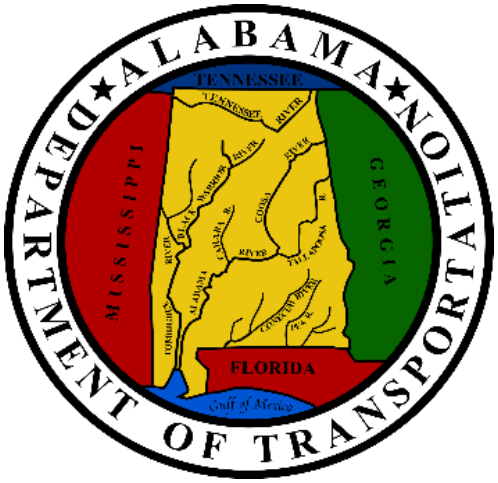
2024 Alabama State Rail Plan



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List of Abbreviations

A-USA Corridor	Alabama-USA Corridor
AASHTO	American Association of State Highway and Transportation Officials
AADT	annual average daily traffic
ADECA	Alabama Department of Economic and Community Affairs
Ala.	Alabama, in referencing the Code of Alabama
AL OL	Alabama Operation Lifesaver
AL SRP	Alabama State Rail Plan
ALDOT	Alabama Department of Transportation
APSC	Alabama Public Service Commission
Av	Avenue
AREMA	American Railway Engineering and Maintenance Association
ASPA	Alabama State Port Authority
BIL	Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act of 2021, IIJA)
CEO	Chief Executive Officer
COFC	container on flat car
CRISI	Consolidated Rail Infrastructure and Safety Improvements
CFR	Code of Federal Regulations
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
ft	feet or foot
FRA	Federal Railroad Administration
FSP-National	Federal Stat Partnership for Intercity Passenger Rail
FY	fiscal year (e.g. FY2022 or FY22 = fiscal year 2022; AL and federal FYs begin 01 Oct)
HSIP	Highway Safety Improvement Program
ICTF	intermodal container transfer facility
IIJA	Infrastructure Investment and Jobs Act of 2021 (Bipartisan Infrastructure Law, BIL)
IRC	Interstate Rail Compacts (Program)
INFRA	Infrastructure for Rebuilding America
LRTP	Long Range Transportation Plan
MGT	million gross tons per year
mph	miles per hour
MP	milepost
MPDG	Multimodal Project Discretionary Grant
MPO	Metropolitan Planning Organization
MUTCD	*Manual on Uniform Traffic Control Devices*
MW	one million watts

NEPA	National Environmental Policy Act
NYC	New York City, NY
NYSE	New York Stock Exchange
PDO	property damage only (PDO crossing crashes are crashes that do not result in personal injury or fatality)
PI	personal injury (PI crossing crashes involve personal injury up to but not including fatality)
PIIRA	Passenger Rail Investment and Improvement Act of 2008
PSR	Precision Scheduled Railroad, Precision Scheduled Railroading
PTC	Positive Train Control
RAISE	Rebuilding America Infrastructure with Sustainability and Equity
RCEG	Railroad Crossing Elimination Grant
REG	Restoration and Enhancement Grant
Ro-Ro	Roll-on/roll-off (wheeled cargo rolled onto or off of ships
RPO	Rural Planning Organization
RR-RR	railroad-railroad, as in RR-RR grade crossing where railroads crossing each other at grade
RRIF	Railroad Rehabilitation and Improvement Financing
RTP	Regional Transportation Plan
Rwy	Railway
SAP	State (Highway-Rail) Grade Crossing Action Plan
Section 130 Program	federal aid crossing safety program of 23 USC § 130
SHSP	Strategic Highway Safety Plan
SRC	Southern Rail Commission
SRP	State Rail Plan
STB	Surface Transportation Board of the United States
STIP	Statewide Transportation Improvement Program
T&S	Timber (Crossties) and surface
TCS	Traffic Control System (also known as Centralized Traffic Control, CTC)
TEU	Twenty-foot Equivalent Unit, a measure of volume in units of twenty-foot-long containers
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Generating Economic Recovery
TOFC	trailer on flat car
U.S.	United States of America
USC	United States Code
USDOT	United States Department of Transportation

List of Railroad Company Abbreviations

Railroad abbreviations herein are generally Standard Carrier Alpha Codes, also known as railroad reporting marks. **Bold font** abbreviations identify current Class I Alabama Railroads.

Marks ending with the letter "X" are assigned to entities that own, lease or operate railcars but are not common carrier railroad companies. Marks ending with the letter "Z" are assigned to entities for use on TOFC service equipment.

Class I Railroads including various predecessor railroads

ACL	SCL predecessor Atlantic Coastline Railroad
AMTK	National Railroad Passenger Corporation that does business as Amtrak
BN	BNSF predecessor Burlington Northern Railroad
BNSF	BNSF Railway Company, initially Burlington Northern and Santa Fe Railway after a 1995 merger with Atchison, Topeka and Santa Fe Railway, ATSF
CSXT	CSX Transportation, Inc, successor to Seaboard System Railroad in 1986
CN	Canadian National Railway Company
CP	CPKC predecessor Canadian Pacific Railway
CPKC	Canadian Pacific Kansas City Railway, an Alabama railroad via haulage rights
GM&O	Gulf, Mobile and Ohio Railroad, see ICG
IC	Illinois Central Railroad Company, purchased by CN in 1998
ICG	Illinois Central Gulf was formed by a 1972 IC-GM&O merger (most former GM&O trackage had been divested by ICG prior to the name change back to IC in 1988)
KCS	CPKC predecessor Kansas City Southern Railway Company
L&N	Seaboard System predecessor Louisville & Nashville Railroad Company
NC&StL	Nashville, Chattanooga and St. Louis Railway, merged into L&N in 1957
NS	Norfolk Southern Railway Company. *Non-operating railroad NS subsidiaries* *AGS Alabama Great Southern Railroad Company* *CGA Central of Georgia Railroad* *TAG Tennessee, Alabama & Georgia Railway Company*
SAL	SCL predecessor Seaboard Air Line Railroad
SCL	Seaboard Coastline Railroad formed by a 1967 ACL-SAL merger (SCL and L&N merged in 1972 to form CSXT predecessor Seaboard System Railroad)
SLSF	St. Louis-San Francisco (Frisco) Railway, successor to Alabama, Tennessee and Northern Railroad, AT&N, SLSF was merged into BN in 1980
SOU	Southern Railway, succeeded by NS in 1982
UP	Union Pacific Railroad Company, not an Alabama or former Alabama railroad

Alabama Class II Railroad AGR Alabama & Gulf Coast Railway (G&W subsidiary)

Railroad Holding Companies with Alabama Railroad Subsidiaries

G&W	Genesee & Wyoming, Inc. subsidiaries highlighted orange below
Ironhorse	Ironhorse Resources, Inc.
Omnitrax	Omnitrax, Inc.
Patriot Rail	Patriot Rail Company, LLC subsidiaries highlighted green below
RJ Corman	RJ Corman Railroad Group, LLC
WATCO	Watco Transportation Service, LLC subsidiaries highlighted green below

Alabama Class III Railroads (Holding company or parent within parenthesis)

ABS	Alabama Southern Railroad (WATCO)
ABWR	Alabama Warrior Railway (WATCO)
ARL	Alabama Railroad, LLC, formerly ALAB, an independent railroad abandoned in late 2022
ALE	Alabama Export Railroad (Mississippi Export Railroad subsidiary)
ATN	Alabama & Tennessee Railway, LLC (Omnitrax)
AUT	Autauga Northern Railroad (WATCO)
BAYL	Bay Line Railroad (G&W)
BHRR	Birmingham Terminal Railway (WATCO)
CGR	CG Railway, LLC, rail ferry (joint venture of G&W and SEACOR Holdings)
CHAT	Chattahoochee Bay Railroad (G&W), successor to Chattahoochee & Gulf Railroad, C&G
CCH	Columbus & Chattahoochee Railroad (G&W)
COEH	Conecuh Valley Railway (G&W)
EARY	Eastern Alabama Railway (G&W)
GSWR	Georgia Southwestern Railroad (G&W)
HODM	Heart of Dixie Railroad Museum, tourist railroad marketed as Calera & Shelby Railroad
HOG	Heart of Georgia Railroad (G&W)
HMCR	Huntsville & Madison County Railroad (public authority HCMRA)
LXVR	Luxapalia Valley Railroad (G&W)
MNBR	Meridian & Bigbee Railroad (G&W), formerly M&B Railroad for a short period of time
MSCI	Mississippi Central Railroad (Patriot Rail)
MSE	Mississippi Export Railroad, an Alabama railroad via haulage rights
NARM	North Alabama Railroad Museum, tourist railroad marketed as Mercury & Chase Railroad
RJAL	Childersburg Line (RJ Corman)
SQSC	Sequatchie Valley Switching Company (Ironhorse)
SERX	Southern Electric Railroad Company, Inc, a non-common carrier (Southern Company)
TSRR	Tennessee Southern Railroad (Patriot Rail)
TASD	Terminal Railway Alabama State Docks (Alabama State Port Authority)
TNHR	Three Notch Railway (G&W)
WGCR	Wiregrass Central Railroad (G&W)

Glossary

Class I Railroad is defined by the Surface Transportation Board (STB) as a common carrier earning annual revenue exceeding $1,053,709,560 in 2023 dollars (originally $250M in 1992 dollars).

Class II Railroad is defined by the STB as a common carrier earning annual revenue between $47,299,851 and $1,053,709,560 in 2023 dollars (originally between $20M and $250M in 1992 dollars), colloquially referred to as regional railroads.

Class III Railroad is defined by the STB as a common carrier earning annual revenue less than $47,299,851 in 2023 dollars (originally less than $20M in 1992 dollars), colloquially referred to as short line railroads, including switching and terminal railroads.

flasher crossing is an active warning device rail-highway grade crossing equipped with only automatic flashing light crossing signals and usually a bell or bells, as well as passive warning devices.

gate crossing is an active warning device rail-highway grade crossing equipped with automatic gates, flashing light crossing signals and a bell or bells, as well as passive warning devices.

passive crossing is a rail-highway grade crossing where road users are warned only of the presence of the crossing where devices that actively warn of an approaching train or train occupying the crossing are not present

Alabama State Rail Plan

2024 update

Chapter 1: Overview

1.1 Vision, Mission and Goals

The Alabama Vision for rail service was largely developed from the Alabama Department of Transportation (ALDOT) Vision "Enriching lives in Alabama through excellence in transportation."

Alabama Rail Vision: Excellent rail freight and passenger transportation infrastructure and services with rail multi-modal connectivity that enriches lives in Alabama.

Similarly the development of the Mission was influenced by the ALDOT Mission "To provide a safe, efficient and environmentally sound transportation system for all customers", and the Alabama Freight Plan Mission Statement "To promote the efficient and safe movement of goods in a manner that increases economic competitiveness and promotes environmental responsibility throughout the State of Alabama."

Alabama Rail Mission: Support a safe, efficient, and environmentally sound Alabama rail system that promotes safety, reliability, efficiency, economic growth and competitiveness, and intermodal connectivity that provides freight and passenger mobility.

Alabama Rail Goals:

- Decreased crossing crashes and casualties by mitigating or eliminating hazards through the Railway-Highway Crossing (Section 130) Program [1]
- Elimination of crossings frequently blocked by trains, reduction of rail freight movement and operations impacts on underserved communities, improved mobility of people and goods through grade separations, and crossing closures and relocations
- Increased partnership and collaboration in planning and coordination among ALDOT, other state agencies, neighboring states, regional organizations, local governments, railroads, industry, and other stakeholders
- Improved freight and passenger rail service, rail network improvement, and rail multimodal connectivity in and through Alabama
- Increased rail infrastructure and network operations safety and security
- Preservation of the rail network, improved infrastructure and infrastructure condition, increased reliability, efficiency, rail terminal and multimodal capacity, and freight and passenger rail access, and reduced transportation network congestion supportive of economic growth
- Increased mobility and domestic and global connectivity enhancing quality of life
- Reduction of community impacts and concerns arising from rail operations and network development

The Plan's goals will be pursued through federal and ALDOT policies, standard practices and procedures that guide rail transportation planning activities and project selection and development, and encouraging and promoting an increasingly safe and efficient rail system that will be a catalyst for growth and is competitive within the global economy. Section 130 Program and other federal program funding and grants, and state tax credits granted railroads and rail-served industry will be the primary fundings sources to achieve the goals.

Multimodal transportation is the movement of cargo or freight from origin to destination using more than one mode of transportation---truck, rail, ship or barge, air, or pipeline.[2] This Plan uses "intermodal" to refer the subset of multimodal transportation of containerized cargo or freight transported by more than one mode. Modes are identified in connection with use of the word intermodal unless the mode or modes is evident in the usage. "Intermodal rail" refers to multimodal movements of containerized freight where rail is one of the modes.

[1] See the 2019 *Alabama Rail-Highway Grade Crossing Action Plan* for detailed crossing safety goals.

[2] The term cargo is traditionally used to refer to commercial goods shipped by sea or airplane, and freight refers to goods moved overland in trucks or trains. Multimodally moved goods are freight or cargo depending on the transportation mode.

