

CHAPTER 3: PASSENGER RAIL

This chapter highlights past and present Amtrak operations, bus connections to Amtrak, tourist/excursion rail lines, and passenger rail-related studies.

3.1 AMTRAK

Amtrak provides passenger rail services connecting over 500 communities in 46 states, the District of Columbia, and three Canadian provinces. **Figure 3-1** shows Amtrak's national system. In addition to its intercity service, Amtrak is the nation's largest provider of contract-commuter rail service for state and regional authorities. Originally created in 1970 as a for-profit government corporation to relieve the freight railroads of the burden of unprofitable passenger operations, Amtrak was granted a monopoly to provide intercity rail transportation. It officially began service on May 1, 1971 with 185 trains serving 314 destinations. Amtrak received \$1.2 billion in federal funds for operating and capital support for fiscal year (FY) 2013.¹⁷

In 1971, Amtrak's nationwide monthly ridership was over 1.2 million passengers or over 14.8 million annually. In 2013, its monthly ridership had grown to more than 2.6 million passengers or nearly 31.6 million annually. By comparison, in 2013, the Kentucky total of just over 11,000 passengers annually represented 0.04 percent of the total annual nationwide ridership.¹⁸

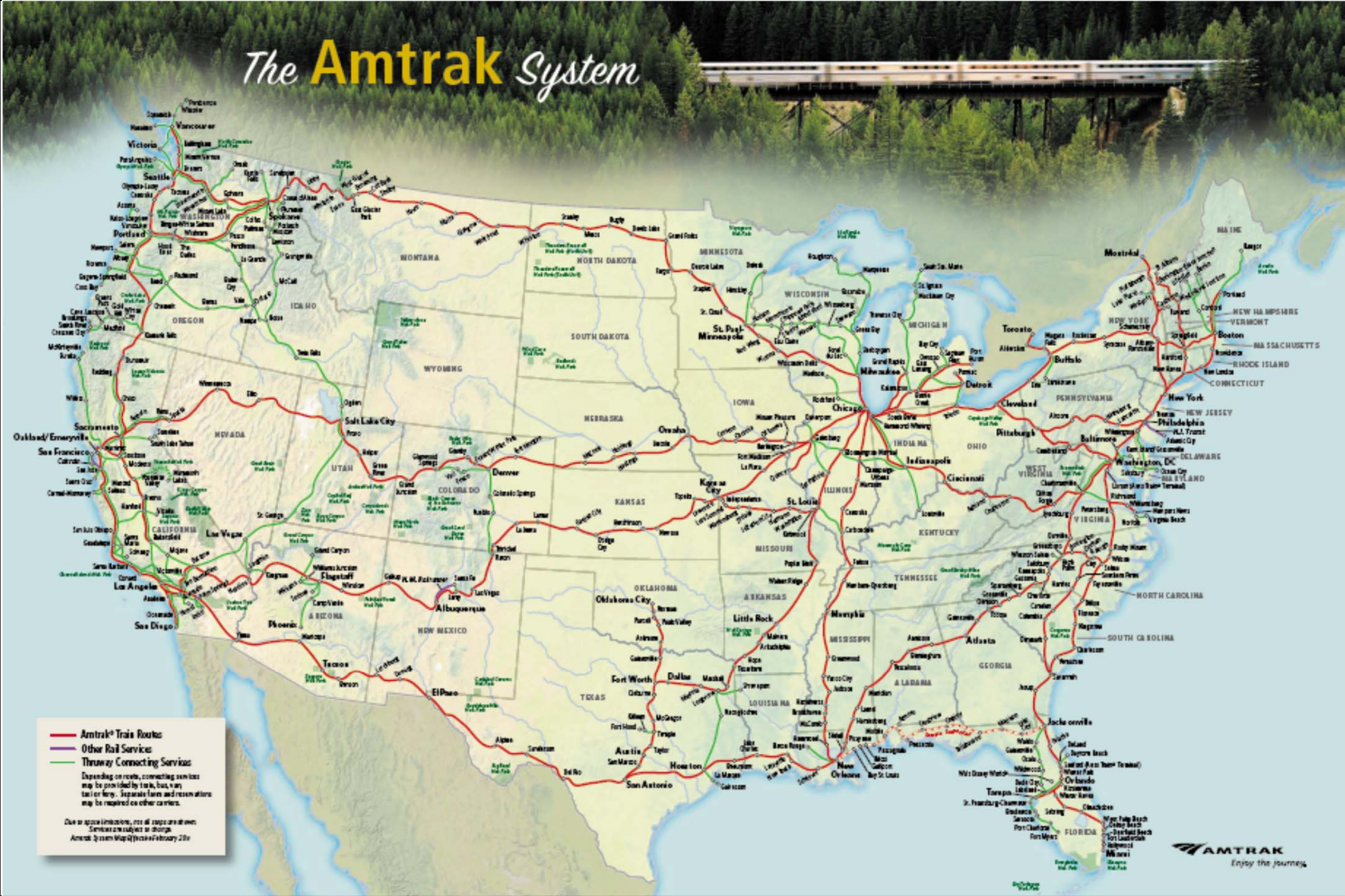
As discussed earlier, railroad infrastructure capacity is managed carefully to eliminate conflicts in the movement of passenger and freight operations through track control arrangements. These arrangements provide guidance on railroad operations for each section of track, and the window of time those operations are expected to take place. Seventy-two percent of Amtrak train operation occurs on freight railroad infrastructure. According to 49 U.S.C. 24308 (c), 1973, passenger trains operated by Amtrak receive priority over freight trains. However, the operational track control decisions are made by non-Amtrak dispatchers and other non-Amtrak employees. Amtrak's ability to meet performance expectations and maintain on-time schedules depends on the prioritization of Amtrak trains on freight railroads. Note that in late 2014, the freight railroads challenged Amtrak's priority and the case was heard before the U.S. Supreme Court. The outcome is not yet known at the time of publication of this plan.

