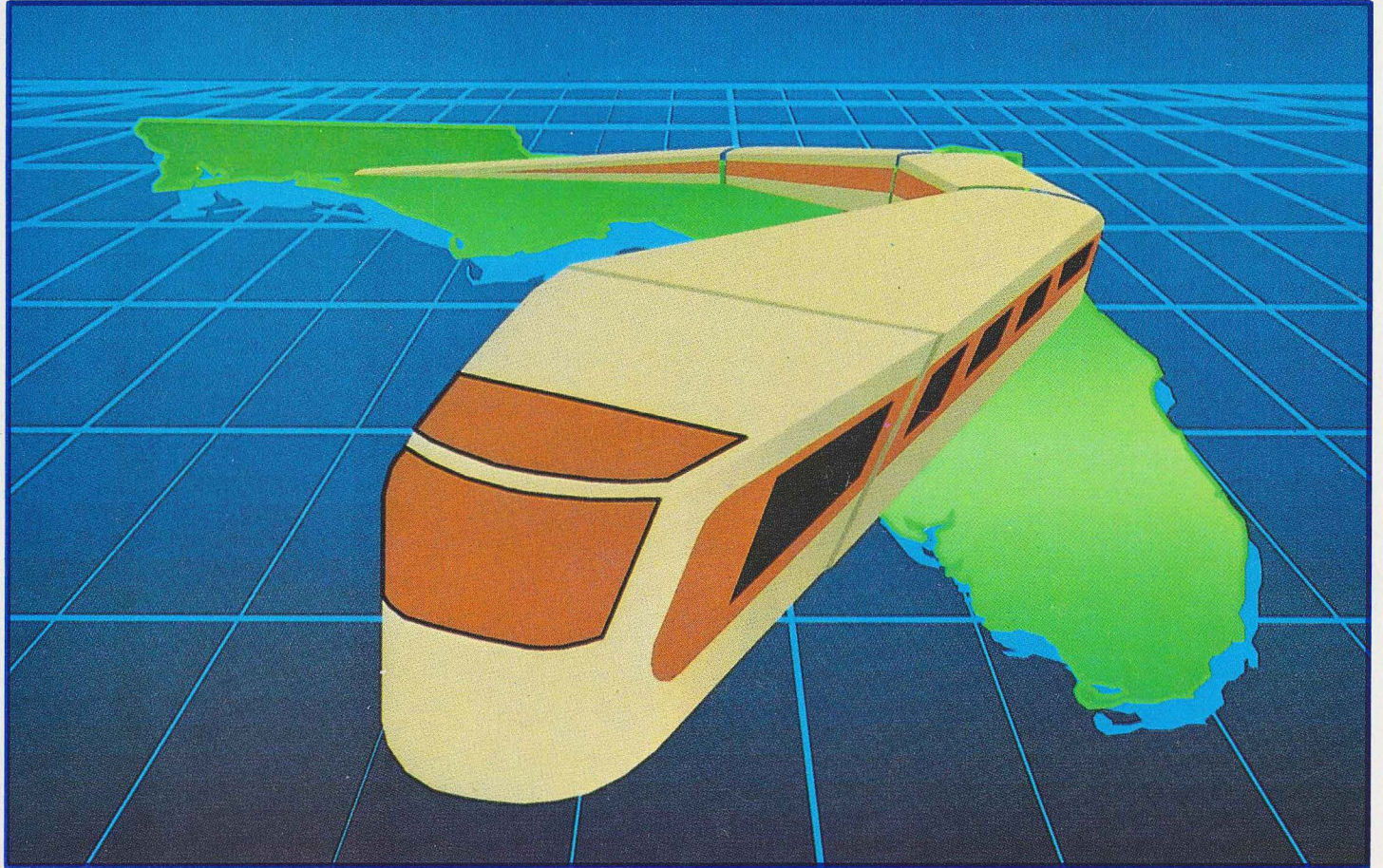
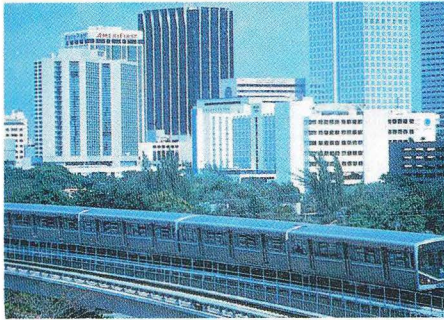


