SECTION 1
PURPOSE AND NEED

1.1 INTRODUCTION

The potential for high speed rail to address a portion of the transportation needs of the State of Florida has a long history. The current effort to evaluate high speed rail's potential was initiated following an enactment by Florida's voters. In November 2000, Florida's voters adopted an amendment to the Constitution of the State of Florida that mandated the construction of a high speed transportation system in the state. The amendment required the use of train technologies that operate at speeds in excess of 120 miles per hour and consist of dedicated rails or guideways separated from motor vehicle traffic. The system was to link the five largest urban areas of Florida and construction was mandated to begin by November 1, 2003, to address a high speed ground transportation system.

The purpose of Article 10, Section 19 of the Constitution of the State of Florida was, "to reduce traffic congestion and provide alternatives to the traveling public." In June 2001, the Florida State Legislature, through the Florida High Speed Rail Authority Act, created the Florida High Speed Rail Authority (FHSRA) and charged the organization with the responsibility for planning, administering, and implementing a high speed rail system in Florida. The act also mandated that the initial segment of the system be developed and operated between St. Petersburg, Tampa, and Orlando areas with future service to the Miami area.

Following its creation in 2001, the FHSRA proceeded to implement the responsibilities set forth in the Florida High Speed Rail Authority Act. The FHSRA's proposal included the provision of high speed rail passenger service between downtown Tampa and Orlando International Airport. This project, while viewed by FHSRA as the first phase of the eventual achievement of the constitutional goal, has independent utility, in that it serves as an important transportation purpose in its own right and its implementation is not dependent upon future actions that may or may not be taken to expand high speed rail service beyond this project's limits. The FHSRA, with guidance from the federal lead agency, the Federal Railroad Administration (FRA), undertook a number of other actions to advance the high speed rail system, which are discussed in greater detail in Section 2, including preparation and issuance of the Draft Environmental Impact Statement (EIS) in August 2003 that preceded this Final EIS.

The FHSRA envisions possible future federal financial support for the project that might be provided through the FRA. While FRA and the U.S. Department of Transportation (USDOT) have several loan and loan guarantee programs that might be potential sources of future financial assistance, there are currently no existing grant or federal bond financing programs that would support the type of financial involvement envisioned by FHSRA. Several proposals to create such programs, however, are currently pending before Congress. The FRA may also have certain regulatory responsibilities, with respect to the project, which are consistent with its statutory railroad safety oversight activities. The Federal Highway Administration (FHWA) and the U.S. Army Corps of Engineers (USACE) are cooperating agencies for this document.

On November 2, 2004, Florida voters repealed the amendment to the Constitution of the State of Florida in its entirety resulting in removal of the constitutional mandate for a high speed rail system. This action, however, did not affect the legislative mandate for the FHSRA and the Florida High Speed Rail Authority Act remains in effect pending any action that the Florida Legislature may choose to take. The future of the proposed high speed rail system in Florida is thus uncertain. Notwithstanding this uncertainty, the FHSRA continues to believe that high speed rail can serve an important transportation purpose. FHSRA has also determined, and the FRA agrees, that it is in the best interest of the State of Florida to complete and issue this Final EIS. Considerable resources have been invested in bringing the document to this late stage of development and completing the environmental impact assessment process through issuance of a Final EIS has significant value, even if no further action is taken at this time to advance the proposed system.

The Florida High Speed Rail (FHSR) system proposed by the FHSRA to be located between downtown Tampa and Orlando International Airport would be developed on new track, with the great majority of the system located within existing right-of-way (ROW) of Interstate 4 (I-4), Interstate 75 (I-75), the Florida's Turnpike Bee Line Expressway (S.R. 528), the Orlando-Orange County Expressway Authority's (OOCEA) Central Florida Greeneway (S.R. 417), or the CSX railroad. Figure S-1 presents the study area. This Final EIS establishes the specific location and major design concepts of the proposed FHSR system from Tampa to Orlando in Florida, a distance of approximately 95 miles (mi).

The FHSRA has prepared this Final EIS with the FRA as the federal lead agency. The FRA is an operating administration within the USDOT and has oversight responsibility for the safety of railroad operations nationwide. Cooperating federal agencies include: FHWA and USACE. The FHSRA and the FRA have determined that an EIS is appropriate in order to satisfy the *National Environmental Policy Act of 1969* (NEPA)[1].

Preparation of this EIS, together with its circulation and review and comment, is designed to ensure that all viable alternatives for the project are evaluated, including a No-Build Alternative; that all substantial transportation, social, economic, and environmental impacts are assessed; and that 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 procedures and Council on Environmental Quality (CEQ) regulations.

