

Analysis of Amtrak Southwest Chief Maintenance Costs and Economic Impacts

Presentation to the New Mexico State Legislature Interim Transportation Infrastructure Revenue Subcommittee

New Mexico Department of Transportation
November 6, 2014

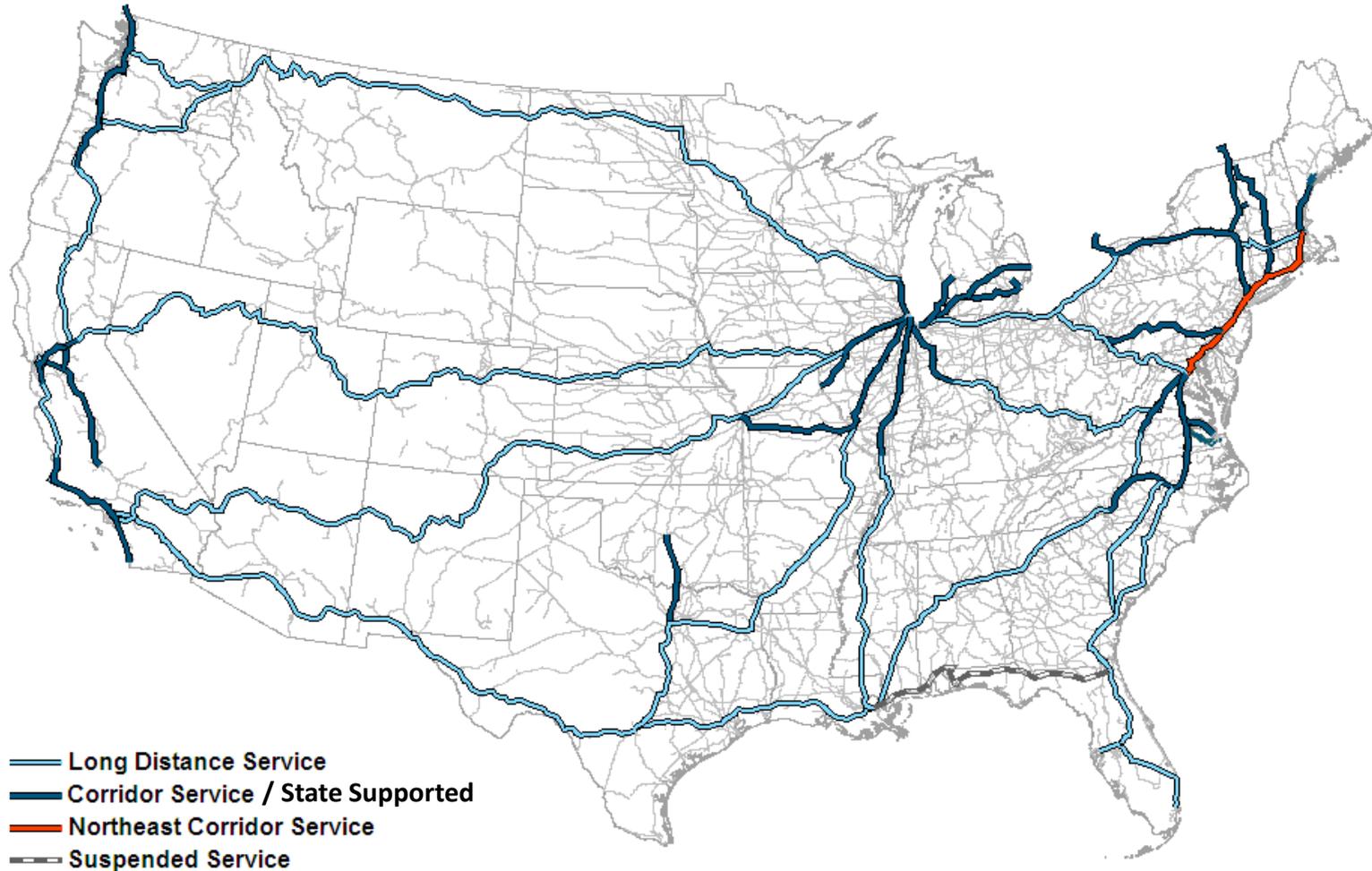
Presentation Outline

- Background and Recent Events
- Analysis of maintenance costs
- Analysis of economic impacts

