

**Testimony of  
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Chairman, Amtrak Reform Council  
before the  
Subcommittee on Ground Transportation  
Transportation & Infrastructure Committee  
U.S. House of Representatives  
Port of Seattle Commission Chambers  
Seattle Washington  
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Mr. Chairman, distinguished members of the Subcommittee, the Amtrak Reform Council (ARC) is indeed grateful that you have provided this opportunity for me to present testimony on "Ground Transportation Issues in the Pacific Northwest" before your subcommittee, specifically addressing the broad range of ground transportation issues that affect the economy and quality of life. Also I am pleased that the Amtrak Reform Council, on which I serve as chairman, was able to schedule one of its public business meetings in conjunction with this hearing. The Council was given the task by Congress to examine the intercity rail passenger network operated by Amtrak, make recommendations to Amtrak and Congress on how to preserve and enhance rail passenger services and to monitor Amtrak's financial performance against the goals established in the Amtrak Reform and Accountability Act of 1997.

I want to emphasize that I am here today as a person who has long argued that intercity rail passenger services are an essential part of our national, regional and local transportation systems, from my general experience in transportation, as a former Federal Railroad Administrator and now as Chairman of the ARC. I should make it clear that while I am confident that my views would be subscribed to by a majority, if not all of the Council members, I do not speak formally for the Council in my appearance here. The Council will make its official views known in its formal reports to Congress and its recommendations to Amtrak's Board of Directors and management.

In my brief remarks and in the testimony that I will, with your permission, file for the record, Mr. Chairman I would like to discuss the growing importance of expanded intercity rail passenger service in increasingly congested major travel corridors around the US. In such corridors, the options for expanding intercity passenger travel capacity point to rail. Also, I would like to address in some detail the important improvements to the rail passenger corridor here in the Pacific Northwest, which have produced the impressive Cascades Service. In addition, Mr. Chairman, since this is

my first opportunity to speak before the Council's authorizing Committee in the House, I would also like to provide, principally for the record, a progress report on the Council's activities. All the Council's activities are aimed at advancing the ARC's efforts to carry out its statutory mandate under the Amtrak Reform and Accountability Act.

Mr. Chairman, the growth of intercity rail passenger corridor development initiatives in the United States over the past 7-10 years has been the single most important phenomenon affecting the future potential of our national rail passenger network. Spurred by clogged highways and airways, which often have exceptionally high costs associated with expanding capacity, state and local transportation planners have increasingly turned to the nation's huge rail network as an economical and environmentally sound solution to help alleviate these capacity problems. While the concept and reality of effective rail passenger corridors is not new to the U.S., there is wide-spread and growing support for developing corridors as an emerging solution to state and regional transportation problems.

Mr. Chairman, let me now turn to the significant rail corridor developments in the Pacific Northwest, which is the focus of this important hearing.

## **I. THE NEW CASCADES SERVICE IN THE PACIFIC NORTHWEST REGION**

The Pacific Northwest – a region that is often called Cascadia – has benefited enormously from the long-term economic expansion that America has experienced during the 1990s. Economic booms, however, create problems even as they represent progress, and this has been true in Cascadia as well. It has been heartening to see the effectiveness with which the governments of Oregon and Washington have worked – both individually and in concert – to address the problems that have attended this period of economic success. I recall that Gerald Grinstein, when he was chairman of Burlington Northern, committed the freight railroad to necessary infrastructure improvements. Also, we need to recognize the significant role of Seattle's Discovery Institute, whose Cascadia Project has looked to address not only the immediate transport manifestations of these problems, but to address long-term growth and development issues that will confront the entire Cascadia region. I am personally pleased that the Discovery Institute's president, Bruce Chapman, serves on the Amtrak Reform Council.

It is against the backdrop of this growth, and its attendant transport problems, that the importance of the improved rail service in the Cascades Corridor can best be examined. I would like first to provide a short description of the specific improvements that have been made, and then I would like to highlight for the

Subcommittee the active, imaginative, and effective manner in which the state governments of Washington and Oregon have tackled these problems.