Figure 3-2 depicts the two passenger rail routes and four passenger rail stations located in Kentucky. Amtrak ridership for FY 2005 through FY 2013 at stations in Kentucky and the nearby cities of Cincinnati, Ohio and Indianapolis, Indiana is summarized in **Table 3-1**. As seen from the Kentucky station statistics, ridership has increased overall in Kentucky from FY 2005 to FY 2013 by 54 percent.

¹⁷ Amtrak, <http://www.amtrak.com/>, 2014

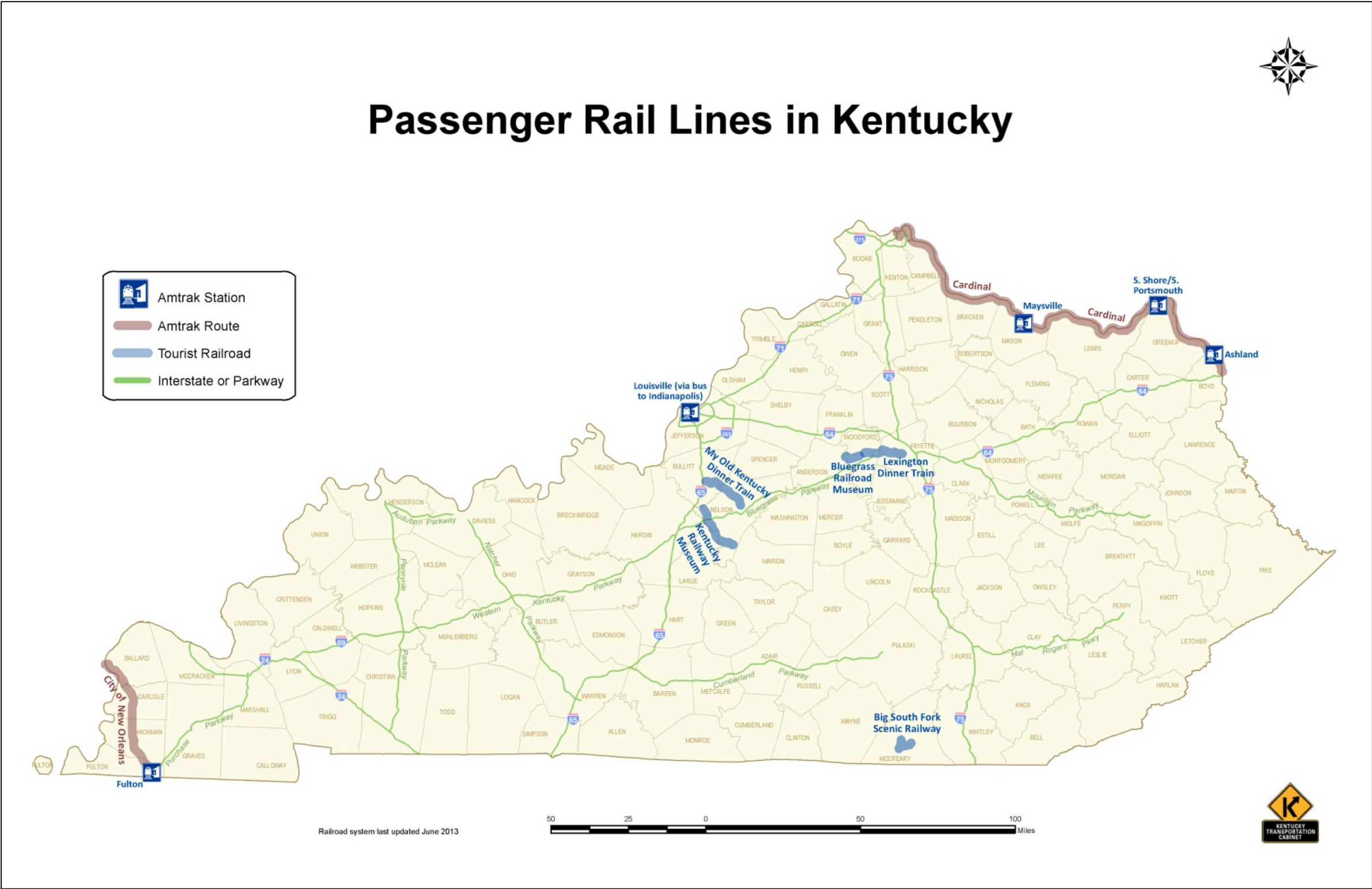
¹⁸ Ibid.

Figure 3-1: Amtrak National System



Source: http://www.amtrak.com/ccurl/948/674/System0211_101web_0.pdf, 2014

Figure 3-2: Passenger Rail Lines in Kentucky



Source: KYTC, 2014

Table 3-1: Amtrak Annual Total Ridership for Selected Years and Cities

City	2005	2006	2007	2008	2009	2010	2011	2012	2013
Kentucky Stations									
Ashland	2,374	2,880	2,829	2,909	2,925	2,771	2,820	2,999	3,007
Fulton	2,304	2,288	2,743	3,683	3,445	3,578	3,548	4,038	4,588
Maysville	1,733	1,604	1,772	1,707	1,855	1,933	1,817	2,507	2,411
S. Portsmouth	734	873	715	811	771	1,019	856	1,037	1,010
Kentucky Total	7,145	7,645	8,059	9,110	8,996	9,301	9,041	10,581	11,016
Regional Stations									
Cincinnati, OH	12,407	14,043	12,753	14,654	14,377	13,852*	15,056*	15,846*	15,213*
Indianapolis, IN	23,404	22,798	28,363	33,035	31,651	31,343	33,344	33,714	35,300
Regional Total	35,811	36,841	41,116	47,689	46,028	45,195	48,400	49,560	50,513