1.2 Rail Transportation's Role

Alabama is more freight rail-intensive than most states. It is the 24th most populous state and has the 26th largest Gross Domestic Product but ranks higher in most freight rail activity metrics. Alabama is 18th in rail route-miles, 16th in originating and 14th in terminating tonnages, and 21st and 18th in originating and terminating carloads respectively. [3]

Unit coal train

The higher originating and terminating tonnage rankings than carload rankings reflect the greater weight of Alabama originating and terminating commodities compared to the overall commodities transported on the United States of America (US) rail network. Coal is the highest volume rail freight commodity by tonnage originating and terminating in Alabama. Primary metal products and chemicals are second or third in originations and terminations. Coal, chemicals, minerals, steel, and sand and aggregates are commodities typically loaded to the 286,000-pound common maximum railcar weight.[4]

Alabama Waterways

Alabama natural resources are important to the state's economy. Rail transportation is used in transporting natural resource commodities, and in manufacturing and production utilizing the commodities and the transportation of natural resource-based products to markets or for further processing. Rail is important in the transportation of assembled motor vehicles, wood products and paper, chemicals, food and the outputs of mines and quarries, steel mills and steel-processing facilities.

Rail is an important component of the Alabama multimodal freight transportation system. Freight is transferred between railcars and barges at several Tennessee River and Tombigbee Waterway facilities and between railcars, and barges and ships, at the Port of Mobile.[5]

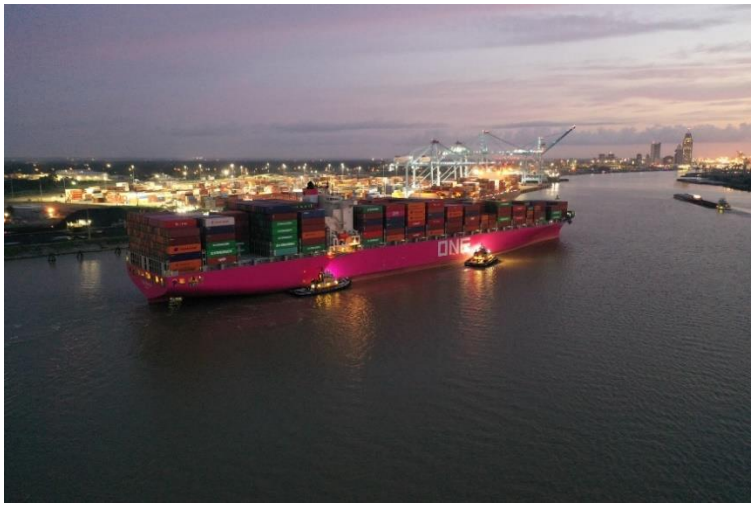
[3] Intrastate tonnage and railcar movements are both Alabama originating and terminating tonnage and movements.

[4] 286,000-pound maximum rail car weight decades ago succeeded the 263,000-pound maximum railcar weight standard. Railroads, Class I railroads s in particular, are moving toward a higher 315,000-pound maximum railcar weight though it is uncertain when if ever that will become the North American standard maximum.

[5] There is relatively little freight on the Alabama-Coosa Waterway, and very little transfer between barge and rail at some of the state's waterway dock facilities.

Motor vehicle distribution is largely multimodal. Most US-assembled vehicles are loaded onto railcars for transportation to ports for export or to domestic distribution centers where trucks then transport the vehicles to dealerships.[6] Chemicals and other products used in manufacturing are sometimes transported multimodally, being transferred from tank or covered hopper cars to trucks at rail transload facilities.

Container ship near APM Terminal in Mobile



The Alabama multimodal passenger transportation network is comparable to that of many states. Passenger rail service consists of one daily Amtrak train in each direction operating across the central portion of the state serving Birmingham, the state's most populous metropolitan area, and Anniston, and Tuscaloosa. New Orleans-Mobile passenger service along the Gulf Coast is expected to resume in 2025.

Anniston Amtrak Station

Amtrak service, though limited, provides an alternative to highway and airline transportation along the Interstate 20 Corridor within Alabama, despite passenger rail-miles being a small fraction of total Alabama Interstate 20 Corridor passenger-miles. Intercity and/or transit buses serve the Alabama Amtrak passenger rail stations, including Amtrak Thruway bus service between New Orleans and Montgomery via Mobile.

(The City of Anniston proposes to extend the 33 mile-long Chief Ladiga Trail seven miles south to the Anniston Amtrak station. The east end of the trail connects to the west end of Georgia's Silver Comet Trail. The Chief Ladiga Trail extension in combination with a planned few mile-long extension of the 62 mile-long Silver Comet trail to the Atlanta Amtrak Station would create a loop that includes a segment of the Amtrak Crescent *route.)*

[6] The multimodal element of the transportation of Alabama-assembled motor vehicles is thus typically out-of-state.

1.3 Alabama Institutional Governance

Alabama institutions with direct or indirect governance of rail transportation or governance related to rail transportation include the Office of the Governor, State Legislature, ALDOT, Alabama Public Service Commission (APSC), Alabama Department of Economic Development and Community Affairs (ADECA), and various public corporation authorities.

Alabama State Capitol

The Alabama State Legislature has direct and indirect roles in rail governance within Alabama. The legislature has a standing joint Senate-House Transportation Committee. Proposed railroad-related legislation originating in the Alabama State Senate is typically referred to the Transportation and Energy Committee. Legislation originating in the Alabama House of Representatives typically would be referred to the Transportation, Utilities, and Infrastructure Committee. The House established a new Ports, Waterways and Intermodal Transit committee in 2023.

Nearly all rail infrastructure in Alabama is owned and operated by private enterprises. Public institution participation largely consists of private-public partnerships and public institution cooperation with private railroads. ALDOT is the primary state agency responsible for state freight and passenger rail planning. ALDOT rail planning is coordinated with other transportation mode planning through the State Freight Plan, and Metropolitan Planning Organizations and Rural Planning Organizations within the state. ALDOT is typically a partner and not the lead in rail plan implementation, other than the federal aid Section 130 crossing safety program that is administered by ALDOT.

Public corporation authorities with direct rail transportation associations include the Alabama State Port Authority through its subsidiary terminal railroad that serves the Port of Mobile and the Huntsville & Madison County Railroad Authority, the only public corporation railroad authority within Alabama that owns and operates a short line railroad. Alabama is party to two railroad compacts with other states, one of which involves a public corporation rail authority.

1.3.1 Alabama Department of Transportation

The ALDOT chief executive officer is the Director of Transportation, a member of the Governor's cabinet who is appointed by and holds office at the pleasure of the Governor. All the powers, authority, and duties vested in ALDOT by the state legislature are exercised by the Director.

Railroad Legislation.

The State Rail Preservation Act (Ala. Code Title 37 Chapter 10, Ala. Code §37-10-1 through § 37-10-7) authorizes ALDOT to establish, coordinate, and administer the Alabama State Rail Plan (AL SRP) as part of an overall transportation plan to (1) promote safe, adequate, and efficient rail service; (2) reduce transportation-related energy utilization and pollution; and (3) comply with USDOT regulations related to federal rail funding eligibility and use of federal funds. The Act also authorizes ALDOT to serve as the agent of the state in cooperating with regional and local transportation authorities, federal and local governments, railroads, and rail users.

The Alabama Shortline Railroad Infrastructure Rehabilitation Act (Ala. Code Title 37 Chapter 10A) was enacted in 2008 to enhance economic development and growth by promoting a state of good repair and improvement of Alabama short line railroads. The Act created the Alabama Shortline Railroad Rehabilitation Program and Fund within ALDOT to provide grants or no-cost loans to local public rail authorities and to receive federal and state appropriations, grants, and other public and private sources of funds made available for short line railroad infrastructure rehabilitation and improvements. The Program and Fund are currently inactive. The state legislature has not appropriated state funds for grants or no-cost loans to the Fund, nor have federal funds or grants been channeled through the Fund for many years.

ALDOT General Office Building

ALDOT Organization.

ALDOT is organized into five geographic regions. Its central office is organized into bureaus and offices. ALDOT rail transportation activities and rail planning are coordinated by the Rail Programs group of the ALDOT Design Bureau of the Traffic Engineering Division. The Rail Programs group administers the federal aid crossing safety program of Title 23, United States Code, Chapter 1, Section 130 (23 USC § 130), commonly referred to as the Section 130 Program. The Section 130 Program evaluates and funds highway-rail grade crossing safety improvements at public crossings throughout the state of Alabama. The Rail Programs group also handles ALDOT construction agreements with railroads.

1.3.2 Other State Agencies

Alabama Public Service Commission (APSC).

Much of Ala. Code Title 37 Chapter 2, Transportation Companies, Article 1 General Provisions, concerns railroad operations within the purview of APSC. The six divisions of Article 1 concern railroad rates, damage during transportation, public safety (highway-rail crossings, employee licensing, fencing, drawbridges, locomotive headlights, and injury reporting), commercial duties, and railway policemen.

The Railway Safety Section (https://psc.alabama.gov/railway-safety/) of APSC inspects track and rolling stock and rail equipment operating in Alabama for compliance with state and federal safety standards and monitors compliance with Railroad Workplace Safety regulations per 49 CFR § 212, State Safety Participation Regulations. The Federal Railroad Administration (FRA) inspects and monitors FRA-designated hazardous materials, operating practices and signal and train control and signal employee hours of service regulation compliance.

Alabama Department of Economic Development and Community Affairs (ADECA).

The stated purpose of Alabama Capital Assistance Stimulus for Rail Projects Act of 2009 (Ala. Code Title 37 Chapter 11B) is that ADECA (https://adeca.alabama.gov/) develop a rail infrastructure plan and program to construct rail lines or tracks, and maintain and improve existing rail infrastructure that prudently uses state funds to take advantage of federal funding assistance opportunities.

ADECA has not been very active in rail infrastructure program development. Alabama has since enacted other rail-infrastructure-related legislation. ADECA, though, has been a conduit for FRA grants to local Alabama governments. A 2013 grant funded a feasibility study of passenger rail service between Birmingham and Montgomery, and a 2020 grant funded a feasibility study extending the intercity service of the 2013 study from Montgomery to Mobile.

1.3.3 Public Corporation Authorities

Ala. Code Title 37 Chapter 13 details the establishment, requirements, and governance and dissolution of railroad authorities as public corporations. Railroad authorities have the power to plan, establish, acquire, lease, maintain, improve, exercise eminent domain, and construct and operate railroad properties and facilities. Authorities are authorized to issue railroad revenue bonds, receive contributions, grants, and financial assistance from the federal government, state government and its political subdivisions, and from other sources including common carriers. Rail authority bonds and bond income are exempt from all taxation in the state, as are all

authority property and income. The Huntsville & Madison County Railroad Authority and the Northwest Mississippi-Northeast Alabama Railroad Authority are the only public corporation rail authorities in Alabama. Other public corporations have some involvement in rail transportation. Table 1-1 identifies public corporations with direct or indirect rail transportation associations.

Table 1-1 Alabama Rail and Rail-Associated Public Corporation Authorities

Authority	Rail Role
Alabama State Port Authority (ASPA)	Port of Mobile and other AL ports, subsidiary TASD railroad at Mobile
Birmingham-Jefferson County Port Authority (BJCPA)	Port Birmingham served by BHRR
City of Childersburg Local Redevelopment Authority (CLRA)	Owner of short line leased to RJAL [1]
Decatur-Morgan County Port Authority (DMCPA)	Mallard Fox Creek and State Docks Ports served by NS
Florence-Lauderdale County Port Authority (FLCPA)	Port of Florence served by TSRR
Huntsville-Madison County Airport Authority (HMCAA)	International Intermodal Center at airport served by NS
Huntsville & Madison County Railroad Authority (HMCRA)	Short line HCMR operator
Industrial Development Board of the Town of Pickensville	Port of Pickensville served by AGR
Northeast Mississippi-Northwest Alabama Railroad Authority	Owner of short line leased to MCSI

1 R.J. Corman Railroad Companies have a long-term lease to operate and maintain the rail line that was acquired by the City from the federal government in the Base Realignment and Closure process.

Huntsville & Madison County Railroad Authority (HMCRA).

HMCRA (https://hmcrr.com/) was created in 1984 to continue rail service along a recently abandoned 13-mile-long spur line. It shortly thereafter became a Class III railroad operator of the Huntsville & Madison County Railroad (HCMR). HCMRA is governed by a seven-member Board of Directors appointed by the Huntsville City Council and Madison County Commission to five-year terms.

HCMR locomotive at a crossing

Alabama State Ports Authority (ASPA).

ASPA (https://www.alports.com/) was created to promote, maintain, and operate the harbors, seaports, and inland waterways system within Alabama. It owns and operates Mobile's public multimodal, rail intermodal, freight, and commodities deepwater seaport public terminals.

ASPA is self-supporting and functions generally in the manner of an enterprise operation. Eight of its nine-member Board of Directors, appointed by the Governor and confirmed by the State Senate, serve staggered five-year terms as at-large or as representatives of north, central and south Alabama regions. The ninth board member is a one-year term ex-officio member alternating between the Mayor of Mobile and the Mobile County Commission President. The Board exercises fiscal and policy oversight and oversees the ASPA's Chief Executive Officer.

