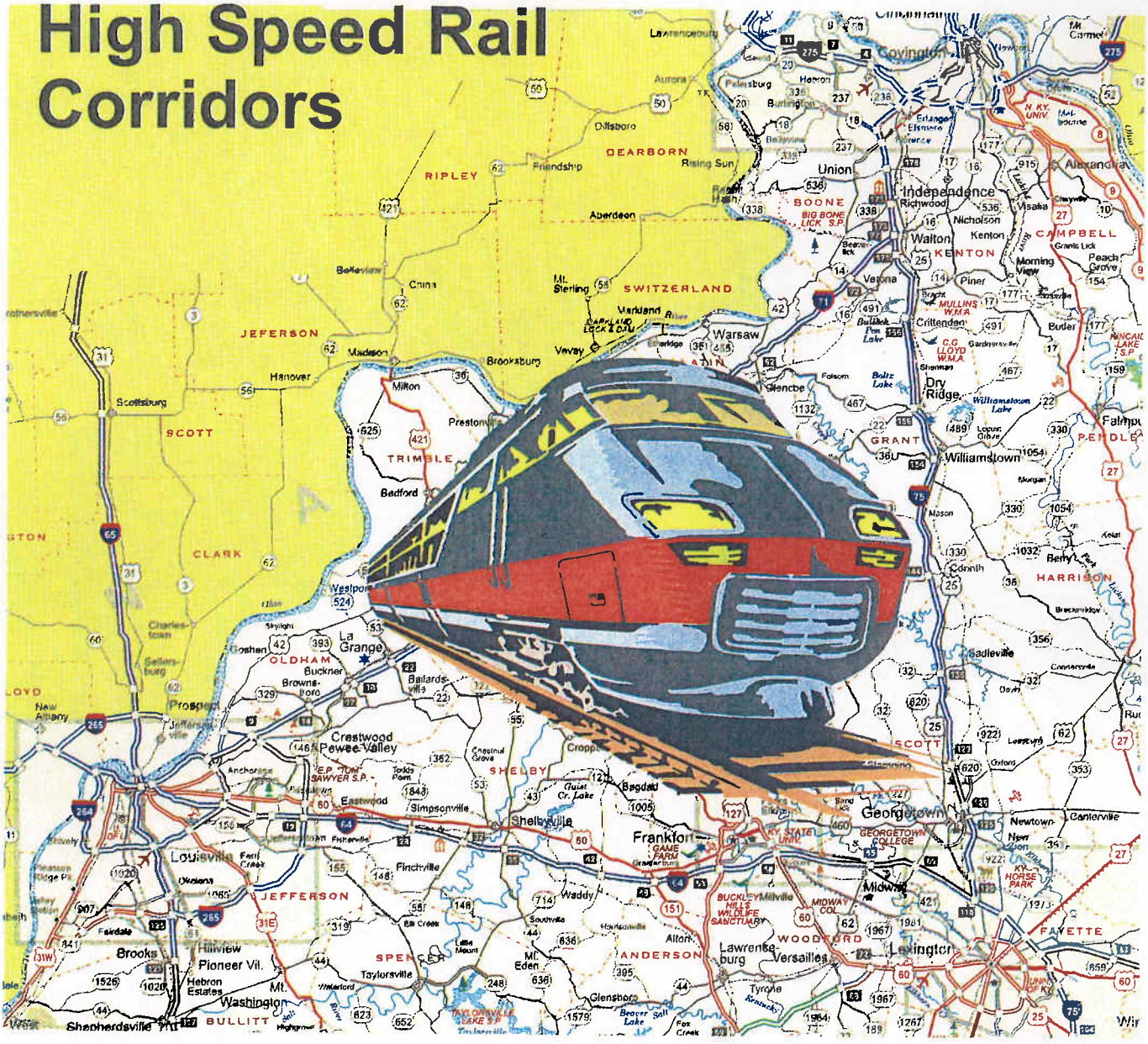
Examination of I-75, I-64 and I-71 High Speed Rail Corridors



Prepared for

The Kentucky Transportation Cabinet

by

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EXHIBITS

EXECUTIVE SUMMARY

This document contains a review of high-speed rail services, proposals, and a preliminary assessment of the potential for high-speed ground transportation between the Kentucky cities of Lexington, Louisville and Covington. The service would connect the airports in the three locations. The three metropolitan areas in the study area had a combined 1997 population of 3.1 million.