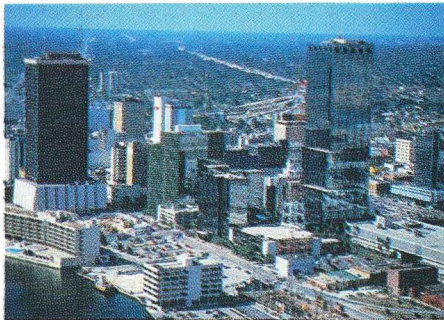
**FLORIDA'S
HIGH SPEED RAIL STUDY**



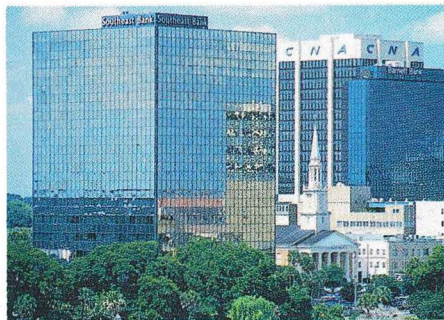
FLORIDA TODAY



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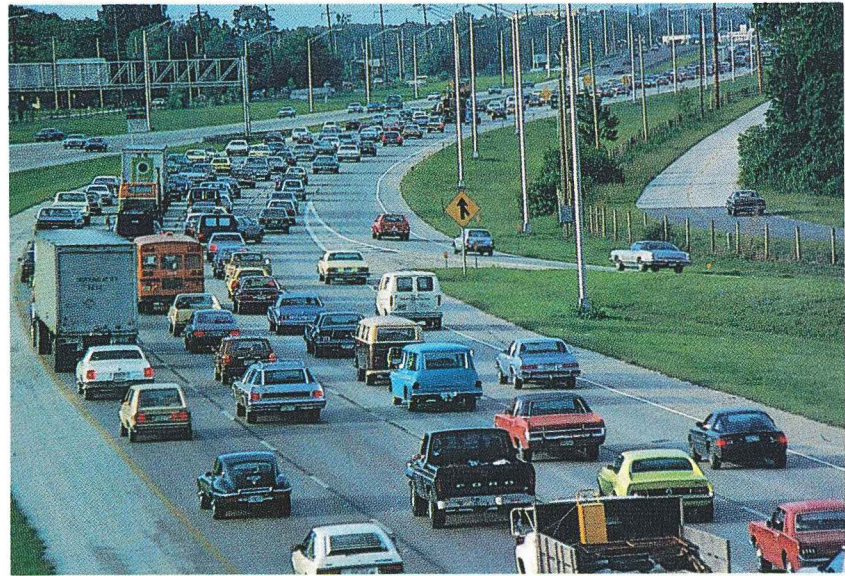


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Florida has labored over transportation problems since long before Henry Flagler's first train chugged into Miami and his Florida East Coast Railroad triggered phenomenal growth in the state. Today, the 4-lane Howard Frankland Bridge across Tampa Bay is jammed with traffic between Tampa and St. Petersburg. In South Florida, bumper-to-bumper traffic creeps along six lanes of I-95 during the inappropriately named "rush hour."

Between 1960 and 1980, the resident population of Florida doubled from almost 5 million to 10 million, and the state continues to attract increasing numbers of tourists. Only 13 years ago, Walt Disney World opened in Central Florida. Other major attractions such as Sea World and Busch Gardens, along with beaches and natural recreation areas, have also played a big part in Florida's tourism development. In 1983, over 40 million tourists visited the state. This compares to fewer than 20 million in 1967.

Florida has changed dramatically over the past 20 years, not only in population growth, but in the distribution of that population. In 1960, approximately 65 percent of the population lived in Florida's urban areas. By 1980, almost 85 percent of the state's inhabitants lived in urban areas—making Florida one



D

of the nation's most populous and urbanized states.

Florida's ability to grow and develop has been determined in large part by its transportation systems, such as the interstate highway system implemented in the past 25 to 30 years. Such major transportation systems, of course, take considerable time to plan, design, finance, and construct.

Florida in the 21st Century will be shaped by planning done today for the transportation systems of the future.

...AND IN THE FUTURE

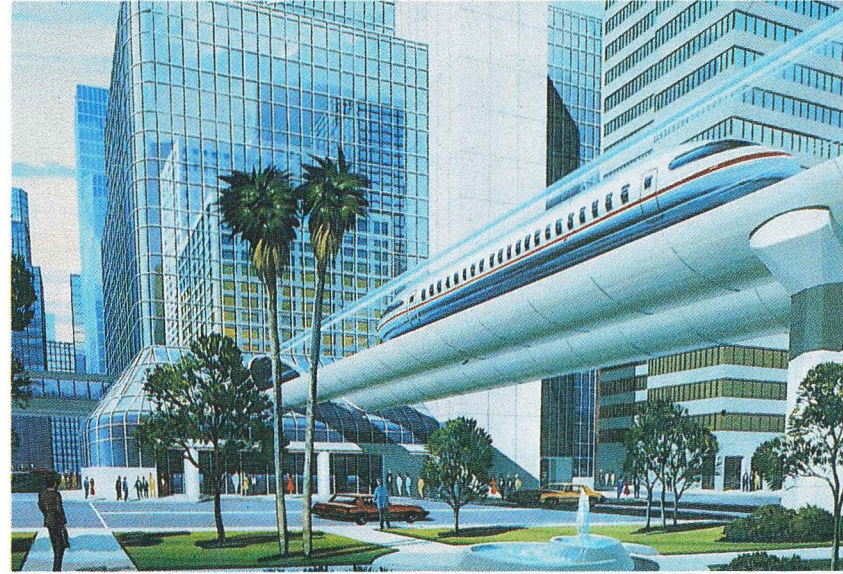


In 25 years, the Howard Frankland Bridge will need 14 lanes across Tampa Bay if the number of cars and trucks increases as predicted. By the year 2020, 44 lanes will be needed between Ft. Lauderdale and Miami on I-95 if alternative methods of travel are not ready.