The Port of Mobile's cargo mix of containers, bulk, break bulk, roll-on/roll-off (Ro-Ro) and heavy lift/over-dimensional traffic is diverse. ASPA opened the Garrows Bend Intermodal Container Transfer Facility (ICTF) in 2016. The Port leads the nation's 25 largest seaports in five-year compound annual growth of container traffic. It recently surpassed Jacksonville, FL as the 17th largest in import container volume. ASPA's McDuffie Coal Terminal is the largest U.S. coal terminal in import volume and amongst the largest in export coal volumes. The Port is one of the largest break-bulk forest products ports in the US. ASPA Ro-Ro traffic includes the railroad traffic of CG Railway, operator of a Mobile-Coatzacoalcos, Mexico railroad ferry that connects the traffic of U.S. railroads at Mobile to five Mexican railroads. Other Ro-Ro cargoes support heavy equipment and wind energy and aviation components. A 57-acre motor vehicle terminal with capacity to process 150,000 vehicles per year opened in 2021. Mobile became the second largest steel-handling port in the U.S. after the 2010 opening of a steel facility north of Mobile.[7]

TASD Locomotive

Ala. Code Title 33 grants ASPA the authority to own, operate, hold, control, regulate and set pricing, and construct railroads, and to enter into agreements with other railroads. ASPA subsidiary Terminal Railway Alabama State Docks (TASD), the Port of Mobile's terminal railroad, is an ASPA exercise of Title 33 ASPA authority. TASD directly serves local industrial customers north of the Port and supports freight and intermodal rail interchange and provides terminal services for the five Class I, one Class II and three Class III

[7] The Calvert, AL facility was constructed by ThyssenKrupp for $4 billion. Outokumpu acquired the stainless-steel portion of the facility in 2012. The remainder of the facility was jointly acquired by ArcelorMittal and Nippon Steel (AM/NS) in 2014. A $775 million AM/NS expansion broke ground in February 2021.

common carrier railroads at the Port of Mobile. TASD moves all rail traffic to and from ASPA's public port terminals.

Ala. Code Title 33 was revised in 2022 to grant ASPA the authority, comparable to ASPA's port railroad authority, to own, operate, etc. inland intermodal facilities. ASPA promptly began exercising that authority in beginning development of an ICTF in Montgomery.

Birmingham-Jefferson County Port Authority (BJCPA).

BJCPA (https://birmingport.org/), incorporated in 2016, operates under ASPA to promote Port Birmingham and Black Warrior River port development. The port is served by Watco subsidiary Birmingham Terminal Railway (BHRR). BHRR interchanges with BNSF Railway (BNSF), CSX Transportation (CSXT) and Norfolk Southern (NS) in Birmingham. BJCPA's five-member Board of Directors are appointed by the Birmingham City Council and Jefferson County Commission to staggered five-year terms.

Florence-Lauderdale County Port Authority (FLCPA).

FLCPA (https://www.portofflorence.org/index.html) was chartered in 1981. The port, located on the Tennessee River just west of Wilson Lock, is served by Patriot Rail subsidiary Tennessee Southern Railroad (TSRR). TSRR connects to CSXT 80 miles north of Florence in Columbia, TN. FLCPA is governed by a five-member Board of Directors appointed by the Florence City Council and the Lauderdale County Commission to staggered five-year terms.

Huntsville-Madison County Airport Authority (HMCAA).

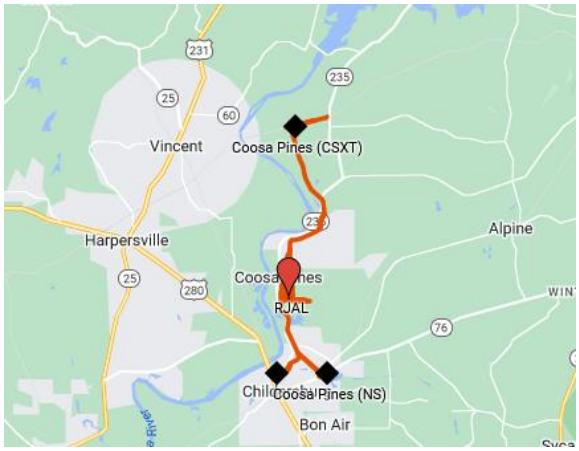
HMCAA (https://www.portofhuntsville.com/) does business as the Port of Huntsville. HMCAA is overseen by a board of five directors that serve six-year terms. Two directors each are appointed by the Madison County Commission and the Huntsville City Council, and one director is jointly appointed by the Commission and Council. The HMCAA Board governs all Port of Huntsville operating entities, including the Mitchell International Intermodal Center (IIC) located at the Huntsville International Airport where freight is transferred between truck, rail, and air modes. The IIC is served by NS via a spur from the NS Chattanooga-Memphis line.

HMCAA locomotive at the IIC

HMCAA operates locomotives based at the IIC that switch the IIC and industries served by an approximately 4.4 mile-long network of HMCAA-owned tracks within the Global Logistics Park.

City of Childersburg Local Redevelopment Authority (CLRA).

CLRA track leased to RJAL



CLRA acquired property including what is currently the Childersburg Line (RJAL) railroad in 2003 from the federal government under the Base Realignment and Closure Act process. The property and railroad were formerly part of the Alabama Army Ammunition Plant constructed and operated during World War II. Portions of the plant property were subsequently leased or sold to industrial operations served by CSXT and NS and their predecessors prior to acquisition of the railroad by the City. The City and R.J. Corman Railroad Company executed a long-term railroad lease in 2019. CLRA is governed by a five-member board that is appointed by the City Council. Board members served staggered four-year-long terms.

Decatur - Morgan County Port Authority (DMCPA).

DMCPA (https://mceda.org/port-authority) was incorporated in April 1982 to develop property along the Tennessee River for industrial use. The Alabama State Docks facility and adjacent property in Decatur were transferred to DMCPA in 1987. DMCPA developed an additional port facility at the Mallard-Fox Creek Industrial Park in 1990. The port facilities are served by lead tracks that connect to NS. DMCPA is governed by a five-member Board appointed by the City of Decatur and the Morgan County Commission serving staggered five-year terms. Watco Transloading-Decatur River Port has been operating both port facilities since 2016.

Industrial Development Board of the Town of Pickensville.

The Industrial Development Board of the Town of Pickensville owns the Port of Pickensville located on the Tombigbee Waterway. The Port is served by the Alabama and Gulf Coast Railway (AGR).

1.3.4 Railroad Compacts with Other States

Southern Rail Commission.

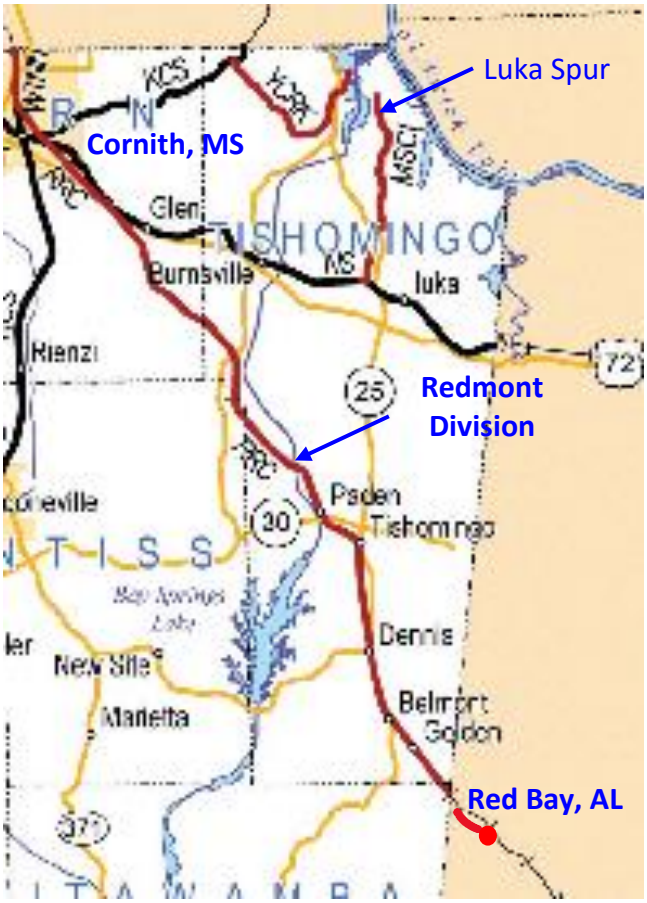
Alabama, along with the states of Mississippi and Louisiana, is party to the Southern High Speed Rail Compact. The 1983 Compact created the Southern Rail Commission (SRC) (https://www.southernrailcommission.org/).[8] The SRC vision is to promote the safe, reliable and efficient movement of people and goods to enhance economic development along rail corridors; provide transportation choices; and facilitate emergency evacuation routes.

The SRC is led by 18 commissioners, six each appointed by the Governors of the three compact states. The Compact allows contiguous states to become parties to it. Past efforts soliciting Texas, Georgia, and Florida to join the SRC have been unsuccessful. FRA allocated SRC $400,000 in Interstate Rail Compacts funding in 2024 to support its operations and initiatives to expand passenger rail operations across the South.

Northeast Mississippi - Northwest Alabama Railroad Authority.

NS filed for abandonment of its 75 mile-long line connecting NS' Chattanooga-Memphis line at Corinth, MS to NS' Birmingham-Sheffield line at Haleyville, AL in 1992 at a time when Class I railroads were actively engaged in divesting light traffic-density lines. The Northeast Mississippi-Northwest Alabama Railroad Authority was established by a 1992 compact between Mississippi and Alabama to save the line from abandonment.[9]

Mississippi Central Railroad



The Authority acquired the western 41.5 miles of the Corinth-Haleyville line, two miles of which are located in Alabama.[10] The Corinth-Red Bay, AL spur line was operated as the Redmont Railway prior to the Redmont Railway being acquired by short line holding company Pioneer Lines subsidiary Mississippi Central Railroad (MCSI) in 201. MCSI

[8] Ala. Code§37-11-1.

[9] Ala. Code § 37-11A-1, Miss. Code § 77-9-531.

[10] NS abandoned the remaining 33 miles of the line east from Red Bay to west of Haleyville.

operated the line as its Redmont Division.[11] Short line holding company Patriot Rail acquired Pioneer Lines including MCSI in September 2022. MSCI took the Redmont Division out of service in autumn 2022 due to track conditions.

The Authority's Board of Directors consists of six members that serve four-year terms. The Board consists of the Mayor of Belmont, MS and two Mississippians appointed by the Belmont Town Council, and the Mayor of Red Bay and two Alabamians appointed by the Red Bay City Council.

1.3.5 Metropolitan and Rural Planning Organizations

There are 12 regional commissions or councils of governments within Alabama. Each consists of two to ten Alabama counties and the municipalities within the counties. The regional organizations are members of the Alabama Association of Regional Councils (AARC). Alabama Metropolitan Planning Organizations (MPOs) and Rural Planning Organizations (RPOs) operate under the umbrella of the regional organizations. Regional organizations and MPOs typically, but not always, share staff, and closely cooperate when staff is not shared.

Federal legislation requires that MPOs conduct comprehensive transportation planning for metropolitan areas with populations greater than 50,000. MPO activities include developing and maintaining a 25-year multimodal Long Range Transportation Plan (LRTP), a five-year Transportation Improvement Program (TIP), the Congestion Management Process, and the Unified Planning Work Program, an annual planning budget.[12] The present LRTP year for all Alabama MPOs is 2045.

RPOs represent a cooperative process between ALDOT and rural areas within Alabama. RPOs were established to meet federal requirements for consultation between ALDOT and nonmetropolitan area local governments and officials. RPOs consist of the rural areas outside of MPOs within the area of a regional organization. The RPO area coincides with that of the regional organization when there are no metropolitan areas located within the region. The regional organizations or MPOs typically staff the RPOs.

Alabama MPOs are wholly located within a regional organization with three exceptions:

- The Columbus-Phenix City MPO is primarily a Georgia MPO
- The Florida-Alabama Transportation Planning Organization is almost wholly within Florida
- The Decatur Area MPO is nearly all located within the North-central Alabama Regional Council of Governments area except for inclusion of a small portion of Limestone County

Table 1-2 identifies the 12 regional organizations, and the MPOs and RPOs within each regional organization. Figure 1-1 maps the regional organizations and MPOs.

