



SOUTHERN RAIL
COMMISSION

THE ECONOMIC IMPACT OF PASSENGER RAIL

SUMMARY REPORTS INCLUDED:

- 1 Jacksonville State University School of Business and Industry/Center for Economic Development and Business Research
Economic Impact of Passenger Rail Expansion on the State of Alabama
- 2 University of Southern Mississippi/Trent Lott National Center
Restoration of Gulf Coast Passenger Rail Service: Economic Impact in Mississippi and Alabama
- 3 Rail Passengers Association
*Extending the Crescent Daily Between Meridian, Ms and Fort Worth, TX:
An Economic Benefits Assessment*

Center for Economic Development and Business Research

School of Business and Industry
Jacksonville State University

Economic Impact of Passenger Rail Expansion on the State of Alabama



Prepared for:

The Southern Rail Commission
States of Alabama, Mississippi and
Louisiana

Economic Impact of Passenger Rail Expansion in Alabama

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Executive Summary

This analysis considers the economic impact of expanding passenger rail service within the state of Alabama. The focus of this analysis is rail service between Birmingham and Mobile and Atlanta and Birmingham. The areas under consideration for this study encompass three distinct geographies: from Birmingham to Montgomery in phase I; from Montgomery to Mobile in phase II; and from Atlanta to Birmingham. The latter considers two distinguishable areas for construction estimates from Georgia-Alabama state line to Anniston and Anniston to Birmingham in measuring economic impact within the state of Alabama along that corridor.

Economic impact is tallied from railway construction along each aforementioned corridor and for usage of the service. Usage impacts are disseminated by operations and maintenance and new visitor spending as a component of tourism. While input variables may be included with a reasonable degree of accuracy, to the extent that a measure of actual values differs from anticipated values can make economic impacts subject to wide variation. This relationship is especially true the further in the future that the calculation extends. In making this analysis readily useful to decision-makers a range of utilization estimates and spending increases are proposed in developing each economic impact. Estimates are based on dollar values in the future commensurate with the expected dates of construction, operation, and spending. Economic impacts are further expressed in terms of employment, labor income, value-added, and output.

Based on a summary of each economic impact category the total economic output on Alabama's economy is as follows for Birmingham to Montgomery: Construction and Restoration of \$851.5 million (5,673 jobs generated); Railway Operations from \$6 million to \$16.1 million (22 – 59 jobs generated), based on low and high end usage estimations; and Increased Tourism Spending on a spectrum from \$11.8 million to \$223.8 million (134 – 2,309 jobs generated) based on a range of percent increase estimates of new visitors. Full illustration is summarized in Table 1 and also includes employment, labor income, and value-added estimated impacts for each event.

Table 1
Birmingham to Montgomery

Event	Total Economic Impact by Category			
	Employment	Labor Income	Value Added	Output
Railway Construction	5,673	\$316,094,437	\$429,250,135	\$851,496,399
Operations Revenue-Low End	22	\$ 2,331,092	\$3,810,153	\$ 6,022,459
Operations Revenue-High End	59	\$ 6,234,664	\$10,190,515	\$ 16,107,479
New Visitor Spending-1% increase	134	\$ 3,932,550	\$6,267,135	\$ 11,757,203
New Visitor Spending-12% increase	1,630	\$ 48,501,608	\$80,546,559	\$ 157,994,221
New Visitor Spending-17% increase	2,309	\$ 68,710,612	\$114,107,625	\$ 223,825,147

Construction values based in 2029-dollar year; operations and visitor spending in 2030-dollar year

For the Montgomery to Mobile phase total economic output on Alabama’s economy is as follows: Construction and Restoration of \$1.3 billion (10,800 jobs generated); Railway Operations from \$6.3 million to \$21.6 million (18 – 61 jobs generated), which is based on low and high end estimates; and Increased Tourism Spending from \$22.8 million on low end to \$389.2 million (227 – 3,867 jobs generated) on high end. Full illustration is summarized in Table 2 and also includes employment, labor income, and value-added estimated impacts for each event.

**Table 2
Montgomery to Mobile**

Event	Total Economic Impact by Category			
	Employment	Labor Income	Value Added	Output
Railway Construction	10,800	\$687,496,439	\$562,265,246	\$1,323,506,985
Operations Revenue-1 daily trip	18	\$ 1,582,887	\$3,152,766	\$ 6,306,932
Operations Revenue-3 daily trips	41	\$ 3,665,743	\$7,301,360	\$ 14,605,960
Operations Revenue-6 daily trips	61	\$ 5,419,552	\$10,794,565	\$ 21,593,922
New Visitor Spending-1% increase	227	\$ 7,026,697	\$11,673,688	\$ 22,892,045
New Visitor Spending-8% increase	1,820	\$ 56,213,573	\$93,389,499	\$ 183,136,352
New Visitor Spending-17% increase	3,867	\$ 119,453,845	\$198,452,688	\$ 389,164,750

Construction values based in 2034-dollar year; operations and visitor spending in 2035-dollar year

Considering railway development and use along the corridor from Atlanta to Birmingham, this analysis explores the segment from the Georgia-Alabama state line to Birmingham in calculating the total economic output on Alabama’s economy. Output is estimated as follows: Construction and Restoration to total \$2.6 billion (14,209 jobs generated), which is tallied for the part of the railway within Alabama and analyzed from state line to Anniston and Anniston to Birmingham; Railway Operations of \$47.5 million (175 jobs generated); and Increased Tourism Spending from \$7.9 million to \$189.0 million (81 – 1,950 jobs generated) based on a range of possible percent increases in new visitor spending. Full illustration is summarized in Table 3 and includes employment, labor income, and value-added estimated impacts for each event. The complete report includes type of impact – direct, indirect, and induced – for each economic impact category and methodology for calculating spending and cost estimates as input variables in developing the economic impact model.

Table3
Atlanta to Birmingham
Georgia-Alabama State Line to Birmingham

Event		Total Economic Impact by Category		
	Employment	Labor Income	Value Added	Output
State Line to Anniston Construction	4,095	\$232,884,295	\$337,988,017	\$760,693,058
Anniston to Birmingham Construction	10,114	\$575,239,356	\$834,852,385	\$1,878,961,331
Total Construction Impacts	14,209	\$808,123,651	1,172,840,402	\$2,639,654,389
Operations & Maintenance	175	\$18,372,606	\$30,029,897	\$47,466,288
New Visitor Spending-1% increase	81	\$ 2,417,987	\$4,015,549	\$ 7,876,606
New Visitor Spending-11% increase	894	\$ 26,597,863	\$44,171,037	\$ 86,642,666
New Visitor Spending-24% increase	1,950	\$ 58,031,647	\$96,373,082	\$ 189,038,368

Construction values based in 2029-dollar year; operations and visitor spending in 2030-dollar year

Resources

Minnesota IMPLAN Group, Inc. (n.d.). IMPLAN economic modeling input-output software.

Birmingham to Montgomery Passenger Rail Feasibility Study – Final Report December 2013 – Prepared by HDR Engineering, Inc.

Birmingham to Montgomery to Mobile Intercity Passenger Rail Feasibility Study – Draft Report November 2019 – AECOM

Atlanta to Birmingham High Speed Rail Planning Services – Final Report March 2012 – Prepared by HNTB

Alabama Tourism Department FY2018 Economic Impact

Restoration of Gulf Coast Passenger Rail Service

Economic Impact in Mississippi and Alabama

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THE UNIVERSITY OF
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Executive Summary

This study estimates the benefits of restoring Gulf Coast passenger rail services on economic growth at the state and county levels for Mississippi and Alabama. The benefits are detailed as increased tourism spending, employment, value-added, and economic output resulting from expenditures related to railway construction, station renovation, rail service operations, and potential train car maintenance and assembly services provided by Talgo Incorporated. Since an accurate estimate of new visitors coming into the study region by the new railway service is not available at present, aspirational scenarios are assessed to give decision makers perspective of how strong the tourism impact could be. New visitors coming into the region caused by the restored railway service and stimulated developments in cities served are estimated through scenarios of 1%, 5%, 10%, and 20% increases in existing and projected tourist. In addition, a broader and comprehensive impact of the passenger railway service on the local socio-economy, resident's travel cost, regional productivity, and commuter accessibility is summarized through a review of existing practical evidences. Finally, an evaluation of existing and planned tourism attractions in Bay St. Louis, Gulfport, Biloxi, Pascagoula, and Mobile (AL) is included. A summary of the economic inputs and outputs at the state level is listed below:

Railway Construction and Operation Impacts in Mississippi

- Railway construction and renovation impact in the four years of construction:
 - Total construction company revenue input: \$40,986,363 (Mississippi's investment of \$20,496,543)
 - Jobs supported: 277 (\$11,597,787 in earnings)

- Value added: \$16,859,165
- **Total economic output effect on Mississippi's economy from construction and renovation: \$34,511,898**
- Railway operation annual impact:
 - Total railway operation inputs for Mississippi is estimated as \$4.71 million (Mississippi's investment of \$2,333,300 per year for three years)
 - Jobs created: 24 (\$1,713,255 in earnings)
 - Value added: \$3,428,130
 - **Total economic annual output of railway operations generated in Mississippi: \$6,086,947**

Tourism Impact in Mississippi

- Economic impact range from 1% to 20% aspirational increases in tourism (as evidenced in other regions) which is attributable to new rail service and stimulated developments in Mississippi cities served (see estimates for 1%, 5%, 10%, and 20% in following sections):
 - New visitor spending annual input: \$24,742,900 to \$494,858,000
 - Jobs created: 394 (\$8,945,093 in earnings) to 7,876 (\$178,901,864 in earnings)
 - Value added: \$12,711,757 to \$254,235,146
 - **Total economic output from increased tourism spending: \$24,296,224 - \$485,924,479**

Train Company Construction and Operation Impacts in Mississippi

Talgo Inc. is committed to establishing a presence which will create important economic benefits in the state of Mississippi as a result of the state's investment in the new passenger rail system. Talgo's commitment includes a maintenance facility and possibly assembly plant.

- Construction of the Talgo maintenance facility:
 - Total input: 80 direct construction jobs
 - Jobs supported: 122 (\$5,115,649 in earnings)
 - Value added: \$7,429,708
 - **Total economic output from maintenance facility construction:**
\$15,147,454
- Construction of the Talgo assembly plant:
 - Total investment in plant and equipment input: \$100,000,000
 - Jobs supported: 1,274 (\$53,603,662 in earnings)
 - Value added: \$77,851,229
 - **Total economic output from assembly plant construction:**
\$158,720,629
- Talgo annual maintenance operations:
 - Total input: 39 direct jobs
 - Jobs created: 79 (\$3,461,633 in earnings)
 - Value added: \$5,012,216
 - **Total economic output from maintenance operations: \$10,556,285**
- Talgo annual overhaul service operation:
 - Total input: 44 direct jobs

- Jobs created: 67 (\$3,268,434 in earnings)
- Value added: \$5,159,508
- **Total economic output from maintenance overhaul services:**
\$8,376,884
- Talgo annual assembly plant operation:
 - Total input: 80 direct jobs
 - Jobs created: 245 (\$12,970,273 in earnings)
 - Value added: \$19,216,446
 - **Total economic output from assembly operations: \$83,924,310**

Economic Contribution in Alabama

Economic impacts from railway construction, renovation, operation, and tourism impacts are also estimated for Alabama and Mobile County. State level inputs and outputs are listed below.

- Railway construction and renovation impact in the four years of construction:
 - Total construction company revenue input: \$6.04 million (\$5.89 million in construction and \$262,500 in station renovation, with Alabama's investment at half of the total, \$3.02 million)
 - Jobs supported: 43 (\$1,959,658 in earnings)
 - Value added: \$2,707,048
 - **Total economic output effect on Alabama's economy from construction and renovation: \$ 5,479,801**

- Railway operation annual impact:
 - Total railway operation input for State of Alabama is estimated as \$1.76 million per year for three years
 - Jobs created: 8 (\$530,000 in earnings)
 - Value added: \$950,000
 - **Total economic annual output of railway operations generated in Alabama: \$1,840,000**

- Economic impact range from 1% to 20% increases in tourism (as evidenced in other regions) which is attributable to new rail service and stimulated developments in Mobile, Alabama (see estimates for 1%, 5%, 10%, and 20% in following sections):
 - New visitor spending annual input: \$11,858,407 to \$237,170,032

- Jobs created: 188 (\$4,795,825 in earnings) to 3,680 (\$220,439,285)
- Value added: \$6,226,305 to \$115,080,266
- **Total economic output from increased tourism spending in Alabama:
\$11,855,857 to \$220,439,285**

Introduction

Amtrak launched its Gulf Coast service with the Gulf Coast Limited, a train which operated between Mobile and New Orleans during the 1984 World's Fair, and again in 1996-1997. From 1993 through 2005 Amtrak also operated an extension of the Gulf Coast Passenger Rail Service with night-time stops through the region, as part of a transcontinental Los Angeles-Florida run. For various reasons (including the route length and carrier operating conditions), successful on-time performance proved to be elusive, hindering the train's ridership and hence its financial performance. Additionally, the lack of day-time train service hindered ridership. Since Hurricane Katrina in 2005, service has been suspended east of New Orleans (Amtrak, 2015).

This economic impact study addresses new commitments for passenger rail service running between New Orleans and Mobile during day-time hours with four stops in Mississippi. The plan calls for two trains operating daily with one round trip departing from New Orleans and the other round trip departing from Mobile. It will no longer be the tail-end of a long-distance service and instead will be devoted to the region.

Senator Roger Wicker championed legislative efforts to restore passenger rail service along the Gulf Coast. In 2015, he led the effort to create and fund the Gulf Coast Working Group (Y'all Politics, 2018). The members of this working group, along with officials from Amtrak, the Federal Railroad Administration, and the Southern Rail Commission joined together to address passenger rail service needs. By re-establishing a passenger railway service between Mobile and New Orleans, passengers will be able to embark and debark at the four established train depots in Mississippi (Gulf Coast Working Group, 2017):

- Bay St. Louis, MS (BAS) 303 South Railroad Avenue, Bay St. Louis, MS 39520
- Biloxi, MS (BIX) 860 Esters Boulevard, Biloxi, MS 39530
- Gulfport, MS (GUF) 1419 27th Avenue, Gulfport, MS 39501
- Pascagoula, MS (PAG) 505 Railroad Avenue, Pascagoula, MS 39567

Talgo Incorporated, a global leader in passenger train manufacturing, has proposed that if Mississippi agrees to invest a net total of \$7.5 million for two Talgo train cars deeply discounted from the manufacturer's total cost of \$25 million, they will site a new railcar maintenance facility in Mississippi. Additionally, they will construct a new assembly plant, if they get new train orders from the United States. This report will help decision-makers identify the benefits of such a proposal.

Methodology and Assumptions

The methodology described in this study used input variables collected from various secondary sources. IMPLAN software was used to calculate the economic contribution of direct, indirect, and induced effects within the region (Minnesota IMPLAN Group, 2016). These effects are described as:

- Direct effect of all expenditures generated through direct purchase of goods and services associated with construction and ongoing operations of the rail system.
- Indirect effect which occurs from supply chain activity of supporting industry sectors and the subsequent spending generated in the economy.
- Induced effect which occurs when employees of an industry purchases goods and services like housing, food, clothing, and other household spending.