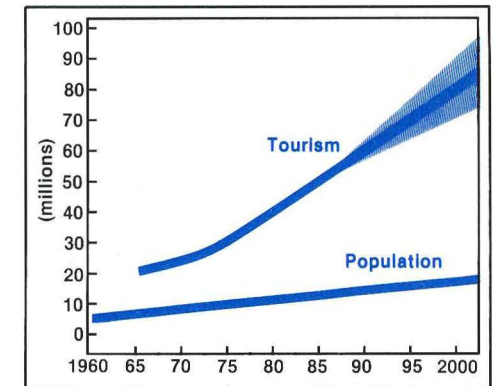
Experts say Florida's growth will continue at a rapid rate for the next generation. By the year 2000, approximately 17 million people are expected to live in Florida, making it the third or fourth most populous state in the country—about as large as New York State today. By the year 2020, almost 21 million people are expected to live in the state, doubling today's population. Thus, today's transportation planning will be important in guiding Florida's future development and population growth.

It also is anticipated that Florida will continue to grow in attractiveness as a tourist destination. Forecasts indicate significant tourist travel increases, to between 70 and 90 million annual visitors by the year 2000. Additionally, the state has positioned itself to continue to attract commercial and industrial expansion to provide future employment opportunities.

The urbanization trend is expected to continue with transportation playing a key part in growth,



development, and redevelopment of Florida's cities. Highway construction will continue to be necessary, as automobiles remain a primary mode of transportation. However, cost-effective and efficient mass transit solutions also must be developed in urban areas and as connecting systems between major metropolitan areas. The expense of a solution relying solely on new highways and new airports has already become prohibitive in the most urbanized areas of Florida. Rapid transit systems, bus lanes, downtown people movers, and similar transit projects provide effective alternatives to balance future transportation needs.



WHAT IS HIGH SPEED RAIL?



Imagine skimming along between Miami and Orlando on a cushion of air at speeds up to 400 miles per hour as you sit reading the daily newspaper. It's a dramatic change from the trains on Florida's tracks today. High speed rail service is available today on passenger trains operating in Japan, France, Great Britain, Canada, and West Germany. Florida is poised to catch up and excel in technology, speed, and economic growth.



State authorities are considering a variety of different high speed rail technologies, including some advanced systems that are in prototype development. The three technologies under consideration operate at the following speed ranges:

- Type I—High Speed Equipment on Upgraded Track (100 to 130 mph),
- Type II—State-of-the-Art Technology on Totally New Track (130 to 170 mph), and
- Type III—Very High Speed New Technologies (230 to 320 mph).

The state of the art in high speed passenger equipment now operating is represented by the TGV-PSE (France), Series 200 Bullet Train (Japan), Intercity 125 (Great Britain), and LRC (Canada).



In a few years, the present state of the art in high speed passenger transportation may drastically change, from steel wheels/steel rails to trains that literally fly over their guideways. These are known as magnetic levitation (Maglev) systems with vehicles held aloft by magnetic forces and propelled forward by a special new-technology linear motor drive.

Two different uses for a high speed rail guideway have been suggested for Florida. The first is "express service" that would be available on an hourly basis, linking high-demand urban areas and major travel markets in central and south Florida. The second concept is to have more frequent "commuter service" within the urban areas that would serve both local and state travel needs. Hourly express service between major cities still would be available, but more localized/regional transportation needs, including commuter service in urban areas, could also be provided on the same system.

HISTORY OF HIGH SPEED RAIL IN FLORIDA



In the mid-1970s, the State of Florida examined the possibility of a high speed rail corridor linking Tampa/St. Petersburg, Orlando, and Daytona Beach through the central part of the state. In the early 1980s, the Japanese indicated an interest in developing a system that linked Tampa/St. Petersburg, Orlando, and Dade, Broward, and Palm Beach Counties in South Florida.

In April 1982, Executive Order 82-34 was issued by Governor Bob Graham creating the Florida High Speed Rail Committee. The Committee set forth the following objectives:

- Determine the public benefit likely to accrue from high speed rail service;
- Determine the market and engineering feasibility of such a system, including route location and priorities;
- Establish design and construction specifications and criteria;
- Determine the feasibility of utilizing existing publicly owned rights-of-way for high speed rail service and, if found feasible, prepare a request for proposals for leasing of same; and
- Prepare requests for proposals for franchising, design, construction, operation, and maintenance of the system to a private entity or entities.