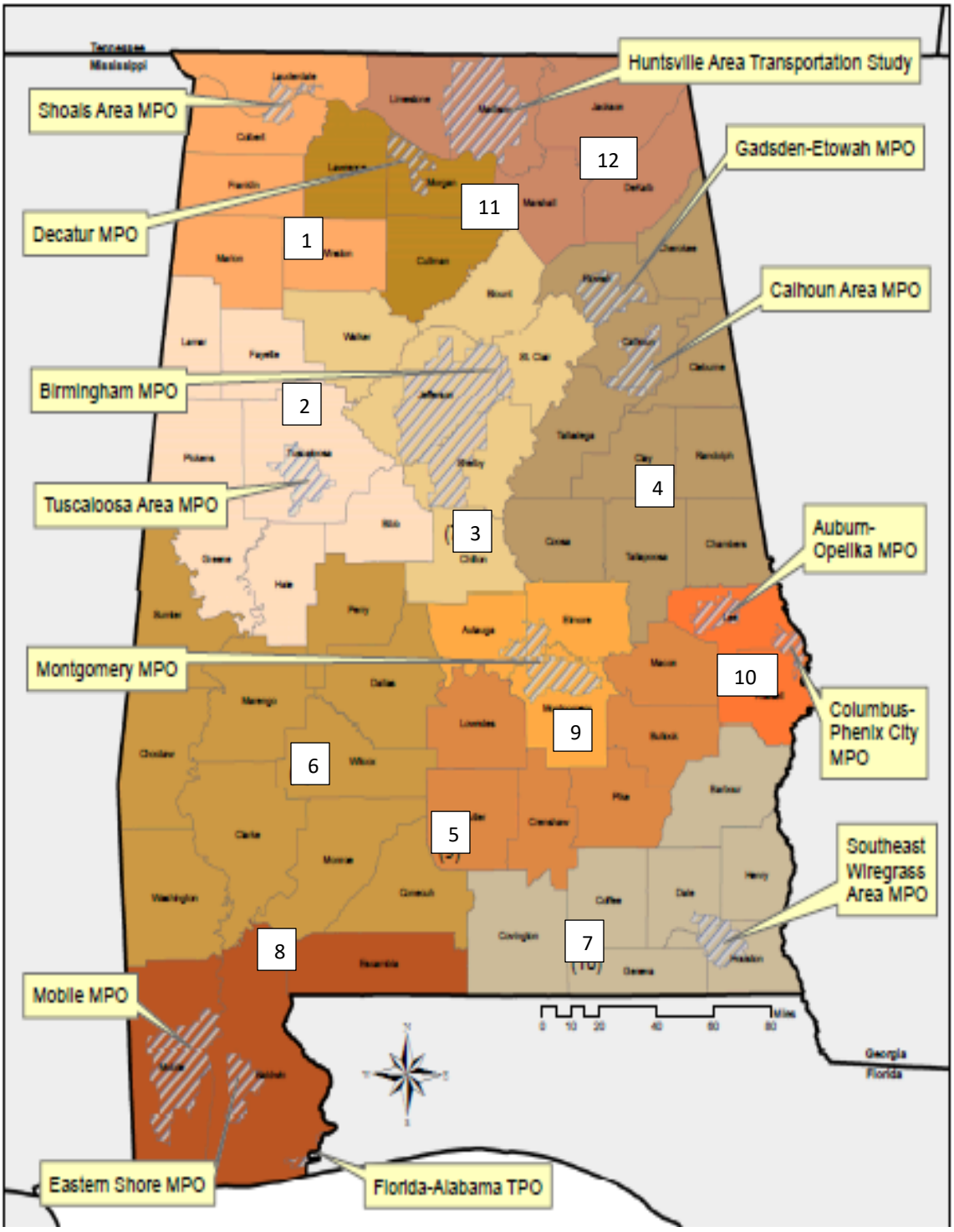
[11] MSCI is also the operator of a 51 mile-long line between Oxford, MS and Grand Junction, TN, and the 11 mile-long "luka" spur that connects BNSF to the Tri-State Commerce Park in the northwest corner of MS.

[12] The LRTP is sometimes titled a Regional Transportation Plan (RTP).

Table 1-2 Alabama Regional Organizations, MPOs and RPOs

	Regional Organization		Region Counties	Metropolitan Planning Organization	Rural Planning Organization
1	Northwest Alabama Council of Local Governments	NACOLG	Colbert, Franklin, Lauderdale, Marion, Wintson	Shoals Area MPO	Northwest Alabama RPO
2	West Alabama Regional Commission	WARC	Bibb, Fayette, Greene, Hale, Lamar, Pickens, Tuscaloosa	Tuscaloosa MPO	West Alabam RPO
3	Regional Planning Commission of Greater Birmingham	RPCGB	Blount, Chilton, Jefferson, Shelby, St. Clair, Walker	Birmingham MPO	Heart of Alabama RPO
4	East Alabama Regional Planning and Development Commission	EARPDC	Calhoun, Chambers, Cherokee, Clay, Cleburne, Coosa, Etowah, Talladega, Tallapoosa	Calhoun Area MPO Gadsden-Etowah MPO (staffed by City of Gadsden)	East Alabama RPO
5	South Central Alabama Development Commission	SCADC	Bullock, Butler, Crenshaw, Lowndes, Macin, Pike	n/a	South Central Alabama RPO
6	Alabama-Tombigbee Regional Commission	ATRC	Choctaw, Clarke, Conecuh, Dallas, Marengo, Monroe, Perry, Sumter, Washington, Wilcox	n/a	Alabama-Tombigbee RPO
7	Southeast Alabama Regional Planning and Development Commission	SEARPDC	Barbour, Coffee, Covington, Dale, Geneva, Henry, Houston	Southeast Wiregrass MPO (Dothan) (staffed by City of Dothan)	Southeast Alabama RPO
8	South Alabama Regional Planning Commission	SARPC	Baldwin, Escambia, Mobile	Mobile MPO Eastern Shore MPO (staffed by Baldwin Co) Florida-Alabama Tranportation Planning Organization	South Alabama RPO
9	Central Alabama Regional Planning and Development Commission	CARPDC	Autauga, Elmore, Montgomery	Montgomery MPO (staffed by City of Montgomery)	Central Alabama RPO
10	Lee-Russell Council of Governments	LRCOG	Lee, Russell	Auburn-Opelika MPO Columbus-Phenix City MPO (staffed by City of Columbus, GA)	Lee-Russell RPO
11	North-central Alabama Regional Council of Governments	NARCOG	Cullman, Lawrence, Morgan	Decatur MPO (includes small portion of Limestone Co.) (staffed by City of Decatur)	North-central Alabama RPO
12	Top of Alabama Regional Council of Governments	TARCOG	DeKalb, Jackson, Limestone, Madison, Marshall, Morgan	Huntsville MPO (Huntsville Area Transportation Study) (staffed by City of Huntsville)	Top of Alabama RPO

Figure 1-1 Alabama Regional Councils and MPOs



ALABAMA REGIONAL COUNCILS

1 North Alabama Council of Local Governments
2 West Alabama Regional Commission
3 Regional Planning Commission of Greater Birmingham
4 East Alabama Regional Planning and Development Commission
5 South Central Alabama Development Commission
6 Alabama-Tombigbee Regional Commission
7 Southeast Alabama Regional Planning and Development Commission
8 South Alabama Regional Planning Commission
9 Central Alabama Regional Planning and Development Commission
10 Lee-Russell Council of Governments (LRCOG)
11 North-central Alabama Regional Council of Governments
12 Top of Alabama Regional Council of Governments

Alabama Rural Planning Organizations consist of those areas within a regional council area that are not part of an MPO.

1.4 State Authority for Grants, Loans and Public-Private Financing

There is no Alabama state revenue exclusively dedicated to funding freight or passenger rail infrastructure or rail operations. Alabama does provide various tax credits that directly or indirectly fund or may fund rail or rail-related infrastructure per the legislation below:

- Railroad Modernization Act of 2019, Ala. Code Title 37, Chapter 11C
- Port facilities use tax credits, Ala. Code Title 40, Chapter 18, Article 18
- Alabama Jobs Act of 2015 [13]
- Alabama Incentives Modernization Act of 2019 [14]
- Growing Alabama Act of 2021, Ala. Code Title 40, Chapter 18, Article 19A

The Railroad Modernization Act of 2019.

The Railroad Modernization Act provided a 50 percent state income tax credit for tax years 2020-2022 to Class II and Class III railroads for eligible qualified railroad rehabilitation expenditures, up to $3,500 per mile of Alabama railroad track. The maximum aggregate tax credit amount was $3,700,000 per year.

The Alabama legislature in 2022 extended the Act's 2022 sunset through the 2027 tax year. The maximum tax credit was increased to $4,100 per mile of track and the maximum aggregate amount to $4,500,000 for the 2023-2027 tax years.

Port of Mobile looking south

Left to right on right side of River: Berths, TASD Riverfront, CSXT Sibert, and TASD Interchange Yards

Port Tax Credit (Ala. Code Title 40, Chapter 18, Article 18).

The Port Tax Credit, enacted in 2016, established a state income tax credit for use of state port facilities. The port tax credit may be claimed by port facility users transporting cargo by ship, cargo aircraft, or railroad through

[13] Some of the Act's provisions are within Ala. Code Title 40. The Act created many new Chapter 18 sections and amended multiple Chapter 21 sections.

[14] Ala. Code Title 40, various Chapter 18 sections, and various Chapter 10 sections of Ala. Code Title 41.

publicly owned port facilities and inland ports.[15] Port facility users seeking the credit must file for the credit and receive the approval of the *Renewal of Alabama Commission* created by Article 18 before the credit is allowed.[16] Economic development project agreements between companies and the state may provide for allocation of port credits made by the Governor and approved by the Commission.

Economic Development-Based Tax Credits

(The Alabama Jobs Act of 2015, the Incentives Modernization Act of 2019, and the Growing Alabama Act of 2021).

South Alabama Megasite

These Acts established economic development-based tax credits, some of which have been used to develop rail infrastructure to serve new industry. The Growing Alabama Tax Credit provides a tax credit equal to the contribution of funds for site preparation and public infrastructure needs of existing industrial sites owned by a local economic development organization, such as an industrial development authority or other nonprofit economic development organization. Projects must be approved by the Department of Commerce and the Renewal of Alabama Commission. Table 1-3 identifies rail-related tax credits.

Table 1-3 Rail-served Sites or Infrastructure Developed Using Economic Development Tax Credits

Location	Amount	Rail Investment / Railroad
South Alabama Megasite	$7,000,000 [1]	7,000-ft spur to 3,009-acre site / CSXT
Little Canoe Creek Megasite also known as NEAR Megasite	$8,700,000 [2]	1,100-acre site development / NS (A-USA corridor)
Montgomery ICTF (ASPA)	$12,500,000	272-acre site / CSXT

1 Portion of 2019 $7M used for rail bed, and $5.5M used for track structure in 2021.

2 2020 Phase 1 $2.7M, 2021 Phase 2 $3M, and 2023 Phase 3 $3M.

[15] One-time tax credit of up to $50 per TEU, $3 per net ton of bulk cargo, or $0.04 per net kilogram for air cargo. New distribution or warehouse shippers investing at least $20 million and creating at least 75 net new jobs are eligible to receive up to $100 per TEU over a three-year period if entering into a project agreement with the state.

[16] The Commission consists of the Governor's Director of Finance, Secretary of Commerce, Chair of the House Ways and Means Education Committee and Chair of the Senate Finance and Taxation Education Committee, or their designees, three gubernatorial appointees, an appointee of the Speaker of the House and an appointee of the Senate President Pro Tempore.

1.5 Summary of Freight and Passenger Rail Services Initiatives and Plans

The development of the AL SRP considered the rail service initiatives and plans of ALDOT, ASPA, MPOs, RPOs and municipalities, and those of the SRC, Amtrak, and private freight railroads. ALDOT's primary initiatives and plans are centered on the Section 130 Program and ALDOT's support of the initiatives and plans of other state agencies and local governments. ASPA plans with respect to TASD and Huntsville & Madison County Railroad Authority plans with respect to HCMR, the only directly publicly sponsored Alabama railroads, were considered in development of the AL SRP, as were other rail-related ASPA plans. MPO and RPO rail-related initiatives and plans are relatively minor or generally supportive of plans that are the purview of other agencies or organizations. Multiple local governments have initiated planning efforts to develop grade separations at crossings that are frequently blocked. Chapter 3 and Chapter 4 respectively provide for passenger and freight plan details considered in the development of this Plan.

Passenger Rail Initiatives and Plans. See Chapter 3 for additional detail.

The identification of state and local funding that support both capital and particularly operations are challenges to development of increasing or improving existing Alabama passenger rail service or implementing new services.

Passenger rail service east of New Orleans along the Gulf Coast was discontinued after Hurricane Katrina in 2005. Re-establishing New Orleans-Mobile service along the Gulf Coast is the SRC's current first priority.

Gulf Coast service is poised to resume in 2025. Amtrak, CSXT, NS, and ASPA reached a settlement agreement in connection with passenger service on the New Orleans-Mobile corridor. The

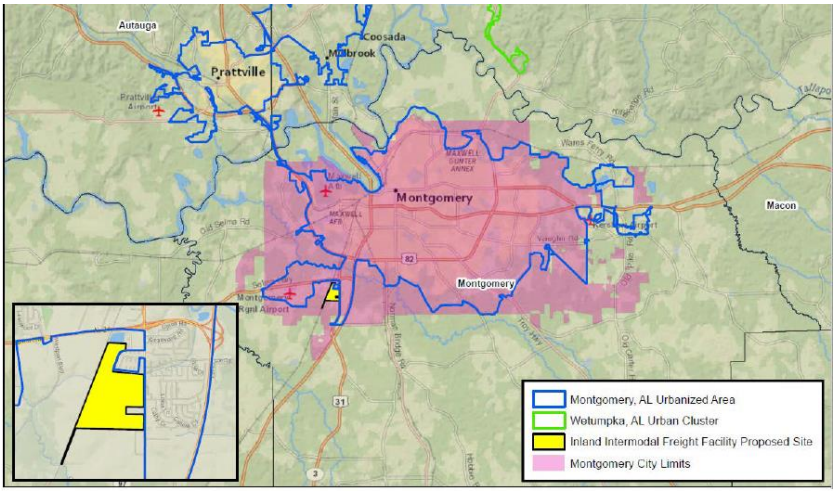
Surface Transportation Board is currently holding in abeyance taking action during execution of the conditions identified in the agreement. Construction at the downtown Mobile station is expected to be completed in 2025. New Orleans-Mobile line capacity improvements, their expense, and source of funding if improvements exceed the $33 million grant and state matches are yet to be identified.