IMPLAN is widely used in economic impact studies by inputting variables of employment numbers, employee earnings, revenues, operational spending, and capital investments to estimate the overall economic output effects on the economy. IMPLAN is a sophisticated software that is used as an economic tool to estimate impacts of changes in regional economies. IMPLAN builds a step-by-step process of an impact scenario and examines all the different factors such as social accounting, multipliers, and trade flows method. It can also examine all the factors that can impact the most common analysis types as well as a change in industry production. A detailed explanation of how IMPLAN works and a list of definitions is in the appendix of definitions.

Model Setup for Mississippi Impact Analysis

Railway Construction and Station Renovation Model Inputs

The total construction investment is \$38.67 million in Mississippi during a four-year period. A Regional Purchase Coefficient (RPC) is applied to the original investment to take into account the out-of-state contractors doing the construction work Mississippi. The RPC for a specific commodity or industry is the proportion of regional demand fulfilled from regional production and is an important consideration for measuring the true economic impact. Based on EMSI’s Mississippi construction related regional purchase profile, the RPC for Mississippi construction-related economic activities is 54% (see Table 1). It means 54% of the local construction industry needs are sourced within Mississippi, while another 46% of the needs are imported from outside of the state. If we can confirm that the construction is done ALL by Mississippi companies, the RPC is not needed. The Southern Rail Commission has already distributed funding for four newly renovated rail stations: \$252,000 to Biloxi, \$659,543 to Pascagoula, \$190,000 to Gulfport and \$55,000 to Bay St. Louis. The cities have committed to match these funds.

Table 1: Railway Construction and Station Renovations Inputs over a 4-year Timeframe

Railway Construction	Original Investments	Regional Purchase Coefficients	Model Inputs	Event Year
Year One	\$2.24 million	54%	\$ 1,209,600	2019
Year Two	\$1.22 million	54%	\$ 658,800	2020
Year Three	\$23.33 million	54%	\$ 12,598,200	2021
Year Four	\$11.88 million	54%	\$ 6,415,200	2022
Station Renovations	\$2.32 million	54%	\$ 1,250,836	2019

Source: Transportation for America, 2018

Railway Annual Operating Input

The total amount of operating cost for the entire route is \$7.91 million per year according to Transportation for America. The amount spent in Mississippi is estimated based on the percentage of the route mileage in the region, which is 53% of the entire route. Thus, the original operating cost in Mississippi is 53% of the \$7.91 million, which equals \$4.17 million. We assume that Amtrak will hire station staff and source supplies for Mississippi operations from local workforce and supply markets, so RPC is 100% (see Table 2).

Table 2: Railway Annual Operation Input

Railway Operations Revenue for Entire Route	Railway Operations Revenue in MS	Regional Purchase Coefficients	Model Input	Event Year
\$7.91 million	\$ 4,170,758	100%	\$ 4,170,758	2022

Source: Transportation for America, 2018

New Visitor Spending Input

Average visitor spending is based upon a *2017 Mississippi Aquarium Economic Impact Study* in which primary data was collected along the Gulf Coast that includes spending for lodging, food & beverages, transportation, shopping, recreation, and other business. The average spent per person per stay was \$353.47 (see Table 3).

Table 3: Average Visitor Spending

Description	Per Person (Average)
Lodging	\$62.70
Food & Beverages	\$105.60
Transportation	\$41.58
Shopping	\$65.92
Recreation	\$35.57
Other Spending	\$42.10
Total	\$353.47

Source: 2017 Mississippi Aquarium Economic Impact Study, 2017

Since there is no survey to determine the percentage of new visitors from the proposed railway service, we assume four scenarios to reflect possible increase in new visitors, including 1%, 5%, 10%, and 20%. These percentages were applied to a tourism projection estimate published by the GoCoast 2020 Commission. According to *GoCoast 2020* report, annual visitation on the Mississippi Gulf Coast is projected to be 7 million people the year 2020. Thus, the four possible scenarios generated by the passenger railway service are estimated to be 70,000 new visitors, 350,000 new visitors, 700,000 new visitors, and 1,400,000 new visitors.

Due to leakage that occurs while new money circulates through the economy, only 65% of total visitor spending is anticipated to remain as final demand in the local economy. Therefore, the standard tourism impact RPC of 65% is applied to the new visitor spending for each scenario (see Table 4).

Table 4: New Visitor Spending Input

New Visitor Spending	Number of new Visitors Annually	Average Number of new Visitors per City per day in Mississippi	Regional Purchase Coefficient	Model Input	Event Year
1% increase	70,000	48	65%	\$16,082,885	2020
5% increase	350,000	240	65%	\$80,414,425	2020
10% increase	700,000	479	65%	\$247,429,000	2020
20% increase	1,400,000	959	65%	\$321,657,700	2020

Source: GoCoast 2020 Commission, 2018

Talgo - Related Model Input

If the passenger railway system becomes a reality, then Talgo is committed to locate a maintenance facility. It also anticipates the need to locate one assembly plant in Mississippi. The estimated investments include 80 construction jobs for the maintenance facility, 39

permanent jobs for the maintenance facility, 44 permanent jobs for overhaul service, and 80 permanent jobs for the assembly plant. Since there is no information about the construction of the assembly plant, we assume that the construction investment would be about \$100 million, based on a comparable case in Chicago (Shropshire, 2017). Since these activities are anticipated to be constructed and operated in Mississippi, we assume that these needs will be met by local workforce and supply markets (see Table 5).

Table 5: Additional Inputs from Talgo Inc.

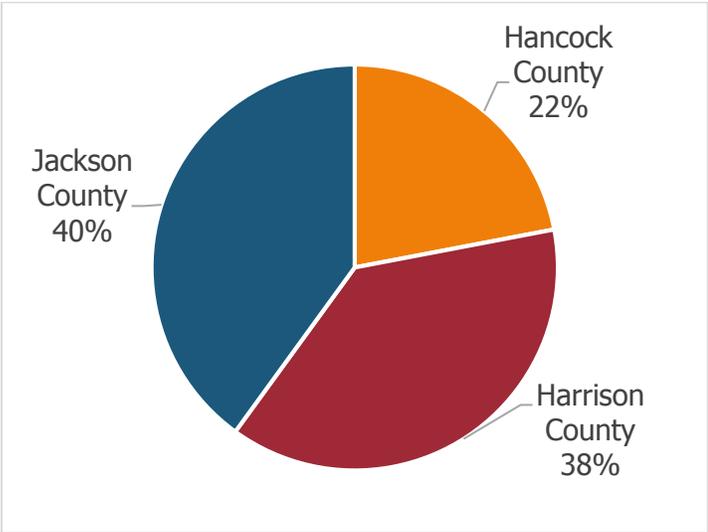
Additional Input from Talgo	Original Investments	Regional Purchase Coefficient	Model Input	Event Year
Construction of Maintenance Facility	80 jobs	100%	80 jobs	2020
Construction of Assembly Plant	\$100 million	100%	\$100 million	2020
Operating of Maintenance Facility	39 jobs	100%	39 jobs	2022
Operating of Overhaul Services	44 jobs	100%	44 jobs	2022
Operating of Assembly Plant	80 jobs	100%	80 jobs	2022

Source: Restoring Gulf Coast Passenger Rail Service in Mississippi, Southern Rail Commission, 2018

Model Setup for Mississippi Counties

The total construction and operation in Mississippi is broken down for each county based on percentage of the railway mileage in each county. According to the Amtrak railway GIS database, the mileage of the route in Hancock County is 22% of the entire length in Mississippi. The number for Harrison and Jackson County is 38% and 40%, respectively. These percentages were used to breakdown the economic impact share by county for construction and operation.

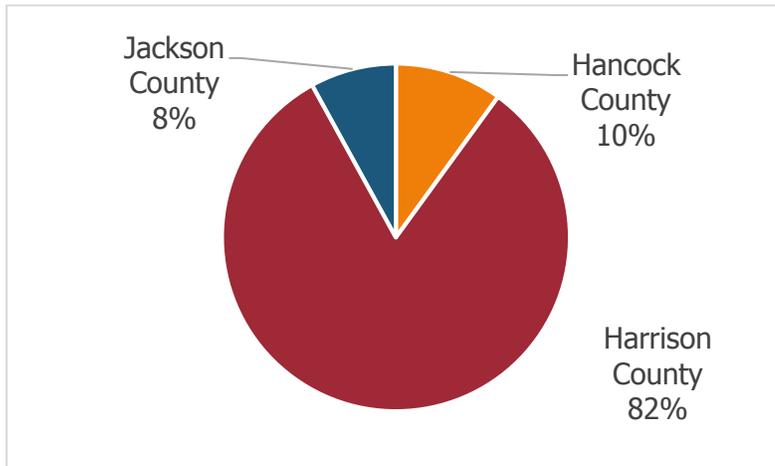
Chart 1: Mississippi County Share of Economic Impact for Construction and Operation



Source: Based on Amtrak GIS Database Railway Model

Numbers of increased visitors under different scenarios will be estimated proportionally based on county tourist estimates. Based on historical data of the estimated county travel and tourism expenditures (Mississippi Development Authority Tourism Division, 2014), we can assume that the percentage of annual tourists in, respectively. Since the projected tourist number in 2020 in Mississippi Gulf Coast is 7 million, the tourism estimates in the three counties applied to the 1% railway increase scenario will be 7,000 in Hancock County, 57,400 in Harrison County, and 5,600 in Jackson County.

Chart 2: Mississippi County Share of Economic Impact for Tourism



Source: MS Development Authority Tourism Division Annual Report, 2013

The Regional Purchase Coefficient for construction related industry and tourism industry stay the same as the state level, which are 54% and 65%, respectively. Regarding Talgo Inc. related activities, since the exact location of the proposed train car service facilities is yet to be determined, we will not include it in the county level analysis.

Model Setup for Alabama Impact Analysis

Railway Construction and Station Renovation Model Inputs

The total construction investment is \$5.78 million in Alabama during the four-year period. A RPC of 54% is applied to the original investment to take into account the out-of-state contractors doing the construction work in Alabama as well (see Table 6). The Southern Rail Commission has already distributed \$131,250 in funding for the newly renovated rail station. The city of Mobile has committed to match these funds.

Table 6: Railway Construction and Station Renovations Inputs over a 4-year Timeframe

Railway Construction	Original Investments	Regional Purchase Coefficients	Model Inputs	Event year
Four years of construction	\$5.78 million	54%	\$3.12 million	2019-2022
Station Renovation	\$262,500	54%	\$141,750	2019

Source: Transportation for America, 2018

Railway Annual Operating Input

The total amount of operating cost for the entire route is \$7.91 million per year. The amount spent in Alabama is estimated based on the percentage of the route mileage in the region, which is 24% of the entire route. Thus, the original operating cost in Alabama is 24% of the \$7.91 million, which equals to \$1.76 million. We assume that Amtrak will hire station staff and source supplies for Alabama operations from local workforce and supply markets, so RPC is 100% (see Table 7).

Table 7: Railway Annual Operation Input

Railway Operations Revenue for Entire Route	Railway Operations Revenue in AL	Regional Purchase Coefficients	Model Input	Event Year
\$7.91 million	\$1,756,645	100%	\$1,756,645	2022

Source: Transportation for America, 2018

New Visitor Spending Input

The visitor spending profile in Alabama is used to estimate the average spent per person per stay which is \$631.27 (see Table 8). And the 65% leakage index is also used to capture the true value stays in the local economy.

Table 8: Alabama Visitor Spending

Description	Per Person (Average)
Lodging	\$100.52
Eating & Drinking	\$201.65
General Retail	\$73.78
Entertainment	\$72.14
Public Transport	\$110.59
Other Personal Services	\$72.59
Total	\$631.27

Source: Hotel Visitor Spending Profile, University of South Alabama

Since there is no survey to determine the percentage of new visitors, we assume four scenarios to reflect possible increases in new visitors, including 1%, 5%, 10%, and 20%. These percentages were applied to the 2016 Mobile hotel visitors number of 1,878,515. Thus, the four possible scenarios brought by the passenger railway service are estimated to be 18,785 new visitors, 93,926 new visitors, 187,852 new visitors, and 375,703 new visitors, respectively (see Table 9).

Table 9: New Visitor Spending Input

New Visitor Spending	Number of New Visitors Annually	Average Number of new Visitors per day in Alabama	Regional Purchase Coefficient	Model Inputs	Event year
1% increase	18,785	52	65%	\$7,707,964	2020
5% increase	93,926	258	65%	\$38,540,233	2020
10% increase	187,852	515	65%	\$77,080,466	2020
20% increase	375,703	1030	65%	\$154,160,521	2020

Source: Hotel Visitor Numbers from University of South Alabama

Economic Impact in Mississippi

State Level Impact

Railway Construction Impact

For the construction of the railway infrastructures, Mississippi's projected investment is roughly \$20.5 million and leads to a temporary economic benefit of \$34.5 million to Mississippi, a 1.72:1 benefit/cost ratio. New temporary construction impacts (direct, indirect and induced) are expected to be concentrated over four years (2019 – 2022) during which the project will be built, and existing stations will be renovated. These activities will generate \$4.21 million/year in added business sales, supporting 70 more jobs per year with \$2.90 million in wages per year, for each of the four years (see Table 10).

Table 10: Railway Construction and Renovation Economic Impact in Mississippi

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway construction	261	\$10,966,473	\$15,927,146	\$32,471,763
Railway station renovation	16	\$631,314	\$932,019	\$2,040,135
Total (over four years)	277	\$11,597,787	\$16,859,165	\$34,511,898
Average per year	70	\$2,899,447	\$4,214,791	\$8,627,975

Source: IMPLAN Input/Output Analysis

Railway Operation Impact

The total yearly potential cost to Mississippi for supporting the first three years of railway operations will be \$2.33 million while the total annual economic benefit from the operation only (excluding tourism, etc.) will be \$6.086 million. The \$2.33 million net operating cost to Mississippi assumes low-fare box revenue and no operating support from private entities. The total amount of new on-going operations' annual economic impacts attributable to

the proposed railway service as of 2022 is expected to be 24 jobs, \$1.71 million labor income, \$3.43 million in value added to the Mississippi economy.

Tourism Effects

It is ideal to conduct the tourism economic impact based on projected new tourists coming into the region because of the proposed railway service. However, this projection was not available when this impact analysis began and is beyond the scope of work in this study. Thus, a scenario analysis is an alternative to give decision makers perspective of how strong the impact could be. New tourists coming into the region caused by the restored railway service are estimated at 1%, 5%, 10%, and 20% increase to the projected 7 million tourists in the Mississippi Gulf Coast region. The most conservative estimate, only a 1% increase in tourism, shows a total economic impact to Mississippi of \$24.29 million (see Table 11).