Over a 2-year period, the High Speed Rail Committee conducted nine public hearings around the state and heard testimony from citizens, public officials, potential franchise applicants, representatives of environmental groups, and officials from federal, state, and local agencies. Information on various types of high speed rail technology was presented, and the Governor and several committee members visited and rode high speed rail systems in Japan and Europe, including the prototype Maglev train in Japan.

In October 1983, an advertisement was placed in the *Wall Street Journal* requesting prospective franchise bidders to submit conceptual proposals for the financing, design, ownership, and operation of a high speed rail system in Florida. Seven proposals were received, indicating substantial business community interest in the private development of the project.

FUTURE TRANSPORTATION SYSTEM



The High Speed Rail Committee concluded its work in April 1984 with a final report to the Governor. The Committee's findings and recommendations were that:

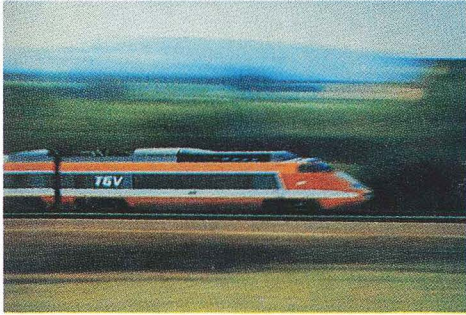
- Florida's present transportation infrastructure is inadequate to accommodate the growth forecast to occur over the next 16 years.
- Expansion of traditional modes to overcome present and future transportation inadequacies is not economically or environmentally feasible.
- An advanced high occupancy interregional mode of ground transportation is essential to Florida's mobility in the 21st Century.
- There appears to be great public benefit from the development of a high speed rail system through safety, high speed convenience, economy, and the creation of jobs for construction and on-going operations.
- The technology is currently available to provide Florida with a "world class high speed rail system" that is most suitable for serving Florida's interregional travel market in the 21st Century.
- The implementation of a high speed rail passenger service can be accomplished by means



Both the use of existing highway and rail corridors as well as new corridors have been proposed by prospective franchisees. The ability to serve the state's transportation needs using existing corridors versus the development of new corridors will be a critical part of the decision in the award of the franchise.

- of a multi-year franchise financed and developed entirely by private free enterprise.
- The development and utilization of high speed rail systems technology could act as a catalyst for economic growth, and could be a key factor in shaping Florida's future growth in a well-planned and managed direction.

POTENTIAL SERVICE CORRIDORS

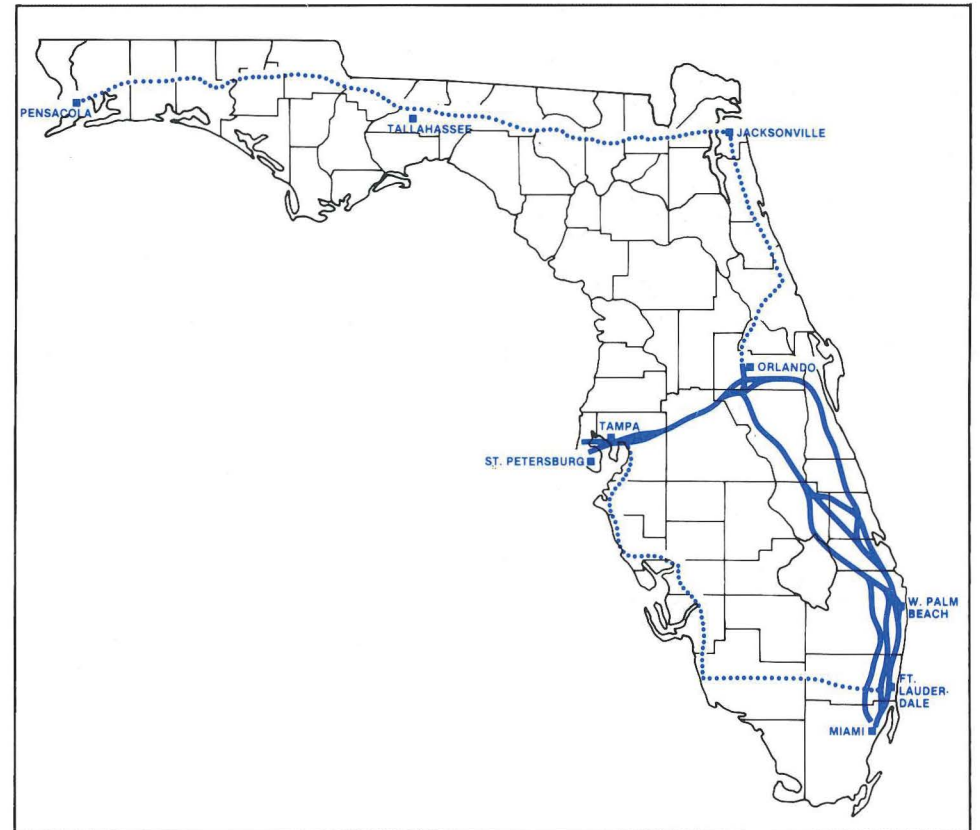


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What areas of the state will be served by high speed rail service — where will it go?