Designated as the Pacific Northwest Corridor under ISTEA, the Cascades Corridor runs from Vancouver, British Columbia, south through Seattle, Washington, and Portland, and Eugene, Oregon. According to the Department of Transportation's High Speed Ground Transportation (HSGT) Commercial Feasibility Study, partnership potential is indicated for any improvements to the existing rail route through the corridor, from those allowing 90 mile per hour top speeds to those allowing 125 mile per hour top speeds. Acting on these findings, the states of Washington and Oregon are working with Amtrak, BNSF, and the Federal Railroad Administration to improve and expand service on the Corridor.

In 1994, Washington State and Amtrak began a service demonstration of a leased Spanish-built *Talgo* trainset on the Cascades Corridor between Seattle and Portland, OR. With its ability to tilt through curves at higher speed with little sacrifice in passenger comfort, and its pleasing passenger amenities, the *Talgo* was successful in shortening travel time along the route by 25 minutes, and achieving annual increases in ridership and revenue of up to 30 percent. As a result of the extremely positive response to the new equipment, Washington State took delivery of two custom-built *Talgo* trains for service along the Seattle-Portland-Eugene segment of Corridor. The new equipment has allowed for additional frequencies on the route, which in turn has resulted in continued increases in ridership. Amtrak has also responded to the success of the equipment and the service by introducing a similar *Talgo* trainset for use on the Seattle-Vancouver portion of the Corridor, with another trainset to enter into service in early September.

Washington State, Amtrak, and Burlington Northern Santa Fe (BNSF) have also been working to upgrade the track along the corridor to increase speeds, capacity, and reliability, and to allow for the initiation of a second Seattle-Vancouver round-trip. The Federal Railroad Administration has granted the State \$750,000 to coordinate high-speed rail requirements for a Positive Train Separation (PTS) prototype being developed by BNSF and Union Pacific for use in the Pacific Northwest. PTS and its variants, which use digital radio signals and computers to enforce safe operation, could have a significant impact on the implementation of HSGT over existing lines owned by freight railroads by ensuring that passenger trains can travel safely and efficiently with the minimum impact on track capacity. Actually, the freight railroads were also able to increase their average train speeds as well -- a major benefit.

It is worth examining how the states of Washington and Oregon carried this off so well. The Cascades Corridor experience provides an excellent prototype for Corridor development within the framework of the principal institutions usually involved in such improvements, specifically, the state DOTs, the freight railroads, the cities and

towns along the corridor that produced very attractive local stations, and Amtrak. I would describe the formula for success as follows:

- The States have taken the leadership role in initiating the service
- The freight railroads have cooperated within an effective framework to secure needed improvements to infrastructure
- Cities and towns have been enlisted to assist in improving stations
- Amtrak has been cooperative and effective in creating improved service
- The primary focus has been meeting the needs of the customer with quality service and reliable, modern equipment.

Here is what other corridors can learn from the Pacific Northwest project:

- *There was leadership at the regional, state, and local level.* The role that the states took on behalf of the region was crucial. They recognized the problem, correctly identified it as a regional problem, and determined an effective solution.
- *The tools were available – or they were created -- to implement the solution.* The state rail staffs became the effective instruments needed to implement the service. That included defining the economic and financial policy governing the operation, designing the routes and services, selecting and designing the trainsets, planning for track and signaling improvements needed to support the service, initiating station improvements, and setting standards for high-quality train operations and on-board services.
- *Support was enlisted from the community at large.* Garnering support is critical. Ideally, it must come from local governments, from civic institutions, from affected industries and businesses, and, generally, from local citizens and taxpayers. They all help mobilize the political will needed to implement an ambitious development plan.
- *Sound working relationships were established.* Achieving a high level of cooperation among the states, Amtrak, freight railroads, and towns and cities is of great assistance.

- *Funding.* Relentless effort is required under the existing funding framework for rail passenger service improvements. The Cascades Corridor effort made, and has continued to make, that effort.

The Pacific Northwest has set the vision for other corridors currently in the development stage. I believe the Subcommittee will be interested in a summary of the progress being made in these additional corridors. I have included a discussion of the overall corridor program and the specific activities underway as an attachment to my statement.

In addition, I would like to discuss briefly one of the other corridor initiatives as a second example of a successful planning and implementation strategy.