Table 11: Increased Tourism Economic Contribution in Mississippi

Increased Tourism Scenarios	New Annual Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
1%	394	\$8,945,093	\$12,711,757	\$24,296,224
5%	1,969	\$44,725,466	\$63,558,787	\$121,481,120
10%	3,938	\$89,450,932	\$127,117,573	\$242,962,239
20%	7,876	\$178,901,864	\$254,235,146	\$485,924,479

Source: IMPLAN Input/Output Analysis

Relationship between Railway Service and Tourism

Positive Impacts. A review of existing evidence from other passenger railway projects and studies could provide a guidance of what scenario would be approachable. Transport is an important factor in the tourism sector. In addition to the transport of tourists to and within a

destination, transport itself can be a tourist attraction in terms of a tourist experience (Michniak, 2016; Hall, 1999). High-speed passenger rail service has a great impact on tourist attractiveness and the choice of a tourist destination (Guirao, 2008; Saladie, 2016; Chen, 2015; Masson, 2009; Wang, 2010; Wang, 2014).

There are good examples of railway use in the tourism sector. In the United States, the inability of the growing elderly population to drive, coupled with the continued desire to participate in recreational travel, was identified as a primary reason behind government drive for interregional high-speed trains (Becker, 2011). Passenger transport of local people can be combined with that of tourists. Various tourist packets can be provided combining rail travel and a visit to various events and attractions. Former abandoned railways can be renovated to combine the railway heritage with the cultural heritage (Michniak, 2016). Tourism attractions, on the other hand, could be developed and boosted in trackside areas (Saimyo, 2010). Targeted groups, such as senior travelers and foreign visitors, can also be considered to create tourism demand.

Two studies in Rome and Madrid respectively (Pagliara, 2014; Valeri, 2012) find the same fact that although the passenger railway service in Rome and Madrid is not the determinant factor for foreign tourists to decide to visit these two famous destinations, it is the key factors for them to choose to visit cities close to Rome and Madrid. Regionally, New Orleans receives 700,000 foreign visitors each year, all without cars and accustomed to rail travel. Take into account this finding and the relationship between New Orleans and MS Gulf Coast cities, it is reasonable to expect greater benefit in MS Gulf Coast region, from foreign tourists, with the passenger railway service. A highly relative study conducted by Becker and George provided a

highly favorable view of rapid rail transit as a means to promote tourism in the Gulf Coast region (Beker, 2011).

The impact on tourism from a new railway service could include both the new riders of the trains who would not have made the trip if the railway service were not available and the new visitors attracted by the improved service. New visitors are expected to use the proposed railway service as there are ample opportunities for recreational, tourism and shopping trips in and around the Mississippi cities. As a comparison, a similar impact study conducted for Amtrak Downeaster Service in Maine discovered that more than 22% of riders were identified as new visitors to the region by a new train service (The Center for Neighborhood Technology, 2008). Surrounded by more attractions along the proposed route compared to the Downeaster route, it is conceivable to expect equal to or higher than 22% of the projected riders could be brought only by the proposed railway service. In addition, the restoration of this new transport service could lead to improvements in destination attractiveness, transit-oriented development along the route, and city image, which will provide more profound impact on the tourism. Evidences from all over the world show that the boost in tourism caused by new passenger railway services themselves and new developments around the routes could be from 15% to 20%.

There are evidences from both ex-ante and ex-post studies about the wider impact of high-speed rail (HSR) services on tourism, not only in bring more riders, but also in attracting more visitors. It is argued that improved accessibility will increase demand for transportation and thus spur business and leisure travel, stabilize occupancy rates at hotels, and/or reduce seasonal effects in the tourism industry. In China, provinces with HSR expect 20% more tourists (Chen and Haynes, 2012). It is worth noting that different arguments emerged as well. When considering the wider impact on tourism, city size is one important factor to be weighed in.

Negative Impacts. The impact to small cities is limited. Tourism growth linked to HSR service is found in major cities, or cities that are quickly and frequently accessible to major cities with famous, well-publicized, and diverse tourist attractions. In addition, another offset is decreased length of stay with visitors being more mobile (Levinson, 2012). These different arguments should be considered with caution though since they have specific statistical and simplification methods. However, it emphasizes the necessity for the proposed rail service to conduct a survey of future train riders, both tourist and other riders, to get a more local estimate from the region of how many would not visit the region without the service. And second, a survey for the tourists in the region is also necessary to identify the impact of the new service.

Potential Effects from Talgo Inc. Facility and Service

Talgo's business approach is to work with states like Mississippi through a long-term relationship that will benefit both and create new jobs in the economy. If Mississippi invests in a net total of \$7.5 million for two Talgo train cars, which have a total cost of \$25 million, Talgo in exchange will site a new railcar maintenance facility in Mississippi. The total economic output to Mississippi of constructing the maintenance facility will be \$15.14 million. Talgo is also committed to a new assembly plant, if they receive new train set orders from the United States. The potential economic output for the assembly plant construction will be \$158.72 million (see Table 12).

Table 12: Potential Construction Impact of Talgo Maintenance and Assembly Plants in Mississippi

Talgo Related Constructions	Total Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Talgo Maintenance Facility	122	\$5,115,649	\$7,429,708	\$15,147,454
Talgo Assembly Plant	1,274	\$53,603,662	\$77,851,229	\$158,720,629
Total	1,396	\$58,719,311	\$85,280,937	\$173,868,083

Source: IMPLAN

The operating of Talgo services would create 391 new permanent jobs, including 79 maintenance jobs, 67 overhaul jobs, and 245 assembly jobs, with an increase in \$19.70 million wages per year, and \$29.39 million value added to Mississippi's economy. The total economic benefit to Mississippi from the increase in maintenance, overhaul, and assembly jobs would be \$102.86 million annually (see Table 13).

Table 13: Potential Annual Impact for Talgo Maintenance, Overhaul and Assembly Operations in Mississippi

Talgo Operating	Total Employment	Labor Income	Value Added	Output (Direct, indirect, and induced)
Talgo Maintenance jobs	79	\$3,461,633	\$5,012,216	\$10,556,285
Talgo Overhaul jobs	67	\$3,268,434	\$5,159,508	\$8,376,884
Talgo Assembly Plant jobs	245	\$12,970,273	\$19,216,446	\$83,924,310
Total	391	\$19,700,340	\$29,388,170	\$102,857,479

Source: IMPLAN

County Level Impact

This section of the report provides a proportional estimate attributable to each of the three counties along the MS Gulf Coast. The impact from railway construction and operation is estimated based on the proportion of the railway mileage in each county. The tourism impact is proportional to annual visitors in each county. (Results in Table 14-27) (Source: IMPLAN)

Hancock County Impact

Table 14: Railway Construction and Renovation in Hancock County in the 4-year Timeframe

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway Construction	47	\$2,004,492	\$2,648,326	\$5,486,507
Railway Station Renovation	1	\$24,576	\$32,637	\$74,901
Total (over four years)	48	\$2,029,068	\$2,680,963	\$5,561,408
Average per year	12	\$507,267	\$670,240	\$1,390,352

Table 15: Annual Impact of Railway Operation in Hancock County

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway Operation	4	309,832	627,742	1,071,491

Table 16: Annual Impact of Tourism in Hancock County

Increased Tourism Scenarios	New Annual Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
1%	36	\$728,111	\$987,352	\$1,876,015
5%	177	\$3,640,555	\$4,936,760	\$9,380,075
10%	354	\$7,281,110	\$9,873,520	\$18,760,150
20%	708	\$14,562,220	\$19,747,040	\$37,520,300

Harrison County Impact

Table 17: Railway Construction and Renovation in Harrison County

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway Construction	95	\$3,761,202	\$5,498,386	\$11,170,105
Railway Station Renovation	3	\$93,125	\$138,095	\$302,051
Total (over four years)	98	\$3,854,327	\$5,636,481	\$11,472,156
Average per year	25	\$963,581	\$1,409,120	\$2,868,039

Table 18: Annual Impact of Railway Operation in Harrison County

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway Operation	8	\$609,449	\$1,231,957	\$2,088,601

Table 19: Annual Impact of Tourism in Harrison County

Increased Tourism Scenarios	New Annual Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
1%	309	\$7,197,680	\$10,265,189	\$18,527,583
5%	1,543	\$35,988,400	\$51,325,945	\$92,637,915
10%	3,086	\$71,976,800	\$102,651,890	\$185,275,830
20%	6,173	\$143,953,600	\$205,303,780	\$370,551,660

Jackson County Impact

Table 20: Railway Construction and Renovation in Jackson County

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway Construction	85	\$3,893,795	\$5,702,317	\$11,051,991
Railway Station Renovation	10	\$423,487	\$634,753	\$1,334,482
Total (over four years)	95	\$4,317,282	\$6,337,070	\$12,386,473
Average per year	24	\$1,079,321	\$1,584,268	\$3,096,618

Table 21: Annual Impact of Railway Operation in Jackson County

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway Operation	7	\$591,986	\$1,231,783	\$2,170,244

Table 22: Annual Tourism Impact in Jackson County

Increased Tourism Scenarios	New Annual Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
1%	31	\$608,301	\$836,332	\$1,670,773
5%	154	\$3041505	\$4,181,660	\$8,353,865
10%	307	\$6083010	\$8,363,320	\$16,707,730
20%	613.6	\$12166020	\$167,26,640	\$33,415,460

Economic Impact in Alabama

State Level Impact

Railway Construction Impact

For the construction of the railway infrastructures, Alabama’s projected investment is roughly \$3.02 million (\$2.89 million for capital investment from the state of Alabama and \$130,781 from city of Mobile for station renovation) and that investments leads to an economic benefit of \$5.48 million to Alabama, a 1.81:1 benefit/cost ratio. New temporary construction impacts (direct, indirect and induced) are expected to be concentrated over the four years (2019 – 2022) during which the project will be built, and existing stations will be renovated. These activities will generate \$0.68 million/year in added value, supporting 11 more jobs per year with \$0.49 million in wages per year, for each of the four years.

Table 23: Railway Construction Impact for the 4-year Timeframe

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway Construction	41	\$1,878,007	\$2,591,299	\$5,233,971
Railway Station Renovation	2	\$81,651	\$115,749	\$245,830
Total (over four years)	43	\$ 1,959,658	\$2,707,048	\$ 5,479,801
Average per year	11	\$489,914	\$676,762	\$1,369,950

Railway Operation in Alabama

The total yearly potential cost to Alabama for operating the train would be \$2.33 million while the total annual economic benefit from the operation would be \$1.84 million. It is worth noting that the total output of the operation is less than \$2.33 million. It is because that the actual input of operation is calculated based on mileage percentage of Alabama part compared

to the entire length. So, the total input is \$1.76 million which is 24% of the total \$7.91 million operating cost for the entire route. However, the \$2.33 million contribution from Alabama was based on the agreement between states governments to split equally the net operating cost of \$6.97 million. The \$2.33 million net operating cost to Alabama assumes low fare box revenue and no operating support from private entities. The total amount of new on-going operations' annual economic impacts attributable of the proposed railway service as of 2022 is expected to be 8 jobs, \$0.53 million labor income, \$0.95 million added business sales in Alabama.

Annual Tourism Impact in Alabama

Impact of new tourists coming into the region in Alabama are estimated in the form of a 1%, 5%, 10%, and 20% boost of the 1,878,515 visitors who stayed in hotels in Mobile in 2016. The most conservative estimate, only a 1% increase in tourism, shows a total economic impact to Alabama of \$11.86 million. As discussed in the Mississippi section, the impacts on tourism from a new railway service could include both the new riders of the trains who would not have made the trip if the railway service were not available and the new visitors attracted by the improved.

Table 24: Increased Tourism Economic Contribution in Alabama

Increased Tourism Scenarios	New Annual Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
1%	188	\$4,795,825	\$6,226,305	\$11,855,857
5%	914	\$23,638,828	\$29,981,425	\$57,493,105
10%	2,030	\$52,040,398	\$67,871,811	\$129,878,826
20%	3,680	\$92,960,585	\$115,080,266	\$220,439,285

County Level Impact – Mobile County

We estimate the impact of the same input at the level of county for Mobile. Below are the outputs of the models. Inputs for construction (new infrastructure and station renovation), operation, and tourism stay the same as at state level. But the economic input-output relationships are adjusted to reflect the county economy activity history (see Tables 25-27).

Table 25: Railway Construction Impact for 4-year Timeframe

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway Construction	39	\$1,800,598	\$2,452,032	\$4,755,765
Railway Station Renovation	2	\$79,224	\$111,016	\$228,548
Total (over four years)	40	\$1,879,822	\$2,563,048	\$4,984,313
Average per year	10	\$469,955	\$640,762	\$1,246,078

Table 26: Annual Railway Operation Impact in Alabama

Activities	Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
Railway Operation	8	\$521,635	\$925,644	\$1,747,344

Table 27: Annual Tourism Impact in Alabama

Increased Tourism Scenarios	New Annual Employment	Labor Income	Value Added	Output (Direct, Indirect, and Induced)
1%	201	\$5,180,402	\$6,574,410	\$12,130,015
5%	1,003	\$25,837,035	\$32,815,440	\$60,614,643
10%	2,007	\$51,804,013	\$65,744,092	\$121,300,139
20%	4,014	\$103,608,024	\$131,488,183	\$242,600,275

Socioeconomic Impact

Major investments on high-speed rail (HSR) systems have been recently carried out all around the world. Asia is currently the leader in this system in terms of length of lines with 13,732 km compared to 7,378 km in Europe. In the United States, the system is becoming more prevalent. In 2010, \$10 billion was budgeted for investment in the high-speed rail system (Pagliara, 2014). The European Commission foresees that, by 2050, medium distance transport of passengers will take place by train (EC, 2011). It seems that the high-speed passenger rail service represents the present and future of transport investments.

Equity

The proposed passenger railway route is about 150 miles long in total. Given the relatively short length of the corridor, auto travel is the dominant travel mode in the study area. After auto travel, intercity bus travel is the next most important mode of travel along the corridor. Lacking a direct air service and no rail service after Hurricane Katrina in 2005, intercity bus is currently the only real alternative model of public transit to the automobile.

The damaged Sunset Limited railway service was not oriented to serve travel within the region. Its ridership compared to other travel modes did not represent regional travel needs and commuting demand. One comparison between the ridership of Gulf Coast Limited and Sunset Limited railway services can shed some light on this issue. In 1996, Amtrak's Gulf Coast Limited provided daily New Orleans to Mobile service on a schedule oriented to corridor travel. Although this service only last for 9 months, historical ridership and revenue data show that the ridership of Gulf Coast Limited was 60 times that of Sunset Limited which was only three times a week at night (AECOM Consult Inc., 2005). However, this regional service was cancelled because of suspended operating support from the government. Regional railway closures bring

immediate negative effect on passengers, particularly those social deprived and excluded, even though it saves operating costs for the government.

Saved Travel Cost

Even though HSR passengers pay more for their tickets, the establishment of this type of infrastructure leads to significant time savings (Blanquart and Koning, 2017). Across the United States, passenger rail services provide a host of economic benefits including approximately \$19.4 billion in annual congestion cost savings, \$12.1 billion in parking cost savings, \$22.6 billion in consumer cost savings, and \$50 billion in traffic collision cost savings (Victoria Transport Policy Institute, January 2012). An economic impact study for Amtrak's Downeaster in Maine estimated a generation of \$244 million per year in transportation cost savings for resident households by 2030 (The Center for Neighborhood Technology, 2008). The Haverhill-Plaistow Commuter Rail extension was estimated to increase daily ridership by 833 passengers per day, where each passenger was estimated to experience vehicle operating cost savings of \$7 per trip (HDR, 2010). Passenger rail service benefits North Carolinians as well. Annually, North Carolina's rail passengers receive \$47.4 million in benefits from taking the train instead of other modes of travel (Bert, 2015).