* Denotes that ridership data is from U.S. House of Representatives KY District 4 Fact Sheet, 2010-2013

Source: www.amtrak.com – About Amtrak – Facts & Services – State Fact Sheets, 2005-2013

3.1.1 Amtrak Routes in Kentucky

Amtrak trains stop at four stations in Kentucky. The *Cardinal* stops in the Kentucky cities of Maysville, South Portsmouth, and Ashland. The *Cardinal* runs three trains per week between Chicago, Illinois and Washington, D.C., offering both sleeper and diner cars. The *City of New Orleans* provides service between Chicago and New Orleans, Louisiana, with a stop in Kentucky in the city of Fulton. The *City of New Orleans* offers daily service with sleeper and diner cars. Between 1999 and 2003, Amtrak operated the former *Kentucky Cardinal*, which connected Louisville and Chicago, through Jeffersonville and Indianapolis, Indiana. The service was discontinued in 2003, due to delays crossing the Ohio River, low track speeds, and low ridership. Riders in Louisville may now take a connecting bus to Indianapolis to meet the *Cardinal*.

3.1.2 Bus Services Connecting Passengers to Amtrak Routes

Thruway Motorcoach Service, operated by Greyhound, provides bus connections from Amtrak stations to other communities not currently served by Amtrak. Guaranteed connections to an Amtrak train station, through-fares, and common ticketing are provided in most cases. A Thruway bus connection is provided at Louisville, connecting Louisville and Indianapolis, Indiana, and continuing on to Chicago, Illinois. The Thruway connection out of Cincinnati provides a link to Columbus, Ohio and Pittsburgh, Pennsylvania. Bus connections are also available to Amtrak passengers at Ashland and Fulton.

3.2 TOURIST/EXCURSION RAIL LINES

Five tourist/excursion trains operate in Kentucky, as described below with locations noted in **Figure 3-2**.

3.2.1 Big South Fork Scenic Railway

Located in Stearns, the Big South Fork Scenic Railway is an excursion railroad that takes passengers on a 14-mile roundtrip tour to the National Park Service's Blue Heron Coal Mining Camp representation within the Big South Fork National River Recreation Area. It operates on a line that is owned by the McCreary County Heritage Foundation in McCreary County and features tunnels, walking paths, an abandoned mine, a snack bar, and a gift shop. The train is in operation from April through December.¹⁹ The line operates over one mile of Kentucky and Tennessee Railroad's yard track to connect its station to its rail line.

3.2.2 Bluegrass Scenic Railroad and Museum

Located near downtown Versailles, the Bluegrass Scenic Railroad and Museum offers an 11-mile/90-minute roundtrip tour within the Bluegrass Region of Kentucky, from Versailles toward the Kentucky River, along the only railroad line in Kentucky not used to transport freight. This tour uses the former mainline of the now defunct Louisville Southern Railroad. In addition to the tour, the museum exhibits include a display car.²⁰

3.2.3 Kentucky Railway Museum

Located in New Haven, the Kentucky Railway Museum operates over 22 roundtrip miles of track that were formerly part of the Lebanon Branch of the Louisville & Nashville Railroad (a CSXT predecessor) through Nelson and LaRue counties. The main depot is located in New Haven with a passenger boarding area in Boston. In addition to a scenic tour, the museum offers a collection of artifacts such as locomotives and cars, train memorabilia, and a gift shop.²¹

3.2.4 My Old Kentucky Dinner Train

Located in Bardstown, My Old Kentucky Dinner Train began operation in 1988. Originally constructed by the Bardstown and Louisville Railroad in 1860, the branch was purchased from CSXT in 1987 by the R.J. Corman Railroad Group. The train travels through Bernheim Forest, and the Jim Beam distillery property, to Limestone Springs and back to Bardstown. The trip is a 37-mile roundtrip excursion taking approximately two and a half hours. My Old Kentucky Dinner Train offers special children's excursions for ages three through 12 and breakfast excursions that are each approximately one and a half hours. My Old Kentucky Dinner Train primarily runs on the R.J. Corman Railroad Group's Bardstown Line in Nelson County.²²