1.2 PURPOSE

The purpose of FHSR is to enhance intercity passenger mobility in Florida by expanding passenger transportation capacity and providing an alternative to highway and air travel. The FHSR Tampa-Orlando phase addresses concerns of increasing vehicular congestion on the I-4 corridor. Currently, few convenient alternatives exist that could reduce commuter, business, freight, and tourist highway traffic. In 1991, the Florida Department of Transportation (FDOT) established a limit of ten lanes (five lanes in either direction) at any location on the Florida Intrastate Highway System (FIHS). The three Master Plans governing I-4 within the project area

were all adopted under this regulation[2]. Interim construction and ultimate ROW acquisitions are consistent with these Master Plans. The Master Plans also identify an envelope for High Occupancy Vehicles or Light Rail Transit.

In 2002 and 2003, FDOT Procedures 525-030-250-f [3] and 525-030-255-c[4] set up specific criteria for widening all roads on the FIHS. These procedures were developed based on year 2000 legislation (Section 335.02(3) F.S.), which establishes criteria that must be considered when determining the number of lanes on the FIHS. The criteria include consideration of multi-modal alternatives and the consideration of local comprehensive plans and approved metropolitan long range transportation plans (LRTPs). The procedure notes:

> Nothing in Section 335.02 (3) F.S. precludes a number of lanes in excess of 10 lanes. However, before the Department may determine the number of lanes should be more than ten, the availability of ROW, and the capacity to accommodate other modes of transportation within the existing ROW must be considered.

The Metropolitan Planning Organizations (MPOs) within the study area support the establishment of the FHSR system within their jurisdictions as part of a balanced, multi-modal transportation system. They have worked closely with representatives of the FHSRA in the development of this EIS.

Federal and congressional transportation initiatives, most notably the *Transportation Equity Act for the 21st Century* and its predecessor the *Intermodal Surface Transportation Efficiency Act*, encourage public transportation investment that increases national productivity and domestic and international competition while improving safety, social, and environmental conditions. These policies encourage investments that:

- Link all major forms of transportation.
- Improve public transportation systems and services.
- Enhance efficient operation of transportation facilities and services.

Together, these statements of policy support the purpose of this proposed FHSR project.

1.3 NEED

Transportation demand and travel growth, as prompted by social demand and economic development, is outpacing existing and future roadway capacity. Increasing population, employment, and tourism rates continue to elevate travel demand in the study corridor as documented by forecasts prepared by the University of Florida Bureau of Economic and Business Research (BEBR). Currently, the FIHS is operating at or near capacity. Although capacity improvements to the interstate system along the corridor are either currently underway or planned for the near future, they are considered interim, "first phase" improvements. Although not funded or programmed, ultimate capacity improvements are needed to accommodate future travel demand. This need is further emphasized by increased traffic volumes, congestion, and accident rates in the study corridor. Social and economic demands will

continue to call for provision of alternative transportation choices for those individuals who cannot or choose not to drive, as well as those travelers looking for alternatives to congested highways.

1.3.1 Transportation Demand and Travel Growth

Florida's growing economy is expected to attract projected population and fuel tourism growth. The increase in the number of automobiles will far out-strip the state's ability to provide enough safe, efficient, and environmentally acceptable solutions with existing highway and airport infrastructure.

Florida is the fourth most populous state in the U.S. with a current population of 16 million, and a projected population of 24 million by 2030, according to the Florida Statistical Abstract 2001[5]. The ratio of licensed drivers per residence is the third highest in the nation, indicating the demand for, and high reliance on, automobile travel for mobility and access in the state. Travel demand in the corridor between Tampa and Orlando was estimated in the Investment Grade Ridership Study, Summary Report[6] prepared by the FHSRA in November 2002. As part of this study, information regarding forecasts of population, employment, and hotel room availability was obtained from the three MPOs within the corridor - Tampa Bay, Polk County, and Orlando. These MPO forecasts were compared on a county level to forecasts prepared by the BEBR to confirm that the MPO data was consistent with the official state data (the BEBR estimates).

Total corridor population is forecast to increase 33 percent from 2002 to 2025 as shown in Table 1-1. The population of the Orlando region (Orange, Seminole, and Osceola counties) was expected to increase by 46 percent over this same period. The Tampa Bay region (Hillsborough, Pasco, and Pinellas counties) is forecast to increase by 23 percent and Polk County by 38 percent. Additionally, employment in the corridor was expected to increase 47 percent by year 2025 as shown in Table 1-2. The Orlando and Lakeland regions were estimated to increase by approximately 57 percent and the Tampa Bay region by approximately 37 percent.