Alternative corridors have been identified for potential high speed rail service in Florida. Corridor selection was based on engineering, socioeconomic, and environmental factors. Routes that had the least potential for engineering problems or for the disruption of existing land use and environmental resources were identified. Although all the corridors connected the major metropolitan areas in central and south Florida, various options were identified to link intermediate markets and the state's major airports and tourist attractions. The Tampa/St. Petersburg, Orlando, and Miami-Ft. Lauderdale metropolitan areas were shown to have the highest potential for generating passenger demand in studies conducted for the Florida Department of Transportation.

A minimum of 50 feet of right-of-way is needed for double tracking of any high speed rail system under consideration. To maintain the speed capabilities of high speed trains, it is necessary for the track to be designed with wide gentle curves. In order for high speed rail to utilize existing state highway and rail corridors, it may be necessary for the train to operate at slower speeds where sharp curves exist. Rail



systems with slower speed ranges will “fit” more easily into existing corridors. Faster technologies, such as Maglev, may require the development of new, straighter rights-of-way.

A special corridor approval process, as enacted in Florida's High Speed Rail Transportation Commission Act, is required prior to the award of

the franchise. Corridors must be identified and environmental impacts determined by each potential franchisee. Opinions and comments from the public and local governments will be solicited in order to refine the corridor alignment and determine which routes will result in minimal impact to public health, safety, and welfare.

WHAT IT MEANS TO YOU...

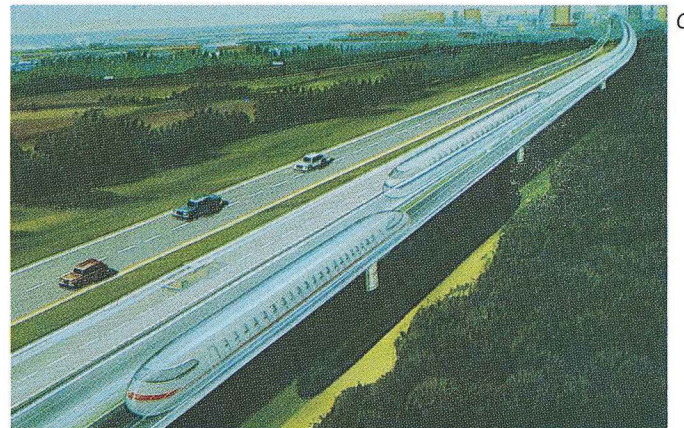


The most important aspect of this project is that it is not anticipated that tax money will be used. A variety of financing mechanisms, such as joint real estate development, revenue bonds, innovative equipment leasing arrangements, and corporate loan guarantees, could be used to provide the capital and operating funds needed to implement high speed rail in Florida.



There are a number of benefits for the State of Florida in the development of a high speed rail system. First, a distinct positive image for future growth and development will be projected worldwide. The implementation of high speed rail in Florida will maintain or improve Florida's image as a premier center for tourism and high technology development.

The second positive impact is that a new means of public travel will be available to meet Florida's complex transportation needs. High speed rail will be competitive in travel time with aviation, whose expansion is being hampered by increasing problems of congested airspace. The travel time for high speed rail is expected to range from under 2 hours to 3½ hours for a Tampa/St. Petersburg to Miami run, depending on technology and route configuration.



Another anticipated effect of high speed rail will be improved transportation safety. High speed passenger trains operating abroad have produced outstanding safety records. Since operation of the TGV system in France began in 1981, there have been no injuries or fatalities. The safety experience of the Japanese National Railway system is also quite similar. To the extent that travelers are diverted from automobiles to high speed rail, the latter's superior safety record should result in a decrease in automobile traffic accidents and decreased aviation delays and airspace congestion, allowing for an improvement overall in transportation safety.

The Florida Department of Transportation made an intense examination of the benefits of high speed rail compared to system costs. There will be benefits for both users and

non-users. User benefits include reductions in automobile operating costs, travel time, and accident costs. Tangible economic benefits, such as increased employment and wages, will occur as a result of construction and operation of the high speed rail system. These new jobs will mean at least \$3.8 billion in employee earnings during the first 30 years of the project. In addition, high speed rail is expected to result in increased expenditures by tourists in Florida. It is expected that the ripple effect of those increased expenditures will result in the creation of approximately 30,000 jobs per year or 1.1 million new jobs over the period from 1990 to 2020.