Background - Amtrak

- Congress created Amtrak in 1970 as a corporation to take over, and independently operate, the nation's intercity rail passenger services.
- Amtrak has been directed by Congress to "... be operated and managed as a for profit company; and is not a department, agency or instrumentality of the United States Government."
- Amtrak has the right to operate passenger services on freight railroads as long as the incremental cost to the railroads of providing this service is paid.
- Amtrak agreement with BNSF for use of BNSF track nationwide expires January 2016 and a new agreement is being negotiated.
- In FY 2014, Amtrak carried 30.9 million passengers, generating \$2.2 billion in ticket revenue.

Current Amtrak System



Background - Amtrak

Amtrak's FY 2015 budget request to Congress: \$1.62 Billion in operating and capital funds-an increase of 16% over their FY 2014 federal appropriation:

Operating Assistance

- \$83 million for regional routes of 750 miles or less that are supported by the States served (29 routes)
- **\$618 million for Long Distance routes exceeding 750 miles (15 routes)**

Capital Funding

- \$445 million for the Northeast Corridor
- \$20 million for State supported regional routes
- **\$295 million for Long Distance routes**
 - \$50 million for ADA improvements at stations
 - \$130 million for new train rolling stock
 - \$115 million for fleet overhauls
- **TOTAL FUNDING REQUESTED FOR LONG DISTANCE ROUTES:
\$913 MILLION**

News Release



FOR IMMEDIATE RELEASE
May 21, 2013

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Contact: Media Relations
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LONG DISTANCE TRAINS ARE FEDERAL RESPONSIBILITY Congress in charge of intercity passenger rail since 1971

WASHINGTON – The operation of long distance trains is a core federal responsibility since 1971 and a federally-funded national system is the best way to keep costs low, provide customer choices that build ridership and develop economies of scale, Amtrak President and CEO Joe Boardman told a Congressional committee today.

"Congress is clearly 100 percent in charge in directing how long distance train service is provided in the United States and has been ever since it created Amtrak more than 40 years ago," Boardman said. "Should Congress again decide in the next passenger rail reauthorization to continue a national system, Amtrak is dedicated to ensuring that long distance trains are sustained and run as efficiently and effectively as possible."

Boardman explained that federal law requires Amtrak to operate a national passenger rail system that includes long distance routes. The current law also includes a "Sense of Congress" statement that declares "long distance passenger rail is a vital and necessary part of our national transportation system and economy."