¹⁹ Big South Fork Scenic Railway, <http://bsfsry.com/>, 2014

²⁰ Bluegrass Scenic Railroad and Museum, <http://www.bgrm.org/>, 2014

²¹ Kentucky Railway Museum, <http://www.kyrail.org/>, 2014

²² My Old Kentucky Dinner Train and R.J. Corman's Lexington Dinner Train, <http://www.kydinnertrain.com/>, 2014

3.2.5 R.J. Corman Lexington Dinner Train

The R.J. Corman Railroad Group's Lexington Dinner Train, which began in 2013, travels approximately 30 miles roundtrip from R.J. Corman's Lexington Station past the Keeneland Race Course, the Village of Pisgah, to the city of Versailles. The train ride is approximately two hours for lunch trips and two and a half hours for dinner excursions. Children's excursions for ages three through 12 and breakfast excursions are each approximately one and a half hours. The R.J. Corman Lexington Dinner Train runs on the R.J. Corman Railroad Group's Central Kentucky Line in Fayette and Woodford counties.²³

3.3 STUDIES REGARDING PASSENGER RAIL IN KENTUCKY

Several studies exploring the potential expansion and feasibility of passenger rail in Kentucky have been completed by various entities. The most relevant studies are described below.

3.3.1 Ohio-Kentucky-Indiana Light Rail Project (1998-2001) ²⁴

In March 1998, the Ohio-Kentucky-Indiana Regional Council of Governments (OKI), the MPO of the Cincinnati - Northern Kentucky urbanized area, completed the I-71 Major Investment Study (MIS). The MIS included the selection of a locally preferred alternative that recommended the design and construction of a 43-mile light rail transit (LRT) line. LRT is an electrified train system that can run at street level in mixed traffic or on its own exclusive track and is powered by overhead electric lines.

The 43-mile LRT line included a 19-mile minimum operating segment (MOS-1) from 12th Street in Covington, Kentucky north to downtown Cincinnati, and terminated in Blue Ash, Ohio. The MOS-1 included 24 proposed stations. In accordance with federal regulations regarding the metropolitan planning process, the project was included in the OKI Long Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP). Using \$5.8 million in Federal Transit Administration (FTA) Section 5307 flexible funds, the Southwest Ohio Regional Transit Authority (SORTA) purchased several portions of active and abandoned railroad right of way for the proposed LRT project.

In December 1998, FTA approved the initiation of preliminary engineering and the preparation of a Draft Environmental Impact Statement (DEIS) for MOS-1. The DEIS was completed in 2001.²⁵ Section 3030(b) (66) of the federal transportation bill, Transportation Equity Act for the 21st Century (TEA-21), authorized the Cincinnati/Northern Kentucky Northeast Corridor for final design and construction. Through FY 2001, the U.S. Congress had appropriated \$9.75 million in FTA Section 5309 New Starts funds for the proposed project.

²³ Ibid.

²⁴ http://www.fta.dot.gov/printer_friendly/12304_2923.html, 2014

²⁵ Ohio-Kentucky-Indiana Regional Council of Governments, <http://www.oki.org/allstudies/i-71-corridor-deis/>, 2014

However, the FTA gave the project an overall rating of Not Recommended based on the project's poor cost-effectiveness, absence of transit-supportive land use policies in the corridor, and the lack of local financial commitment to build and operate the proposed LRT system. With no other source for ongoing funding, the project was abandoned.²⁶

3.3.2 Louisville Transportation Tomorrow Light Rail Project (1998-2006)²⁷

The Transit Authority of River City (TARC), Louisville, Kentucky's urban transit service provider, examined the feasibility of LRT in the Louisville and southern Indiana region through the development of the Transportation Tomorrow (T2) MIS.