## **II. CHICAGO HUB**

The Chicago Hub is one of the corridor projects identified in TEA-21. Among its most promising attributes is the formation of its sponsoring organization, the Midwest Regional Rail Initiative (MWRRI), an alliance of nine Midwestern states, Amtrak and FRA. Its objective is to further assess the potential of HSGT at the regional, interstate level. The alliance includes all seven of the states currently included in the designated Chicago Hub corridor, and examines all four spokes of the designated network. In addition, the initiative is evaluating several other spokes in Illinois, Wisconsin, Indiana, Ohio, Missouri and Michigan. With these added routes, the MWRRI system includes virtually all of Amtrak's current Midwest service and would be readily accessible to 80 percent of the region's population.

Phase I of the Initiative's Midwest high-speed rail corridor study has suggested 110-mile-per-hour fossil-fueled operation using existing routes, and estimated implementation costs of \$3.5 billion, which could be a low cost-high benefit situation. Work is currently underway, funded by the states and by Amtrak, to fine tune revenue and ridership forecasts, and to agree on estimated operating costs. The full study is expected to be completed by early 2000.

This initiative holds significance for corridor developments outside of the Chicago Hub in a number of respects:

- The fact that nine states (with the possible addition of a tenth, Kentucky) are participating in the Initiative is important. Aside from the Northeast Corridor, where the eight member states are designated by statute, there is no similarly large group of states involved in such a complex enterprise.

- The Initiative's extensive study of economics, operations, revenues, and ridership from the ground up is important.
- The participating states have formed a steering group with a representative from each member. It is chaired by the Secretary of Transportation of Wisconsin. A policy analysis group provides advice and counsel to the steering group in response to its directives. This provides a source of independent economic and policy analysis to the steering group, so that it can examine options, seek additional information, and generally develop a greater degree of confidence in the decisions that it reaches.
- This arrangement will give the states the capability to operate with greater effectiveness when negotiating a contract with the service provider.

Finally, Mr. Chairman, I would like to give the Subcommittee a brief report on the functioning of the Amtrak Reform Council.

### **III. ARC'S WORK PROGRAMS FOR FY 1999 & FY 2000**

Mr. Chairman, when you boil down the provisions of the ARAA that deal with the ARC, it is clear that the Council has one principle goal – to improve rail passenger service in the United States operationally and financially. Under its authorizing legislation, it is to evaluate Amtrak's operations and recommend improvements to its Board and management and to Congress. We have begun the process. Should the Council make a finding that Amtrak will not meet the financial performance goals of the ARAA, the Council is then charged to carry out this goal by preparing and submitting to the Congress an action plan for a restructured national system of intercity rail passenger service.

As for our preparations, I will briefly describe the organization we have built and the work programs we are carrying out to discharge our mandate. In FY 1999, the Council has:

- Elected a new Chairman. I am grateful to have been so honored.
- Moved forward with recruitment of small staff on the rationale that a diverse Council of 11 members required a strong stem on to crystallize its efforts. The Council has a full-time staff of six, which is as large as it is going to get, including an executive director, a senior financial analyst, an attorney, a transportation specialist (vacant), an office manager, and a secretary-receptionist.

- Addressed key administrative issues involved in getting our operations underway, including:
  - Preparing and submitting a budget request for FY2000, which is currently under consideration by the Congress;
  - Defining a work program, firmly based on ARC's statutory mandate, which sets forth basic issues that the Council will address, and relates the Council's activities, which comprise business meetings, outreach hearings, and seminars, to those issues.
  - Having all Council members affirm that they understand and will abide by the confidentiality requirements when dealing with proprietary information from Amtrak;
  - Developing guidelines to deal with any conflict-of-interest issues that might arise; and
  - Creating and approving a committee structure, to assist the Council in the implementation of its work program.
  
- Designed and implemented the FY 1999 ARC Work Program, which includes:
  - Business Meetings in March, April, May, June, and August;
  - State DOT Outreach Hearings in April, for the Northeast Corridor, and in June, for the Southeast Corridor. The Council's August meeting will provide an effective opportunity to gain insights into the principal issues affecting rail passenger service in the Pacific Northwest region;
  - A seminar in May, which addressed past, present, and future issues affecting rail passenger service in the US and abroad; and
  - Providing an annual report to the Congress for FY1999, which will be submitted to Congress in January 2000.