SYSTEM IMPACTS

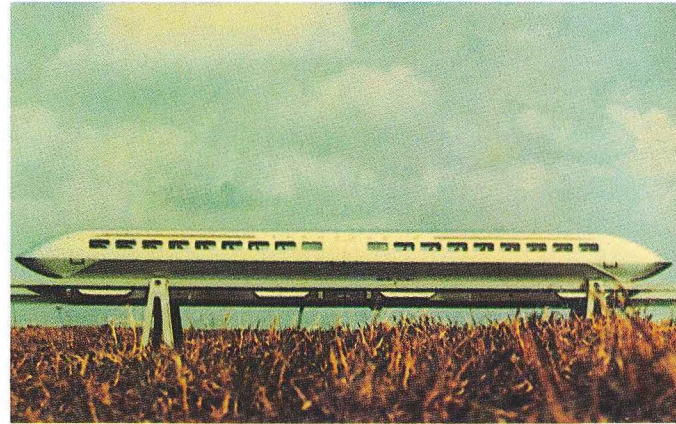


Construction and operation of a high speed rail system in Florida will have both positive and negative impacts. Many of the negative impacts can be reduced with proper planning and coordination.

The proposed high speed rail facility has the potential to enhance Florida's air quality as auto travel is replaced by electrically powered transportation, and projected increases for aviation facilities and airspace congestion are reduced. Additionally, a reduction in energy consumption would be a major asset of high speed rail development in Florida. The technology of high speed rail makes it the most energy-efficient mode of transportation available compared to buses, automobiles, or airplanes. Most high speed rail systems are twice as efficient as airplane travel.

The high speed rail system will provide considerable development and redevelopment opportunities, especially around station locations. Transportation facilities have been a major influence on development patterns throughout Florida in the past. Planned growth and more efficient land use are a natural result of improved transportation access as are lower overall utility costs.

A major non-cash tax incentive that is planned for the potential franchisee is the exemption from taxes

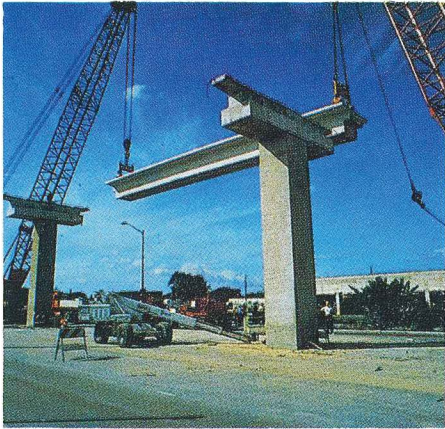


for the system and related development. This will mean that lands associated with the project will be under public ownership and will not be on local tax rolls. However, the High Speed Rail Transportation Commission Act specifically allows the charging of impact fees to offset any local government costs for utilities and other items needed to support the system.

Unless properly planned and designed, the development of high speed rail in Florida could also have adverse effects on the environment and on the communities through which it travels. During construction, air and water quality could be temporarily affected. In addition, local communities may be disrupted due to construction and the possibility that some businesses and residences will need to be relocated. Noise will be evident during

construction and could become a concern when the system is operational unless sound barriers are provided on right-of-way that is adjacent to residential neighborhoods. Vibration effects may also be experienced, although structural design techniques will be used to reduce or eliminate this problem.

SCHEDULE FOR DEVELOPMENT



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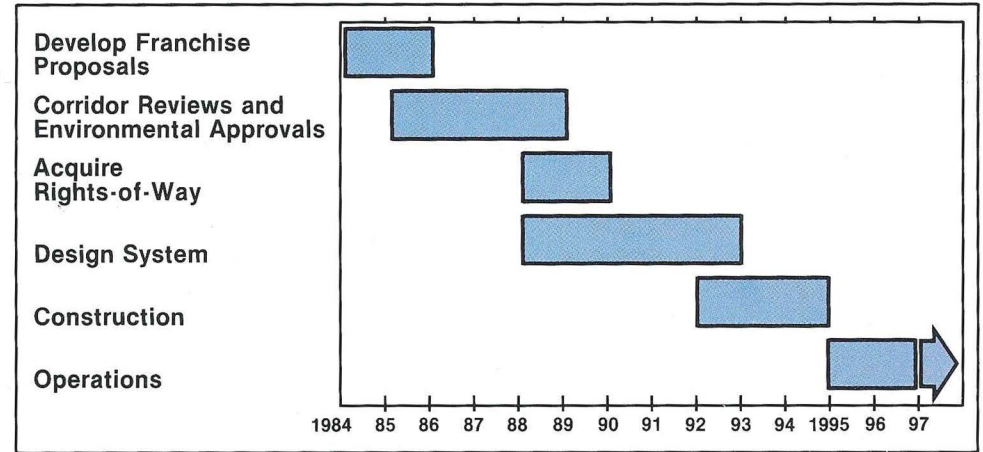


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During the 1984 session of the Florida Legislature, a law was passed creating a Florida High Speed Rail Transportation Commission. The act empowers the Governor to appoint a commission to award a franchise for the development, construction, maintenance, and operation of a high speed rail system. The High Speed Rail Transportation Commission Act was approved by the Legislature May 30, 1984, and signed into law by Governor Bob Graham June 14, 1984. This act is a landmark law not duplicated elsewhere in the United States.