Infrastructure and Equipment – True high-speed rail systems are operated with electric-powered trains which draw electricity from overhead wires or catenary, and require alignments appropriate for contemplated speeds (in excess of 125 mph). Extensive safety measures are necessary -- fencing of rights-of-way, grade separating rail-highway crossings and installation of advanced train control systems. Mixed freight trains and high-speed passenger trains raise serious operational and liability concerns.

Ridership - The rail ridership forecast shown below was designed to produce an initial "order of magnitude" of potential patronage. It is based on a comparison of the Kentucky corridors with an existing rail corridor currently operating in the U.S. and adjusting for some of the differences between those corridors.

City 1	City 2	Year 2000 Annual Passengers
Louisville	Lexington/Frankfort CMSA	22,419
Louisville	Cincinnati	39,381
Cincinnati	Lexington/Frankfort CMSA	28,112
Lexington	Frankfort	3,650
Total		93,563

Additional ridership could be derived from air connect passengers, those finding it more advantageous to use the rail system directly serving the Cincinnati or Louisville airports instead of a short commuter flight (estimated at 58,000 annually), and from a Cincinnati connection with the Midwest Regional Rail initiative.

Revenues and Costs - Revenues in this evaluation are generated solely from patronage using fares competitive with other land transport means. Air fares, due to the short-haul nature, are not competitive. Total revenues attributable to the system from ridership are estimated to total $5.42 and $7.71 million annually, for four and six round trips, respectively.

The costs of developing the infrastructure and acquiring the initial trainsets are included in the capital costs. An order-of-magnitude estimate to construct the 266-route-mile system is $5.48 billion. A similar estimate for the five trainsets needed for six round trips is $100 million, and the three sets needed for four round trips is $60 million. A summary follows.

Service Frequency (round trips)	Annual Ridership Revenues ($million)	Capital Costs ($million)	Annual Operating and Maintenance Costs ($million)
4	$5.4	$5,539.6	$38.3
6	7.7	5,579.6	42.9

Conclusions - The high-speed rail proposal discussed in this document is estimated to produce only 15 percent of the revenue needed to cover operating costs, and no contribution toward capital costs. Two major factors work against the proposal. First, the system suffers from highway - competitive travel times, a situation due in large part to parallel Interstate Highways. In addition, the trips are not long enough to compete for airline traffic, the target of many HSR proposals. It may be desirable to re-examine the proposal, however, if the Cincinnati-Chicago leg of the Midwest Rail Initiative becomes a reality and proves successful. This connection would extend the effective size of the rail system permitting competitive-length trips, and providing access to a much larger travel market.

EXAMINATION OF I-75, I-64, AND I-71 HIGH-SPEED RAIL CORRIDORS

Study Purpose

This document contains an assessment of the potential for high-speed ground transportation between the Kentucky cities of Lexington, Louisville and Covington. The high-speed service is to take the form of a fixed guideway system, more particularly, a rail service. High-speed service is generally considered to be that which operates at or in excess of 125 mph. The service would connect the airports serving the regions surrounding the three locations with selected intermediate stops. Airport terminals were selected as opposed to downtown locations as it would be easier to access them and downtown connections already exist and are proposed to be improved in Northern Kentucky (to Cincinnati) and Louisville with Light Rail Transit connections.

The work performed is preliminary in nature in order that insight may be gained before a decision is made to devote additional resources to the investigation. It is felt that by taking benefit of the work performed previously in other investigations, a fair overview of the potential in Kentucky might be expeditiously and economically obtained.

Study Area

The study area includes the three metropolitan areas mentioned above -- Lexington/Frankfort, Northern Kentucky/Cincinnati and Louisville. The three metropolitan areas had a combined 1997 population of 3.1 million.

The populations centers are connected by existing highways, including Interstates, as evident in Exhibit 1. Interstate 75 connects Lexington with Northern Kentucky and Cincinnati; Interstate 71 connects Northern Kentucky with Louisville; and, Interstate 64 connects Louisville with Lexington.

The study area is also well served with existing rail lines. A principal mainline of the Norfolk Southern Railway (NS) runs between Lexington and Northern Kentucky, and a similar line of CSX Transportation (CSXT) connects Northern Kentucky with Louisville. Other lines of both CSXT and NS lie in the area between Lexington and Louisville, but CSXT has the only line which connects the two.

High-Speed Rail Services

High-speed rail (HSR) services are currently available in parts of Europe, Asia and the United States. Although many proposals have been advanced in the US, the only high-speed service currently provided is by Amtrak on its Northeast Corridor between Washington, DC and New York City. The Corridor between New York and Boston is now being improved with electrification and new trains for similar operations. The overseas services, although they operate in part over existing rail lines, run primarily over new lines designed and constructed exclusively HSR.