The initial phases of the Council's FY 2000 Work Program have been determined and will include:

- Business Meetings in October and late November-early December to approve our annual report, with additional meetings to follow in calendar year 2000;
- State DOT Outreach Hearings planned for October (Midwest), November (South Central US), and additional meetings planned in calendar year 2000 for the Mountain States, California, and New England, which will complete the series that was begun in Philadelphia in April 1999;
  
- Most likely, additional seminars or round table meetings addressing issues critical to the Council's mandate and the improvement of rail passenger service; and

- The development, in addition to the Council's annual report for FY 2000, of reports and analyses on such topics as Amtrak's FY 2000-2004 Business Plan, and quarterly reports to the Congress required under the ARAA.

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That concludes my testimony, Mr. Chairman. I thank you for this opportunity to provide this information and commentary to the subcommittee on these important issues, and will welcome any questions from you or other members of the Subcommittee.

## **Background on Intercity Rail Passenger Corridor Development in the US**

As early as the 1930's, private American railroad companies were providing service with top speeds of over 100 miles per hour in densely populated intercity corridors such as Washington-New York, Chicago-Milwaukee, and Los Angeles-San Diego.

It was not until the 1960's, however, that organized efforts began to develop such corridors, in the context of modern technology, as a solution to the country's growing transportation needs. In 1965, the *High-Speed Ground Transportation Act* was passed. It paved the way for expanded research into new technologies, but, more significantly, promoted the development of the Metroliner Service, a public-private partnership between the federal government and the Pennsylvania (later the Penn Central) Railroad aimed at improving rail passenger service along the Northeast Corridor between Washington and New York.

The results of the 30-year development program for the Northeast Corridor, even with all its fits and starts, have been predominantly positive. Metroliner travel times between Washington and New York currently stand at approximately three hours, with trains making between five and eight stops along the way. Amtrak's Northeast Corridor services, including the limited-stop Metroliners and non-express conventional trains, today capture more than one half of the combined air/rail travel market within the Washington-New York corridor. With the completion of the improvement projects that are currently underway, as part of Amtrak's ambitious Acela program, travel times between Washington and New York will be reduced to two hours, 45 minutes, while the fastest New York to Boston schedules, which currently stand at four hours, 33 minutes, will be shortened to three hours. After 30 years of steady service enhancements, the Northeast Corridor has grown to become the best financially performing of Amtrak's routes. The Northeast Corridor's development and financial performance demonstrates the potential of effective Corridor operations, which are based on providing trip-time-competitive rail passenger transportation between major city pairs. The hallmarks of such competitiveness, as is the case with all effective corridor programs, are frequency of operation, convenience and accessibility of origin and destination stations, and a service that stops at major markets.

## **Recent Legislative Provisions Supporting Expansion of Corridor Development Outside of the Northeast Corridor**

Up through the 1980's, rail corridor development in the United States had concentrated almost exclusively on the Northeast Corridor Improvement Program. While some states had begun to explore rail and other high-speed ground transportation (HSGT) technologies as possible transportation options, there was little federal commitment to development outside of the Northeast. This situation changed in 1991, when the historic *Intermodal Surface Transportation Efficiency Act (ISTEA)* was signed into law. As part of a strategy to develop intermodal solutions to the nation's transportation needs, ISTEA authorized the Secretary of Transportation to designate, through a bidding process from the states, five corridors for investigation of rail and other HSGT options and limited investment. The designated corridors consisted of the California Corridor (San Francisco-Los Angeles-San Diego), the Chicago Hub (Chicago-Milwaukee, Detroit, St. Louis), the Florida Corridor (Tampa-Orlando-Miami), the Pacific Northwest Corridor (Vancouver, B.C.-Seattle-Portland-Eugene), and the Southeast Corridor (Washington-Richmond/Hampton Roads-Raleigh-Charlotte). Included in this act were 6-year funds to improve and eliminate grade crossings along the designated corridors in anticipation of improved service. Equally important, though, was a mandate to perform a comprehensive Commercial Feasibility Study (CFS), ultimately published as *High Speed Ground Transportation for America*, to assess various HSGT options for the corridors. The CFS analyzed eight illustrative corridors. The illustrative corridors included the five corridors designated under ISTEA along with the Northeast Corridor, the Empire Corridor (New York-Albany-Buffalo), and the Texas Triangle (Dallas-Fort Worth-San Antonio-Houston). The Northeast and Empire Corridors were included as they both represented corridors that had already been improved for over 110 mile per hour operation, while the Texas Triangle was examined because of significant state-level interest at the time for developing it into a 200 mile per hour New HSR system. These elements of the Act have spurred a new nationwide interest in HSGT development, extending its scope of relevance beyond the Northeast.