Governor Bob Graham has expressed a desire to see the high speed rail project operational by 1995, the 150th birthday of the State of Florida. To develop a high speed rail project in Florida, considerable time is necessary to obtain all approvals at the federal, state, and local levels, to finance the system, complete design and construction, and perform test runs prior to full service operation.

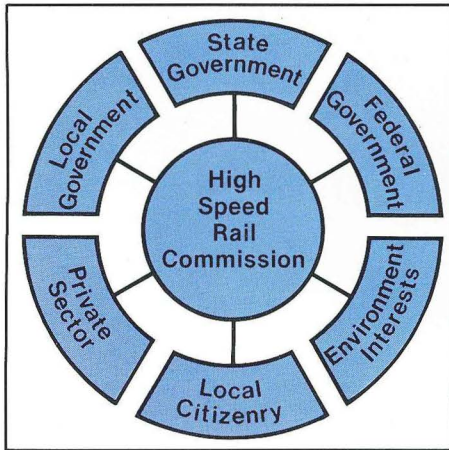
The first links to be developed would be the highest travel demand corridors linking Tampa/St. Petersburg, Orlando, and Miami. Expansion of the system to other major urban areas, such as Jacksonville, Sarasota, Daytona, and Ft. Myers, would be accomplished shortly thereafter.



In its approach to the project, Florida is unlike other states which are pursuing the development of a statewide high speed rail system. Local comment, concern for environmental issues, and private sector operation and financing have been considered essential in Florida to the successful development of this new means of travel in the state. Considerable efforts have been made to consider early in the planning process citizen and agency concerns about service, routes, and technologies offered by the prospective franchisees. To accommodate this complex planning process, the timetable for development

may stretch over the next 10-12 years as route selection, design, environmental permitting, and a multi-year construction schedule are completed.

...A COMPLEX DECISIONMAKING PROCESS



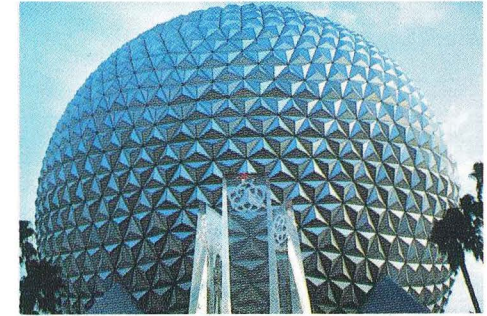
It is thought that high speed rail passenger service in Florida will be accomplished by means of a multi-year franchise financed and developed entirely by private enterprise. There are a number of reputable consortia interested in the franchising rights for Florida's high speed rail passenger service. Private enterprise has proposed to design, construct, own, operate, and maintain the Florida High Speed Rail Transportation System.

A high speed rail project in Florida will involve a complex review and approval process at the federal, state, and local levels. Review and approvals for the location of the facility and permits to construct and operate the system will be required. Public and private interests all will be involved in the review of such a large-scale transportation development project in the state.

On the federal level, review of environmental impacts and negotiations for joint use of existing highway rights-of-way will be required. At the state level, similar environmental permits and approvals will be required. Local governments will be interested for the same reasons as federal and state agencies, but will also review the project to determine its impact on land use plans and zoning, and to identify utility improvements (water, sewer,

transportation connectors, etc.) that the system will need.

Coordination and comment from the public, environmental agencies, and interest groups must also be accomplished to ensure timely review and approval of the variety of permits required by Florida's unique legislation. Residents will be involved in the decisionmaking process and will be asked to participate during a series of local, regional, and state public hearings to be held along the corridors of the high speed rail system. This process will ensure that the system is developed with full community support and that it is structured in a way that truly meets Florida's transportation needs and the needs of its people.



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This document summarizes a report prepared by a consultant team for the Florida Department of Transportation.

The Florida High Speed Rail Study was directed by:
 Barton-Aschman Associates, Inc.,
 in association with:
 Environmental Science and Engineering, Inc. (ESE)
 Robert J. Harmon Associates, Inc.
 Metric Engineering, Inc.
 Bachman Associates

The study was financed in part by a grant from the Federal Railroad Administration, U.S. Department of Transportation. The United States Government assumes no liability for its contents or use, and the views herein expressed should not be interpreted as reporting the official policy of the United States Government, the United States Department of Transportation, or the Federal Railroad Administration.

Environmental Science and Engineering, Inc., Gainesville, FL, designed and produced this brochure. Sound and Vision Communications, Tampa, FL, prepared the computer graphic illustration for the cover.