Background – Southwest Chief

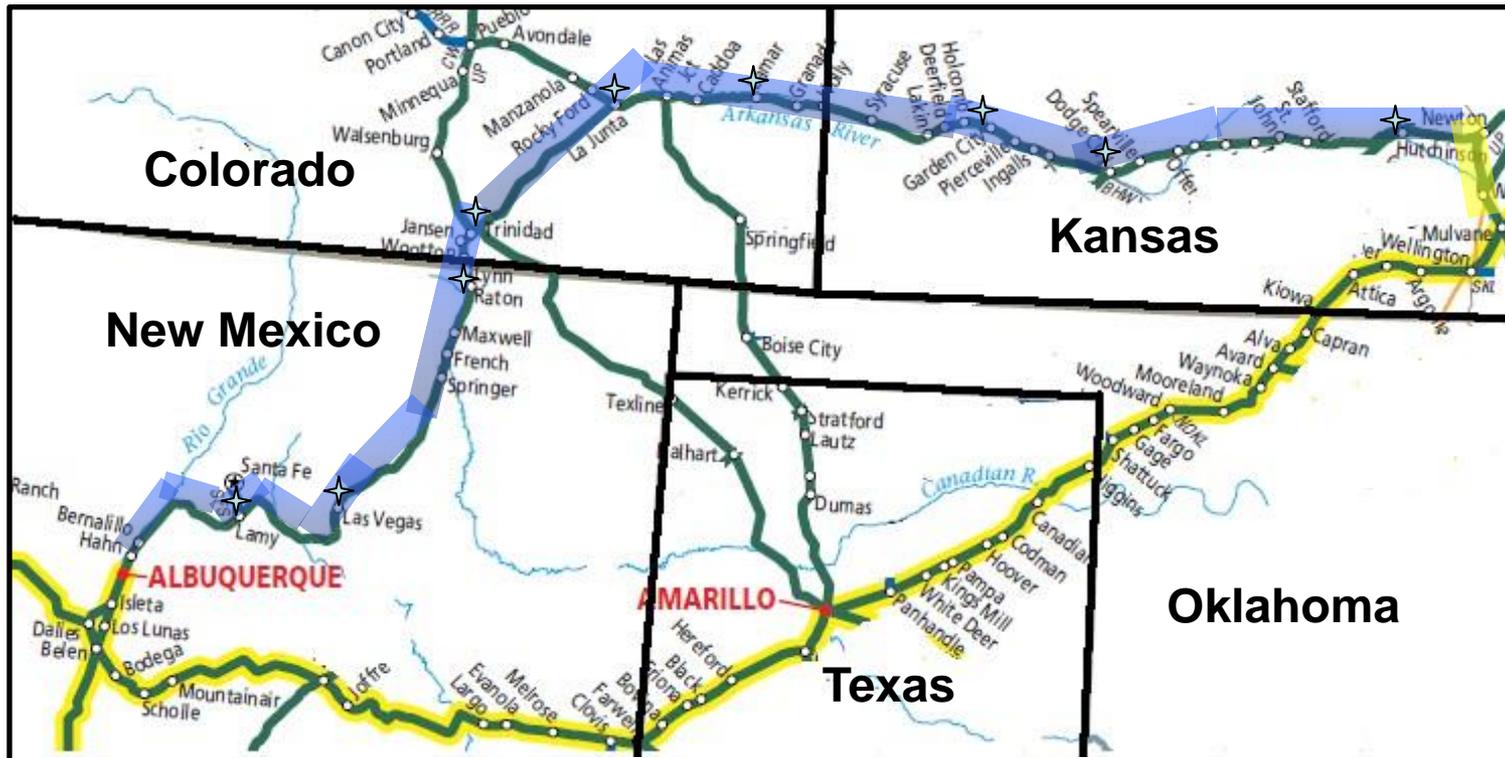
The Southwest Chief is one of 15 Amtrak long distance routes. In FY 2013, it was Amtrak's:

- 4th most expensive long distance route (\$114.5 million)
- 7th highest ridership (358,681)
- 4th highest revenue generating (\$50.8 million)
- 3rd highest subsidy per rider (\$177.61)
- 2nd highest annual loss (\$63.7 million)

Background – Southwest Chief (continued)

- Amtrak Southwest Chief operates one daily train in each direction between Los Angeles and Chicago (2,265 miles).
- Due to declining freight traffic BNSF no longer needs to maintain Southwest Chief alignment in northeast New Mexico, Colorado, and Kansas to Class 4 standards that allow 79 mph Amtrak operations.
- Amtrak indicates it does not have sufficient funds to pay BNSF to maintain the line to 79 mph standards.
- BNSF has offered Amtrak use of BNSF Transcontinental line through Amarillo and Clovis for Southwest Chief.
- BNSF and Amtrak have stated a decision on whether the Southwest Chief will remain on current route or relocate to the BNSF TransCon Line must be made by January 2015.

Current and Alternative Southwest Chief Alignment



From Amtrak November 12, 2013 presentation to the Interim Transportation Infrastructure Revenue Subcommittee

Amtrak Southwest Chief Boardings and Alightings by Station in New Mexico

	FY 2013 Annual	FY 2013 Avg. Daily	FY 2012 Annual	FY 2011 Annual	FY 2010 Annual	FY 2009 Annual
Raton	15,733	43	16,292	16,794	18,025	15,066
Las Vegas	5,376	15	5,563	4,952	4,491	4,456
Lamy	12,551	34	12,589	12,579	13,056	13,012
Albuquerque	78,066	214	78,324	75,779	71,848	67,751
Gallup	<u>15,647</u>	<u>43</u>	<u>16,446</u>	<u>14,433</u>	<u>13,431</u>	<u>12,340</u>
Subtotal New Mexico	127,373	349	129,304	124,537	120,851	112,625
Total Southwest Chief	355,815	974	355,316	354,912	342,403	318,025