An increase in the number of hotel rooms is one measure used to estimate growth in visitor travel within the corridor. Overall, the number of hotel rooms was estimated to increase approximately 83 percent between 2002 and 2025 as shown in Table 1-3. The highest rate of increase was expected in the Orlando region (approximately 100 percent). In the Tampa Bay region, the number of hotel rooms was expected to increase approximately 47 percent, and in Polk County by approximately 22 percent.

Table 1-1
Summary of Population Trends in
FHSR Tampa-Orlando Corridor

Region	Existing 2002 Population	Projected 2025 Population	Percent Change
Orlando			
Orange County	938,367	1,411,809	50
Seminole County	380,425	475,498	25
Osceola County	183,637	314,054	71
Sub-Total	1,502,429	2,201,361	46
Lakeland			
Polk County	451,515	625,725	38
Tampa Bay			
Hillsborough County	981,712	1,321,758	35
Pinellas County	904,827	963,138	6
Pasco County	341,337	460,669	35
Sub-Total	2,227,876	2,745,565	23
Overall Study Corridor	**4,181,820**	**5,572,651**	**33**

Source: Investment Grade Ridership Study, Summary Report

Table 1-2
Summary of Employment Trends in
FHSR Tampa-Orlando Corridor

Region	Existing 2002 Employment	Projected 2025 Employment	Percent Change
Orlando			
Orange County	742,901	1,150,908	55
Seminole County	196,323	321,105	64
Osceola County	66,296	110,810	67
Sub-Total	1,005,520	1,582,823	57
Lakeland			
Polk County	181,722	286,344	58
Tampa Bay			
Hillsborough County	698,108	1,055,801	51
Pinellas County	511,037	584,881	14
Pasco County	99,972	151,353	51
Sub-Total	1,309,117	1,792,035	37
Overall Study Corridor	**2,496,359**	**3,661,202**	**47**

Source: Investment Grade Ridership Study, Summary Report

Table 1-3
Hotel Room Growth in
FHSR Tampa-Orlando Corridor

Region	Existing 2002 Hotel Rooms	Projected 2025 Hotel Rooms	Percent Change
Orlando			
Orange County	79,388	169,298	113
Seminole County	4,055	8,998	121
Osceola County	27,367	44,598	63
Sub-Total	110,810	222,894	101
Lakeland			
Polk County	5,841	7,127	22
Tampa Bay			
Hillsborough County	19,832	33,484	69
Pinellas County	24,038	30,869	28
Pasco County	3,214	5,042	57
Sub-Total	47,084	69,395	47
Overall Study Corridor	163,736	299,416	83

Source: Investment Grade Ridership Study, Summary Report

Tables 1-1, 1-2, and 1-3 indicate the significant increases in population, employment, and tourism within the counties containing the FHSR corridors. The predicted population growth documented in the tables would require future services, including multiple modes of transportation, to insure socio-economic growth and economic sustainability.

1.3.2 Capacity

The growing population and tourism rates in Florida place severe demands on an already congested transportation system. The counties, which contain the FHSR study area, also contain approximately 30 percent of the state's population and over 50 percent of the state's tourism revenue. Thus, transportation congestion would be more acute in these areas than elsewhere in the state. This is one of the reasons that FHSRA targeted the Tampa to Orlando area for the FHSR system.

In order to evaluate I-4 capacity, FHSR analyzed three time frames (2001, 2008, and 2025), which are presented in Table 1-4 and Figure 1-1. The Tampa-Orlando corridor is served by highways that currently operate at or near capacity, and will continue to do so after interim expansions are completed. Table 1-4, Existing and Future Roadway Capacity, illustrates capacity (number of lanes), traffic volumes, and level of service (LOS) for existing conditions, in both 2008 (estimated opening year for rail service) and 2025 design years. LOS is used as an indicator of a roadway's congestion level. Six different levels (A through F) are used to describe the level of congestion operating on a road. LOS A exists when a road has free flow or

unrestricted conditions, while LOS F describes a roadway with extreme congestion including long queues. Table 1-5 shows I-4 improvements recently completed, currently under construction, or planned for construction in the near future. Even with these improvements, I-4, in the vicinity of the Tampa and Orlando metropolitan areas, would operate at LOS F by the year 2008[7]. Many of the arterial routes providing access to I-4 are functionally obsolete and inadequate to accommodate current traffic, much less anticipated growth in travel demand. In 2008, half of the roadway network along the proposed FHSR corridor will operate at LOS F. While FHSR will not eliminate congestion, it offers an alternative transportation option, and can relieve some of the traffic problems.