Regional Productivity

The wider economic impacts are what decision-makers often envision, however are also a subject of debate in the academic community. Increased accessibility to HSR service means increased competitiveness for region. This gained productivity was estimated as high as 700 million to 1.3 billion in British pounds per year in a study in North England (Graham, 2011). A similar study in Australia for a proposed HSR connecting Sydney and Melbourne provided an estimate of this gain as \$10 million a year (Hensher, 2013). Another study for the railway

service going through Paris – Orleans – Clermont – Ferrand – Lyon (POCL) expected to generate 87 million Euros from local economic performance gains. A similar 8.5% in GDP of the regions between two HSR stations was also found from an ex-post study done for Cologne and Frankfurt since 2001. It concluded from the evidence six years after the installation of the railway that this GDP increase is faster than if the project had not been implemented (Ahlfeldt, 2015).

There are many empirical, conceptual and theoretical problems in determining the wider economic effects of HSR on the local means of production. To appraise the local economic impact of the proposed railway service, the lack of sufficient data is one limitation since data on business and employee productivity is not available on a fine-grained spatial scale. In addition, since sometimes a HSR line can mean a loss of relative accessibility and competitiveness for certain areas near the region served, it is easy to overestimate the benefits of HSR. Based on the literature review and project report review, certainly it is likely that new HSR service will have a short-term influence on the local productivity supply, mostly through economies of agglomeration or an increase in competition. However, it is worth noting that due to problems in obtaining the data and identifying the indirect effects, great caution is necessary to interpret and use it in official socioeconomic calculations. We strongly suggest that a study should be conducted before the proposed railway service started to determine what data and information will be needed when appraising its future socioeconomic impacts, so that these data could be tracked and collected when it is a good time to conduct an ex-post study. If successful, this effort will be the first one in U.S. passenger rail service history to quantify the wider economic impact of a HSR system.

Commuter Accessibility

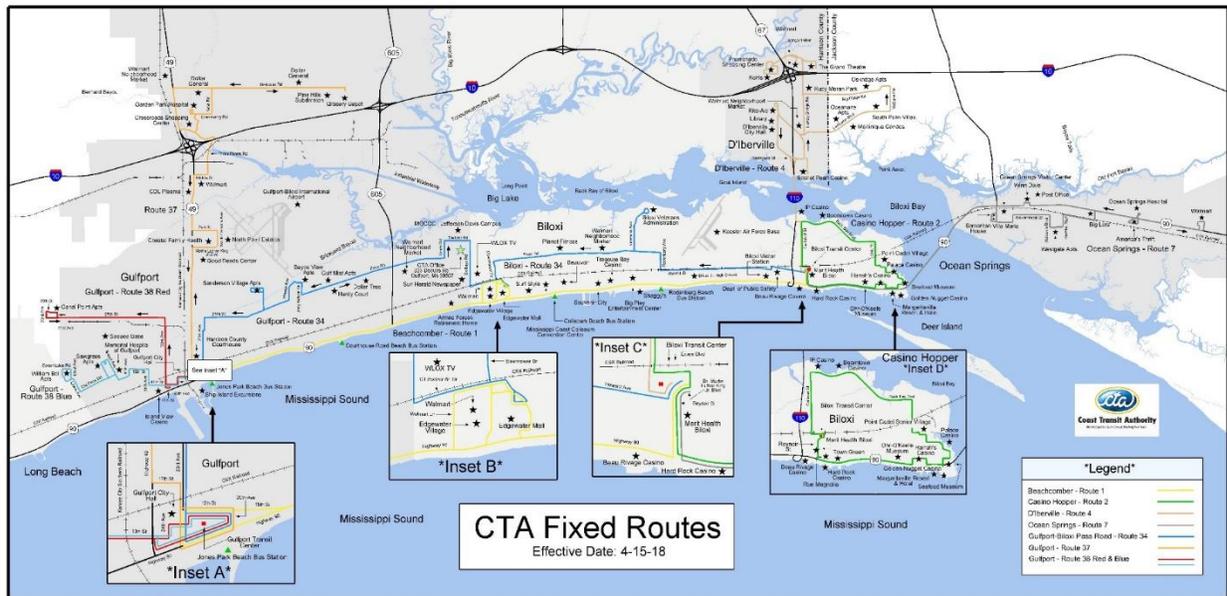
An increase in daily HSR commuters has been observed in Spain, France, and Sweden. One common finding is that commuting is generally more favorable to large cities. With the service, the density of economic and demographic will be reinforced in large cities. While the living cost increases, this HSR service could allow urban populations to spread into the hinterlands – the countryside and small adjacent cities. Based on evidences, this reinforcement is most powerful on one-hour connections, which is favorable to MS Gulf Coast cities if consider New Orleans as such a major city in this interaction. HSR could also lead to new ways of life by turning tourists into short-term or part-time residents (Martin, 2012). Due to increased individual mobility, a region could gain more from outsiders' spending as opposed to other areas export consumers. This win and lose mechanism depends on what amenities a region could provide. In April 2018, Huntington Ingalls Industries announced that its Ingalls Shipbuilding division plans to reactivate its shipbuilding facilities on the east bank of the Pascagoula River (Huntington Ingalls, 2018). With new jobs created along with this reactivation, increased potential for ridership could be expected for the proposed passenger rail service to function as a basic commuter service other than just recreational service.

Mississippi Gulf Coast Region Tourism Attraction Assessment

The section of the report investigates current and new tourism attractions that has potential to influence railway ridership.

The Mississippi Legislature established the Coast Transit Authority in 1970 to offer public transportation as a public service along the Mississippi Gulf Coast (Coasttransit.com). Transit is much more established in Gulfport and Biloxi in comparison to Pascagoula and Bay St. Louis. The transit authority has strategically placed bus routes to make stops at the established Gulfport and Biloxi train depots. Currently, a bus route is not available for the Pascagoula or Bay St. Louis train depots.

Figure 1: CTA Fixed Routes



Existing Attractions

Bay St. Louis, Mississippi

- **Bay St. Louis Bridge** – Following Hurricane Katrina, large scale recovery efforts were underway for the Gulf Coast region. The opening of the Bay St. Louis Bridge was an achievement in these recovery efforts. Reopened in 2007, the bridge consists of 4 lanes for vehicles, pedestrians, and bicyclists traveling between Bay St. Louis and Henderson Point. The bridge is located 8.5 miles from the train depot with available parking at 101 US-90, Waveland, MS 39576.
- **Hollywood Casino Gulf Coast** – Offering many types of slots, table games, and live poker, Hollywood Casino is open 24/7 to provide Las Vegas-style gaming to the Bay St. Louis area. The hotel offers a waterfront view with free Wi-Fi, access to pool area, and a fitness center. Hollywood Casino Gulf Coast is located 9 miles from the train depot at 711 Hollywood Blvd, Bay St Louis, MS 39520.
- **Silver Slipper Casino** – The Silver Slipper Casino offers many types of gambling games and machines that are state of the art. Silver Slipper also offers great food and live entertainment. The Silver Slipper Casino is located 2 miles from the train depot at 5000 South Beach Boulevard, Bay St Louis, MS 39520.
- **Hurricane Katrina Tree Angels** – Scattered throughout downtown Bay St. Louis are beautiful oak angel sculptures by Dayle K. Louis. There are six angels in total, located near the Cedar Rest Cemetery, Our Lady of the Gulf Church, Century Hall, and the first block of Demontuzin Avenue. Downtown Bay St. Louis is 6.5 miles from the train depot.
- **Mardi Gras Museum** – The Mardi Gras Museum features many unique Mardi Gras costumes and is located in the Visitor Center of the Historic Train Depot. There is no admission required. The Mardi Gras Museum is located 6 miles from the train depot at 1928 Depot Way, Bay St Louis, MS 39520.
- **Historic L&N Train Depot** – Classified as a Mississippi Landmark, the depot is two stories and houses the Bay St. Louis Mardi Gras Museum. The depot is mission style in design and is surrounded by park-like grounds. The Historic L&N Train Depot is located 6 miles from the train depot at 1928 Depot Way, Bay St Louis, MS 39520.
- **Shore Thing Fishing Charters** – Offering a variety of fishing packages, Shore Thing Fishing Charters target speckled trout, redfish, triple tail, flounder and more. It is conveniently located within 3 miles of the train depot at 5120 Lambert Ln, Bay St Louis, MS 39520.

- **Bay St. Louis Little Theatre** – An official Mississippi Landmark, the theatre showcases a variety of shows, concerts, and dances. The Theatre prides itself on its quality and includes both veteran actors and newcomers. It is located at 398 Blaize Ave, Bay St Louis, MS 39520 within 6 miles of the train depot.

Table 28: Existing Attractions in Bay St. Louis

Existing Attractions	Attraction Address	Distance from train depot to the attraction	Transit service to the attraction
Biloxi and Bay St. Louis Bridges	101 US-90, Waveland	8.5 miles	No
Hollywood Casino Gulf Coast	711 Hollywood Blvd, Bay St. Louis	9 miles	No
Silver Slipper Casino	5000 South Beach Boulevard, Bay St. Louis	2 miles	No
Hurricane Katrina Tree Angels	Various downtown locations	6.5 miles	No
Mardi Gras Museum	1928 Depot Way, Bay St. Louis	6 miles	No
Historic L&N Train Depot	1928 Depot Way, Bay St. Louis	6 miles	No
Shore Thing Fishing Charters	5120 Lambert Ln, Bay St. Louis	2.5 miles	No
Bay St. Louis Little Theater	398 Blaize Ave, Bay St. Louis	5.8 miles	No

Based on the investigation, there is no direct transit service at the station currently. The nearest bus stop is Long Beach with is 13 miles away. In addition, all of the attractions can only be approached by cars. We recommend that transit stations should be considered at the station when the service is restored in the future, especially the transit connection between the train station and attractions.

Gulfport, Mississippi

- **Gulfport/Biloxi International Airport** – The Gulfport-Biloxi International Airport is the second largest airport in the state of Mississippi and welcomes nearly 800,000 travelers each year. The airport serves as the gateway to the Gulf Coast and is your destination for business and pleasure. The airport was initially constructed in 1942 to train B-25 and B-29 flight crews for WWII. Currently, the airport offers major US airlines to its travelers: American Airlines, Delta, and United. It is located at 14035 Airport Rd L, Gulfport, MS 39503, five miles from the train depot and near a local transit stop.
- **Ship Island Excursions** – Ship Island, part of the Gulf Islands National Seashore, offers relaxation, recreation and history; 11 miles offshore, Mississippi's undeveloped barrier islands welcome guests with pristine beaches, beautiful water and clean gulf air. While here, you have the chance to witness the Atlantic Bottlenose Dolphins during the 50-minute ferry boat ride. Ship Island is home to Fort Massachusetts, a preserved brick fortification completed in 1868. The National Park Service offers fort tours during the season the ferries operate. Ship Island with its tranquil stretches of National Park beaches invites you for an affordable family vacation to explore, swim and relax for a fun-filled day. Within 1 mile of the train depot, Ship Island Excursions is located at 1040 23rd Ave, Gulfport, MS 39501.
- **Ft. Massachusetts on Ship Island** – Ship Island is home to Fort Massachusetts, a preserved brick fortification completed in 1868. Fort Massachusetts was built on Ship Island for national defense. Both domestic and foreign powers recognized the strategic significance of the natural deep-water harbor on the north side of the island. After lengthy debate fort construction began in the summer of 1859. Storms, disease, climate, isolation and the Civil War made construction on this remote barrier island a challenge. Construction on Fort Massachusetts halted in 1866 although the fort was not fully completed. The fort has not only withstood actions of war but also the enemies of time and neglect. The devastating and powerful Hurricanes Camille (1969) and Katrina (2005) washed over and through the building but failed to significantly undermine the structure. The National Park Service offers fort tours during the season the ferries operate.
- **Gulf Islands Water Park** – Gulf Islands Waterpark features wild rides, miles of slides and cool summer fun for all ages. Guests enjoy the Water Attractions and Special Events like Celebrity Meet & Greets with Stars from Nickelodeon and Disney Channel. Some of the past performances include the live bands of DreamFest, Sea Lion Shows, Frisbee Dog Shows and more. Gulf Islands Waterpark is also a one-of-a-kind place for a one-of-a-kind Party, Field Trip, Reunion or Corporate Event. Kids also enjoy celebrating their

birthdays with us. The waterpark has the Coast's one and only water roller coaster, a lazy river, and several other slides that can only be found at this waterpark. There is something for everyone to enjoy, no matter the age. It is located 7 miles from the train depot at 17200 16th St, Gulfport, MS 39503.

- **Institute for Marine Mammal Studies** – The Institute for Marine Mammal Studies is a non-profit institute that serves as the liaison between public and private entities interested in marine mammal science. The facility houses an educational museum, a 200-seat auditorium for media presentations and lectures, classrooms, a state of the art veterinary hospital and additional facilities to provide care for dolphins at every stage of rehabilitation. It is located 11 miles from the train depot at 10801 Dolphin Ln, Gulfport, MS 39503.
- **Island View Casino Resort** – The Island View Casino Resort is the premiere casino in Gulfport, offering nearly 2,000 slots and 45 table games. It is the perfect place to capture the gaming, dining, and entertainment you have been craving. Island View is located 1 mile from the train depot and near a local transit stop at 3300 W Beach Blvd, Gulfport, MS 39501.
- **Chandeleur Brewing Company** – The Chandeleur Brewing Company brews a variety of ales using only local ingredients. The company strives to find the best craft beers that they can. Within 1 mile of the train depot, the Chandeleur Brewing Company is located at 2711 14th St, Gulfport, MS 39501 near a local transit stop.
- **Lynn Meadows Discovery Center** – The Lynn Meadows Discovery Center began as a community project in 1991 geared towards inspiring children, families, and communities through interactive educational experiences and exploration. Today the center hosts extensive indoor and outdoor exhibits as well as a variety of classes for all ages. Lynn Meadows Discovery Center is located 4 miles from the train depot at 246 Dolan Ave, Gulfport, MS 39507 near a local transit stop.
- **Zip'N Fun Adventure Park** – The Zip'N Fun Adventure park is a 50-game tree to tree obstacle course where patrons can zip-line, learn leadership skills, and enjoy impressive views of the beautiful park. Zip'N Fun Adventure Park is located 7 miles from the train depot at 17200 16th St, Gulfport, MS 39503.
- **Busted Wrench Garage & Museum** – The Busted Wrench Garage (B.W.G.) is not a business, it's a passion. Founded in 2008 by John Hans, a life-long motor vehicle enthusiast, the B.W.G. shares an opportunity to see rare, exotic, and one-of-a-kind motor vehicles. Classic cars, motorcycles, boats, and bicycles are displayed in a 6000-

square foot exhibit hall with no admission charge. Additionally, the B.W.G. had added an automotive gift shop to satisfy the desires of fellow car-buffs to buy nostalgic signs, branded clothing, die-casts, glassware, and various collectibles. Busted Wrench Garage & Museum is located 1.5 miles from the train depot at 2311 29th St, Gulfport, MS 39501 and near a local transit stop.