Background – Southwest Chief (continued)

- Amtrak met separately with Colorado, Kansas and New Mexico in summer 2011 to propose cost sharing proposal for operating and capital costs on the BNSF rail line.
- Amtrak's request: BNSF, Amtrak and three states each provide \$4million/year for 10 years starting January 2016. After 10 years, funding request has not been identified.
- On July 20, 2012, three state DOTs sent joint letter to Amtrak indicating the states:
 - Support Southwest Chief and will seek Congressional delegation support;
 - Can't commit to funding Southwest Chief due to budget challenges in each state; and
 - Believe that funding the Southwest Chief is Congress' responsibility.

Recent Events - Colorado

The Colorado Southwest Chief Rail Line Economic Development, Rural Tourism and Infrastructure Repair and Maintenance Commission (SWCC) was created by HB 14-1161 in May 2014 to:

- Coordinate and oversee efforts by the state and local governments and cooperate with the states of Kansas and New Mexico, Amtrak and BNSF to ensure continuation of existing Amtrak Southwest Chief rail line service in the state.
- Appropriate \$5,279 for SWCC expenses. Three SWCC meetings have been held and a fourth meeting is scheduled for December 19, 2014.
- Create the SWCC fund to receive future appropriations or other funds provided for the SWCC to expend for rail replacement or other improvements or expansion of service, if:
 - Amtrak confirms in writing the Southwest Chief will continue to stop in Lamar, La Junta and Trinidad
 - A regular stop is added in Pueblo within 5 years of the SWCC first expenditure of funds for the Southwest Chief.
 - Amtrak will explore the benefits of adding a stop in Walsenburg, and
 - The states of Kansas and New Mexico, BNSF and Amtrak commit in writing to expend an average aggregate amount of at least \$15,220,000 per year for 10 years beginning with the year the SWCC first expends funds for the Southwest Chief.

Recent Events – Kansas

A TIGER Grant was awarded for the Southwest Chief in September 2014.

- Garden City, Kansas applied for \$15 million USDOT TIGER grant to make improvements to the BNSF line in Kansas and eastern Colorado, and was awarded grant funds of \$12.5 million.
- \$9.3 million of local matching funds were pledged by:

\$4 million-Amtrak	\$12,500-Garden City, KS
\$3 million-Kansas DOT	\$12,500-Hutchinson, KS
\$2 million-BNSF	\$12,500-Dodge City, KS
\$100,000-Pueblo County, CO	\$12,500-Newton, KS
\$75,000-I-25 Coalition, CO	\$10,000-Prowers County, CO
\$14,000-Bent County, CO	\$10,000-Lamar, CO
\$10,000-Otero County, CO	\$10,000-Trinidad, CO
\$10,000-La Junta, CO	\$1,000-CO Rail Passenger Assoc.
\$10,000-Las Animas, CO	
- Total funding of \$21.8 million to be used for restoring 54.9 miles of the 158 miles of bolted rail sections between Hutchinson, KS and Las Animas, CO to FRA Class 4 condition with continuous welded relay rail, new turnouts and panelized crossings.
- BNSF will complete work in 2015
- BNSF pledged to maintain the new track segments to Class 4 standards for 20 years.

Recent Events – New Mexico

In response to questions from the State Transportation Commission at the September 18, 2014 meeting, Amtrak indicated that:

- Amtrak is re-evaluating the amount of their funding request from the States, because of the award of the Garden City, KS TIGER grant.
- Amtrak has not determined if funding will be needed from the States beyond the initial 10 year funding period.