Three subsequent phases of T2 examined the system's benefits or sought to develop design documents and provide environmental reports. Phase I took place from 1994 to 1996 with the MIS concluding that a LRT system in Louisville was generally feasible. Phase II from 1997 to 1998 examined the benefits that a LRT system would bring to Louisville. These benefits included improved mobility, development and redevelopment of certain neighborhoods, reduced air pollution, and the easing of congestion on I-65. Alternatives to a LRT system included doing nothing, enhancing bus service, improving roadways, and adding bus-ways and high occupancy vehicle lanes.

Phase III took place from 1998 to 2000. It reaffirmed LRT as the preferred mode and chose a general route for the system. The study concluded with a proposed route as shown in **Figure 3-3**, preliminary cost estimates for capital and operating expenses, planning level design, and estimated ridership. T2 was entered into the FTA's New Starts Program. In accordance with federal regulations regarding the metropolitan planning process, the project was included in the Kentuckiana Regional Planning and

Figure 3-3: TARC T2 Proposed Light Rail Route



Source:

https://www.ridetarc.org/uploadedFiles/About_TARC/Long_Range_Plan/Long%20Range%20Plan.pdf, 2014

²⁶ Federal Transit Administration, http://www.fta.dot.gov/12304_3149.html, 2014

²⁷ <http://insiderlouisville.com/news/making-case-louisville-streetcar-learned-public-transit-trip-portland-ore/>, 2014

Development Agency's (KIPDA's) Long Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP). The project then progressed into the preliminary engineering phase after both the FTA issued a Recommended rating for New Starts and the DEIS was completed, but not released for public review. From 2004 to 2006, the FTA indicated that the project's movement into the final design phase was not possible without a secured local funding match. According to TARC, the project was withdrawn from the New Starts Program due to the inability to secure local funding.²⁸

3.3.3 Examination of I-75, I-64, and I-71 High Speed Rail Corridors (1999)²⁹

A review of high-speed rail services, proposals, and a preliminary assessment of the potential for high-speed rail transportation between three Kentucky cities: Lexington, Louisville, and Covington, was performed for the KYTC in 1999. Connections to Frankfort, Kentucky and Cincinnati, Ohio, were also evaluated in the study.

Annual ridership was estimated to be 94,000 passengers, which included rail passengers connecting to airline service at the Cincinnati/Northern Kentucky International Airport in Covington and a Cincinnati connection with the Midwest Regional Rail Initiative (MWRRI). Capital costs were estimated to be \$5.48 billion, with annual operations and maintenance costs of approximately \$40 million. Annual revenues were expected to range from \$5.5 to \$7.7 million based on a fare of \$34.50 to and from the cities of Cincinnati, Lexington, and Louisville. The fare for the Frankfort to Lexington trip was priced at \$6.50.

It was concluded that the proposed service faced a number of challenges, of which the most significant was that fares would only return 15 percent of the operating costs – meaning that in order to cover these costs, the fares would have to be raised to \$190 per leg or \$245 for a roundtrip. In addition, it was determined that adjacent and parallel highways would offer faster travel times and speeds, making it difficult to attract sufficient ridership to support operating costs.

3.3.4 Midwest Regional Rail Initiative Executive Report (2004)³⁰

The Midwest Regional Rail Initiative (MWRRI) was formed in 1996 by several states including Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, and Wisconsin, in an effort to improve and expand passenger rail service in the Midwest. Its objectives are to increase operating speeds, train frequencies, system connectivity over the existing network, and service reliability. The consortium has also developed the proposed Midwest Regional Rail System (MWRRS) to improve the level and

²⁸ Transit Authority of River City, http://www.ridetarc.org/faq/#Light_Rail, 2014

²⁹ <http://transportation.ky.gov/Railroads/Documents/Examination%20of%20I-75,%20I-64%20and%20I-71%20High%20Speed%20Rail.PDF>, 2014

³⁰ http://www.michigan.gov/documents/mdot/MDOT-MWRRServiceDevelopmentPlan_Exec_330322_7.pdf, 2014

quality of existing regional passenger rail service, and thereby improving mobility as well as stimulating economic development.