In 1993 and 1994, the Congress enacted the *High-Speed Rail Development Act* and the *Swift Rail Development Act*, which have spurred development of various technologies that are necessary to bring HSGT to the U.S., and led to the establishment of the Federal Railroad Administration (FRA) Next-Generation High-Speed Rail Program to manage HSGT technological development. The Next-Generation Program's current projects include those relating to motive power, train control, and

grade crossing safety. The Program is currently working with Bombardier to develop a high-speed, non-electric, fossil-fueled locomotive to achieve top speeds of over 125 miles per hour over existing railroad without the high cost of electrification. The Program is also working with freight railroads, Amtrak, and the states to implement advanced train control systems for designated HSGT corridors. This family of technologies, which includes Positive Train Control, Positive Train Separation, and the Incremental Train Control System, will help to ensure safe, efficient, and reliable operations on the country's unique mixed railroad environment, where slow, heavy, and long freight trains interact with faster, lighter, and shorter passenger trains. The Next-Generation Program is also in the process of implementing and testing advanced grade crossing warning and protection technologies that can effectively block the crossing from highway traffic upon approach of a train, and that can detect when vehicles try to violate the crossing or get stuck on the tracks. These technologies will further help make it practical and safe to operate high-speed passenger and freight trains over existing U.S. railroads, where there is on average one crossing for every mile of track, with the kind of accident potential that we all know far too well.

The latest development in federal support for HSGT came with the passage of the *Transportation Equity Act for the 21<sup>st</sup> Century* (TEA-21). Working off of the precedent for intermodal transportation policy established by ISTEA, TEA-21 included several provisions relating to HSGT corridor development. Perhaps the most significant of these was the call for the designation of seven new corridors and corridor extensions. Included in the Act itself were the designations of the Empire Corridor (New York-Albany-Buffalo), the Keystone Corridor (Philadelphia-Harrisburg), the Gulf Coast Corridor (Houston-Baton Rouge-New Orleans-Mobile; and New Orleans-Meridian-Birmingham), and an extension of the Chicago Hub from Milwaukee to Minneapolis. The Act also authorized the designation of three additional corridors to be chosen by the Secretary of Transportation. Presently, there are two requests for designation pending, one, in Ohio from Cincinnati, Columbus, to Cleveland, and two, in the upper Northeast from Boston to Portland, ME. Other options are also being explored such as designating a further expansion of the Chicago Hub from Chicago to Indianapolis and Cincinnati, and a two-pronged extension of the Southeast Corridor from Raleigh, N.C., to Columbia, S.C., Savannah, Ga., and Jacksonville, Fla., and from Charlotte, N.C. to Spartanburg and Greenville, S.C., and Atlanta and Macon, Ga. These additional designations will help to identify future HSGT development opportunities, and make more potential corridors eligible for grade crossing hazard elimination funding, as established by ISTEA and reauthorized and expanded by TEA-21. All of these Corridors have come from initiatives from the state DOT's. Many state transportation officials are becoming aware that the rail corridors need the removal of crossings to create high-speed freight and passenger capacity.

