

**“Evaluation of High-Speed Rail Options in the Macon-Atlanta-  
Greenville-Charlotte Rail Corridor”  
The Volpe Center, August 2008**

**INTRODUCTION**

Georgia Department of Transportation  
South Carolina Department of Transportation  
North Carolina Department of Transportation

We are pleased to share the recently completed feasibility study of the high speed rail corridor from Charlotte through Greenville/Spartanburg and Atlanta to Macon. This is part of the Southeast High Speed Rail corridor (SEHSR) authorized by the Congress and designated by the USDOT, and is a continuation of the SEHSR work being conducted in Virginia and North Carolina between Washington DC and Charlotte.

The report validates the decisions of the Congress and USDOT to designate this corridor, and establishes the justification for continued interest and progress toward developing high speed rail (HSR) along this route. It provides a good first step, particularly with respect to the assumptions that must be considered and weighed as we move forward with more detailed studies.

Some of the preliminary assumptions and conclusions that need to be revisited in more detailed work include the following:

- The study uses city pairs only within this particular study area (between Macon and Charlotte) for revenue and ridership estimates. Models have shown that ridership projections could be different, and likely higher, if major markets beyond the study corridor are included in the analysis. DC, New York City, and Boston all attract and generate significant numbers of travelers, and would have direct connectivity to the Macon to Charlotte HSR service. These major northeastern markets should be included in more detailed revenue and ridership estimates.

- At this stage of analysis, the study makes necessary general assumptions regarding various train speeds and resulting track configurations and alignments, including the bypass of smaller downtowns. This will provide an excellent starting point for additional Tier I corridor studies to better establish the Purpose and Need for rail passenger service in this corridor, as well as necessary National Environmental Policy Act (NEPA) considerations related to corridor alternatives.

- The report leans toward a 125 to 150 mph operating speed as the recommended balance between ridership and cost, provided those speeds can be attained with the relatively less expensive diesel locomotive power versus electric. At the same time, the report recognizes (page ES-3) that no commercially available FRA-compliant diesel locomotives currently exist in the US that can operate at those speeds. A more thorough Tier I Environmental Impact Statement (EIS) would address the general issues related to operating speeds, locomotive power as it relates to cost, existing versus new alignment,

comingled freight and passenger traffic versus passenger only, and associated NEPA requirements, etc.

- Also required will be further exploration of relationships between the freight railroads that currently operate in the corridor, how improved future passenger and freight operations can best coexist, and decisions relating to use of the existing corridor versus a completely new alignment, etc. These type issues also would be addressed in a future Tier I EIS document.

- The report's cost estimate of roughly \$6.2 million/mile focuses on the costs of rail improvements alone. Additional studies will be required to establish costs for the roadway and structure work associated with grade separations and crossing consolidations. The total cost for rail, as well as roadway work associated with grade separating all crossings, could be expected to more than double this initial cost estimate.

This study confirms the feasibility of HSR for this portion of the SEHSR corridor, and provides the foundation for at least three "next steps" studies that are considered necessary at this point.

1. New travel/intercept studies. Updated travel/intercept studies will obtain actual origin and destination surveys of travelers in the corridor, and provide the basic data necessary to calibrate the ridership and revenue models associated with high speed rail in this area.

2. Ridership/Revenue Updates. This was done in a general manner in the feasibility study. It needs to be taken to the next level, using the better data obtained in the travel/intercept study, above, and extending the model to reflect the major markets to which this corridor would provide access, such as the northeast corridor.

3. Tier I EIS. The two preceding efforts would feed into a Tier I Environmental Impact Study, which would begin the EIS process that must be conducted for any transportation infrastructure investment. The Tier I EIS is a program level NEPA document that would establish:

- The overall purpose and need for the project (Note: Complexities in the global energy situation will need to be addressed in the project's purpose and need);
- The project approach, to include design speeds, type of motive power (fossil fuel versus electric), shared alignment versus dedicated, etc.
- The appropriate study corridor location, size, etc.

The Georgia, South Carolina and North Carolina Departments of Transportation cooperatively present this *Evaluation of High-Speed Rail Options in the Macon-Atlanta-Greenville-Charlotte Rail Corridor* and will continue our collaboration in addressing the next steps.

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