currently being planned to begin meeting with affected municipalities in the corridor to begin discussions regarding potential alignment and station locations. Outreach to environmental justice populations is also planned in the early phases of the Public Involvement Plan.