Based on the November 2002 Investment Grade Ridership Study, Summary Report, a total of 4,253,000 automobile trips within the project area would be replaced by trips on the FHSR system by 2010. This represents a reduction of 4.3 percent of total trips that would otherwise travel on the congested highway network between Tampa and Orlando in 2010. In terms of overall traffic between the cities, 11 percent of the 4.5 million annual travelers are forecasted to utilize the FHSR between Tampa and Orlando, as noted in the Investment Grade Ridership Study, Summary Report.

Table 1-4 and Figure 1-1 present the existing and future congestion levels for I-4, the Central Florida Greeneway (S.R. 417), and the Bee Line Expressway (S.R. 528). Even with the completion of the I-4 projects that are funded with pending construction, and the considerable planned I-4 improvements in the future, capacity problems on I-4 would continue through 2025. The need for a substantial widening of the Florida Turnpike and the Bee Line Expressway (S.R. 528) by 2008 is also shown. Only limited portions of the Central Florida Greeneway (S.R. 417) would have excess capacity by 2025.

Table 1-4
Existing and Future Roadway Capacity

Segment	2001			2008			2025		
	Lanes	$AADT_1$	LOS_2	$Lanes_3$	$AADT_3$	LOS_2	$Lanes_3$	$AADT_3$	LOS_2
I-4 from Downtown Tampa to Tampa City Limits (50th Street)	4	132,000	F	6*	140,000	F	6*	164,000	F
I-4 from Tampa City Limits (50th Street) to I-75	6	91,000	D	6	114,000	E	6	117,000	E
I-4 from I-75 to Plant City (S.R. 39)	6	93,000	D	6	130,000	F	6	145,000	F
I-4 from Plant City (S.R. 39) to Polk Parkway	6	87,000	D	6	110,000	E	6	137,000	F
I-4 from Polk Parkway to U.S. 98	4	69,000	E	6	86,000	D	6	115,000	E
I-4 from U.S. 98 to U.S. 27	4	62,000	D	6	62,000	C	6	88,000	D
I-4 from U.S. 27 to Osceola County Line	4	82,000	F	6	90,000	D	6	116,000	E
I-4 from Osceola County Line to Central Florida Greeneway	4	63,000	E	6	$72,000_1$	C	8**	151,000	E

Table 1-4 (cont.)
Existing and Future Roadway Capacity

Segment	2001			2008			2025		
	Lanes	$AADT_1$	LOS_2	$Lanes_3$	$AADT_3$	LOS_2	$Lanes_3$	$AADT_3$	LOS_2
(S.R. 417)									
I-4 from Central Florida Greeneway (S.R. 417) to Epcot Center Drive (S.R. 536)	6	117,000	E	6	$137,000_1$	F	8**	175,000	F
I-4 from Epcot Center Drive (S.R. 536) To Bee Line Expressway (S.R. 528)	6	143,000	F	6	$175,000_1$	F	8**	$220,000_4$	F
Central Florida Greeneway (S.R. 417) from I-4 to Epcot Center Drive (S.R. 536)	4	16,100	A	4	$24,000_1$	B	4	$28,000_4$	B
Central Florida Greeneway (S.R. 536) to John Young Parkway	4	26,000	B	4	$39,000_1$	C	4	$76,000_4$	E
Central Florida Greeneway (S.R. 417) from John Young Parkway to Boggy Creek Drive	4	25,000	B	4	$37,000_1$	C	4	$45,000_4$	C
Bee Line Expressway (S.R. 528) from I-4 to John Young Parkway	4	63,000	D	4	$74,000_1$	F	10***	$121,000_5$	C

Sources:
1 Florida Traffic Count Information, FDOT, 2001
2 Quality/Level of Service Handbook, FDOT, 2002
3 Tampa Bay Regional Planning Model; Polk TPO Model
4 MetroPlan Orlando 2020 LRTP
5 Bee Line Expressway (S.R.528) PD&E Study, Florida's Turnpike, 2003s

* 6-lane divided freeway plus interchange with the Crosstown Connector
** 6-lane divided freeway plus 2 HOV lanes.
*** 8-lane divided expressway plus 2 HOV lanes.

While the FHSR system cannot meet all of the future capacity needs of I-4 within the study area, the high speed rail traffic diversion may delay the need for future improvements to I-4 and the Bee Line Expressway (S.R. 528), freeing funds for other network capacity improvements.

1.3.3 Safety

Safety is a paramount consideration in providing transportation. A key rail safety consideration focuses on reducing or eliminating conflicts between people, automobiles, trucks, and trains. These conflicts occur most frequently at grade crossings and where pedestrians and automobiles cross rail lines. In the interest of minimizing the possibility of train-vehicular or pedestrian collisions and maximizing safety, this project incorporates grade-separated crossings for all streets and highways. Barrier intrusion systems would also be incorporated into the design/build alternatives.