Amtrak's *2022 Vision* as it directly concerns Alabama beyond re-establishing Gulf Coast service, is a second daily train between Birmingham and Atlanta, and new Atlanta-Montgomery and Atlanta-Nashville rail service. Amtrak, however, has not committed to new Alabama passenger services other than re-establishing New Orleans-Mobile passenger service.

SRC has supported new Interstate 20 Corridor Meridian, MS-east Texas passenger service that would connect to Amtrak's *Crescent* service in Meridian. Another SRC Alabama priority is re-establishing Birmingham-Montgomery-Mobile passenger rail service. Birmingham has studied commuter service operated on the line in tandem with intercity service. The Huntsville MPO LRTP proposes a 108 mile-long extension of that intercity service via Decatur to Huntsville. The next Huntsville MPO LRTP update will include proposing rail passenger service east of Huntsville to connect at Bridgeport to Amtrak's *2022 Vision* Atlanta-Nashville service.

ASPA Initiatives and Plans. See Section 4.1 for additional detail.

Location of new Montgomery ICTF



ASPA shippers are increasing both freight and intermodal rail traffic supporting significant cargo traffic growth through the seaport. Traffic growth in 2022 was robust with the Port of Mobile leading the nation's 25 largest seaports in five-year compound annual growth of container traffic, surpassing Jacksonville, FL as the 17th largest in import container volume. Intermodal rail container traffic constituted about five percent of total port rail traffic and ten percent of total rail traffic in 2022. Rail container traffic is currently primarily import traffic destined to Chicago intermodal yards via Canadian National Railway (CN) and CSXT, and Memphis via CN.

Planned ASPA intermodal rail projects consist of:

- Construction of a new 2022 CRISI-grant funded Montgomery ICTF to be served by CSXT
- Staged Garrows Bend ICTF expansions

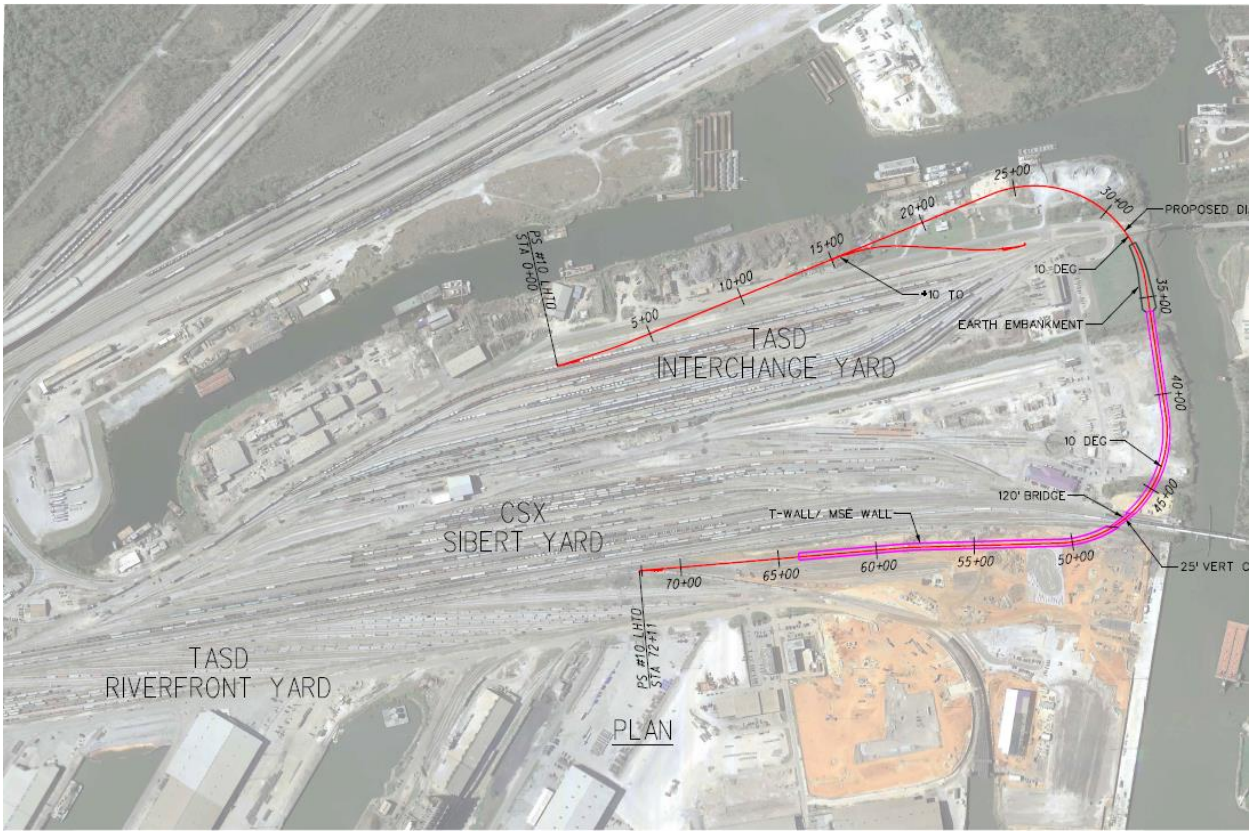
- Construction of a 3,000 foot-long motor vehicle bridge directly connecting the dock-side container APM Terminal to the ICTF
- In the long term, expansion of the Birmingham Regional Intermodal Facility and construction of a second north Alabama ICTF served by NS

An ASPA subsidiary Terminal Railway Alabama State Docks (TASD) project would increase Chickasaw Lead capacity. Another TASD project would increase TASD Interchange Yard capacity and reduce the risk of rising sea levels by increasing the elevation of the tracks within the yard.

Three ASPA-proposed projects support New Orleans-Mobile passenger rail service by increasing rail capacity at congested locations. The additional capacity these projects would provide would also improve freight rail operations and safety:

- Three Mile Creek flyover
- Bob Hope Siding extension
- Virginia Street Lead Track improvement

Three Mile Creek flyover of CSXT's Sibert Yard connecting TASD's Interchange and Riverfront Yards



ALDOT Initiatives and Plans. See Section 4.2 for additional detail.

ALDOT, as previously mentioned, administers the Section 130 Program, a set-aside from federal Highway Safety Improvement Program funds. The Infrastructure Investment and Jobs Act of 2021 (IIJA) (also known as the Bipartisan Infrastructure Law, BIL) appropriated a total of $245

million annually to the Section 130 Program for the 2022-2026 period. The 2022 Alabama apportionment is $5.05 million, the 19th highest allocation among the states.

New crossing signal installation

ALDOT currently has programmed 42 Section 130 Program projects estimated to cost $10,355,000. Approximately 95 percent of Alabama Section 130 construction funds are used for new crossing signal installations or improvements to existing crossing signal installations.

ALDOT provides guidance and partners with local governments in support of projects seeking to mitigate highway traffic delay due to blocked crossings. Nine proposed grade separation projects in various stages of development are identified in Subsection 4.4.1.

Freight Railroads. See Section 4.3 for additional detail.

Short Lines. There are a number of Alabama short line railroad projects where grants have been applied for or recently awarded. These projects---notably rail replacement and bridge deficiency elimination---are of types that Alabama short lines are expected to continue to pursue. Short lines in some instances have new capacity and infrastructure needs to accommodate new and evolving customer needs.

Some Alabama short lines, like many U.S. short lines, struggle with the relatively large capital investments necessary to sustain long term operation. Rail replacement and major bridge maintenance, particularly involving timber bridges, are large expense long-term capital investments. Crossties are an overall long term capital investment with less service life than rail and bridges. Crossties renewal should be a more a periodic ongoing capital expense than large but infrequent rail and bridge capital expenses. Extended deferral of crosstie replacement may necessitate a large expense to simple maintain continuing operation.

The increase in the industry standard maximum carload weight to 286,000 pounds overstresses the smaller sized rail often found on short lines, shortening its service life. Smaller sized rail is typically jointed rail instead of the general industry standard continuous welded rail. Rail joints, like small-sized rail, are stressed by heavier carloads, increasing inspection and maintenance expenses.

Class I railroads have relatively few timber bridges, steel and concrete structures being more economical for their heavier traffic volumes, with their lighter volume lines where timber bridges where more prevalent having been abandoned or spun off to short lines. The service lives of some short line bridges, especially timber bridges, are approaching their end given less investment over the past 30 years since the lines were shed by Class I railroads.

Timber deck timber trestle

Alabama's Railroad Modernization tax credit though not limited to crosstie replacement is likely used for crossties and smaller capital investment investments. The Port Tax Credit promotes rail transportation through ports and thereby indirectly supports short line railroads. Economic development tax credits may be used to improve or develop new short line rail infrastructure.

Class I Railroads. Class I railroads typically keep the projects they plan and fund themselves private for competitive reasons. Capacity improvements have generally supported intermodal rail traffic that has increased immensely over the past 40 years and has resumed its increase after the COVID-19 pandemic. CSXT over the past two decades has made substantial capacity improvements to its heavy intermodal rail traffic Nashville-Birmingham-LaGrange-Waycross line. NS Birmingham-Meridian line is a heavy intermodal rail traffic line likely to see capacity improvements. NS has sought to improve capacity on it line from west of Birmingham to Mobile. See subsequent A-USA discussion for comment on NS improvements.

Tuscaloosa 2nd Avenue overpass

Blocked Crossings and New Grade Separations. Public concern with blocked crossings increased with the implementation of PSR adoption by railroads. Blocked crossings have been the subject of relatively recent Congressional action. The FAST Act of 2015 amended the Section 130 Program to include "projects at grade crossings to eliminate hazards posed by blocked crossings due to idling trains". The IIJA codified a requirement that FRA maintain a blocked crossing portal to receive information from the public regarding blocked crossings.

There have been many Alabama grant applications and some grant awards concerning new grade separations. These have concerned Class I railroad lines, blocked crossings rarely being of public concern on short lines. New grade separation projects span the gamut from grants and

applications for construction (CR52 Pelham) through engineering (SR25 Calara, Sheffield), feasibility studies (Birmingham-Trussville, Fort Payne, York) and aspirationally identified projects (downtown Mobile).

A-USA Corridor. See Subsection 4.3.4 for additional detail.

The Alabama-USA (A-USA) Corridor was proposed as a public-private collaborative effort among Alabama government agencies, NS, and the federal government. A 2022 CRISI grant application for its Phase I was not approved. It is included herein as an example of the type of Class I railroad grants that may be expected in the future, either at its large scale or by smaller elements, especially as concerns rail service to and from the Port of Mobile.

The $231.6 million A-USA Corridor proposal, one-half funded by NS, proposed to improve the NS route between Mobile and the NS Birmingham Rail Intermodal Facility (RIF) in McCalla and NS rail routes within central Alabama, providing Port of Mobile gateway access to the NS intermodal rail network. Its proposed Phase I projects consist of:

- Signalization 89 miles of the 250-mile-long route between Bessemer and Mobile
- Creating four 12,000 foot-long passing sidings, two where track would be signalized and two with standalone signalization (dispatcher-controlled power-operated switches at ends of sidings in otherwise non-signalized territory.
- New lead and connecting tracks that relocate switching and staging operations from main to yard and siding tracks
- Birmingham RIF expansion, and new Bessemer crossovers and set off track necessary to expedite Mobile-Birmingham intermodal rail service.

NS announced on August 1, 2024 it is making $200 million in improvements to its congested 3-B corridor that links Burstall west of Birmingham and Mobile, too recent for inclusion in this Plan. The improvements include 21+ miles of new track including passing sidings, yard tracks and terminal improvements with work to be completed by 2027.

NORFOLK SOUTHERN

STRATEGIC INFRASTRUCTURE INVESTMENTS DRIVE ECONOMIC GROWTH IN ALABAMA

21+
miles of new track construction

40+
local customers supported

1.6 Plan Preparation and State Approval

The federal Passenger Rail Investment and Improvement Act of 2008 (PRIIA) required states to establish or designate a "State Rail Transportation Authority" (SRTA) responsible for State Rail Plans and a "State Rail Plan Approval Authority" (SRPAA). ALDOT is the designated SRTA responsible for preparing, maintaining, coordinating and administering the AL SRP. The ALDOT Transportation Director is the designated SRPAA that reviews and approves the AL SRP. The Rail Programs Administrator of the Design Bureau within ALDOT coordinated this 2023 update of the 2014 AL SRP.

One of the purposes of the AL SRP is to satisfy eligibility requirements enabling ALDOT to receive federal Local Rail Freight Assistance funding established by PRIIA. The State of Alabama is in compliance with the eligibility requirements stipulated in 49 USC §221022 – Eligibility, of Title 49 Chapter 221, Local Rail Freight Assistance.