Various studies have been produced by MWRRRI in 1998, 2000, 2004, and most recently in 2007.³¹ Participants included the states of Indiana, Illinois, Michigan, Minnesota, Missouri, Nebraska, North Dakota, and Wisconsin. Amtrak and the FRA also participated. Kentucky is not currently participating in the MWRRRI because no funding is presently available to support MWRRS development. The KYTC has reserved the right to reconsider its position if funding were to become available. Connections to Kentucky are proposed by bus.

The proposed MWRRS network is comprised of nine corridors consisting of 3,000 route miles, as shown in **Figure 3-4**. The majority of the system is owned by freight railroads with the remainder owned by Amtrak and Metra (Chicago, Illinois' commuter rail operator). The proposed passenger rail system would have a station located in Cincinnati, Ohio, with feeder bus service connecting to the Kentucky cities of Lexington, Paducah, and in Illinois, the city of Carbondale.

The initial implementation of the proposed MWRRS service was part of a 10-year phased program, as called for in the 2004 MWRRRI Executive Report.³²

³¹ <http://miprc.org/Portals/0/pdfs/railmidwest1.pdf>, 2014

³² <http://miprc.org/Portals/0/pdfs/Feb2000mwrrireport.pdf>, 2014

Figure 3-4: Proposed MWRRS System Map



Source: <http://www.dot.state.mn.us/passengerrail/pdfs/mwrrioverallmap.pdf>, 2014

According to the MWRRRI Executive Report, the capital costs of MWRRS include two components: rolling stock and infrastructure. Total capital investments are projected to be \$7.7 billion, with rolling stock costs expected to be approximately \$1.1 billion and infrastructure costs estimated at \$6.6 billion. Infrastructure costs include the implementation of a positive train control (PTC) signaling system, improvement of highway-rail at-grade crossings, and construction or renovation of passenger stations.

3.3.5 Atlanta to Chattanooga to Nashville to Louisville High Speed Rail Study (2012)³³

This study was undertaken by the Georgia Department of Transportation (GDOT) to evaluate the need for, and effectiveness of, several potential rail corridors connecting Atlanta, Georgia with other cities in the region. Three corridors were examined:

³³ <http://www.dot.ga.gov/travelingingeorgia/rail/Documents/HighSpeedRail/Final%20Report.pdf>, 2014

- Atlanta-Birmingham;
- Atlanta-Macon-Jacksonville; and,
- Atlanta-Chattanooga-Nashville-Louisville (Atlanta-Louisville corridor).

The feasibility of both Emerging High-Speed Rail (90-110 mph) service and Express High-Speed Rail (180-220 mph) service, as designated by the FRA, was examined in each corridor. The former can be operated on track shared with freight railroads, while the latter requires dedicated track and right of way.

In addition, a maglev alternative (more than 220 mph) was evaluated in the Atlanta-Louisville corridor. Maglev, a term derived from magnetic levitation, is a method of propulsion that uses magnetic levitation to propel trains with magnets rather than with wheels, axles, and bearings. With maglev, a train or car is levitated a short distance above a guideway, using magnets to create both lift and thrust. High-speed maglev trains promise dramatic improvements for travel.³⁴

A representative route was identified for each corridor and service type. These were not intended to be the preferred or recommended alternatives, but served as representative examples to evaluate high-speed rail performance in the corridors. Each route could have several alignments which would be analyzed in more detail as part of the federally required environmental review, if the route is selected for future analysis.

With respect to Kentucky, the Atlanta-Louisville corridor would extend from Hartsfield-Jackson Atlanta International Airport to downtown Louisville, as shown in **Figure 3-5**.