Projected growth in the mobility of people and goods by truck, rail, auto, transit, and air over the next two decades underscores the need for improved safety. Florida's overall highway facility and injury rate exceeds national averages, ranking third in fatality rate and tenth in crashes involving injuries[8].

Table 1-5
Roadway Improvements within the Study Area

Corridor	Roadway	Limits	Construction Status	Type
Hillsborough	I-275/I-4	Central Business District (CBD) Interchange	In Progress	Interchange Improvements
	I-4	14th Street to 50th Street	Pending	Additional Lanes 4 to 8
	I-4	I-4 50th Street to Polk County Line	In Progress	Additional Lanes 4 to 8 and 6
Polk	I-4	Hillsborough County Line to U.S. 92	Completed	Additional Lanes 4 to 6
	I-4	U.S. 92 to Osceola County Line	In Progress	Additional Lanes 4 to 6
Osceola	I-4	Polk County Line to U.S. 192	In Progress	Additional Lanes
	Boggy Creek Road	U.S. 192 to Turnpike	Pending	Realignment & Shoulders
	Western Beltway	I-4 South of Disney to S.R. 50	Pending	New Construction Expressway
Orange	I-4	U.S. 441 to Maitland Blvd.	In Progress	Additional Lanes
	I-4	Kirkman Road to Turnpike	In Progress	Additional Lanes
	I-4	S.R. 528 to S.R. 482	In Progress	Additional Lanes
	I-4	I-4 John Young Parkway	In Progress	Interchange Improvements
	I-4	I-4/EW Expressway	Pending	Interchange Improvements
	U.S. 441-17/92	Osceola Parkway to Taft/Vineland	Pending	Additional Lanes

Source: FDOT June 2003

The Florida Department of Highway Safety and Motor Vehicles publishes an annual summary entitled, "Florida Traffic Crash Facts." The summary reported for the years 2000 and 2001 that there were a total of 2,999 and 3,013 fatalities, respectively. The summary also reported 231,588 and 234,600 non-fatal injuries in 2000 and 2001, respectively, an increase of 3,012. The number of crashes also increased approximately 9,628 with 246,541 and 256,169 crashes, in 2000 and 2001, respectively. These increases correspond to an estimated fatality rate of 2.0 per 100 million vehicle miles of travel (VMT), compared to a national average of 1.5 per 100 million VMT, demonstrating that Florida is approximately 33 percent higher than the national average[9].

The FHSR would be required to determine protective measures necessary to prevent intrusions of vehicular traffic, unauthorized persons, large animals, and objects into the rail alignment from the surrounding highway system and overpasses. FHSRA is further required to obtain any and all associated approvals for the barrier, fencing, and intrusion detection systems, in addition to any protective measures that would be required from all federal and state agencies having jurisdiction within the corridors proposed for use by the FHSR.

Passengers must have confidence that the proposed rail service is not only reliable and fast, but is as safe as or safer than other modes. Recent statistics indicate that passenger rail travel is one of the safest modes of transportation in terms of total accidents and fatalities.

1.3.4 Social Demands/Economic Development

More than 17 percent of Florida's citizens are age 65 years or older, compared to the national average of 12 percent. In addition, there are an estimated two million citizens in Florida with disabilities, who depend on access to user-friendly transportation facilities and services for

mobility between major urban centers and visitor attractions. The population living in the corridor between Tampa and Orlando represents approximately 30 percent of the total Florida population.

For minimal charge, bus service in each county is available to residents and visitors. These buses provide service to all areas of the county including neighborhoods, attractions, and CBDs. As a percentage of all trips taken, the approximate percentage of transit users within Orange County is 4 percent; Hillsborough County is 3 percent; Polk County is 2 percent; and Osceola County is 2 percent.

Traveling between counties in the region, however, one must rely on other transportation choices. The primary mode of choice is the automobile, but private bus services are also available. Amtrak travel is provided from the northeast U.S., south to Miami via Orlando, and then on to Florida's east coast. There is no passenger rail travel available between Tampa and Orlando. Amtrak, through the Martz Tampa Bay bus lines, offers a continuation of service from Orlando to Tampa. The bus service, via Martz Tampa Bay bus lines, runs twice daily and makes one stop in Lakeland. The trip takes approximately 2 hours and 50 minutes, costing $54.00 for one adult passenger's round trip ticket. Greyhound buses run several times daily, between Orlando and Tampa, make stops in several cities en route, and offer flexible departure times from early morning to late in the evening. Travel time depends on the number of stops and can range from 1 hour and 40 minutes to 3 hours and 45 minutes. The cost of one adult passenger round trip ticket is $32.25.

