



Northern Flyer Alliance, Inc.

Northern Flyer Alliance, Inc. KU School Of Business Jayhawk Consulting Final Return On Investment Review

December 2009

Lawrence

Kansas City
 Visits: 14,500

Topeka

Wichita

Oklahoma City
 Visits Per Year: 7,500,000
 Annual Visitor Expenditure: \$1,500,000,000
 Average Dollars Spent Per Visitor: \$200

CONSULTING
 THE UNIVERSITY OF KANSAS SCHOOL OF BUSINESS

NORTHERN FLYER ALLIANCE
 ECONOMIC BENEFIT STUDY

Map Legend:
 Existing Route (Red line)
 Expansion Route (Dotted line)
 Existing Stop (Blue dot)

Map Labels: Garden City, Dodge City, To Los Angeles, Hutchinson, Newton, WICHITA, Arkansas City, Ponca City, Enid, Perry, Guthrie, Edmond, OKLAHOMA, Norman, Purcell, Pauls V, Davis, Ardmore, Lawton, Duncan, Gainesville, DALLAS, Mirreola, Marshall, FORTH WORTH, To Chicago, Lawrence, Topeka, EMERALD ZOO.

Bar Charts: Comparison of Vehicle vs. Rail vs. Passenger Vehicle metrics.

Executive Summary

Final University of Kansas study results show that the states of Kansas, Oklahoma and Texas should proceed aggressively with passenger rail planning. Despite the fiscally conservative study approach used by the University of Kansas, a robust *Regional Taxable Revenue Ratio increase of 3.2:1** was projected for a Kansas City – Wichita – Oklahoma City route. Federal support for passenger rail through the *High Speed Intercity Passenger Rail (HSIPR)* capital funding program would dramatically increase ratio benefit for Kansas, Oklahoma, and Texas taxpayers. The HSIPR program will inject \$8 billion in capital into select national projects during FY2010 alone. The HSIPR program mimics federal interstate highway investment programs of the 1950's and 1960's. This visionary program could dramatically reduce required capital expenditures for Kansas, Oklahoma, and Texas and bring passenger rail service within the sights of visionary regional transportation experts.

The KU study proves that passenger rail can become an effective and sustainable regional economic development tool even before HSIPR. Overall economic impact shows a break-even return after the first year with a continuing \$43 million annual impact.

These increases are due to direct, indirect, and induced economic factors. Regional employment increases through construction and operational staffing represent direct and positive economic effects. Employment increases and associated economic benefits through support industries (construction, real estate, healthcare, tourism, etc...) would flow into the regional economy. These indirect and induced *after-the-fare-box* effects are obviously substantial. They prove that rail travel infrastructure/operational investment and development can play a significant role in creating and improving regional economies. The region cannot afford to ignore the economic benefits analyzed by the University of Kansas.

* For every dollar of investment taxable income increases by \$4.60.

1.0 Background

The University of Kansas – School of Business – Jayhawk Consulting (KU) completed its Return On Investment study (ROI) with a presentation to the Northern Flyer Alliance, Inc. (NFA) board and the Wiedemann foundation on December 17, 2009 in Wichita, Kansas at PBA Architects. The intent of this independent and impartial study was to analyze potential economic impact based upon a passenger rail reintroduction between Kansas City, MO and Oklahoma City, OK.

This document represents the official NFA position regarding the study, based upon the current regional economic climate, contemporary passenger rail economics, and peer Amtrak operations in Missouri, Oklahoma, and Texas. The NFA wishes to thank the Wiedemann Foundation and KU for their contributions and work on this important and timely economic evaluation.

The criteria used to develop this study included an aggressively fast completion date, thus limiting the possibility of a more comprehensive and thorough overview. Many economic benefit criterions were excluded. If time had allowed, these additional benefits would have only improved economic benefit ratios as passenger rail costs are well understood. The appropriation source percentage, federal versus state, was seen as outside of project scope. The reader is left to wrestle with what is an acceptable federal versus state share.

1.1 Need Statement

Historically, Amtrak has not included quantitative economic benefit analysis within internal studies. Amtrak's pending cost study for the *Kansas City – Wichita – Oklahoma City – Fort Worth* rail corridor will not include such data. Intensified fiscal scrutiny of state government programs demands a detailed economic benefit analysis. The NFA board deemed the production of a complementary economic benefit analysis to be imperative to its mission. KU produced a study based upon this need with financial contribution from the Wiedemann Foundation.