Chapter 2: Alabama's Existing Rail System

Chapter 2 provides an overview and inventory of Alabama's existing rail system as a baseline for planning and decision-making. It describes the Alabama rail network and Alabama railroads, safety and security, and general and railroad industry trends and forecasts. Opportunities and plans to meet passenger and freight rail needs are identified in Chapters 3 and 4 respectively.

The AL SRP generally uses the Standard Carrier Alpha Code (SCAC), also known as a railroad reporting marks, as railroad abbreviations.[1] Other than SCAC abbreviations are used in instances where the railroad is not a common carrier or where an abbreviation other than a SCAC abbreviation is the commonly used abbreviation.

2.1 Network Overview

Figure 2-1 depicts the Alabama rail network. The figure identifies Class I and Class II line operators. Class I and Class II railroad trackage or haulage rights are identified on lines other than those they operate.[2]

The Alabama rail network consists of 3,218 physical route-miles operated by four Class I, a single Class II, and 22 Class III freight railroads. A fifth Class I railroad, Canadian Pacific Kansas City (CPKC), has an Alabama presence via haulage and trackage rights. The Class II and Class III railroads collectively lease 296 Alabama route-miles of the 764 route-miles that they operate. There are 743 route-miles of trackage rights that allow one railroad to operate trains over the line of another. Table 2-1 identifies Alabama rail network route-miles by railroad.

Class I passenger railroad Amtrak operates the New York City-New Orleans, LS "*Crescent*" train that currently provides the only rail passenger service in Alabama. The *Crescent* operates on Norfolk Southern Railway Company (NS) track across central Alabama. *Crescent* service consists of one train in each direction daily with station stops at Anniston, Birmingham, and Tuscaloosa. An Amtrak-operated passenger train that would operate daily twice each way between New Orleans and Mobile is expected to begin operations in 2025. The trains would operate on CSX Transportation (CSXT) track within Alabama. There are two tourist-excursion railroads, each affiliated with a railroad museum, that primarily or exclusively operate trains on short track segments not used by and isolated from freight railroad operations.

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[1] SCAC are unique two to four letter codes that identify transportation companies.

[2] Class" followed by Roman numeral refers to railroad size based on operating revenue. ("Class" followed by an Arabic numeral refers to track standards established by FRA.) The STB, to which Congress has delegated some of its Interstate Commerce regulatory authority, has established revenue thresholds, periodically adjusted for inflation, for three sizes of railroad common carriers. Class I railroads are those railroads having at least $1.054 billion in 2023 dollar revenue. Class II railroads are defined as railroads having between $47.3 million and $1.054 billion in revenue. Class III railroads are those railroads with less than $47.3 million in revenue.

Figure 2-1 Alabama Rail Network

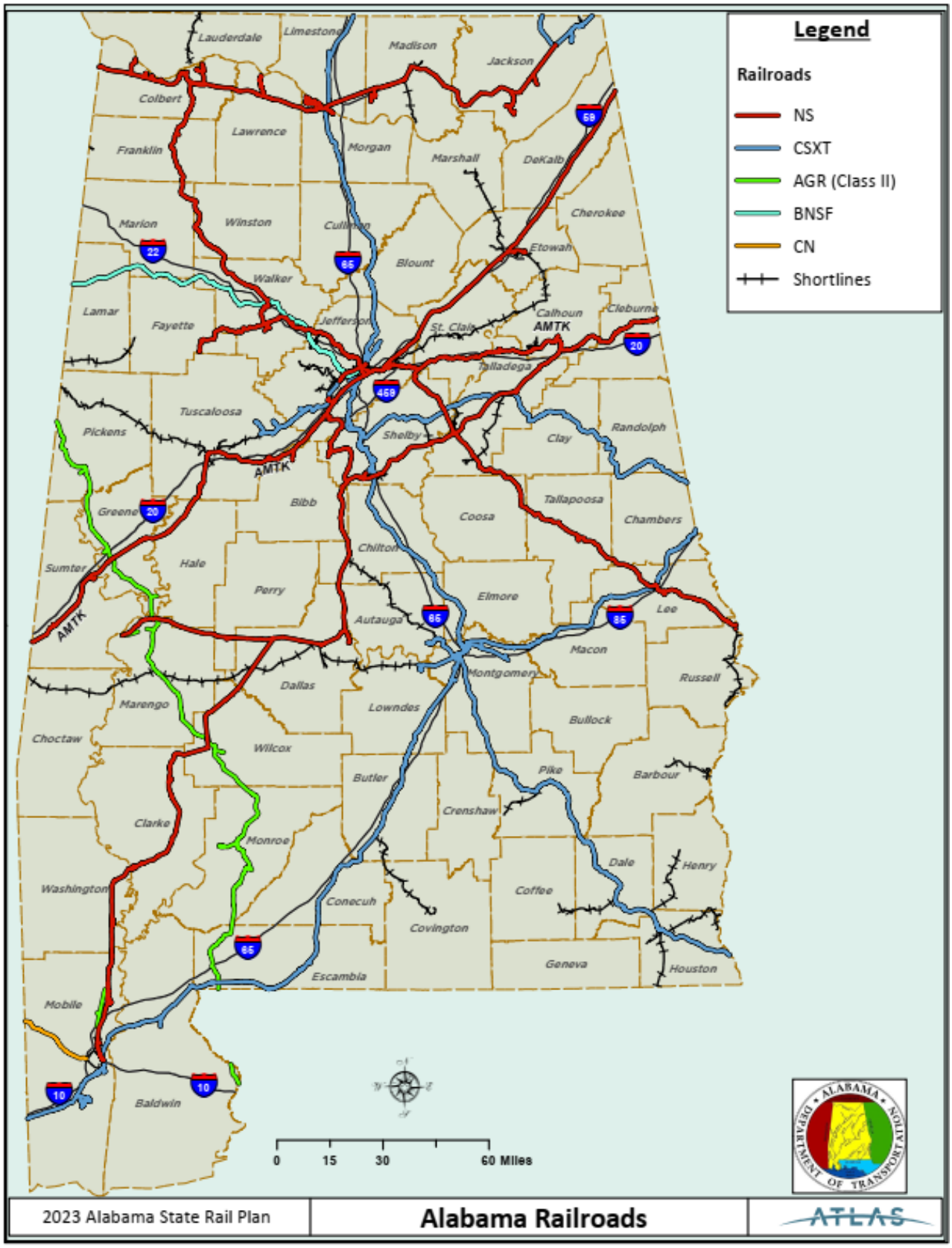


Table 2-1 Alabama Railroad Route Miles

Class I Railroads [1]	**Railroad** [2]	**Owned**	**Leased**	**Operating Rights**	**Total**
Amtrak	AMTK			233	233
BNSF Railway	BNSF	105		126	231
Canadian National	CN	22			22
Canadian Pacific Kansas City	CPKC			44	44
CSX Transportation	CSXT	900		111	1,011
Norfolk Southern	NS	1,212 [3]		92	1,304
Subtotals *excluding Amtrak*		***2,239***	***0***	***606***	***2,612***
Class II Alabama & Gulf Coast	AGR	***233***	***17*** [4]	***113*** [5]	***363***
Freight Class III (Short lines)					
Alabama & Tennessee River Rwy	*ATN*	119			119
Alabama Export Railroad [6]	*ALE*		12 [7]		12
Alabama Southern Railroad	ABS		68 [8]		68
Alabama Warrior Railroad	*ABWR*	3			3
Autauga Northern Railroad	*AUT*		44 [8]		44
The Bay Line Railroad	BAYL	44		8	44
Birmingham Terminal Railway	*BHRR*	43			43
CG Railway [9]	CGR	Rail Barge Service to Mexico			
Chattahoochee Bay Railroad	CHAT	Operated as part of BAYL			
Columbus & Chattahoochee RR	*CCH*		27 [10]		27
Conecuh Valley Railway	*COEH*	13			14
Childersburg Line	*RJAL*		11 [11]		11
Eastern Alabama Railway	*EARY*	27			27
Georgia Southwestern Railroad	GSWR	17			17
Heart of Georgia Railroad	HOG		2 [12]		
Huntsville & Madison Co. RR Auth	*HMCR*	14	1 [13]		15
Luxapalila Valley Railroad	LXVR	25			25
Meridian & Bigbee Railroad	MNBR	33	94 [14]	15 [15]	145
Mississippi Central Railroad	MSCI		2 [16]		2
Mississippi Export Railroad	MSE	Haulage Only			
Sequatchie Valley Railroad	SQSC	3			3
Southern Electric Railroad	SERX [17]	12			12
Tennessee Southern Railroad	TSRR	18			18
Terminal Rwy Ala State Docks	*TASD*	11 [18]		1 [19]	12
Three Notch Railway	*TNHR*	34	2 [20]		36
Wiregrass Central Railroad	*WGCR*	20			20
Subtotals (Short lines)		***436***	***279***	***24***	***764***
Subtotal Excursion Railroads [21]		***11***	***0***	***0***	***0***
Heart of Dixie RR Museum	*HODM*	6			6
North Alabama RR Museum	*NARM*	5			5
Totals *excluding Amtrak*		**2,919**	**296**	**743**	**3,961**

Table notes on the following page.

Table 2-1 (previous page) notes:

1 Source for Class I railroads 2021 R-1 (KCS for CPKC because 2021 R-1 reporting precedes CP-KCS merger.
2 *Italic font* identifies short line railroads wholly located within Alabama. Red font identifies an abbreviation that is not an AAR railroad reporting mark. Yellow highlight identifies Watco Companies railroads. (Locomotives used by Watco have WAMX, Webb Asset Management, reporting marks.) Orange highlight identifies G&W railroads. Blue highlight identifies Patriot Rail railroads.
3 Includes 145 route-miles Alabama Great Southern RR (AGS, Bridgeport-Birmingham-New Orleans), 134 route-miles Central of Georgia RR (CGA, Phenix City-Leeds) and five route-miles of Tennessee, Alabama & Georgia Railway (TAG) portions of those Norfolk Southern subsidiaries within Alabama,
4 Mobile-Axis spur line leased by BNSF to AGR.
5 AGR exercise of 108 miles BNSF trackage rights on NS Kimbrough-Mobile.
6 MSE subsidiary.
7 Leased to ALE by CN.
8 Alabama portion of the Columbus, MS-Tuscaloosa line leased to ABS by CPKC (ABS route-miles excludes Fox Branch). ABS has trackage rights on CPKC between Columbus and Artesia, MS.
9 Leased to CCH by NS.
10 G&W-SEACOR Holdings joint venture. CGR, served by TASD, does not own or operate any AL track-miles.
11 Leased by the City of Childersburg Redevelopment Authority to RJAL.
12 Leased by the Georgia Department of Transportation to HOG. Not included as an Alabama railroad or as Alabama route-miles because the HOG within Alabama has been out of service for decades.
13 HMCR leases and operates on an industrial park lead connection to CSXT's S&NA North Subdivision.
14 Burkeville-Myrtlewood leased by CSXT to MNBR that has been terminated with route now operated by CSXT.
15 Montgomery-Burkeville trackage rights on CSXT.
16 Alabama portion of the 41.5 mile-long line Corinth, MS -Red Bay, AL leased by the Northwest Mississippi-North Alabama Railroad Authority to MCSI that MSCI operates as its Redmont Division.
17 Southern Electric Railroad, a Southern Company subsidiary, is not a common carrier.
18 TASD operates 75.5 track-miles. Track miles is the total number of miles of all types of tracks, i.e., main, siding, storage and yard. A route-mile has at least one main track but may have various other types of tracks.
19 Owned by Port of Chickasaw and John B. Walton.
20 Former Central of Georgia track leased by the Alabama Electric Cooperative to TNHR.
21 The museum railroads are not common carriers.

The Alabama Class I network consists of 2,845 route-miles including 606 route-miles of Class I railroad trackage rights on other railroads. Rival Class I railroads NS and CSXT operate 1,212 and 900 mile-rail networks in Alabama respectively, excluding trackage rights with the networks of both railroads extending throughout most of the state. Birmingham is the easternmost U.S. terminus of western U.S. railroad BNSF Railway Company (BNSF). [3]

Mobile is the eastern terminus of a Canadian National Railway Company (CN) line branching from CN's Chicago-New Orleans trunk line at Jackson, MS. Canadian Pacific Kansas City Railway (CPKC), newly formed in 2023 by the merger of Canadian Pacific (CP) and Kansas City Southern (KCS) Railways, has haulage rights on the Hattiesburg-Mobile portion of the CN line.

[3] National Rail Network Maps are available here: *https://www.arcgis.com/home/item.html?id=96ec03e4fc8546bd8a864e39a2c3fc41*

Class II railroads are commonly referred to as regional railroads. The Alabama & Gulf Coast Railway (AGR) is the sole Class II railroad operating in Alabama. Its 265 mile-long principal line, 203 miles of which are within Alabama, connects Columbus, MS and Pensacola, FL via Kimbrough, AL. Kimbrough, an Alabama locale where the AGR crosses the NS Selma-Mobile line at grade, is located four miles north of the Town of Pine Hill. Pine Hill is located 45 miles southwest of Selma. AGR has overhead trackage rights on NS between Kimbrough and Mobile. AGR uses the trackage rights for access to the Port of Mobile and the AGR Mobile-Axis, AL branch line that it leases from BNSF.