Travel time is an important factor when traveling on business or for pleasure. With the 71 million people visiting Florida for business and recreation each year, automobile and air travel are equally popular modes of transportation. However, because of the high popularity, automobile and air travel are also quickly emerging as the most congested modes of transportation. The result is that business travelers lose productive working hours and tourists lose valuable recreation time because of delays on congested roadways and in congested airports.

The FHSRA Investment Grade Ridership Study, Summary Report assessed traffic along the FHSR corridor to categorize and quantify corridor ridership, analyze drive times, and determine travel characteristics between Tampa and Orlando. According to the report, estimated driving time between downtown Tampa and Orlando International Airport can take up to 91 minutes utilizing I-4 and other congested roadways. Conversely, travel time at posted speeds between these two destinations is estimated to be a 82-minute trip. Further, travel times vary by bus, from 1 hour and 40 minutes to 3 hours and 45 minutes, not including parking, boarding/deboarding, or travel to and from origin/destination. By comparison, an estimated rail trip on FHSR between downtown Tampa and Orlando International Airport will take approximately 64 minutes, not including parking, boarding/deboarding, or travel to and from origin/destination.

Total travel time by air, from origin to destination, includes road delays, ticketing access, terminal navigation, transfer time, and enplane/deplane time. Also, travel time by air has increased recently as airports have become more cautious about security. Air travel between Tampa and Orlando is currently provided by one round trip flight per day serving primarily

connecting travelers. The estimated flight time is approximately 45 minutes, but this does not include time required for parking, security checks, enplaning/deplaning, or travel to and from the origin/destination. Altogether, air travelers between Tampa and Orlando can expect a travel time of approximately 2 hours and 45 minutes.

Persons traveling by automobile pay approximately $0.36 per mi. for business travel and about $0.12 per mi. for non-business travel. For air travel, ticket costs range from $1.55 to $2.90 per mi. For bus service, costs can vary from $0.34 to $0.57 per mi. These travel costs can be compared to rail rates that are estimated at expected ticket price of approximately $0.31 per mi. from Tampa to Orlando.

In order to ensure efficient and cost effective travel for business and tourist travelers, more than one mode of transportation is desirable. The Florida State Comprehensive Plan[10], which was enacted by the Florida Legislature, calls for a high speed rail system linking Florida's major urban centers. This plan also provides long-range policy guidance for the orderly social, economic, and physical growth of the state.

1.3.5 Air Quality

Under the *1990 Clean Air Act Amendments*, three Florida airsheds, encompassing six urbanized counties, were designated as ozone non-attainment areas. One of those airsheds, Tampa Bay (Hillsborough and Pinellas counties) is within the FHSR study corridor and was designated as a "marginal" ozone non-attainment area. On February 5, 1996, the U.S. Environmental Protection Agency (EPA) redesignated the airshed as "attainment" for the 1-hour ozone National Ambient Air Quality Standard (NAAQS).

The redesignation also provided EPA approval of "maintenance plans." Maintaining air quality standards is part of the FDOT Strategic Plan for 1998-2006[11]. The challenge in the Tampa Bay area will be to continue to reduce vehicle emissions to acceptable levels and then maintain air quality standards by encouraging more efficient use of land resources, improving mobility, and providing alternative transportation facilities and services. These, 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.

The ability to meet federal air quality standards over the next 20 years will also require a number of parallel actions, including reductions in the number of VMT; improved land-use planning and development; transportation demand management strategies; operational improvements and use of new technologies; more people per vehicle; and travel alternatives to the single occupancy vehicle. The FHSR is expected to reduce total VMT between Tampa and Orlando.

The *Clean Air Act* makes transportation conformity the affirmative responsibility of the USDOT, the State of Florida, and the MPO. In addition, transportation conformity with the ozone attainment and maintenance strategies contained in the Florida State Implementation Plan for the

Tampa Bay area is an important criterion for evaluating project alternatives, including the No-Build Alternative. The FHSRA has coordinated with regional MPOs on how this project is, or will be, reflected in each of the metropolitan LRTPs, regardless of the NAAQS designation.