## **Status of the Various Intercity Rail Passenger Corridor**

### ***1. Pacific Northwest Corridor***

Designated as the Pacific Northwest Corridor by the Secretary of Transportation under ISTEA, the Cascades Corridor runs from Vancouver, British Columbia, south through Seattle, Washington, and Portland, and Eugene, Oregon. According to the HSGT Commercial Feasibility Study, partnership potential is indicated for any improvements to the existing rail route through the corridor, from those allowing 90 mile per hour top speeds to those allowing 125 mile per hour top speeds. Acting on these findings, the States of Washington and Oregon are working with Amtrak, the freight railroads, and the Federal Railroad Administration to improve and expand service on the Corridor.

In 1994, Washington State and Amtrak began a service demonstration of a leased Spanish-built *Talgo* trainset on the Cascades Corridor between Seattle and Portland. With its ability to tilt through curves at higher speed with little sacrifice in passenger comfort, and its pleasing and unique passenger amenities, the *Talgo* was successful in shortening travel time along the route by 25 minutes, and achieving annual increases in ridership and revenue of up to 30 percent. With more than 550,000 passengers traveling in 1998 on Amtrak's service in the Pacific Northwest Rail Corridor, ridership has increased by more than 150 percent since 1993 when the states began their partnership with Amtrak. As a result of the extremely positive response to the new equipment, Washington State took delivery of two custom-built *Talgo* trains for service along the Seattle-Portland-Eugene segment of Corridor. The new equipment has allowed for additional frequencies on the route, which in turn has resulted in continued increases in ridership. Amtrak has also responded to the success of the equipment, and the service by introducing a similar *Talgo* trainset, with another to enter service soon, for use on the Seattle-Vancouver portion of the Corridor.

Washington State, Amtrak, and Burlington Northern Santa Fe (BNSF) have also been working to upgrade the track along the corridor to increase speeds, capacity, and reliability, and to allow for the initiation of a second Seattle-Vancouver round-trip. The Federal Railroad Administration has also granted the State \$750,000 to coordinate high-speed rail requirements for a Positive Train Separation (PTS) prototype being developed by BNSF and Union Pacific for use in the Pacific Northwest. PTS and its variants, which use digital radio signals and computers to enforce safe operation, could have a significant impact on the implementation of HSGT over existing lines owned by freight railroads by ensuring that passenger trains can travel safely and efficiently with the minimum impact on track capacity. Altogether, since 1992, some \$1.19

billion has been committed to the improvement of the Pacific Northwest Corridor through spending programs that extend as far into the future as 2008. The largest single commitment is the Sound Transit commuter rail program, to which \$600 million is committed through 2008. The remaining funding is made up by Washington State DOT (\$230 million), the freight railroads (\$225 million), Amtrak (\$90 million), and a total of \$45 million from the state of Oregon, local communities, ports, and the federal government.

## **2. California Corridor**

The California Corridor has three distinct geographic segments, which are currently served by three high-frequency Amtrak services. The *Capitols* serve the northern portion of the corridor from Placer County/Sacramento to Oakland/San Jose, the *San Joaquin's* serve the Central portion of the corridor from Oakland to Bakersfield, and the *San Diegan's* run from San Luis Obispo through Santa Barbara, Los Angeles, and San Diego. This rail service is supplemented by an extensive system of Amtrak Thruway feeder busses, which connect off-line points to rail stations. The State has been working with Amtrak on a campaign to improve service and build ridership along these routes, and has invested or committed nearly \$800 million on new equipment and operating subsidies for increased frequencies and new services.

Of interest is that these incremental improvements to rail service on existing lines form only one half of a two-pronged strategy for intercity passenger rail development in California. The newly created California High Speed Rail Authority, is formulating a plan for the financing, construction, and operation of a high speed, grade-separated rail network with a top speed of over 200 miles per hour. The Authority's predecessor, the California Intercity High-Speed Rail Commission, recommended a 676 mile electrified, double-tracked system that would span the entire length of the designated corridor from the Bay Area to San Diego. The system's construction would be a public works project on the scale of the State's freeway system, at a cost of \$23 to \$32 billion (depending on the technology employed). The new network would work in tandem with a high-speed feeder system operating at over 100 mile per hour, which would be developed from the existing improved service now being offered by Amtrak. In the year 2000, after a preliminary construction and funding plan is completed, the Authority plans to bring before California voters a referendum on whether to proceed with this ambitious HSGT development plan.