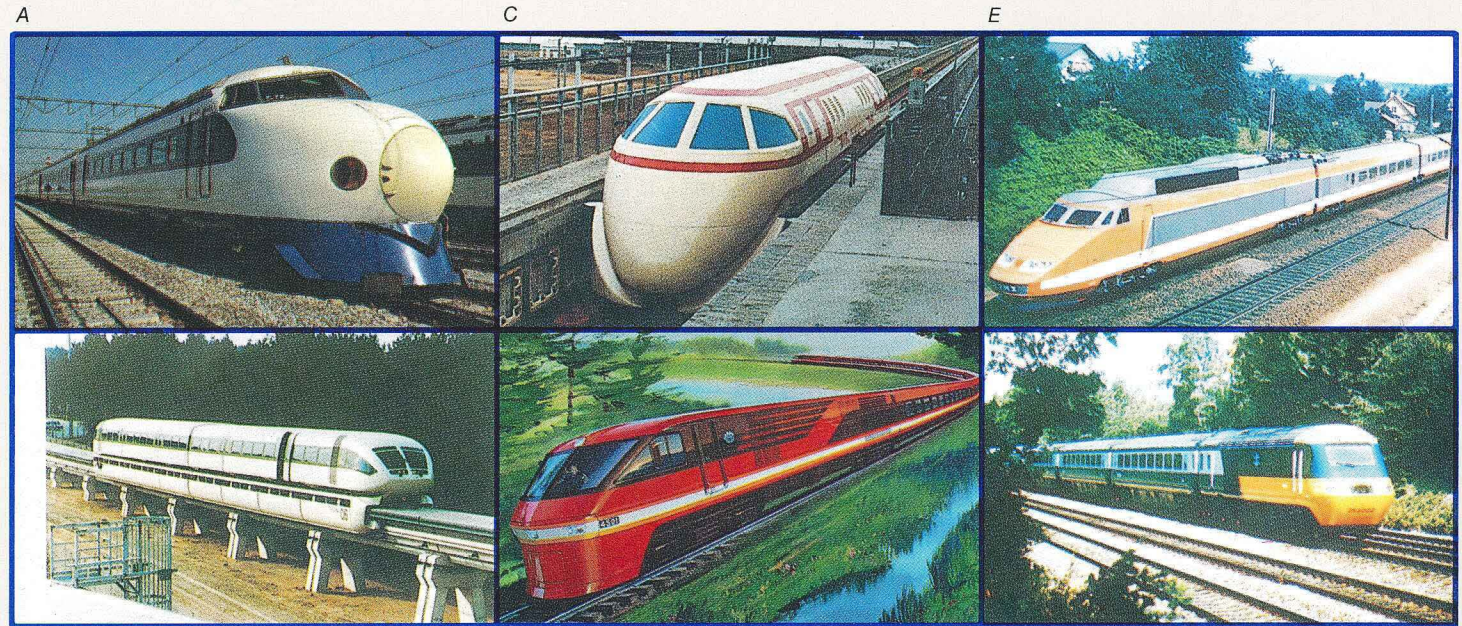


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 B. Downtown Tampa (Greater Tampa Chamber of Commerce)
 C. Downtown Orlando (Orlando Chamber of Commerce)
 D. Orlando (City of Orlando)</p> <p>2 A. Key Biscayne, FL (Florida Dept. of Commerce/Div. of Tourism)
 B. Harbour Island, Tampa, FL (Harbour Island, Inc.)
 C. Artist's Rendering (United States Research Laboratories, Inc.)</p> <p>3 A. Series 200 Bullet Train (Japanese Railway Technology Corp.)
 B. TGV-PSE Train (The TGV Company)
 C. Train Interior (Bombardier, Inc.)
 D. Prototype Maglev Train (Japanese Railway Technology Corp.)</p> | <p>4 A. Governor Graham on Series 200 Bullet Train (Japanese Railway Technology Corp.)
 B. Florida High Speed Rail Committee, John Parke Wright, Chairman (Mr. Akiro Kambara)
 C. Florida House Transportation Committee (Mr. Akiro Kambara)</p> <p>5 A. Orlando International Drive (Florida Dept. of Commerce/Div. of Tourism)
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 C. Tampa International Airport (ESE)
 D. Metrorail (Metro-Dade Transportation Administration)</p> <p>6 A. TGV-PSE Train (The TGV Company)</p> <p>7 A. Train Interior (Bombardier, Inc.)
 B. Train Station Platform (Bombardier, Inc.)
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 C. Prototype Maglev Train (Japanese Railway Technology Corp.)</p> <p>9 A. Metrorail Construction (Metro-Dade Transportation Administration)
 B. Rail Construction (ESE)</p> <p>10 A. EPCOT Center (Walt Disney World)
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 F. Intercity 125 Train (Great Britain)</p> |
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