Maintenance and Economic Impacts Analysis

During the 2014 Legislative Session NMDOT offered to conduct two studies related to the possible relocation of the Amtrak Southwest Chief from the current alignment in Kansas, Colorado and New Mexico to the BNSF TransCon alignment:

- An Engineering Cost Analysis to review Amtrak's estimate of the 10 year cost of maintenance to maintain 79 mph (Class 4) operations on the current alignment in Kansas, Colorado and New Mexico. Wilson and Company conducted this analysis using data provided by Amtrak, BNSF and other sources.
- An Economic Impact Analysis to identify the economic impact of relocating the Southwest Chief from the current alignment to the BNSF TransCon alignment. Cambridge Systematics conducted this study using data provided by Amtrak and other sources. A ridership analysis was also conducted to provide data for the economic impact study.

Maintenance Cost Analysis

- A study was conducted by Wilson and Company utilizing data provided by Amtrak, BNSF and other sources.
- This study reviews and evaluates Amtrak's assessment of the routine operational and capital maintenance necessary to continue Class 4 Southwest Chief operations on the BNSF-owned portions of the railroad line between Newton, Kansas (KS) and Dalies, New Mexico (NM).
- Amtrak has the right to operate its passenger services on freight railroads as long as Amtrak pays the incremental cost of its using these railroads.
- Declines in freight service on the BNSF freight line between Newton, Kansas and Dalies, New Mexico have led to BNSF determining that it no longer needs to maintain these lines to Class 4 levels, and BNSF is seeking to have Amtrak pay the incremental cost of maintaining the line to Class 4 in its next host railroad operating agreement. Class 4 standards must be met in order for Amtrak to operate at current 79 mph speeds.
- Operational and capital maintenance costs were evaluated for each segment.
 - Operational (routine) Maintenance – ordinary maintenance for operating expense – frequent inspections, rail lubrication / grinding, ballast tamping and minor repairing of track, signal and structures
 - Capital Maintenance – replacement of relatively large portions of track structure materials and components, bridge replacement and signal upgrades

Maintenance Costs – Corridor Under Analysis

Kansas (271 miles)

- Newton, KS to Kansas-Colorado State Line – 271 miles BNSF La Junta Subdivision;

Colorado (182 miles)

- Kansas-Colorado State Line to Las Animas – 63 miles BNSF La Junta Subdivision;
- Las Animas to La Junta – 22 miles BNSF Boise City Subdivision;
- La Junta to Colorado-New Mexico State Line – 97 miles BNSF Raton Subdivision;

New Mexico (197 miles)

- Colorado-New Mexico State Line to Las Vegas – 118 miles BNSF Raton Subdivision;
- Las Vegas to Lamy – 64 miles BNSF Glorieta Subdivision;
- Isleta to Dalies – 15 miles BNSF Glorieta Subdivision.



Maintenance Costs – Rail Corridor Characteristics

- Daily train traffic

Kansas: La Junta Subdivision	16 Freight Trains	2 Amtrak Trains
Colorado: La Junta and Boise City Subdivisions	16-22 Freight Trains	2 Amtrak Trains
Colorado: Raton Subdivision	0 Freight Trains	2 Amtrak Trains
New Mexico: Raton and Glorieta Subdivisions	0 Freight Trains	2 Amtrak Trains

- Bridges

Kansas	12,047 Track Feet (TF)
Colorado	13,172 Track Feet
New Mexico	10,283 Track Feet

- Tunnels

2,800 feet Raton Pass (New Mexico)

- Grade Crossings

	<u>Public Signalized</u>	<u>Public Unsignalized</u> <u>Cross Buck</u>	<u>Private Unsignalized</u> <u>Cross Buck</u>
Kansas	105	121	63
Colorado	24	54	39
New Mexico	11	30	41

Maintenance Costs – BNSF/Amtrak Allocation

Average Annual Operational and Capital Maintenance Costs for BNSF and Amtrak, 2016-2025