## **3. Empire Corridor**

The Empire Corridor, located entirely within New York State, runs north from New York City to Albany, then west to Buffalo. The Empire Corridor currently has the second most frequent service on the Amtrak system (next to the NEC), carrying 1.2

million yearly passengers on 13 daily round trips between New York and Albany, with limited service continuing on to Buffalo. A five-year, \$185 million plan to upgrade the track infrastructure along entire corridor and to rebuild equipment is a joint effort of Amtrak and the State of New York to further improve service and generate ridership. Improvements include additional track capacity, grade crossing hazard elimination and equipment upgrades. The state is rebuilding gas turbine-powered high speed, non electric "Turboliners" for use on the route. One such trainset was partially upgraded in 1995 as part of FRA's Next Generation High Speed Rail technology demonstration program, and is currently in regular service at speeds up to 110 miles per hour between Albany and New York. The combination of the rebuilt trainsets and improved infrastructure is forecasted to result in 125 mph service and a two-hour Albany-New York City schedule as well as a reduction to a little more than six hours for the Buffalo to New York run. It is estimated that the improvement in service will attract an additional 1.8 million passengers annually to the corridor.

#### ***4. Keystone Corridor***

The Keystone Corridor in Pennsylvania, running between Philadelphia and Harrisburg, Pennsylvania, and owned by Amtrak was designated as an emerging HSGT corridor under TEA-21. Many characteristics of the of corridor indicate its potential for HSGT, such as its dense population, connection with the heavily traveled Northeast Corridor, and its status as the only electrified mainline outside of the NEC. Amtrak currently offers nine weekday round trips between Harrisburg and Philadelphia, with the majority of those trips also serving New York City, and a few serving Pittsburgh and points west. The State of Pennsylvania, Amtrak and the Federal Railroad Administration have undertaken various studies of options for service, equipment, management, and operating improvements on of the line. Amtrak and Pennsylvania recently agreed to a five-year \$140 million program to begin the upgrade of the Keystone Corridor.

#### ***5. Southeast Corridor***

The Southeast Corridor, as designated by the Secretary of Transportation under ISTEA and subsequently runs from Washington, DC through Richmond to Raleigh, NC, where it splits into two lines: one running southwest through Charlotte, Atlanta, and Macon, and another running south through Columbia, Savannah, and Jacksonville. The corridor also includes a spur between Richmond and the Hampton Roads area. There are currently eight daily round trips between the Northeast Corridor and Richmond, of which three are limited-stop, long distance trains, and two continue on to serve Hampton Roads. Virginia is investigating improvements that would allow two-hour downtown-to-downtown service between Washington and Richmond. Over the past five years, Virginia has invested nearly \$40 million on this segment of the

corridor in anticipation of such service, and is considering spending an additional \$34 million in the near term. Working together, Virginia DOT, CSX, FRA, and Amtrak, recently developed a \$370 million plan for infrastructure improvement between Washington and Richmond which was transmitted to Congress in May of this year.

The State of North Carolina has also shown significant commitment to the development of its portion of the corridor. For the last decade, the state has worked with Amtrak to implement an intrastate corridor serving Raleigh and Charlotte with future plans for high-speed service. North Carolina has already begun to institute some improvements along the corridor, having spent \$47 million to upgrade stations, buy equipment, and improve track. The State has also commenced the ambitious and innovative Sealed Corridor Initiative, an effort to minimize or eliminate hazards at every grade crossing along the North Carolina portion of the corridor. In July of this year, the North Carolina Board of Transportation approved \$515 million to improve rail service and safety as part of a seven year Transportation Improvement Program. The State of North Carolina has also invested \$71 million to acquire the right of way between Charlotte, Greensboro, and Raleigh. North Carolina is planning for this right of way to be developed for high-speed and other passenger rail services. An additional development is that Amtrak and FRA, working with the states and other interested parties, have commenced detailed planning of necessary improvements from Richmond to Charlotte as a follow-on to the Washington, DC – Richmond effort.