1.3.6 Modal Inter-Relationship

Intermodal connections with major airports and existing and planned local and regional transit systems are required in Florida's 2020 Transportation Plan. Within this plan, it is indicated that the FHSR should connect with airports at Miami, Orlando, and Ft. Lauderdale. A high speed rail connection is proposed for the Orlando International Airport. Another connection would serve the Orange County Convention Center (OCCC) multi-modal station. In addition to the FHSR, it is anticipated the OCCC multi-modal station would handle automobile parking and buses in the immediate future, and light rail and the I-Drive Circulator system in the future. The circulator system is currently under study to determine technology requirements needed to provide a transit system for the I-Drive economic area. The Tampa Station, located in the downtown business district, would serve the Hillsborough Area Regional Transit Authority (HARTline), the Tampa Electric Company (TECO) Line Streetcar System, and future light rail. HARTline has constructed an area transit center, with service to all busses in the system, across from the proposed FHSR station. The streetcar system currently serves downtown Tampa, Ybor City, and Channelside with future connection with the proposed Tampa light rail system. The light rail system is planned to connect downtown Tampa to Tampa International Airport, the University of South Florida (USF), West Shore business district, south Tampa, and area hospitals.

1.4 BACKGROUND OF FLORIDA HIGH SPEED RAIL

Starting as early as the 1960s, the feasibility of high speed rail has been studied in Florida. In 1976, the Florida Legislature mandated the first study, the Florida Transit Corridor Study[12]. The study resulted in the FDOT's identification and acceptance of limited access highway medians as a potential location for high speed rail. The study proposed the use of existing rail corridors as well, both on and parallel to the existing facilities. The study also established the size of the rail envelope within medians of limited access roadways at 44 feet (ft.) for a dual track.

In 1982, Florida Governor Bob Graham authorized the creation of the Florida High Speed Rail Committee. The Committee, in 1984, issued the Florida Future Advanced Transportation Report[13]. The report recommended using public/private partnerships to proceed with the implementation of a high speed rail system. The report also recommended using existing publicly-owned ROW for the system. As a result, the Florida Legislature passed the *Florida High Speed Rail Transportation Commission Act (the Act)* to, "encourage and enhance the establishment of a high speed rail transportation system connecting the major urban areas of the state." The act defined a high speed rail transportation system as, "any high speed, fixed guideway transportation system for transporting people or goods . . . capable of operating at speeds in excess of 120 miles per hour (mph)."

Between 1986 and 1991, a number of proposals and attempts were made to implement high speed rail with a variety of combinations of private and public funds and taxing proposals. However, none of these attempts resulted in the implementation of high speed rail.

In 1992, the Florida Legislature enacted the *New High Speed Rail Act*, transferring the responsibility from the Commission to the FDOT. Key studies conducted by FDOT after the 1992 revision of the *New High Speed Rail Act* are discussed below. The FDOT conducted these studies to assess market factors that would be critical in the implementation of high speed rail.

In 1993, FDOT completed its study, High Speed/Intercity Rail Passenger System Planning Assessment of Routes and Alignments[14]. It was a statewide examination of possible routes for high speed rail. FDOT conducted a second study, Florida High Speed and Intercity Rail Market and Ridership Study[15], which was an examination of the characteristics of the intercity rail market and ridership characteristics between Tampa, Orlando, and Miami. This study concluded that recreational travel and business travel were the two predominant trip purposes for high speed rail travel.

Also in 1993, FDOT completed a third study, the High Speed Rail Transportation Study – Tampa Bay to Orlando Corridor[16]. The study further investigated whether the Orlando-Tampa Bay corridor was suitable for high speed rail. Because of intensive development and the existence of major wetlands within the Orlando-Tampa Bay corridor, the study focused on existing corridors connecting Pinellas County to Orlando, mainly the I-4/I-275 and CSX rail corridors. At the conclusion of the study, FDOT determined that the I-4/I-275 corridor was the preferred alternative for high speed rail implementation between Orlando and the Tampa Bay area. For this reason, FDOT, in conjunction with the reconstruction of I-4/I-275, proposed to preserve an envelope within the median of the reconstructed interstate corridor between Orlando and Pinellas County for a high speed rail transportation system.

In 1995, FDOT produced Florida Intercity Rail Passenger Service, Options for the 21st Century, a Component of the Florida Transportation Plan[17]. It included a discussion of various corridors between Orlando and Tampa. These include the I-4 median, the CSX railroad tracks, and a new alignment. The document recommended the establishment of a public/private franchise to ensure a cost effective and marketable intercity high speed rail network.

In 1995, the Florida Overland eXpress (FOX), a limited partnership composed of affiliates of four global companies, was awarded the franchise to form a public/private partnership with the FDOT for the purpose of creating a high speed rail system in Florida. FOX studied an initial route, which linked Miami to the Orlando International Airport with the anticipation of expansion of the route to Tampa. The Florida Overland eXpress (FOX) Study[18] was initiated by FDOT in 1996. The Notice of Intent for the environmental process was issued in the Federal Register on April 27, 1998, describing the alternatives under consideration. The scoping process for the EIS included eight public workshops in communities along the study corridors, as well as review workshops with federal, state, and local agencies during May and June 1998.