Segment	Track		Signal		Bridge		Total		Combined Total
	BNSF	Amtrak	BNSF	Amtrak	BNSF	Amtrak	BNSF	Amtrak	
Kansas									\$ 9,822
La Junta Sub	\$4,477	\$1,119	\$3,327	\$0	\$899	\$0	\$8,703	\$1,119	
Colorado									\$ 9,471
La Junta Sub	\$1,631	\$408	\$1,507	\$0	\$330	\$0	\$3,668	\$408	
Boise City Sub	\$1,088	\$0	\$380	\$0	\$164	\$0	\$1,632	\$0	
Raton Sub	\$1,154	\$182	\$0	\$2,128	\$0	\$499	\$1,154	\$2,809	
New Mexico									\$ 9,375
Raton Sub	\$0	\$1,787	\$0	\$3,085	\$0	\$906	\$0	\$5,778	
Glorieta Sub	\$0	\$1,188	\$0	\$2,146	\$0	\$263	\$0	\$3,597	
TOTAL	\$8,350	\$4,684	\$5,214	\$7,359	\$1,393	\$1,668	\$14,957	\$13,711	\$ 28,668

- Costs are in thousand dollars of year of expenditure dollars.
- BNSF costs are paid by BNSF to maintain the rail line to standards required for existing freight rail operations.
- Amtrak costs are the incremental cost to Amtrak to maintain the rail line to Class 4 standards.
 - These are the costs that Amtrak is seeking cost sharing by Kansas, Colorado, New Mexico and BNSF.
 - These costs do not include the \$21.8 million TIGER grant that was awarded to Garden City, KS in 2014.
 - These cost estimates are lower than Amtrak’s projected \$20 million per year maintenance funding requirements to maintain Class 4 operations on this line from 2016 to 2025.
- The estimated annual maintenance costs presented in this study were based on limited data provided by BNSF and no physical inspections were completed on the track segments reviewed. Wilson and Company did draw on in-house and other available data to develop a reasonableness evaluation of the maintenance costs developed.

Economic Impact – Ridership

Cambridge Systematics conducted a ridership analysis of Southwest Chief ridership at current stations and potential future stations if the Southwest Chief is relocated to the BNSF TransCon alignment, using data provided by Amtrak and other sources. The results of the ridership analysis were subsequently used in the economic impact study.



The map to the left shows the existing Southwest Chief stations and potential future stations if the Southwest Chief is relocated to the BNSF TransCon alignment.

Economic Impact – Ridership (continued)

- Cambridge Systematics obtained Southwest Chief ridership from Amtrak showing origin and destination stations for all station pairs. This data, supplemented by socioeconomic data for communities on the alternative route, was used to develop estimates of ridership to and from stations on the alternative route.
- The table below shows:
 - Actual trips originating at and destined for each New Mexico station for 2013 on the existing route;
 - Estimated 2013 trip origins and destinations in New Mexico for 2013 were the Southwest Chief to use the alternative route; and
 - The estimated change in ridership at each station were the Southwest Chief to switch to the alternative route.

Station	Ridership on Existing Route			Ridership on Alternative Route			Change in Ridership		
	Total	Origin	Destination	Total	Origin	Destination	Total	Origin	Destination
Gallup	15,600	8,112	7,488	16,800	8,736	8,064	1,200	624	576
Albuquerque	78,100	39,831	38,269	79,800	40,698	39,102	1,700	867	833
Lamy	12,600	1,890	10,710	--	--	--	-12,600	-1,890	-10,710
Las Vegas	5,400	2,970	2,430	--	--	--	-5,400	-2,970	-2,430
Raton	15,700	2,669	13,031	--	--	--	-15,700	-2,669	-13,031
Belen	--	--	--	7,800	4,290	3,510	7,800	4,290	3,510
Vaughn	--	--	--	2,600	1,430	1,170	2,600	1,430	1,170
Clovis	--	--	--	7,400	4,070	3,330	7,400	4,070	3,330
TOTAL	127,400	55,472	71,928	114,400	59,224	55,176	-13,000	3,752	-16,752

Economic Impact Analysis

- A study was conducted by Cambridge Systematics utilizing data provided by Amtrak, the ridership analysis shown above, and other sources.
- This study:
 - Estimates Southwest Chief ridership will increase at a uniform 2% annual rate for all trips on both the existing route and a potential reroute to the Transcon, based on Amtrak's ridership growth assumptions in the 2012 Amtrak Fleet Strategy document;
 - Estimates how many riders on the existing route would choose not to make their trip if the Southwest Chief no longer served stations in northeast New Mexico;
 - Estimates how many riders that were forecasted to use the Southwest Chief at potential new stations along the Transcon would make the trip even if the Southwest Chief remained on its current route; and
 - Estimates the impacts of the Southwest Chief on the state and local economy and on tax revenues for each routing.