The other Southeast states traversed by the portions of the corridor designated under TEA-21 (South Carolina, Georgia and Florida) have also been working towards HSGT. In anticipation of the extension, the five Southeast Corridor states cooperatively completed a market and demand study for HSGT travel which will be used in future assessments of corridor improvement options. Since the release of the study report in 1996, the states have continued to coordinate their efforts to develop HSGT in the Southeast.

#### **6. *Florida Corridor***

The Florida Corridor, established under ISTEA, links the major population and tourist centers of Miami, Orlando, and Tampa. This corridor is served currently by Amtrak long-distance trains with top speeds of 79 miles per hour that link Florida to the Northeast and the West Coast. Studies conducted by the state over the past eight years show a great potential for additional intercity passenger rail service in this corridor. It is expected that over the next ten years, the intercity travel market within the Miami-Orlando-Tampa corridor will grow at an annual rate of 4% and will reach a level of 105 million intercity trips per year by 2010. Despite the termination earlier this year of the FOX high-speed rail project, interest in starting additional passenger

rail service within this corridor remains high. Amtrak and the Florida Department of Transportation are currently working jointly on development of a plan for implementation of new and improved intercity passenger rail service within this corridor.

### ***7. Gulf Coast Corridor***

The Gulf Coast corridor is one of the newest additions to the federally designated HSGT corridors, having been designated in 1998 under TEA-21. The corridor extends from Houston, through New Orleans to Mobile (with a possible future extension through Florida to Jacksonville), and northeast from New Orleans to Birmingham, connecting at Atlanta. This is another route currently served only by Amtrak long distance trains, but there is genuine enthusiasm and support for HSGT corridor service in the region. The Southern Rapid Rail Transit Commission (SRRTC), made up of the states of Alabama, Florida, Louisiana, Mississippi, and Texas, has conducted a study that identified the corridor route and possible improvement options. SRRTC has hired an executive director and is strongly supported by the local area airport authority.

### ***8. Chicago Hub***

The Chicago Hub, as designated by ISTEA and expanded under TEA-21, consists of a number of potential HSGT routes radiating from Chicago's Union Station. These spokes currently extend to Detroit, Indianapolis/Cincinnati, Milwaukee/Minneapolis, and Springfield/Saint Louis.

The area of the Midwest covered by the corridor is presently served by numerous Amtrak routes, although few of the services now operating approach the frequencies necessary for efficient corridor operation. Several of the states included in the corridor are presently working to improve service along some of these routes by conducting studies of possible improvement options and by investing in infrastructure upgrades. The Chicago-Milwaukee-Minneapolis segment of the corridor has been the subject of the Tri-State High-Speed Rail Study, a cooperative effort of the Minnesota, Wisconsin, and Illinois Departments of Transportation. The State of Michigan, working with Amtrak, is in the process of upgrading the Chicago-Detroit line for 110 mile per hour operation, hoping to increase daily frequencies to ten round trips, and achieve a travel time of 3.5 hours. Seventy-nine million dollars have been invested in the project, including \$47 million in state funds and \$10 million in federal funds for an advanced train control system. Illinois is testing a similar technology for implementation along the Chicago-St. Louis corridor. These facilities are seen as imperative for establishing HSGT on already congested rail lines. The Chicago-St. Louis route shows promise of early success.

One of the most promising current developments in the Chicago Hub has been the organization of the Midwest Regional Rail Initiative (MWRRI), an alliance of nine Midwestern states, Amtrak and FRA, with the objective of further assessing the potential of HSGT at the regional, interstate level. The alliance includes all seven of the states currently included in the designated Chicago Hub corridor, and examines all four spokes of the designated network. In addition, the initiative is evaluating several other spokes in Illinois, Wisconsin, Indiana, Ohio, Missouri and Michigan. With these added routes, the MWRRI system includes virtually all of Amtrak's current Midwest service and would be readily accessible to 80 percent of the region's population. Phase I of the Initiative's Midwest high-speed rail corridor study has suggested 110-mile-per-hour fossil-fueled operation using existing routes, and estimated implementation costs of \$3.5 billion, which could be a low cost-high benefit situation. Work is currently underway, funded by the states and by Amtrak, to fine tune revenue and ridership forecasts, and to agree on estimated operating costs. The full study is expected to be completed by early 2000.