Figure 2-2 identifies Class III railroads operating within Alabama and, where applicable, the owning railroad that leases the line to the operating Class III railroad.

Class III railroads are typically referred to as short line railroads. Most Alabama short line railroads operate on track previously divested by Class I railroads.[4] Thirteen short line railroads or segments of short line railroads within Alabama are spur lines with one terminus that does not connect to another railroad.[5] Many of the short line spurs are remnants of former Class I railroad through routes that became spurs because of abandonment prior to Class I railroad divestiture.[6]

The Alabama short line railroad network consists of 22 common carrier short lines that operate 718 route-miles excluding trackage rights.[7,8] All but four Alabama short lines are owned by various-sized railroad conglomerates. Short line railroad holding company Genesee & Wyoming, Inc (G&W), the largest short line owner in North America, owns 11 Alabama short lines as well as the Class II railroad, AGR.[9] Watco Companies LLC owns four short lines and Patriot Rail owns two short lines operating within Alabama. Three other short line holding companies, OmniTRAX, Inc.; Ironhorse Resources, Inc.; and R.J. Corman Railroad Group LLC; each own one short line railroad operating in Alabama.

[4] Exceptions include TASD, SERX, MNBR and the original portion of the BAYL between Dothan and Panama City, FL.

[5] The Birmingham-Attalla-Guntersville ATN is included among the 11 because its Attala-Guntersville segment is a spur.

[6] The 1980 Staggers Act significantly deregulated the U.S. railroad industry. Class I railroad abandonments and divestitures in Alabama resulting in Alabama short lines were largely post-Staggers Act and primarily occurred in the 1984-1993 period.

[7] Does not include common carriers MSE or CG that do not own or operate any track within AL, or the HOG whose Alabama track has been out of service for decades.

[8] See Subsection *2.1.3 Class III Railroads* concerning possible changes concerning short line MNBR.

[9] The 11 G&W Alabama short lines do not include the CG Railway railcar ferry as an Alabama railroad. They do include short line CHAT as a separate Alabama railroad though CHAT is operated as part of BAYL.

Segments located at the spur end of three Alabama short line railroads are inactive or out of service are as follow.[10]

- The 11 westernmost miles of the 17 mile-long segment of G&W subsidiary Georgia Southwestern Railroad (GSWR) within Alabama are inactive or out of service. The spur line extends west from Cuthbert, GA into Alabama at Eufaula. The line ends at the location of a former lead track to the 286-acre site of a former Louisiana-Pacific particleboard plant that ceased operating in 2001.
- The 10 westernmost miles of the 13.3 mile-long spur line G&W subsidiary Conecuh Valley Railroad (COEH) that connects to CSXT in Troy are inactive or out of service. Birdsong Peanut at the end of the spur in Goshen, AL ceased use of rail more than a decade ago.
- The 41.5 mile-long Corinth, MS-Red Bay, AL spur line that extends two miles into Alabama, operated as the Redmont Division of 115 mile-long Patriot Rail subsidiary Mississippi Central Railroad (MCSI), is currently out of service pending track rehabilitation including crosstie replacement and other rail infrastructure work required for safe rail operations. The line's traffic has been diverted to truck until significant investment is available to restore the line to service.[11]

Trackage Rights vs Haulage Agreements.

Trackage rights, the rights of a railroad to operate its trains over the track of another railroad, are subject to Surface Transportation Board (STB) jurisdiction. The landlord owner of the track receives compensation from the tenant railroad for use of the track. Trackage rights, including those in Alabama, are typically "overhead" or "bridge" type rights that permit the tenant railroad to operate trains over the

BNSF locomotives on CSXT west of Harpersville

[10] The few miles of HOG RR within Alabama that have been out of service for decades are not included.

[11] MCSI consists of the Redmont Division line and two northern Mississippi spur lines that connect to BNSF.

landlord railroad's line but do not permit tenant railroad access to the landlord railroad's customers located along the line.[12]

Haulage agreements negotiated between railroads, where the one railroad carries traffic for another railroad on its track, have been increasing. The host railroad granting haulage rights retains direct control of train operations and provides train crews and sometimes locomotives. The railroad receiving haulage rights markets rail service that includes movement over the host railroad. It negotiates a single rate with customers for transportation over its and the host railroad's route. The host railroad, however, is not privy to the contractual details of the haulage railroad's agreement with its customers. The host railroad is typically compensated by the tenant railroad via a cents per unit payment, commonly cents per railcar-mile or ton-mile.

Shippers like haulage because it eliminates negotiating and dealing with the host railroad, and any haggling with the host railroad when rates or service changes are sought. Railroads like haulage because haulage is outside of STB jurisdiction and because they are not required to publicly report haulage contract terms. Haulage rights host railroad employees are not entitled to traditional railroad labor protections, but employees usually gain because of the additional haulage traffic.

Alabama Railroad Trackage Rights and Haulage Agreements.

Note that Figure 2-1 identifies Class I and Class II railroad trackage or haulage rights on lines other than those they operate. Trackage rights may be retained by railroads on lines that have been sold or are being leased to other railroads. A railroad may not choose to exercise its trackage rights. A railroad may have both trackage rights and a haulage agreement hosted on the same railroad line. The most important overhead trackage rights in Alabama consist of:

- CSXT (Nashville-Birmingham line) on NS over the Tennessee River Bridge in Decatur
- NS (Chattanooga-Memphis line) on CSXT between Chattanooga and Bridgeport including over the Tennessee River Bridge in Bridgeport
- AGR exercising of BNSF trackage rights on NS between Kimbrough and Terminal Junction [13]
- AGR exercising of BNSF trackage rights on TASD between Terminal Junction and the AGR (BNSF) Yard in Mobile that AGR (BNSF) leases from TASD

[12] "Local trackage rights", colloquially "full service" trackage rights, permit the tenant railroad to serve rail customers along the line.

[13] Terminal Junction is located south of Chickasaw in northern Mobile.

Other trackage rights within Alabama, SCAC-alphabetically ordered, include:

- AGR on CSXT between Mrytlewood and Linden
- BAYL (Bay Line Railroad) on CSXT at Dothan between BAYL's Grimes-Abbeville spur line and its Dothan-Panama City line
- BNSF on the Columbus, MS-Kimbrough line that AGR acquired from BNSF
- BNSF on the Mobile-Axis spur that BNSF leases to AGR
- CPKC on CSXT between Brookwood and Birmingham [14]
- CSXT on the Atmore-Hybart portion of the AGR [15]
- CSXT on Alabama & Tennessee River Railway (ATN) between Birmingham and Gadsden
- CSXT on Meridian & Bigbee (MNBR) between Burkeville and Meridian, MS [16]
- MNBR over CPKC between Myrtlewood and AL-MS state line (extends to Meridian)
- NS over CSXT between Prattville and Montgomery
- NS over AGR between Kimbrough and Columbus, MS that NS acquired from a BNSF predecessor prior to the BNSF sale of the line to AGR

Haulage agreements/rights where the tenant railroad does not also have trackage rights include:

- BNSF intermodal container on CSXT between Birmingham and the Fairburn Intermodal Yard in suburban Atlanta via LaGrange, GA (145 of the total 209 miles are within AL)
- CPKC on CN and on CN leasee Alabama Export Railroad (ALE) between Hattiesburg, MS and Mobile
- CSXT over MNBR between Burkeville (west of Montgomery) and Meridian, MS [16]
- Mississippi Export Railroad (MSE) on CN, and on CN leasee and MSE subsidiary ALE, between the CN-MSE interchange at Evanston, MS and NS in Mobile

[14] CSXT refused assignment of these rights to ABS, lessor of the CPKC-owned line from MS through Tuscaloosa to Brookwood.

[15] Hybart is a locale located approximately 60 miles north of Atmore where the AGR connects to and overpasses CSXT.

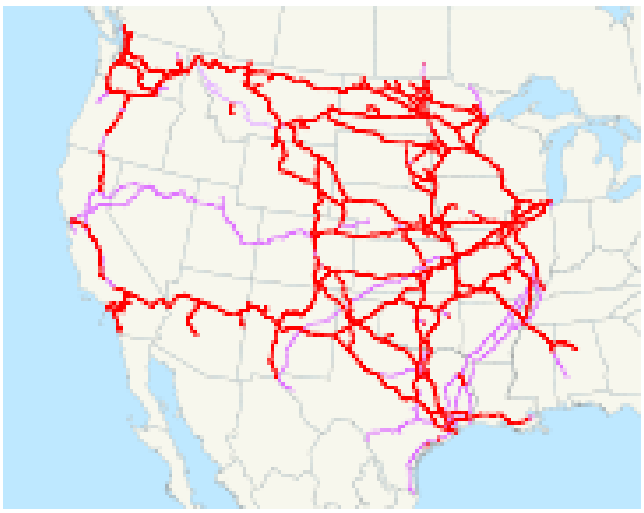
[16] See Subsection *2.1.3 Class III (Short Line) Railroads* about developments concerning MNBR.

2.1.1 Class I Freight Railroads

BNSF Railway Company.

BNSF (http://www.bnsf.com/), a wholly owned subsidiary of Berkshire Hathaway, Inc. (NYSE ticker BRK) headquartered in Ft. Worth, TX, operates 32,500 route-miles in 28 states and three Canadian provinces. The signalized BNSF Memphis-Birmingham line, 105 miles of which are within Alabama, is used by approximately 10 trains per day. Birmingham is the easternmost terminus of any BNSF line. BNSF's Finley Boulevard Birmingham auto facility, located at its East Thomas Yard, is a vehicle distribution center.

BNSF Network *(trackage rights purple)*



Southeastern Portion of BNSF Network

Partner RRs green, Haulage on CSXT dotted red

BNSF has a haulage agreement with CSXT for movement of intermodal container traffic between Birmingham and CSXT's suburban Atlanta Fairburn Intermodal Terminal. BNSF intermodal container traffic on its Alabama line is run-through traffic.[17]

BNSF connects to AGR via a BNSF Amory, MS-Columbus, MS branch from its Memphis-Birmingham line. BNSF has trackage and haulage with Class II railroad AGR between Amory, MS, and Mobile.[18] Powder River Basin coal from Wyoming mines figures prominently in BNSF traffic to Alabama, including coal to Alabama Power's Miller Electric Generating Plant.[19] BNSF coal traffic in Alabama constitutes more carloads than any other BNSF commodity.

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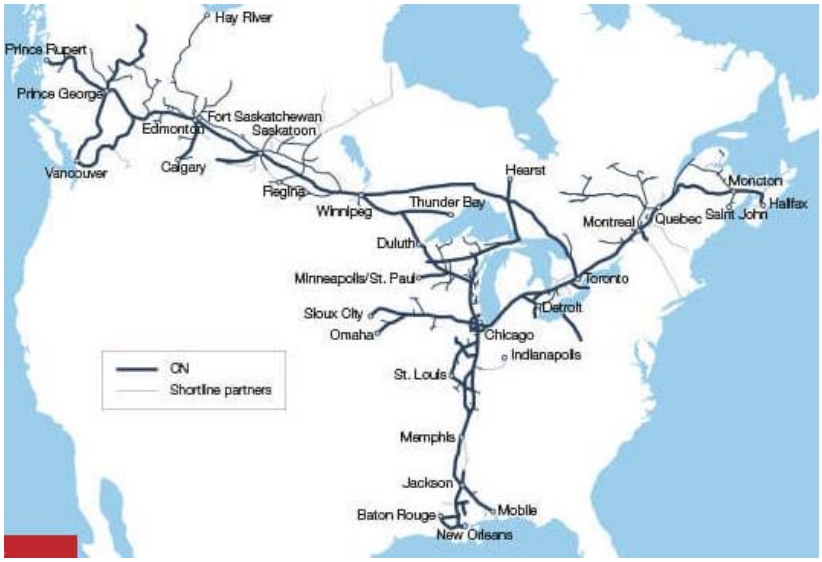
[17] BNSF provided Birmingham container intermodal service prior to the CSXT haulage agreement. BNSF north Alabama originating or terminating intermodal traffic is drayed to or from Memphis, TN, or perhaps Atlanta.

[18] Trackage rights Columbus, MS-Kimbrough, AL on and Mobile-Axis branch leased to AGR.

[19] Powder River Basin coal is low-sulfur sub-bituminous coal valued for its low sulfur content when used to generate electricity.

Canadian National Railway Company.

CN Network



CN (https://www.cn.ca/en/), a publicly traded company (NYSE ticker CNI) headquartered in Montreal, Canada, operates 20,400 route-miles in Canada and the US.[20] CN's U.S. network south of Chicago consists of the former Illinois Central purchased by CN in 1998. CN's 10 mile-long Alabama segment is near the eastern end of a non-signaled branch line from Jackson, MS to Mobile. The ALE began leasing and operating the 12.1 easternmost miles of the branch at the Mobile end line in 201, including the spur to McDuffie Coal Terminal.

Approximately four trains per day operate over the line. Nearly all rail intermodal container traffic volume at the Port of Mobile is CN traffic, primarily to or from Memphis and metropolitan Chicago.[21]

CSX Transportation, Inc.