1.2 Amtrak Cost Study*

As mentioned, Amtrak is in the process of completing a cost study for the Kansas, Oklahoma, and Texas Departments of Transportation (KDOT, ODOT, and TxDOT respectively). Amtrak uses the AECOM model to analyze potential capital costs, operational costs, and ridership. The AECOM model likely differs significantly from the IMPLAN model used by KU. Simply stated, the Amtrak study will measure ridership and cost while the IMPLAN model measured economic benefit. The final Amtrak study will consider four scenarios:

Scenario A. A night-time roundtrip between Newton and Oklahoma City to connect with the eastbound and westbound *Southwest Chief* by extending the *Heartland Flyer* using the existing trainset.

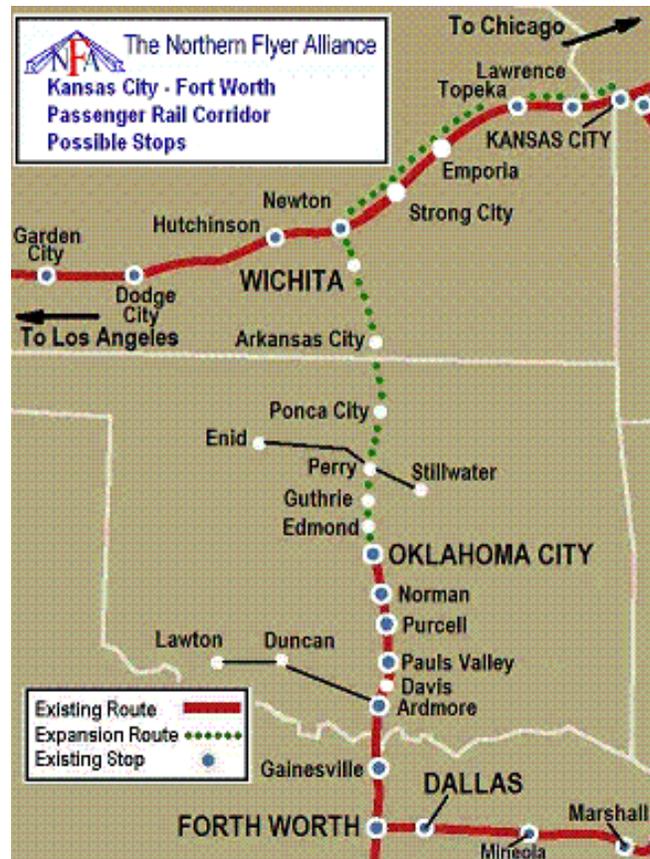
Scenario B. A night-time roundtrip between Kansas City and Fort Worth via connections at Newton and Oklahoma City. It would not connect to the *Southwest Chief* and would use the existing *Heartland Flyer* between Oklahoma City and Fort Worth and a new service between Kansas City and Oklahoma City. This option would require an additional trainset to supplement the *Heartland Flyer* equipment.

Scenario C. A daytime roundtrip between Kansas City and Fort Worth via Newton and Oklahoma City using a new, stand-alone service and two new trainsets for the entire route.

Scenario D. A daytime roundtrip between Kansas City and Oklahoma City using a new, stand-alone service and two new trainsets for the entire route.

NOTE: The *Heartland Flyer* makes a daily round trip between Fort Worth and Oklahoma City and the *Southwest Chief* operates daily between Chicago and Los Angeles. Their schedules do not change in the study scenarios.

*Source: Kansas Department of Transportation



1.3 KU ROI Study Overview

The aggressive schedule necessitated a drastically limited scope. While costs are strictly understood as defined, many benefits were intentionally excluded. Therefore, the final product quantifies only large economic benefits while neglecting other more time consuming analysis such as avoided-cost-transportation, clean air, and congestion mitigation savings and other smaller economic criteria.

1.4 KU ROI Study Inputs

Study inputs were derived from several different sources. KU used the IMPLAN economic analysis model to study potential corridor economic impacts. A March 2000 KDOT passenger rail study, adjusted for inflation and energy prices, was referenced heavily for ridership, infrastructure cost, and operational cost. Regional travel and tourism data was collected for Kansas City, Lawrence, Topeka, Wichita, and Oklahoma City to approximate travel related cash flow. Only *scenario "D"*, as detailed in the Amtrak Study Scope from paragraph 1.2 was studied.