As a result of the input from the scoping process and the agency screening process, FDOT, in cooperation with FHWA and FRA, identified alternative corridors to be evaluated in the FOX EIS including the alignments paralleling I-4. The I-4 corridor from Orange County to the Tampa Bay area had six options, three in the Orlando metropolitan area, and three between Lakeland and the Tampa metropolitan area. Stations were planned for Orlando area attractions, Lakeland,

and Tampa. Due to the termination of state funding for the study in early 2000, no further work was undertaken on the EIS.

In 2000, the Florida Legislature authorized the Coast to Coast Rail Feasibility Study[19]. It was later renamed the Cross-State Rail Feasibility Study. The study was not an environmental or preliminary engineering study, but instead focused on the physical and financial feasibility of the I-4 corridor between Orlando and the Tampa Bay area for high speed rail. The study team recommended the following "Next Steps":

- Conduct no additional planning studies.
- Initiate preliminary engineering and work activities.
- Conduct an Investment Grade Ridership Study.
- Build the initial operating segment between Union Station in Tampa and the Orlando International Airport, with eventual development of a total system between St. Petersburg and Port Canaveral.
- Develop a highly creative financial analysis in order to maximize the potential for all possible revenue sources.
- Use of freight revenues could help reduce operating shortfalls.
- Acknowledge that the State of Florida will have to contribute a significant share of costs.

In November 2000, Florida voters adopted the amendment to the Constitution noted earlier, which mandated that high speed rail be implemented with construction to begin by November 1, 2003 leading to the creation of the FHSRA and the extensive planning efforts and environmental assessment activities described in other section of this Final EIS. On November 2, 2004, Florida voters repealed the Constitutional amendment as discussed in Section 1.1 and the future of the high speed rail project remains with the Florida Legislature and Governor. The FHSRA continues to believe, based upon the various studies and analyses, that the proposed high speed rail project could serve an important transportation need in the Tampa-Orlando corridor.

1.5 REFERENCES/NOTES

1. The National Environmental Policy Act of 1969, as amended. (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258; September 13, 1982).

2. Tampa Interstate Study, Greiner, Inc., Tampa, Florida (1992-1996); Interstate 4 Multi-Modal Master Plan (1997); Interstate 4 Multimodal Interstate Master Plan (1989-Revised 1989); Polk County Interstate 4 Master Plan (1994).

3. Development of the Florida Intrastate Highway System, Florida Department of Transportation Procedure, Topic No. 525-030-250-f; Systems Planning Office; Tallahassee, Florida; Effective Date: May 16, 2002.

4.

Development of the Florida Intrastate Highway System, Florida Department of Transportation Procedure, Topic No. 525-030-255-c; Systems Planning Office; Tallahassee, Florida, Effective Date: May 21, 2003.

5. Florida Statistical Abstract; University of Florida: Bureau of Economic and Business Research, Warrington College of Business Administration; Gainesville, Florida; 2001.

6. Investment Grade Ridership Study, Summary Report; prepared for the Florida High Speed Rail Authority; prepared by AECOM Consulting, Wilbur Smith Associates; November 20, 2002.

7. Level of Service is a qualitative assessment of a roadway's operating condition or level of congestion. Stratified into six letter grades A through F, LOS A is a free-flow operation with vehicles almost completely unrestricted in their ability to maneuver within the traffic stream, LOS F indicates that the capacity of the freeway has been exceeded resulting in long queues and extremely high levels of congestion.

8. Source: National Highway Traffic Safety Administration; 2000.

9. Ibid.

10. Florida State Comprehensive Plan; The Florida Legislature; Tallahassee, Florida.

11. Strategic Plan for 1998-2006; Florida Department of Transportation; Tallahassee, Florida.

12. Florida Transit Corridor Study; Alan Voorhees and Associates; March 1976.

13. Florida Future Advanced Transportation Report; Florida High Speed Rail Committee; April 1984.

14. High Speed/Intercity Rail Passenger System Planning Assessment of Routes and Alignments (and Appendices); Wilbur Smith Associates; 1993.

15. Florida High Speed and Intercity Rail Market and Ridership Study (and Technical Appendices); KPMG Peat Marwick; July 1993.

16. High Speed Rail Transportation Study – Tampa Bay to Orlando Corridor; ICF Kaiser Engineers; September 1993.

17. Florida Intercity Rail Passenger Service, Options for the 21st Century, A Component of the Florida Transportation Plan; January 1995.

18. Florida Overland eXpress Study; Florida Overland eXpress; 1999.

19. Coast to Coast Rail Feasibility Study / Cross-State Rail Feasibility Study; STV Incorporated; June 2001.