³⁴ <http://namti.org/magnetic-levitation-transport-explained/>, 2014

Figure 3-5: Proposed High Speed Rail Route from Atlanta to Louisville



Source: Atlanta to Chattanooga to Nashville to Louisville High Speed Rail Study, Georgia Department of Transportation (GDOT), 2012

The Emerging High-Speed Rail service, a shared use route, is proposed to follow a CSXT line. The Express High-Speed Rail Route, a dedicated use route would follow I-75 from Atlanta, Georgia to Chattanooga, Tennessee; I-24 from Chattanooga to Nashville, Tennessee; and I-65

from Nashville to Louisville, Kentucky. With the exception of Marietta, Georgia, which would only have a station under the Emerging High Speed Rail scenario, both scenarios would have stations at these locations:

- Hartsfield-Jackson Atlanta International Airport, Atlanta, Georgia;
- Atlanta Multi-Modal Passenger Terminal, Atlanta, Georgia;
- Cumberland/Galleria, Georgia;
- Marietta, Georgia;
- Cartersville, Georgia;
- Dalton, Georgia;
- Lovell Airport Field, Tennessee;
- Downtown Chattanooga, Tennessee;
- Murfreesboro, Tennessee;
- Nashville International Airport, Tennessee;
- Downtown Nashville, Tennessee;
- Bowling Green, Kentucky;
- Elizabethtown, Kentucky;
- Louisville International Airport, Kentucky; and,
- Downtown Louisville, Kentucky.

The analysis showed that the trip time between Atlanta and Louisville in the shared use scenario would be approximately 6 hours and 55 minutes with an average speed of 72 mph. Comparatively, the trip would take approximately the same time as driving along the nearest interstate highway.³⁵ Conventional high speed trains operating on a passenger-only track would average 122 mph for an approximate trip time of 3 hours and 32 minutes between the two cities, substantially faster than driving. Finally, the maglev service would operate at an average speed of 143 mph, completing the trip in approximately 3 hours and 2 minutes.

Estimated capital costs, operations and maintenance costs, as well as ridership and revenue, are depicted in **Table 3-2** for the years 2021 to 2040.

Table 3-2: Estimated Costs & Operational Statistics for Atlanta to Louisville High Speed Rail Scenarios, 2021-2040

	Emerging High Speed	Express High Speed	Maglev
Ridership	101.9 million	110.6 million	116.1 million
Capital Costs	\$11.5 billion	\$32.6 billion	\$43 billion
O&M Costs	\$2.8 billion	\$5.8 billion	\$4.5 billion
Revenue	\$4.2 billion	\$6.4 billion	\$6.8 billion
Avg. Fare	\$41.22	\$57.87	\$58.57

Source: Atlanta to Chattanooga to Nashville to Louisville High Speed Rail Study, Georgia Department of Transportation (GDOT), 2012

³⁵ <http://www.dot.ga.gov/travelingingeorgia/rail/Documents/HighSpeedRail/Final%20Report.pdf>, 2014

The Emerging High-Speed Rail, Express High-Speed Rail, and maglev alternatives performed well under the operating ratio analysis, resulting in anticipated ridership versus estimated revenue ratios well above the necessary benefit-cost ratio for all three scenarios. When revenues exceed operating costs, operating subsidies are not required. The excess funds could be reinvested in the rail service or used to pay existing debt. The operating revenue surplus could encourage investment from the private sector, reducing public financing required.

Taking into account the operating ratios and benefit-cost ratios, the study recommended that the results be used to set priorities for future state planning and corridor development activities. In particular, this study found that high-speed passenger rail service is feasible in the Atlanta-Chattanooga-Nashville-Louisville Corridor.³⁶

The study concluded that high-speed rail service in the Atlanta-Chattanooga-Nashville-Louisville Corridor presents an opportunity to provide needed transportation solutions and promote economic development. While high-speed rail is not the only transportation solution, this study showed that high-speed passenger rail would give consumers improved mobility and transportation mode choices, with connectivity to major cities such as Atlanta, Chattanooga, Nashville, and Louisville through commercial centers and national destinations.

³⁶ Ibid.