- **Wut SUP Paddleboard & Rentals** – Wut Sup offers Kayak, Paddleboard, and Canoe Rental. Wut SUP also offers free paddle lessons, as well as sunset paddles during the summer. Pontoon boats and jet skis are also available for rent. Wut Sup Paddleboard & Rentals is located 7 miles from the train depot at 13247 Seaway Rd, Gulfport, MS 39503.
- **Premium Outlets** – Gulfport Premium Outlets includes a wide variety of 70 stores. Experience the best selection of apparel, shoes, and entertainment stores around. Food options are also available at the Premium outlets. Gulfport Premium Outlets are located 4.5 miles from the train depot at 10000 Factory Shop Blvd, Gulfport, MS 39503 and near a local transit stop.
- **Gulfport Sportsplex** – The Gulfport Sportsplex is a 250-acre recreational park supporting many sporting activities. The complex was created to support recreational activities and to generate revenue from the tourism market. The Gulfport Sportsplex is located 7 miles from the train depot at 17200 16th St, Gulfport, MS 39503.

Table 29: Existing Attractions in Gulfport

Existing Attractions	Attraction Address	Distance from train depot to the attraction	Transit service to the attraction
Gulfport/Biloxi International Airport	14035 Airport Rd L, Gulfport	5 miles	No
Ship Island Excursions	1040 23 rd Ave, Gulfport	1 mile	Yes
Ft. Massachusetts on Ship Island	Ship Island West		
Gulf Islands Water Park	17200 16 th St, Gulfport	7 miles	No
Institute for Marine Mammal Studies	10801 Dolphin Ln, Gulfport	11 miles	No

Island View Casino Resort	3300 W Beach Blvd, Gulfport	1 mile	Yes
Chandeleur Brewing Company	2711 14th St, Gulfport	<1 mile	Yes
Lynn Meadows Discovery Center	246 Dolan Ave, Gulfport	4 miles	Yes
Zip'N Fun Adventure Park	17200 16 th St, Gulfport	7 miles	No
Busted Wrench Garage & Museum	2311 29 th St, Gulfport	1.5 miles	Yes
Wut Sup Paddleboard & Rentals	13247 Seaway Rd, Gulfport	7 miles	No
Premium Outlets	10000 Factory Shop Blvd, Gulfport	4.5 miles	Yes
Gulfport Sportsplex		7 miles	No

The station at Downtown Gulfport does not have direct transit service on site currently. But within a walking distance, there are two bus routes, including Gulfport – Route 38 Red and Gulfport – Route 38 Blue. The main transit hub is not within a walking distance, so it is recommended that a shuttle service between the train station and the transit hub should be provided in the future.

Biloxi, Mississippi

- **Big Play Entertainment Center** – Big Play Entertainment Center is a family entertainment complex that offers activities such as an arcade, 12 lanes for bowling, a laser maze, outdoor go-kart racing and mini golf, and a full restaurant and bar. Big Play is located four miles from the Biloxi train depot and is accessible via bus on the Beachcomber Route 1.
- **Biloxi Brewing Company** – Biloxi Brewing Company is a locally-owned craft brewery and taproom founded in 2014 with tastings and tours available. Located 0.3 miles from the Biloxi train depot, the brewery is within walking distance for passengers.

- **Biloxi Fire Museum** – The Biloxi Fire Museum is located in the city’s firehouse built in 1937 and features many historic photographs as well as antique fire equipment that documents the history of the Biloxi Fire Department, which dates back more than 120 years. The museum is located less than a mile from the Biloxi train depot and is within walking distance of the Biloxi Visitors Center stop on Coast Transit Authority’s Beachcomber Route 1.
- **Biloxi Lighthouse** – The Biloxi Lighthouse was established in 1848 and was one of the first cast-iron lighthouses in the South. It is the city’s signature landmark and has become a post-Katrina symbol of the city’s resolve and resilience. The lighthouse has withstood many storms over the years. However, Katrina’s storm surge took over a third of the 64-foot tall lighthouse. In March 2010, the city re-opened the lighthouse to public tours after a 14-month, \$400,000 restoration that was funded by FEMA and MEMA. Guided tours are available daily. The lighthouse is located less than a mile from the Biloxi train depot and is within walking distance of the Biloxi Visitors Center stop on Coast Transit Authority’s Beachcomber Route 1.
- **Biloxi Shrimping Trip** – Biloxi Shrimping Trip is an interactive day cruise that allows passengers to get the full shrimping experience. Passengers will learn about the life cycle of shrimp and other sea life, the shrimp catching process (including an overview of the tools required) and get to experience pulling in a catch firsthand. Biloxi Shrimping Trip has been in operation since 1955 and is a must for tourists. Schedule is posted on the website and tours are done on a first come first serve basis.
- **Dusti Bongé Art Exhibition** – Dusti Bongé was one of only a few female Abstract Expressionists in the 1950s when New York rivaled Paris as the center of the art world. Her paintings are in the same class as those of the male artists who represent the best of Abstract Expressionism and one of the most significant eras in American art. Her work has caught the attention of collectors, historians, museums, and art lovers throughout the country. The art exhibition is located in Biloxi’s Rue Magnolia Art District, which is about 0.3 miles—walking distance—from the Biloxi train depot.
- **Maritime & Seafood Industry Museum** – The Maritime & Seafood Industry Museum was established in 1986 to preserve and interpret the maritime history and heritage of Biloxi and the Mississippi Gulf Coast through an array of exhibits on shrimping, oystering, recreational fishing, wetlands, managing marine resources, charter boats, marine blacksmithing, wooden boat building, netmaking, catboats/Biloxi skiff, shrimp peeling machine and numerous historic photographs and objects. The museum is located 2.4 miles from the Biloxi train depot and is accessible by bus on Casino Hopper Route 2.

- Ohr-O’Keefe Museum** – The Ohr-O’Keefe Museum showcases the work and life of influential Biloxi-native artist George Ohr (1857-1918). Ohr, the self-proclaimed “Mad Potter of Biloxi,” created a body of ceramic work which defied the aesthetic conventions of 19th century America and is considered an early leader in the modernist movement. His extraordinary cultural legacy is recognized for its power and integrity and for its important influence on 20th and 21st century art. The museum is located 1.6 miles from the Biloxi train depot and is accessible by bus on Beachcomber Route 1.
- Shuckers Baseball/MGM Park** – The Biloxi Shuckers are a minor league baseball team based in Biloxi and are the Double-A affiliate of the Milwaukee Brewers in the Southern League. The Shuckers currently play at MGM Park, which opened in June 2015 with the start of the team’s first season in Biloxi. The name "Shuckers" celebrates Biloxi's heritage as a center for the oyster and seafood industries. MGM park has 5,000 seats with room for an additional 800 to 1,000 spectators in berm seating. In addition to Shuckers games, MGM park also hosts collegiate games such as the Conference USA Tournament in addition to serving as an entertainment venue. The park is located within walking distance from the Biloxi train depot, 0.4 miles away.

Table 30: Existing Attractions in Biloxi

Existing Attractions	Attraction Address	Distance from train depot to the attraction	Transit service to the attraction
Biloxi Brewing Company	186 Bohn Street, Biloxi	0.3 miles	Yes
Biloxi Fire Museum	1046 E Howard Avenue, Biloxi	0.7 miles	Yes
Biloxi Lighthouse	1050 Beach Boulevard, Biloxi	1.1 miles	Yes
Biloxi Shrimping Trip	693 Beach Boulevard, Biloxi	0.7 miles	Yes
Dusti Bongé Art Exhibition	132 Rue Magnolia, Biloxi	0.3 miles	Yes
Maritime & Seafood Industry Museum	115 E 1st Street, Biloxi	2.4 miles	Yes
Ohr-O’Keefe Museum	386 Beach Boulevard, Biloxi	1.6 miles	Yes

Shuckers Baseball/MGM Park	105 Caillavet Street, Biloxi	0.4 miles	Yes
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According to the investigation, there is an immediate train and bus terminal adjacent to one another at Biloxi depot. Many nearby attractions are approachable by transit right from the station. Such as Biloxi – Beachcomber Route 1, Biloxi – Casino Hopper, D’Iberville – Route 4, Ocean Springs – Route 7, and Pass Road – Route 34. In addition, many attractions are within walking distance from the station. These current services all guarantee that train riders are able to visit attractions in Biloxi without private cars.

Pascagoula, Mississippi

- **La Pointe-Krebs Museum** – The LaPointe-Krebs House and Museum, also known as Old Spanish Fort, has a rich history and diverse people that have inhabited the site and its surrounding area throughout history. The house is the state's oldest surviving building, the state's only French Colonial structure still in existence, and the oldest scientifically-confirmed standing structure in the Mississippi River Valley. The museum is located one mile from the Pascagoula train depot and is not served by public transportation.
- **Pascagoula River** – The Pascagoula River is the largest (by volume) undammed river in the contiguous 48 states. The Pascagoula is often called the "Singing River." According to legend, the peace-loving Pascagoula Indian tribe sang as they walked hand-in-hand into the river to avoid fighting with the invading Biloxi tribe. It is said that on quiet nights you can still hear them singing their death chant. The Pascagoula Watershed also rings with the calls of 327 species of birds. A 2003 documentary, *The Singing River: Rhythms of Nature*, was co-produced by the Conservancy and Mississippi Public Broadcasting. Narrated by Mississippi native Gerald McRaney, the documentary increased awareness of the need for continued protection of the river. The documentary won two southeast regional Emmy awards for best documentary and best photography.
- **Pascagoula River Audubon Center** – The Pascagoula River Audubon Center is a part of the National Audubon Society: a 100-plus year old non-profit organization focused on promoting conservation and education about birds and wildlife and the habitats that support them. As a gateway to the Pascagoula River, the center provides visitors with a variety of opportunities for first-hand exploration of the river's rich flora and fauna.

- **Round Island Lighthouse** – The Round Island Lighthouse, c. 1859, once stood off the coast of Pascagoula on Round Island. Damaged by various hurricanes over the years it was moved to the mainland in 2010. It is whitewashed to reflect the look it had originally. Now it sits at the western gateway to the City welcoming visitors and residents alike. The lighthouse is located within walking distance of the Pascagoula train depot at 0.3 miles away.
- **Scranton Museum** – The Scranton Museum is a decommissioned 70-foot shrimp boat with exhibits that illustrate the life and ways of coastal shrimpers. The museum is docked in River Park, floating on the Pascagoula River. The museum is three miles away from the Pascagoula train depot and is not served by public transportation.
- **Scranton Nature Center** – At the Scranton Nature Center, Sea life, birds, mammals, rocks, minerals, fossils and insects will be among the exhibits for the public to view. The exhibits are complemented with artwork to give a natural setting to what visitors will experience. Adults love this place as much as children! The center provides environmental education that promotes natural resource conservation practices and provides support to the cultural and ecotourism industry. The center has new exhibits where children can look through a glass hole and be face-to-face with what's inside, and there's a small stuffed alligator guarding a display of ships that operated on the Pascagoula River from 1878 to the turn of the 20th century. The Nature Center is located three miles from the Pascagoula train depot and is not served by public transportation.

Table 31: Existing Attractions in Pascagoula

Existing Attractions	Attraction Address	Distance from train depot to the attraction	Transit service to the attraction
La Pointe-Krebs Museum	4602 Fort Street, Pascagoula	1 miles	No
Pascagoula River			No
Pascagoula River Audubon Center			No
Round Island Lighthouse	815 Cypress Avenue, Pascagoula	0.3 miles	Yes
Scranton Museum	Pascagoula River Park – 4100 Clark Street, Pascagoula	3 miles	No

Scranton Nature Center	G Levy Park – 3928 Nathan Hale Drive, Pascagoula	3 miles	No
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According to the summary, there is no direct access to transit service at Pascagoula railway station currently. Although existing attractions in Pascagoula is slightly limited compared to other cities, it is worth noting that Ocean Springs, which is within 20 min drive is a famous visitor destination along the coast. It is recommended that a shuttle bus service or a short-time stop of the train at Ocean Springs could be of great help in promoting local tourism and increase train ridership.

Alabama Region Tourism Attraction Assessment

Mobile, Alabama

- **USS Alabama Battleship Memorial Park** – Memorial Park honors veterans of all wars and military branches. Featuring memorials, tanks and artillery, an aircraft pavilion, and the decommissioned World War II Battleship USS Alabama which is now open as a museum, the park draws hundreds of thousands of visitors each year. The park and battleship are located 2.9 miles away from the Mobile train depot at 2703 Battleship Parkway, Mobile, AL 36602 and are accessible for free via the downtown trolley.
- **5 Rivers – Alabama Delta Resource Center** – Where the Mobile, Spanish, Tensaw, Apalachee and Blakeley rivers flow into Mobile Bay stands a facility with an exhibit hall, learning center, theater, gift shop and welcome center, boat tours, kayak rentals, walking trails, picnic areas, conference center and reception hall. The facility is located 7.8 miles away from the Mobile train depot at 30945 Five Rivers Blvd. Spanish Fort, AL 36527 and is not served by public transportation.
- **American Sport Art Museum and Archives** – The American Sport Art Museum and Archives (ASAMA), located on the campus of the United States Sports Academy, is dedicated to the preservation of sports history, art and literature. The ASAMA collection is comprised of more than 1,800 pieces across all media including paintings, sculpture, prints, posters, photography and assemblage. The collection is believed to be the largest of sport art in North America and possibly the world. Also featured is the largest public art offering in the state of Alabama, the famed two-story tall mural by Maestro Cristóbal Gabarrón. “A Tribute to the Human Spirit” graces one wall of the main campus building and has become a landmark on the Eastern Shore. The museum is located 10.6 miles from the Mobile train depot at 1 Academy Drive, Daphne, AL 36526 and is not served by public transportation.
- **Archaeology Museum at the University of South Alabama** – The Archaeology Museum showcases artifacts from the Gulf Coast and covers over 12,000 years of prehistory and history. Artifacts are contextualized using a series of life-size scenic representations depicting archaeologists at work and glimpses into the ways of life of ancient Woodland cultures, mound-building Mississippian peoples, early French settlers, and an African American family after the Civil War. The museum is located 16.5 miles from the Mobile train depot at 6052 USA Drive, Mobile, AL 36688 and is not served by public transportation.