Economic Impact – Diversion to Other Modes

- Some current Amtrak riders to Lamy, Las Vegas, and Raton would still make their trip if the Southwest Chief were rerouted to the Transcon, either by choosing a different primary mode for travel (air, bus, auto) or by riding Amtrak to a different station and using an additional ground mode to reach their final destination. To assist in determining how many passengers would still make their trip, a platform survey of passengers boarding and alighting the Southwest Chief in New Mexico was undertaken.
- Almost all surveyed travelers who would still make their trip indicated they would switch to a different primary mode rather than use Amtrak if their existing station were no longer served. Travelers to/from other states were equally divided between diverting to auto and air, while intrastate travelers would divert to auto but not air. Among both interstate and intrastate travelers who would still make their trip if Amtrak were not an option, 1 in 8 respondents indicated they would take a bus.
- Based on this, the study estimated that 40% of travelers to Lamy and Las Vegas combined would not make their trip if the Southwest Chief were rerouted. The Philmont Scout Ranch estimates that 50% of scouts who use Amtrak to reach the ranch would no longer make their trip if the Southwest Chief no longer stopped at Raton, so for Raton 50% of travelers were presumed to not make their trip.
- For the stations on the Transcon reroute, it was also estimated that 40% of passengers boarding and alighting at Belen, Vaughn, and Clovis would have still made the trip if Amtrak remains on its current route.

Economic Impacts – Economic Activity

- Southwest Chief travelers from out of state that visit New Mexico benefit the state's economy directly with the money that they spend while here, and indirectly in the jobs they support, the spending generated by those employees, by the addition to the gross regional product their money and those jobs create, and by the local, state, and federal taxes all of this economic activity generates.
- The table below shows the gross economic impacts to the state from out of state Southwest Chief travelers for each alignment and the net economic impact to New Mexico of travelers that would travel only if the Southwest Chief was available.
- The table includes the impacts of the projected loss of 5.5 full-time equivalent railroad jobs in northeast New Mexico if Amtrak were to relocate and BNSF were to abandon the railroad.

Comparison of Economic Impacts for Existing and Alternative Southwest Chief Alignments							
		2013			2023		
		Existing Route	Alternative Route	Net Impact*	Existing Route	Alternative Route	Net Impact*
Employment	Direct	222	142	-42	269	173	-50
	Indirect	25	16	-7	30	19	-7
	Induced	37	24	-8	44	30	-9
	Total	283	182	-56	342	222	-65
Output (millions)	Labor Income	\$9.1	\$5.6	(\$2.1)	\$11.0	\$6.8	(\$2.4)
	Gross Regional Product **	\$13.3	\$7.9	(\$3.3)	\$16.0	\$9.7	(\$3.7)
Taxes (millions)	State and Local	\$1.7	\$1.1	(\$0.3)	\$2.1	\$1.4	(\$0.4)
	Federal	\$1.7	\$1.0	(\$0.4)	\$2.1	\$1.3	(\$0.5)
	Total	\$3.4	\$2.2	(\$0.7)	\$4.2	\$2.6	(\$0.8)

* Net Impact does not consider trips that would occur regardless of which alignment the Southwest Chief is on