2.0 Analysis Data Highlights

The NFA has taken the liberty of condensing KU results for quick overview. The preliminary net project economic return is nearly \$400 million over a ten year span. The project returns more than its original investment after the first year of operation or \$72.7 million with a \$66.5 million federal/ state investment. After five years the project will have returned \$217 million for a benefit ratio of 2.52 to 1.

2.1 Tax Considered Return on Investment

For each \$1.00 of net investment Amtrak scenario "D" produces \$3.22 in economic benefits after tax consideration, a 3.2 to 1 ratio. Analysis details are provided in Table 1.

Table 1: Jayhawk Consulting Return on Investment.

Return on Investment (after Tax Consideration)	
Net out of pocket Investment	\$1.00
Value Produced from Investment	\$3.58
Incremental Economic Benefit	\$3.22*
Tax Considered ROI:	3.2:1

*Net of average 10% all taxes impact on value produced.

2.2 Jayhawk Consulting Projected Ridership

KU used the March 2000 KDOT Passenger Rail study to project ridership figures. Table 2 shows potential figures which were used as inputs to the IMPLAN model. These figures were adjusted by ten-percent due to higher 2009 gasoline prices.

Table 2: Potential Kansas City – Oklahoma City Corridor Ridership Figures.

Benefiting City	Population	Projected Ridership
Kansas City	688,380	43,763
Lawrence	114,784	7,295
Topeka	174,709	11,107
Emporia	35,562	2,261
Strong City	2,804	178
Newton	33,675	2,141
Wichita	482,863	30,697
Winfield – Arkansas City	34,065	2,166
Newkirk – Ponca City	45,632	2,901
Perry	11,169	701
Guthrie	38,102	2,422
Edmond – Oklahoma City	706,617	44,922
Totals	2.4 Million	150,562

2.3 Infrastructure and Operational Costs

Table 3 provides an infrastructure analysis. This information was derived from the March 2000 KDOT Passenger Rail study. Table 4 provides an operational analysis. KU adjusted these values to 2009 figures and allocated costs based upon a rail mileage basis between Oklahoma and Kansas.

Table 3: Infrastructure Costs.

Total Infrastructure Costs By State			
State	Miles of Rail	Allocation	Amount Spent
Kansas	281.72	70.836%	\$33,791,783
Oklahoma	115.99	29.164%	\$13,912,782
Total Infrastructure Cost of Proposed Railway*			\$47,704,565
<i>* 2010 Figure (updated for inflation)</i>			

Table 4: Operational Costs.

Calculation of Operational Costs by State			
State	Miles of Rail	Allocation	Cost
Kansas	281.72	70.836%	\$15,819,890
Oklahoma	115.99	29.164%	\$6,513,378
Totals	397.71	100.000%	\$22,333,268

3.0 Critical Analysis

The NFA has evaluated passenger rail industry costs associated with other regional passenger rail projects as provided by Amtrak, the states of Missouri, Oklahoma, and Texas. Table 5 provides an overview. While the cost and ridership elements of the KU study will be refined within the official Amtrak study the KU benefit analysis will remain valid. The NFA expects significantly reduced values for operational and capital costs based upon industry analysis. Further, because KU studied only scenario “D” potential ridership between Kansas City and Fort Worth will be dramatically lower than a through route without an overnight layover in Oklahoma City.

Table 5: Regional Amtrak State Operational Funding Requirements.

Calculation of Operational Costs by State			
State or Entity	Annual Operational Cost (Million)	Daily Miles	Per-Mile Cost
Oklahoma-Texas	4.297	412	\$28.57
Missouri	7.400	1,132	\$17.91
KU Projection	22.333	1,204	\$50.82

4.0 Conclusions

Transportation corridors, regardless of mode, highway, aviation, and rail, are the arteries of local, state, and interstate commerce. These paths are a fixture of modern society. KU has provided a case study demonstrating a method to bring increased prosperity to the region. A niche passenger rail transportation market exists between *Kansas City – Wichita – Oklahoma City – Fort Worth* that can be served through Amtrak route expansion.

The NFA encourages lawmakers to seriously consider the KU report as positive economic news in depressed economic times. A fast track reintroduction along the entire corridor will aide downtown communities both large and small. Seniors, the elderly, the disabled, and those who cannot or choose not to drive will again be served by a hometown public transportation option. Related rail infrastructure improvements will encourage more rail freight shipping, reducing highway damage, and thus conserving precious taxpayer dollars. The reduction in fossil fuel burning automobile miles will improve air quality while conserving personal investments.