- **Bellingrath Gardens and Home** – Nestled among its 65-acre estate garden and the scenic Fowl River, the Bellingrath Home features its original antique furnishings and extensive collections of decorative arts, silver, china and crystal. Built in 1935-36, the 10,500-square-foot home was designed by prominent architect George B. Rogers in the style he dubbed "English Renaissance." Bellingrath Gardens and Home are located 22.9 miles away from the Mobile train depot at 12401 Bellingrath Gardens Rd, Theodore, AL 36582 and are not served by public transportation.
- **Bragg-Mitchell Mansion** – Built in 1855, Bragg-Mitchell Mansion is one of the Gulf Coast's most elegant homes. The mansion features double parlors, a lavish dining room and grounds with Mobile's trademark live oaks and azaleas. Historical tours offered on the hour.
- **Carnival Cruise Lines (Mobile Cruise Terminal)** – Carnival offers four- and five-day cruises from Mobile to Cozumel and Progreso aboard the Carnival Fantasy. The Carnival Fantasy underwent a multi-million-dollar refurbishment in the Spring of 2016. The Mobile Cruise Terminal is located at 201 Water St, Mobile, AL 36602, 0.3 miles from the Mobile train depot, which is within walking distance, and is also served by the free downtown trolley system.
- **Chicksabogue Park** – Chicksabogue park is a multi-use outdoor recreation facility featuring camping, mountain biking and hiking trails, sports fields, playground, frisbee golf, canoeing, swimming, fishing and rental pavilions. The park is located at 760 Aldock Road, Eight Mile, AL 36613, 8.4 miles from the Mobile train depot, and is not served by public transportation.
- **Condé-Charlotte Museum House** – The museum house is a circa-1850 Federal-style home that was renovated from the city's first official jail. The Conde-Charlotte Museum has period rooms containing French, British, Confederate, and American antique furnishings, plus a charming walled Spanish Courtyard, that reflect Mobile's history under these five flags. The house is located at 104 Theatre Street, Mobile, AL 36602 and is served by the free downtown trolley as well as within walking distance from the Mobile train depot at 0.3 miles away.
- **Fort of Colonial Mobile** – The Fort of Colonial Mobile is a partially reconstructed 1724 French fort in downtown Mobile. Visitors can learn about the people who colonized early Mobile by viewing historic artifacts of Native Americans and Europeans who played large roles in the evolution of the Port City in a time shaped by innovation, conquest, plunder, piracy, and war. The fort is located in downtown Mobile, 0.2 miles from the train depot, at 150 South Royal Street, Mobile, AL 36602.

- **Gulf Coast Exploreum Science Center and IMAX Theater** – With more than 150 interactive exhibits, thought-provoking IMAX films, and hands-on educational programming, the Gulf Coast Exploreum Science Center aspires to increase science literacy among the people of south Alabama and the Gulf Coast region. The Exploreum is located at 65 Government Street, Mobile, AL 36602, less than 300 feet from the Mobile train depot.
- **GulfQuest/National Maritime Museum of the Gulf of Mexico** – With 90 interactive exhibits, simulators, displays, and theaters, GulfQuest/National Maritime Museum is housed on multiple decks of a life-sized replica of a container ship. There are many places to sit and enjoy the view, both inside the museum and outside overlooking the beautiful Mobile River and the busy Port of Mobile. The maritime museum is located in downtown Mobile at 155 South Water Street, Mobile, AL 36602 and is within walking distance at 0.2 miles from the Mobile depot.
- **Hank Aaron Childhood Home and Museum** – Hank Aaron’s childhood home was relocated to Hank Aaron Stadium, home of the Mobile Bay Bears Minor League Baseball team. Never before in American history has this happened – a Hall of Famer’s home coming to rest at a stadium. Hank Aaron Stadium is located at 755 Bolling Brothers Boulevard, Mobile, AL 36606, and is served by public bus via Wave Transit Route 12.
- **History Museum of Mobile** – Experience the Port City’s story at the History Museum of Mobile, where visitors discover 300 years of Mobile area history. Located in the Southern Market, a National Historic Landmark building, the museum is within walking distance of the Mobile train depot at 0.1 miles away.
- **Mobile BayBears/Hank Aaron Stadium** – The BayBears are the Minor League affiliate of the Los Angeles Angels in Anaheim, CA. The team is relocating to Madison, AL in 2020. Hank Aaron Stadium is located at 755 Bolling Brothers Boulevard, Mobile, AL 36606, and is served by public bus via Wave Transit Route 12.
- **Mobile Botanical Gardens** – The Mobile Botanical Gardens feature an outdoor learning environment with walking trails, art classes, nine species of azaleas, seven species of camellias, 35 acres of the Longleaf Pine Treasure Forest including 175 plant species and 72 woody species. The botanical gardens are located at 5151 Museum Drive, Mobile, AL 36608, 7.8 miles away from the Mobile train depot.
- **Mobile Carnival Museum** – The carnival museum is dedicated to the history and traditions of Mardi Gras, which originated in Mobile. Exhibits include the crowns, scepters, and robes of Mardi Gras monarchs, the art of costume design and float

construction, videos of parades, balls, and coronations, and historical photographs dating back to 1886. The museum is located 0.4 miles from the train depot at 355 Government Street, Mobile, AL 36602 and is accessible via trolley and walking distance.

- **Mobile Greyhound Park** – Formerly a live racing track, the Mobile Greyhound park offers free admission for simulcasts of greyhound and horse racing. The park is located 14.5 miles from the Mobile train depot at 7101 Old Pascagoula Road, Theodore, AL 36582 and is not served by public transportation.
- **Mobile International Speedway** – The Mobile Speedway is Alabama's fastest half mile asphalt racetrack with racing every other Saturday. The track is located at 7800 Park Boulevard, Irvington, AL 36544, 19.7 miles from the Mobile train depot, and is not served by public transportation.
- **Mobile Medical Museum** – The Mobile Medical Museum preserves and exhibits medical artifacts and archives to commemorate Mobile's prominent place in the history of medical education and public health in the state of Alabama and the Gulf Coast. The museum's collections and exhibitions provide the public with a broad understanding of the evolution of the art and science of health care. The museum is located at 1664 Springhill Avenue, Mobile, AL 36604, 3.4 miles from the Mobile train depot.
- **Mobile Museum of Art** – The Mobile Museum of Art (MMofA) includes a permanent collection of close to 10,000 works of fine and decorative arts from America, Asia, and Europe. This collection spans periods from classical antiquity to the present day. The museum is supported by a unique public/private partnership of city and community support: the facility is owned by the city of Mobile, and the art collection is privately owned. The museum is located at 4850 Art Museum Drive, Mobile, AL 36602, 11.7 miles from the Mobile train depot.
- **Mobile Police History Museum** – Located in the downtown precinct office and host to a gallery of artifacts and documents tracing the history of law enforcement in Mobile. Infamous crimes represented; notably, the arrest in Mobile of Patricia Krenwinkle, who participated in the murderous rampage of the Charles Manson family. The museum is located in downtown Mobile at 320 Dauphin Street, Mobile, AL 36602 and is within walking distance of the train depot.
- **Phoenix Fire Museum** – The Phoenix Fire Museum is in the restored home of the Phoenix Volunteer Fire Company No. 6. This building houses turn-of-the-century horse-drawn steam engines and early motorized vehicles. The gallery on the second floor recounts the history of the volunteer fire companies of Mobile from their organization in

1838. The museum is located at 203 South Claiborne Street, Mobile, AL 36602 and is accessible via the free downtown trolley.

- **Richards-DAR House Museum** – Italianate-style house built in 1860, now converted into a period house museum and run by the Mobile chapters of the Daughters of the American Revolution. Listed on the National Register of Historic Places. Tea and cookies offered to all guests. The museum is located at 256 North Joachim Street, Mobile, AL 36603, 0.9 miles from the Mobile train depot.

Table 32: Existing Attractions in Mobile

Existing Attractions	Attraction Address	Distance from train depot to the attraction	Transit service to the attraction
USS Alabama Battleship Memorial Park	2703 Battleship Parkway, Mobile	2.9 miles	Yes
5 Rivers – Alabama Delta Resource Center	30945 Five Rivers Blvd., Spanish Fort	7.8 miles	No
American Sport Art Museum and Archives	1 Academy Drive, Daphne	10.6 miles	No
Archaeology Museum at the University of South Alabama	6052 USA Drive, Mobile	16.5 miles	
Bellingrath Gardens and Home	12401 Bellingrath Gardens Road, Theodore		No
Bragg-Mitchell Mansion	1906 Spring Hill Avenue, Mobile	3.5 miles	
Carnival Cruise Lines (Mobile Cruise Terminal)	201 Water St, Mobile	0.3 miles	Yes
Chicksabogue Park	760 Aldock Road, Eight Mile	8.4 miles	No
Condé-Charlotte Museum House	104 Theatre Street, Mobile	0.3 miles	Yes
Fort of Colonial Mobile	150 South Royal Street, Mobile	0.2 miles	Yes

Existing Attractions	Attraction Address	Distance from train depot to the attraction	Transit service to the attraction
Gulf Coast Exploreum Science Center and IMAX Theater	65 Government Street, Mobile	<300 feet	Yes
GulfQuest/National Maritime Museum of the Gulf of Mexico	155 South Water Street, Mobile	0.2 miles	Yes
Hank Aaron Childhood Home and Museum	755 Bolling Brothers Boulevard, Mobile	7.3 miles	Yes
History Museum of Mobile	111 South Royal Street, Mobile	0.1 miles	Yes
Mobile BayBears/Hank Aaron Stadium	755 Bolling Brothers Boulevard, Mobile	7.3 miles	Yes
Mobile Botanical Gardens	5151 Museum Drive, Mobile	7.8 miles	
Mobile Carnival Museum	355 Government Street, Mobile	0.4 miles	Yes
Mobile Greyhound Park	7101 Old Pascagoula Road, Theodore	14.5 miles	No
Mobile International Speedway	7800 Park Boulevard, Irvington	19.7 miles	No
Mobile Medical Museum	1664 Springhill Avenue, Mobile	3.4 miles	
Mobile Museum of Art	4850 Art Museum Drive, Mobile	11.7 miles	
Mobile Police History Museum	320 Dauphin Street, Mobile	0.6 miles	Yes
Phoenix Fire Museum	203 South Claiborne Street, Mobile	0.5 miles	Yes
Richards-DAR House Museum	256 North Joachim Street, Mobile	0.9 miles	
Wales West Light Railway	13670 Smiley Street, Silverhill	27.4 miles	No

Based on the investigation, it is obvious that Mobile has many attractions to provide to visitors. Its transit service and tourism industry are well planned and blended together. For example, there is trolley transit service, which is 0.3 miles from the depot. In addition, many attractions are within both walking distance or/and direct transit service area.

Mississippi Gulf Coast Region Planned Attractions

Biloxi, Mississippi

- **Edgewater Mall** –Work has already begun on an eight-screen movie theater at Edgewater Mall, and Premiere Cinema will make its debut in 2018. The movie theater will move to the former Sears location on the southeast side and will be separate but adjacent to the mall. Since the theater won't fill the entire space occupied by Sears, a 20,000-square-foot grassy area on the north side of the theater presents space for future opportunities. Premier Cinema is privately owned and based in Texas and operates almost 300 screens in 26 locations across five states in the southeast and southwest United States. The Biloxi theater will have eight theaters with state-of-the-art digital and total luxury reclining seats. Once construction is completed in November 2018, residents and visitors will no longer have to drive north of Interstate 10 to go to the movies. Edgewater Mall will be located 6.3 miles from the train depot at 2600 Beach Blvd, Biloxi, MS 39531.
- **Barefoot Billy's** - A full-service bar and grill, opening in early December 2018 in what was Bonefish Grill. Barefoot Billy's will be located 6.3 miles from the train depot at 2600 Beach Blvd, Biloxi, MS 39531.
- **Sky Zone Trampoline Park** - Opens spring of 2019. The 24,000-square foot trampoline park will have 19 attractions and will be on the west side of Edgewater Mall. Complete range of zones with 10 programs from Toddler Time, Sky Camp, Sky Fit to Sensory Hours, providing a quieter, toned-down jumping experience for those with special needs. Sky Zone Trampoline Park will be located 6.3 miles from the train depot at 2600 Beach Blvd, Biloxi, MS 39531.
- **Multi-level go-kart track with electric go-karts** - "eco-friendly, no gas" karts that can race up to 35 mph on multi-level track with banked turns. Like golf carts, the cars run quiet can run 30 at one time. A higher speed race track is proposed on the former Slippery Sam's site to the east. The multi-level go-kart track will be located 3.6 miles from the train depot at 1782 Beach Blvd, Biloxi, MS.
- **Foxwoods Resort Casino** - at Biloxi Pointe, a new \$265 million premiere full-service destination resort casino to be located in the Back Bay area of Biloxi, MS on the site of the former Heinz plant. The Foxwoods Resort Casino at Biloxi Pointe will be easily accessible from New Orleans and Atlanta areas as well as being within a 300-mile radius feeder market of approximately 9 million people, largely from Mississippi, Louisiana, Alabama, and Florida. Foxwoods Resort Casino at Biloxi Pointe will offer gaming, hotel, multiple entertainment venues including approximately 71,000 square feet of meeting and exhibit space as well as

a unique selection of six restaurants and bars, all in one location within the historic Biloxi Gulf Coast region with a rich tradition of resort entertainment. The 37-acre property is situated at the north-east tip of Biloxi on the beautiful Back Bay 185 E 8th St, Biloxi, MS 39530 and is approximately 2.7 miles from the train depot.

Gulfport, Mississippi

- **Mississippi Aquarium** – The anticipated Mississippi Aquarium is scheduled to open in late 2019/early 2020. The aquarium will contain 1 million gallons of both salt and fresh water. Sitting on 5.8 acres, the aquarium contains over 80,000 square feet of exhibits connected by landscaped walkways with plantings representing all seven Physiographic Regions of Mississippi. The aquarium is estimated to create 900 new jobs to the Gulfport area. This includes 65 full-time employees and 45 part-time employees at the aquarium. Other jobs created include, 340 tourism industry jobs, 400 additional construction jobs, and 500 other industry jobs. The aquarium will be located .5 miles from the train depot at 2100 E Beach Blvd, Gulfport, MS 39501.

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Appendix of Definitions

Keyword	Definition
Capital Expenditures	It is a factor of production. Capital investment refers to both funds invested in expanding business activities and acquisition of various assets for higher productivity.
Direct Effect	Results measurable in monetary value that can be directly attributed to the change(s) in the production or expenditures of an industry within the existing economy.
Direct Employment	The average annual number of jobs directly supported by the industry.
Economic Contribution	The aggregate change in the existing economy that is the result of activities undertaken by an industry within the economy during a certain period.
Employee Compensation	Wages, salaries, and benefits paid to full-time employees by the industry.
Economic Impact	The total change in new economic activities that is related to an existing industry within the economy over a certain period. Generally, economic impact is measurable when new revenue is brought into the economy of the study region.
Indirect Effect	The total dollar amount of inter-industry transactions within the regional economy. Industries buy goods and services from other industries within the local economy, and the money spent leaks from the economy, either through imports from outside the regional economy or by value added payments.
Indirect Employment	Number of average annual jobs supported by industries within the economy that are results of the direct spending of employee compensation, proprietor income, capital investment etc.
Induced Effect	Total monetary change in the economy that is attributable to household spending patterns which generate further economic activity within the local economy. Induced effects change as household income increases or decreases.
Induced Employment	Number of jobs on an average annual basis that can be attributed to the induced changes in the local economy.
Input category	A broad expense category for an industry or final-use category.
Multipliers	Input-Output model works based on final demands. Each industry's production creates demand for another existing industry within the region. Multipliers determine how industries respond to each other's demand and production functions.
Output	The output of an economy is the amount of production in dollars, including all intermediate goods purchased as well as value-added (labor, capital, and profit). It can also be thought of as sales for both final goods and services and intermediate goods and services. Output is

	dependent upon consumption in the area, state government spending, investment, and exports of the industries in the region.
Labor Income	Employment income of all forms, including employee compensation and proprietor income.
Value Added	Measured in monetary value the difference between an industry's total output and the cost of its inputs. Compensation of employees, taxes on production, operating surpluses, imports minus subsidies consist value added.
Study Region	Study region is a geographic area for which the economic contribution and impact is measured.