** Gross Regional Product (GRP) measures the newly created value through production within a region.

Economic Impacts – Property Taxes Paid by BNSF

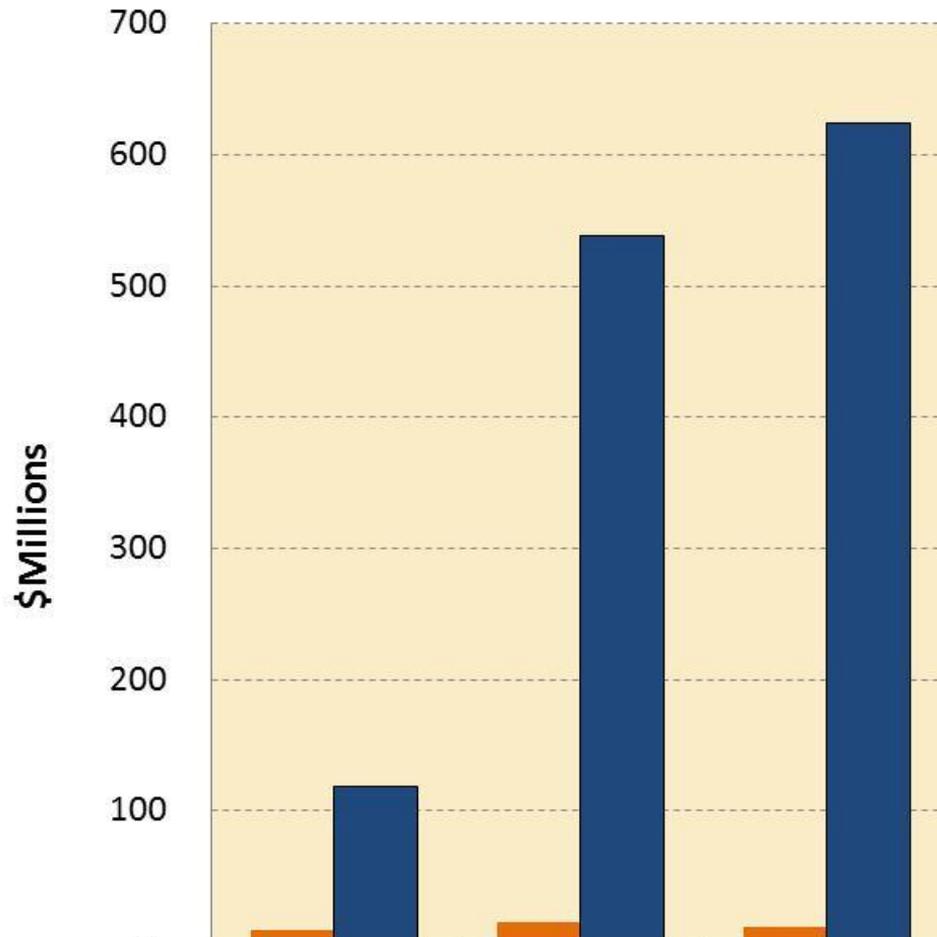
BNSF Property Tax: Distributions by Recipient Category (\$thousands)

County	State	County	Municipal	School District	Other	Total
Colfax	15	116	7	72	50	260
Mora	12	111	1	65	26	215
San Miguel	20	173	4	161	33	391
Santa Fe	13	126	0	69	37	245
<u>Total</u>	<u>60</u>	<u>527</u>	<u>12</u>	<u>367</u>	<u>145</u>	<u>1,111</u>

Note: "Other" includes community colleges, hospitals, and building levies.

Economic Impact – BNSF Property Value by County

BNSF vs. County Total Net Taxable Value



BNSF Railway property makes up the following percentages of taxable property value by county:

- 7.4% of Mora County’s total;
- 2.7% of San Miguel County’s total;
- 1.8% of Colfax County’s total; and
- 0.1% of Santa Fe County’s total (not shown).

■ BNSF Taxable Value	9	15	11
■ Countywide Total Taxable Value (All Taxpayers)	118	538	624

Economic Impacts – New Mexico

The table below shows the economic impact to New Mexico of:

- The Southwest Chief on its existing alignment;
- The Southwest Chief were it to be rerouted to the BNSF Transcon and the railroad from Lamy to Colorado were abandoned by BNSF; and
- The net economic impact to New Mexico of rerouting the Southwest Chief.

Economic Impact of Southwest Chief on New Mexico today			
(millions of dollars)			
	Existing Route	Alternative Route	Net Impact*
Gross Regional Product	\$13.3	\$7.9	-\$3.3
Local and State Taxes	\$1.7	\$1.1	-\$0.3
Property Taxes	\$1.1	\$0.0	-\$1.1
Total Local, State, and Property Taxes	\$2.8	\$1.1	-\$1.4

* Net Impact does not consider trips that would occur regardless of which alignment the Southwest Chief is on