Source: IMPLAN

Services Offered by The University of Southern Mississippi Trent Lott National Center for Economic Development and Entrepreneurship

In addition to providing graduate education in economic development through the Master of Science in Economic Development (MSED) program and the Graduate Certificate in Economic Development, the Trent Lott National Center partners with the MSED program to further the students experience by working with economic developers, communities, companies, and non-profit organizations through five main approaches:

1. University Economic Development researchers provide technical assistance in defining problems or opportunities; evaluating the effects of change; and providing recommendations for improvements.
2. Graduate students work on class projects involving research for an actual community or organization (e.g., retail pull factor analysis).
3. Each student is required to complete a thesis or capstone project. The capstone project involves completing an economic development research study (e.g., feasibility study).
4. Each student is required to complete an internship in an economic development organization.
5. Communities may have sponsored research projects and tap into the faculty expertise and university data sources (e.g., EMSI and REMI).

Examples of class projects involving research for Mississippi communities:

- Retail Analysis for the City of Greenwood
- Feasibility of a Livability Court for the City of Hattiesburg
- Economic Impacts of a Native American Casino in Jones County
- Ecotourism Development for Noxubee County
- Strategic Plans for Stone County, Sunflower County, Bolivar County, and the Hattiesburg Historic Downtown Development Association
- Community Study for the Hattiesburg Mid-Town District
- Entrepreneurial Development Plan for the Area Development Partnership
- Multimodal transportation research for Mississippi Port Directors
- Workforce Analyses for Mississippi Association of Local Workforce Areas

The University of Southern Mississippi also offers economic development training for working professionals and graduate students through its annual True South Basic Economic Development Course - an International Economic Development Council accredited introductory course. This course fulfills one of the prerequisites for those who wish to take the Certified Economic Developer (CEcD) exam.

Extending the *Crescent* Daily Between Meridian and Fort Worth: An Economic Benefits Assessment

Rail Passengers Research Team:

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SUMMARY

***Rail Passengers* modeling indicates that an Amtrak proposal to extend service on the *Crescent* route from Meridian, MS, to Fort Worth, TX, while simultaneously operating a modified consist on the *Crescent's* current route to New Orleans, could generate as much as \$50.7 million annually in new economic benefits (2023 dollars) to a dozen communities that would be served and some \$207 million annually overall to the three states concerned – Mississippi, Louisiana, and Texas. The new service would add or support 661 permanent jobs across all industries, including 224 directly connected to the new service.**

For Mississippi alone, *Rail Passengers'* modeling suggests \$73.4 million in annual benefit to the state and to four locations in the state that would be served (Meridian, Jackson, the Jackson/Vicksburg airport, and Vicksburg), supporting 77 direct jobs in the state.

In Louisiana, *Rail Passengers* assesses \$70 million in annual benefit to the state and to three locations and the surrounding communities that would be served (Monroe, Ruston, and Shreveport), supporting 81 direct jobs in the state.

For Texas, *Rail Passengers'* modeling shows \$63.5 million in annual benefit through service to Marshall, Longview, Mineola, Dallas, and Fort Worth, which would support some 65 direct jobs.

Economic benefits will accrue in two ways – in the form of additional spending by passengers and by businesses serving those passengers or supporting the local economy, and also in the form of savings to municipalities, and passengers themselves. Additional spending from riders in local economies comes as passengers board and alight in different places, opening their wallets along the way in local hotels, restaurants, and retail establishments, and inducing business-to-business transactions. Savings come mostly through diverting vehicle miles traveled to rail, which produces savings to municipalities in the form of reduced road construction and maintenance, savings to society as a whole in the form of lower deaths and pollution emissions, and savings to riders themselves who more often than not experience a lower overall trip cost by taking a train than they do by driving, flying or riding a bus once the total costs are taken into account.

In this Research Note, we have added additional levels of initial analysis to an assessment originally performed for the City of Monroe, LA, of just a ten-stop portion of the extension. That work examined the potential total economic benefits to be gained by linking Jackson, MS, to Fort Worth, TX, closing a 345-mile gap between Jackson, MS, and Marshall, TX. To that initial assessment we have now added the additional ridership that would be generated in Meridian, and the effects of a proposed stop near the airport serving Jackson, MS. We performed our assessment using models co-developed by the Association and the University of Southern Mississippi's *Trent Lott Center*, plus the commercially available IMPLAN economic-impact planning tool.

In addition to the core assessment above, *RailPassengers* reports the following key findings:

- At 274,000 passengers, the new train should boast higher ridership than many other existing services, and significantly more ridership than Amtrak projected in a 2015 assessment of the new *Crescent* section

- The new train should remove many millions of vehicle-miles traveled (VMTs) from the highways and secondary roads of the three states served. **Taking cars off the road will create benefits which conservatively total at least \$9.9 million each year.**
 - o Most diverted trips will be from cars, with a small fraction diverting from buses
- In addition, by supporting an *ecosystem* of establishments and suppliers that would generate \$202.2 million per year, the new service should produce an additional 11% gain in induced new travelers, injecting **\$3 million worth of new visitor-related revenue each year into the economies of communities considered in this analysis.**
- **Annual tax receipts from all sources can be expected to rise by \$14.9 million.**

FINDINGS

Rail Passengers assesses that operating the additional Crescent section from Meridian, MS, to Fort Worth, TX – stopping at the Jackson/Evers Airport, Jackson, Vicksburg, Monroe, Ruston, Shreveport, Marshall, Longview, Mineola, Dallas, and terminating in Fort Worth – could generate a **total economic benefit of \$207.48 million annually**. Statewide benefits would add \$61 million in Mississippi, \$56.8 million in Louisiana, and \$38.9 million in Texas. Benefits specific to the 12 communities considered could reach \$50.7 million.

Rail Passengers’ analysis suggested that **total annual ridership on the new segment could be in the range of 276,256, including the two endpoints**. This is roughly 95,000 riders higher than Amtrak estimated in its 2015 assessment of the *Crescent* extension’s potential. The difference in our estimate from Amtrak’s derives from several factors. First, the Amtrak 2015 analysis did not include several stops, such as the Jackson, MS, airport, or Monroe, or Ruston. We have done so and based on the demographics these counties and parishes, as well as their proximity to important sources of travel demand, *Rail Passengers* estimates Jackson/Evers airport ridership of 10,458, Monroe annual ridership of 18,258, and Ruston annual ridership of 13,964. Together, these account for close to 45 percent of the difference between *Rail Passengers*’ estimate and Amtrak’s eight-year-old estimate for the Southern Rail Commission.

Next, since the time Amtrak’s estimate was produced, populations in the areas served have grown substantially. The nine counties have collectively grown by 474,082 residents in the past ten years. *Rail Passengers*’ nationwide modeling suggests that the new service could capture between eight and eleven percent of that new population.

Moreover, Amtrak projections often underestimate ridership demand on new routes. *Rail Passengers* considers and models the characteristics of the communities, and the types of institutions present which can shape travel demand, such as Federal government facilities, hospitals, universities, major tourist attractions and sporting events, and others, as well as network effects. This relatively small rail segment will create connections between mega-regions and existing Amtrak services linking population centers totaling 110 million people. More than simply linking Jackson to Marshall, this would connect New York to Los Angeles with a swing through Southern states, enabling regional daytrips between any of 35 communities, college towns and tourist destinations across the three-state region encompassing Texas, Louisiana, and Mississippi.

Our modeling suggests that of the total ridership, another 11 percent represent travelers who would stay home and not spend any money in the absence of the service. That 11 percent

induced ridership can be expected to generate **an additional increment of \$3 million** of new visitor spending every year.

Together, the 12 communities considered in this analysis should expect to see roughly **5.8 million vehicle-miles traveled**, or VMTs, removed from highways and secondary roads thanks to a combination of existing visitors and residents who will shift some of their driving to using the train and new visitors who would not travel to these locations using any travel mode if the train did not exist. Reducing VMTs can be expected to reduce costs imposed on municipalities and states for highway and road maintenance, reduce pollution and emissions, and reduce the number of deaths from motor-vehicle crashes. Road maintenance savings are projected to be worth roughly **\$9.9 million annually**.

Results from the IMPLAN model show that new induced visitor spending on Lodging, Restaurants, Entertainment, Shopping and Local Transportation, combined with the stimulus effects of savings from reduced VMTs and spending on the rail operation itself, can be expected to support an additional **Labor Income increment of \$46.5 million** and **Value-Added effects** – i.e., incremental contribution to Gross Domestic Product from industry-to-industry transactions – **of \$91.8 million annually**.

Due to time constraints, *Rail Passengers* did not include any economic effects from capital spending in its assessment of economic benefits from the new service. A future study thoroughly updating the capital spending plan could be used to calculate additional benefits to the states' economies during the 5–10-year period during which capital investments would be made in building or upgrading stations and improving rights-of-way, tracks and signaling. These benefits would include labor income and value-added effects from construction spending, business-to-business purchases of materials and components.

METHODS AND APPROACH

For this assessment of the value of restored rail service, we calculated more than 70 variables for the counties that would encompass the station stops the City of Monroe asked us to examine, as well as additional counties to expand the span of the analysis to both endpoints of the proposed new extension. These were Lauderdale County, MS, Hinds County, MS, Warren County, MS, Ouachita Parish, LA, Lincoln Parish, LA, Caddo Parish, LA, Harrison County, TX, Gregg County, TX, Wood County, TX, Dallas County, TX, and Tarrant County, TX. In addition, some stimulus from the annual boardings and alightings at Jackson airport were modeled using Hinds County as a base.

Based on those selections, we began by updating key assumptions from the Amtrak 2015 Crescent assessment¹, including examining Census Bureau data for population and income changes in the counties studied between 2015 and today². Significant population and income growth have taken place throughout the areas we studied, but especially in nine counties that would be served by this route. According to 2021 Census Bureau estimates, these communities grew by a net 474,082 residents since the previous Census enumeration.

Since 2016, *Rail Passengers* has been assessing and comparing ridership at every station stop in the Amtrak system to understand the differences in the ways that populations in rural counties use Amtrak's long-distance routes compared with more suburban or urban communities.

¹ <https://irp.cdn-website.com/be785d40/files/uploaded/Feasibility%20Study.pdf>

² U.S. Census QuickFacts v2022 - <https://www.census.gov/quickfacts/fact/table/US/PST045222>

The new *Crescent* extension would have characteristics broadly similar to Amtrak's *Empire Builder*, *Texas Eagle* and *Sunset Limited* routes, and our previous station-by-station work allowed us to generalize about likely passenger behavior on this new route. This work underpins our county-by-county ridership estimates, which consider whether the station stop is located in an urban, suburban, or rural area, the size of the population, the degree of population growth recorded during the intervening years from prior studies or assessments, the 2021 median income of the county in which the station is located, and the current average Amtrak fare for similar long-distance segments.

We then used our county-by-county ridership estimates to calculate the ways in which ridership increments in a given locality affected outcomes such as new visitor spending in various categories, the number of trips into and out of a locality, the percentage of trips taken in each travel mode (rail, car, bus or air), removed vehicle miles traveled (VMTs) and the savings associated with reduced VMTs in the form of pollution reductions, avoided fatalities and reduced per-mile road maintenance costs which are typically borne by the municipality. These calculations, in turn, are used to calculate additional business activity generated across industries. This two-step process is explained in more detail below.

How Our Modeling Works

Our proprietary *Rail Passengers* model uniquely assesses 47 variables, such average bus operating revenues, passenger miles by car, emissions control costs per unit of CO₂, percentage of rail riders who are visitors versus residents, and so forth. Our model examines the way in which those variables interact with each other to produce different outcomes in the form of additional increments of spending or savings to consumers. The model's assessment produces outputs estimating the effects of ridership on things like visitor spending across different categories and the savings that riders can expect to pocket because of not driving or flying. The two core drivers of our model are ridership and mileage. Ridership figures drive the additional increments of spending, while mileage figures drive the savings produced. This is Step 1 of our economic-benefits modeling process, and it produces a useful accounting of direct benefits stemming from rail ridership all on its own. We then combine this work with an additional step to broaden our view of the benefits of rail.

In Step 2, we enter our model results/outputs into IMPLAN, a modeling tool widely used by universities, the Federal government, and economic-development agencies³. IMPLAN relies on Input-Output (I-O) analysis, which looks at inter-industry relationships within an economy. It captures all monetary market transactions *between industries*. By doing this, analysts can use the tool to study the effects of a change in one or several economic activities – say, introducing a passenger rail service -- on an entire economy. Uniquely among economic-study tools, IMPLAN also includes transactions between industries and institutions and between institutions themselves, giving a truly complete picture of all monetary market transactions taking place over a given time period.

Put more simply, after *Rail Passengers'* model identifies the spending that enters a particular economy from the rail service, the IMPLAN tool traces the flow of that money through

³ For more detailed explanations of IMPLAN, visit <https://implan.com/application/>

other parts of the local economy and the extent to which those flows generate additional labor income, value-added benefits, and tax effects.

Notes and Limitations

The purpose of this Research Note was to add additional analysis to an original assessment commissioned by the City of Monroe, encompassing both endpoints of the proposed extension of Amtrak's Crescent between Meridian, MS, and Fort Worth, TX. Our scope was to assess the scale of economic benefits from restored passenger service, using a set of station stops supplied by Monroe and other requesters, updating ridership projections initially provided by Amtrak. This document is not a formal Operations Analysis, and our work did not consider a range of factors, such as, but not limited to:

- The final operating schedule of the service, which will affect whether the train is desirable or attractive to passengers
- Costs of required station improvements for each station based on an in-situ assessment of existing physical conditions or ADA compliance
- Costs for rolling stock and locomotives that might be used in the service
- An updated assessment of track conditions and signaling by operating company and territory, or
- Changes in operating conditions by proposed host railroads

As mentioned previously a worthwhile next step would include re-examination and baselining of needed capital investments in light of changes to host railroad operations, physical and geographical changes in the relevant operating territories, and pending broad-based Federal investments in Amtrak rolling stock systemwide. Previous Amtrak estimates for station platforms and improvements ranged from \$500,000 to as much as \$1.5 million per station stop. All of these capital investments, as well as additional capital spending by communities above and beyond those amounts to produce a more attractive station or adapt the facilities to mixed-use development, would produce additional economic benefits during the course of construction, which could and should be modeled.

RIDERSHIP PROJECTIONS

As noted earlier, significant population and income growth have taken place throughout the areas we assessed, but especially in nine counties that would be served.

RailPassengers own ridership analysis assesses that annual ridership on a potential new Crescent extension service should reach in the range of **276,256 riders**, based on the mix of urban, suburban, and rural counties which would be served by this route, and the opportunities for interconnection between East and West Coast megaregions. Our present estimate is 53% higher than Amtrak estimated eight years ago.

Estimated Annual Ridership By Station												
Meridian	Jackson /Evers APT	Jackson	Vicksburg	Monroe	Ruston	Shreveport	Marshall	Longview	Mineola	Dallas	Fort Worth	TOTAL
16,220	10,458	20,041	13,509	18,258	13,964	23,813	15,213	13,662	13,304	64,651	53,162	276,256

Source: Rail Passengers LD Characteristics Model

RailPassengers' previous work suggests that there is a stronger relationship between the population size of the county and the share of ridership than there is between median income for a county and its ridership. Since 2016, our work examining ridership across all Amtrak-served origin/destination points shows that rural and lightly populated areas are outsized users of passenger rail service, often producing annual trip numbers that are multiples of the catchment area's population rather than fractions.

PASSENGER SPENDING

New, incremental visitor spending brought to each served community because of the new train service was assessed at **\$3 million annually**. It is important to note that this is not all the spending captured in our modeling work, but simply the value of a portion of the new spending. There are more effects from a broader view of visitor spending captured elsewhere in the model, particularly in the IMPLAN Labor Income, Value-Added and Output values. Some visitors would still make the trip, but might drive, or take a bus or drive. Our model captures them as well. But the Visitor Spending figure reported here calculates the value of visitors who would not travel at all in the absence of rail service.

The calculation underlying the percentage we apply to arrive at this figure was developed in 2017 through extensive research and literature review:

of passengers deboarding X fraction of passengers assumed to be nonresident X fraction of "induced" passengers (i.e., passengers who only took the trip because the train route exists) X lodging/restaurant/entertainment/shopping/local transportation spending per person reported by tourist bureaus in each state.

Annual Induced New State Visitor Spending From I-20 Corridor Initiative						
State	Lodging	Restaurants	Entertainment	Shopping	Local Transportation	Total New Spending
Mississippi	\$ 81,058	\$ 154,632	\$ 178,459	\$ 101,197	\$ 90,113	\$ 605,459
Louisiana	\$ 174,602	\$ 207,878	\$ 116,861	\$ 104,774	\$ 220,716	\$ 824,831
Texas	\$ 387,644	\$ 405,844	\$ 169,073	\$ 244,538	\$ 400,628	\$ 1,607,727
TOTAL	\$ 643,305	\$ 768,354	\$ 464,392	\$ 450,509	\$ 711,457	\$ 3,038,018

Source: Rail Passengers Railway Benefits Calculator, IMPLAN Economic Modeling Tool

ENVIRONMENTAL BENEFITS

Annual Reduction In Vehicle Miles Traveled (VMTs)		
County/State (Station)	VMTs Removed	Road Mx Savings
Lauderdale County, MS (Meridian)	569,391	\$ 882,857
Jackson/Evers Airport (Rankin County)	367,113	\$ 569,219
Hinds County, MS (Jackson)	703,536	\$ 1,090,854
Warren County, MS (Vicksburg)	474,246	\$ 735,333
Ouachita Parish, LA (Monroe)	555,586	\$ 861,452
Lincoln Parish, LA (Ruston)	390,922	\$ 606,137
Caddo Parish, LA (Shreveport)	522,030	\$ 809,423
Bossier Parish, LA (Shreveport)	144,615	\$ 224,229
Harrison County, TX (Marshall)	252,377	\$ 391,318
Gregg County, TX (Longview)	226,648	\$ 351,425
Wood County, TX (Mineola)	220,703	\$ 342,207
Dallas County, TX (Dallas)	1,072,535	\$ 1,662,997
Tarrant County, TX (Fort Worth)	881,932	\$ 1,367,462
TOTAL	5,445,130	\$ 9,894,914

Source: Rail Passengers/USM Railway Benefits Calculator

Trains are inherently energy efficient. In the United States, the Oak Ridge National Laboratory reports in Edition 39 of the Transportation Energy Data Book that as of 2018 Amtrak consumed 1,535 Btus per passenger mile, compared with 2,840 Btus per passenger mile for personal automobiles⁴. Thus, every reduction in vehicle-miles traveled helps to reduce the energy intensity of passengers' travels.

A 2007 study for the American Bus Association – "Comparison of Energy Use & CO2 Emissions From Different Transportation Modes" – found CO2 levels generated by trains, air travel, cars, and buses were

estimated to be 177 grams per passenger mile, 243 grams per passenger mile, 371 grams per passenger mile, and 299 grams per passenger mile, respectively⁵. Once again, every VMT saved translates into less pollution emitted.

Rail Passengers' calculation of the economic value of these reductions is extremely conservative, however, and is based on work by the U.S. Department of Transportation and the Victoria Transport Policy Institute ("Transportation Cost and Benefit Analysis II – Air Pollution Cost"). **The Institute notes that CO2 Emissions are very difficult to price, given varying climate forecasts and future discounting behavior.** Per ton, studies have estimated that CO2 Emissions have an impact from \$17 to \$917. However, there are credible estimates that put that cost well over \$1,000 and even \$1,600 per ton. The current guidance from the U.S. Dept. of Transportation for assessing the social cost of carbon is \$57 per ton.⁶ To remain in line with DOT, this is the figure *Rail Passengers* used in its modeling.

With this calculation, it is estimated that passengers aboard the new train would save the counties/parishes together at least **\$300,951 each year**. *Rail Passengers* nonetheless believes a more robust model to price emissions' true costs would likely result in a higher savings number.

SAVINGS FROM REDUCED VEHICLE MILES TRAVELED (VMTs)

Reducing the total number of vehicle miles traveled (VMTs) also translates into a reduced need to spend on roadway maintenance, both on highways and secondary roads, due to the fraction of reduced wear-and-tear imposed on the roadways.

⁴ Transportation Energy Data Book: Edition 39, Table 2.13 Passenger Travel and Energy Use, 2018 - https://tedb.ornl.gov/wp-content/uploads/2021/02/TEDB_Ed_39.pdf#page=63

⁵ M. B. & Associates, "Comparison of Energy Use & CO2 Emissions From Different Transportation Modes," American Bus Association, 2007.

⁶ US DOT – Benefit-Cost Analysis Guidance for Discretionary Grant Programs, p 40

We assume the train riders (not including the newly induced riders) who live in a region need to travel no matter what travel mode is provided. If the train was not there, they would take cars, planes, or buses. One of the values our model calculates is how many passenger miles traveled would have happened in cars if there were no passenger rail service. The Railway Benefits Calculator model *Rail Passengers* co-developed with the University of Southern Mississippi estimates the accrued annual savings to municipalities from reduced road wear-and-tear, assigning the savings to the fraction of trips diverted from the roads to trains.

OVERALL BENEFITS FROM DIRECT OPERATIONS

Annual Estimated Economic Benefits of Crescent I-20 Extension

Presented below are the aggregate results of all the calculations and formula results from both the *Rail Passengers* model and the IMPLAN model's calculations of additional benefits in the form of Labor Income, Value-Added and total economic Output.

Results at the county level for counties in which station stops will be located are driven primarily by ridership at these stations. Results at a state-wide level are primarily driven by induced state-level spending not captured at the station level and the effects of maintenance and support spending on rail rights-of-way in each state.

As noted earlier, *Rail Passengers* did not include the benefits of a projected five- to seven-year capital investment program that will be required to improve railbeds and signals, construct new tracks and sidings, and bring stations into compliance with Americans with Disabilities Act (ADA) access standards. This would create significant additional benefits beyond the \$207 million annual benefit our model calculated.

NOTE: The "Output" column includes amounts from the Labor Income and Value-Added columns, but also includes other inputs. Output cannot be viewed as the sum of Labor Income and Value-Added.

Annual Estimated Economic Benefits of I-20 Corridor Initiative to Selected Counties										
County/State (Station)	Visitor Spending	Reduced Pollution	Reduced Crash Fatalities	Avoided Road Maintenance	Avoided Travel Costs (vs Other Modes)	Rail Operations & Maintenance Spending	Labor Income	Value Added	Output*	Total Economic Benefit
Lauderdale County, MS (Meridian)	\$ 163,054	\$ 26,852	\$ 87,707	\$ 882,857	\$ 1,241,396	\$ -	\$ 374,587	\$ 708,240	\$ 1,341,846	\$ 3,743,712
Jackson/Evens Airport (Rankin County)	\$ 105,129	\$ 17,313	\$ 56,549	\$ 569,219	\$ 800,386	\$ -	\$ 52,315	\$ 82,369	\$ 164,849	\$ 1,713,445
Hinds County, MS (Jackson)	\$ 201,469	\$ 33,178	\$ 108,371	\$ 1,090,854	\$ 1,533,863	\$ -	\$ 462,838	\$ 875,098	\$ 1,657,978	\$ 4,625,713
Warren County, MS (Vicksburg)	\$ 135,808	\$ 22,365	\$ 73,052	\$ 735,333	\$ 1,033,960	\$ -	\$ 304,110	\$ 574,297	\$ 1,088,442	\$ 3,088,959
Ouachita Parish, LA (Monroe)	\$ 293,923	\$ 26,201	\$ 77,023	\$ 861,452	\$ 1,221,007	\$ -	\$ 527,246	\$ 924,766	\$ 1,686,155	\$ 4,165,761
Lincoln Parish, LA (Ruston)	\$ 206,811	\$ 18,436	\$ 54,195	\$ 606,137	\$ 859,127	\$ -	\$ 370,982	\$ 650,685	\$ 1,186,415	\$ 2,931,120
Caddo Parish, LA (Shreveport)	\$ 276,171	\$ 24,618	\$ 72,371	\$ 809,423	\$ 1,147,262	\$ -	\$ 774,065	\$ 1,357,676	\$ 2,475,494	\$ 4,805,339
Bossier Parish, LA (Shreveport)	\$ 76,506	\$ 6,820	\$ 20,048	\$ 224,229	\$ 317,819	\$ -	\$ 137,238	\$ 240,709	\$ 438,893	\$ 1,084,315
Harrison County, TX (Marshall)	\$ 152,872	\$ 11,902	\$ 30,486	\$ 391,318	\$ 602,266	\$ -	\$ 364,381	\$ 635,995	\$ 1,148,619	\$ 2,337,464
Gregg County, TX (Longview)	\$ 137,288	\$ 10,689	\$ 27,379	\$ 351,425	\$ 540,868	\$ -	\$ 327,234	\$ 571,158	\$ 1,031,523	\$ 2,099,171
Wood County, TX (Mineola)	\$ 133,687	\$ 10,408	\$ 26,660	\$ 342,207	\$ 526,681	\$ -	\$ 318,651	\$ 556,177	\$ 1,004,466	\$ 2,044,109
Dallas County, TX (Dallas)	\$ 649,667	\$ 50,580	\$ 129,560	\$ 1,662,997	\$ 2,559,472	\$ -	\$ 1,548,525	\$ 2,702,810	\$ 4,881,330	\$ 9,933,606
Tarrant County, TX (Fort Worth)	\$ 534,213	\$ 41,591	\$ 106,535	\$ 1,367,462	\$ 2,104,622	\$ -	\$ 1,273,333	\$ 2,222,487	\$ 4,013,858	\$ 8,168,281
Mississippi State-Wide	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,345,740	\$ 31,897,949	\$ 61,039,917	\$ 61,039,917
Louisiana State-Wide	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,042,948	\$ 27,335,935	\$ 56,826,347	\$ 56,826,347
Texas State-Wide	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,337,142	\$ 20,496,206	\$ 38,870,997	\$ 38,870,997
TOTAL	\$ 3,066,596	\$ 300,951	\$ 869,936	\$ 9,894,914	\$ 14,488,729	\$ -	\$ 46,561,334	\$ 91,832,556	\$ 178,857,129	\$ 207,478,256

* - Includes Labor Income and Value Added values, but not a total
Source: Rail Passengers Railway Benefits Calculator, IMPLAN Economic Modeling Tool

ADDITIONAL RESULTS

Annual Tax Revenues Created by the I-20 Corridor Initiative

Recall that our study protocols look not only at direct spending by visitors, but at the business-to-business transactions that are spurred on by the visitors’ activities. All of these activities – from staying in a hotel to eating at a restaurant, visiting an entertainment venue, buying local goods, or renting a car – support employees who in turn make purchases and pay sales taxes or property taxes, or cause retail outlets to buy additional goods, or induce supporting businesses to supply services to the hotels or restaurants or stores. Each of those transactions produces tax revenues at varying levels depending on the jurisdiction. The IMPLAN model captures those tax effects at the county level, which are presented in this table summarized by state.

Annual Tax Revenues Created By I-20 Corridor Initiative						
State	Sub County General	Sub County Special Districts	County	State	Federal	Total Tax Revenue
Mississippi	\$ 101,014	\$ 243,396	\$ 202,126	\$ 1,353,838	\$ 3,088,640	\$ 4,989,015
Louisiana	\$ 137,983	\$ 211,499	\$ 124,793	\$ 754,307	\$ 3,507,014	\$ 4,735,596
Texas	\$ 296,275	\$ 649,013	\$ 209,841	\$ 968,129	\$ 3,082,222	\$ 5,205,479
TOTAL	\$ 535,272	\$ 1,103,908	\$ 536,760	\$ 3,076,274	\$ 9,677,875	\$ 14,930,090

Source: Rail Passengers Railway Benefits Calculator, IMPLAN Economic Modeling Tool

Definitions, Explanations and Notes

Visitor Spending – captures additional spending in the local economy exclusively from the roughly 5% to 7% of annual ridership that would not be there but for the train service.

of passengers deboarding X fraction of passengers assumed to be nonresident X fraction of “induced” passengers (i.e., passengers who only took the trip because the train route exists) X lodging/restaurant/entertainment/shopping/local transportation spending per person reported by tourist bureaus in each state.

Road fatalities – an extremely conservative set of assumptions which uses a U.S. Dept. of Transportation figure related to, but different from, the U.S. Dept. of Labor’s statistical value of a life saved. DOT refers to this figure as the “comprehensive cost” of road fatalities, and in our model examines only the subset of existing passenger miles shifted directly from car to rail

Road maintenance – derived from reductions in annual Vehicle Miles Traveled (VMTs) by non-resident passengers (i.e., assumes residents will likely drive to and from their preferred stations to use the train, so the rail service only reduces the VMTs imposed by non-residents).

Labor Income (IMPLAN) – All forms of Employment income, including Employee Compensation (wages, salaries, and benefits) and Proprietor Income.

Value-Added (IMPLAN) – The difference between an Industry's or establishment's total Output and the cost of its Intermediate Inputs; it is a measure of the contribution to GDP. Value Added is a large portion of Output, as it encompasses Labor Income (LI), Other Property Income (OPI), and Taxes on Production and Imports (TOPI).

Output (IMPLAN) – For all Industries, output equals the value of Industry production, which is equal to sales plus net inventory change, but details vary depending on industry sector. For wholesale and retail, Output is equal to gross wholesale margin or gross retail margin, respectively, not gross sales. In other words, the value of production for wholesale and retail sectors is the value of the services they provide and doesn't include the value of the items sold within their establishment. Output includes labor income and value-added, but also other intermediate inputs. Thus, in the tables we present, it's not accurate to add labor income and value-added to yield Output.