CSXT (https://www.csx.com/), based in Jacksonville, FL, is a subsidiary of publicly traded CSX Corporation (NYSE ticker CSX). CSXT expanded further north into New England after the 2022 STB approval of CSXT's absorption of Class II Pan Am Railway. CSXT's 21,000 mile-long network reaches 26 eastern U.S. states and two Canadian provinces.

CSXT's 900 route-mile-long Alabama network consists of six principal segments and three branches. CSXT is not currently exercising its trackage rights on ATN, or on AGR between Atmore and Hybart. CSXT is the only Class I railroad operating in southeastern Alabama. All six CSXT line segments are parts of CSXT through routes and all except the southeastern Alabama line are signalized. CSXT's three Alabama branch lines connect to short line railroads that connect to other Class I railroads, making the CSXT branches portions of through routes too.

[20] CN's various U.S. lines, including the IC, are subsidiaries incorporated in the US.

[21] The service area of the CN intermodal terminal in Jackson, MS extends into west central Alabama. There is also CN intermodal service at the Port of New Orleans.

The Lagrange, GA-Montgomery-Mobile-New Orleans and especially the Lagrange-Birmingham--Nashville route that carries BNSF Birmingham-Atlanta intermodal traffic through Alabama are principal CSXT intermodal routes.

CSXT formerly operated container intermodal terminals in Mobile and New Orleans. CSXT has low volume Mobile intermodal traffic. CSXT will serve a new ASPA ICTF to be constructed in Montgomery. Appendix A-4 provides CSXT corridor information details.

CSXT Network

Principal CSXT Alabama facilities include Boyles Yard (Birmingham), S&NA Yard (Montgomery), Sibert Yard (Mobile), the Central Alabama ICTF in Bessemer, Transflo (bulk commodities) terminals in Birmingham and Montgomery, and the Total Distribution Services Inc (TDSI) automotive distribution facilities in Birmingham and Talladega.[22]

<u>Canadian Pacific Kansas City Railway Ltd</u>.

CPKC (https://www.cpr.ca/en/), headquartered in Calgary, Canada, is a publicly traded company (NYSE ticker CP) that operates approximately 8,600 route-miles in the US, 7,700 in Canada and 3,800 in Mexico. CPKC, the smallest Class I railroad by revenue, is the first railroad providing single-line service spanning Canada, the U.S. and Mexico. CPKC was formed after the acquisition of Kansas City Southern Railway (KCS) by Canadian Pacific Railway (CP) was approved by the STB in March 2023.[23] The former CP network extended only as far south as Kansas City, thus CPKC's Alabama presence is that of predecessor KCS.

[22] CSX subsidiary Transflo specializes in transloading of bulk commodities between railcars and trucks including bulk materials storage within railcars.

***Former KCS Network** (in red. Meridian Speedway in blue. Lines leased to short lines in green.)*

CPKC currently does not operate any railroad lines within Alabama.[24] CPKC leases its Columbus, MS--Brookwood, AL line to Alabama Southern Railroad (ABS). CPKC's KCS predecessor began serving the Port of Mobile and interchanging with CSXT in 2003 when KCS acquired haulage rights on the Hattiesburg-Mobile portion of CN's Jackson-Mobile line.

The merger that formed CPKC was projected to have little effect on the Alabama rail network. The merger's Environmental Impact Statement indicated a 0-3 trains per day increase on the ABS line and the Meridian Speedway, a predecessor KCS-NS joint venture railroad line between Meridian, MS and Shreveport, LA, and that no merger-related capital improvements east of the Mississippi River south of Iowa were planned.

Norfolk Southern Railway Company.

NS (http://www.nscorp.com/content/nscorp/en.html), based in Atlanta, is a subsidiary of publicly traded NS Corporation (NYSE ticker NSC). NS' 19,500 mile-long network reaches 22 eastern U.S. states. Other NS Corporation subsidiary railroads within Alabama are the Alabama Great Southern Railroad (AGS), Central of Georgia Railroad (CGA), and the Tennessee, Alabama & Georgia Railway Company (TAG).[25] AGS, CGA, and TAG do not operate trains and are operationally NS Railway lines.

The 1,212 route-mile NS network in Alabama has seven principal segments geographically extending throughout the state except within southeastern Alabama. Five of the seven segments

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[23] KCS prior to the merger operated 3,400 route miles in the US. CPKC subsidiary Kansas City Southern de Mexico operates about 3,300 route-miles in northeastern, central, southeast-central and southwest-central Mexico.

[24] See Subsection *2.1.3 Class III (Short Line) Railroads* for possible change involving CPKC and MNBR.

[25] The 19,500 miles include multiple NS subsidiary railroads. The approximately 486-mile-long AGS, of which 145 miles are located within Alabama, connects Chattanooga and New Orleans via Birmingham and Meridian. (The AGS was 290 miles-long prior to its 1969 absorption of the New Orleans and Northeastern Railroad connecting Meridian and New Orleans.) The portion of the CGA within Alabama consists of the 134-mile-long Phenix City-Leeds line. A five mile-long Attalla-Gadsden spur is all that remains of TAG that formerly connected Chattanooga and Gadsden at the time it was acquired by NS predecessor Southern Railway.

are signalized and are parts of through routes.[26] The 216 mile-long largely non-signaled Wilton (southwest of Birmingham)-Mobile line segment is the longest Class I railroad spur line wholly located within Alabama. AGR notably has trackage rights on that line south of Kimbrough.

NS Network

The Chattanooga-Memphis, Chattanooga-Birmingham-New Orleans and Atlanta-Birmingham lines within Alabama are principal NS intermodal routes. The principal NS Alabama intermodal facility is the Birmingham Regional Intermodal Facility (RIF) in McCalla that is also an automotive distribution facility. NS serves the Mitchell International Intermodal Center at Huntsville International Airport. NS in its 2022 annual report identified the Birmingham-Meridian and Memphis-Chattanooga segments among its six heaviest freight volume corridors.

Principal NS Alabama facilities include the Ernest G. Norris Yard, a hump classification yard located in eastern Birmingham, hump classification Sheffield Yard, and Decatur and Selma Yards. Appendix A-5 provides NS corridor detail information.

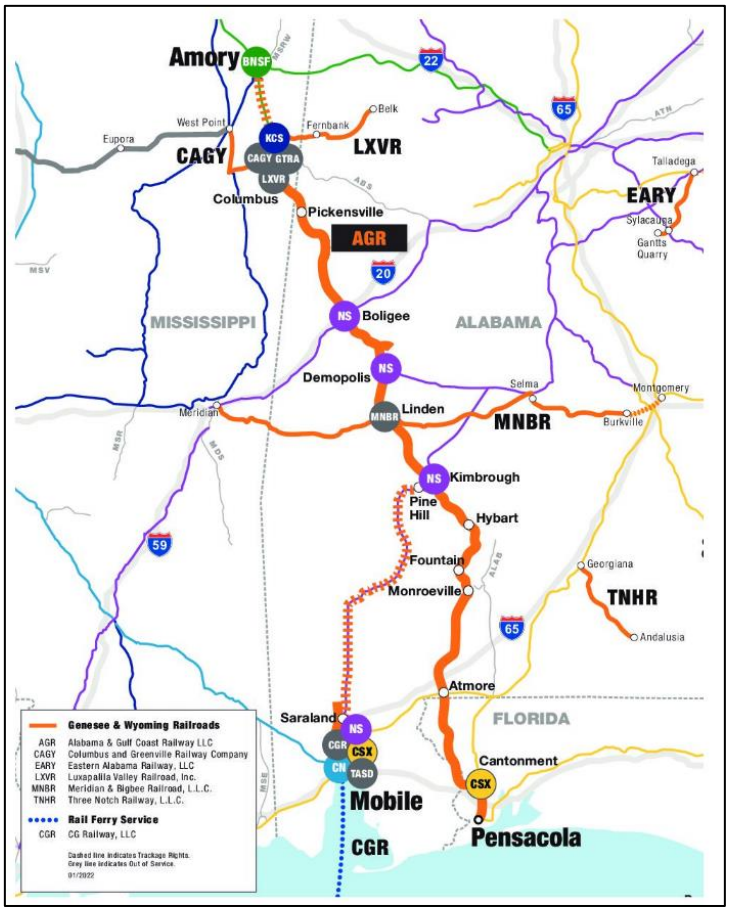
[26] NS's 1/13/2021 request of FRA (Docket FRA-2021-0002) for permission to discontinue the signal system on the Birmingham-Sheffield segment is pending.

2.1.2 Class II Freight Railroad Alabama & Gulf Coast Railway LLC

AGR's primary 267-mile-long line, 228 miles of which are within Alabama, connects Columbus, MS and Pensacola, FL.[27] The AGR's 37 miles of overhead trackage rights on BNSF between Columbus and Amory, MS connect it to the BNSF Memphis-Birmingham line. AGR leases a 17 mile-long Mobile-Axis spur line from BNSF.

AGR Network

(BNSF in green, NS in purple, CSXT in gold, CN in light blue, CPKC in dark blue)



AGR utilizes 112 miles of overhead trackage rights on NS between Kimbrough, where the NS Selma-Mobile line crosses AGR, and Terminal Junction in northern Mobile, and also trackage rights on TASD between Terminal Junction and the AGR's Mobile Yard that AGR leases from TASD. The trackage rights connect both the Port of Mobile and the Axis spur to the primary AGR line.

AGR (https://www.gwrr.com/agr/) was formed in 1997 when it purchased the BNSF line between Kimbrough and Pensacola. AGR became a Class II railroad in 2003 after it purchased additional BNSF track between Kimbrough and Columbus, acquired trackage rights between Columbus and Amory, MS, began leasing the Mobile-Axis spur from BNSF, and gained trackage rights on NS.[28] AGR became a Genesee & Wyoming (G&W) subsidiary in 2012.

AGR transports Wyoming Powder River Basin originating coal to ASPA's McDuffie Coal Terminal in Mobile for export via its line north of and NS' line south of Kimbrough. See Appendix A-6 for additional AGR information.

[27] The 228 Alabama route-miles exclude the Demopolis spur. Note AGR has six route-miles within Baldwin County.

[28] AGR leases the five northernmost miles of the Columbus, MS-Kimbrough segment from BNSF.

2.1.3 Class III (Short Line) Freight Railroads

This subsection concludes with discussion of a deal announced 28 June 2023 between CSXT and CPKC involving short line railroad Meridian & Bigbee (MNBR).

Short line freight railroads fulfil a variety of roles within the Alabama railroad network. Most Alabama short lines primarily function as the first and/or last mile of rail transportation system travel, meaning the first or last leg of rail transportation. Short lines functioning in that manner importantly extend the geographic reach of the broader rail network and its rail-related industrial development potential. A few short lines such as TASD and the Birmingham Terminal Railway (BHRR) are terminal railroads that connect railroads to each other as well as serve terminal customers.

A few of Alabama's short lines have long or always not been part of a Class I railroad system. Most Alabama short lines have been created by divesture, by lease or sale, or lease for a period of time prior to sale, of lines and branches formerly operated by Class I railroads. In many instances, particularly in southeastern Alabama, the divested lines are the remnants of former Class I through routes.

Class I railroad's consolidation of through traffic onto fewer lines in the 1970's resulted in abandonment, often piece by piece, of portions of the lines where the local traffic was insufficient to support continuing operation. Short lines with their lower cost structure began operating the remaining branches, in some instances with the piecebypiece abandonment continuing. Short line railroad economics are discussed in Chapter 4.

All but three of Alabama's 22 short lines are 44 miles or less in length. The collective length of the three longest Alabama short lines constitute 46 percent of the 764 total Alabama short line route-miles. The 168 mile-long MNBR connects Montgomery and Meridian, MS. Its 145 route-miles within Alabama include 97 route-miles leased from CSXT and 15 route-miles of overhead trackage rights on CSXT between Montgomery and the east end of the leasehold at Burkeville. It is the longest short line railroad segment within Alabama. The 119 mile-long Alabama & Tennessee River Railway (ATN) is the longest short line railroad line wholly located within Alabama. CPKC leases the former KCS Brookwood, AL-Columbus, MS line, 68 miles of which are located within Alabama, to Alabama Southern Railroad (ABS).[29]

There are eight short line railroad spur lines wholly located within Alabama. The eight spurs include the end of the ATN north of Attala and two short Bay Line (BAYL) spurs. Four Alabama

[29] ABS has trackage rights on 15 miles of CPKC between Columbus and Artesia, MS.

short lines, Luxapalila Valley Railroad (LXVR), Mississippi Central Railroad (MCSI), Tennessee Southern Railroad (TSRR), and Georgia Southwestern Railroad (GSWR) are spur lines that connect to the U.S. general railroad network in other states with their spur line ends located within Alabama. The Sequatchie Valley Railroad (SQSC) that connects to CSXT in northwestern Alabama and ends in Tennessee is the only Alabama short line spur with its spur end located in another state.

Short lines may be dependent on one or a very few customers to sustain continued line operation or operation on much of the length of the line. Alabama examples include the BAYL spurs to Abbeville (Westrock Chip Mill) and Taylor (Greenbrier Rail Services), and the Columbus and Chattahoochee Railroad (CCHA, WestRock Mahrt Mill). See Appendices A-7 through A-32 for information on individual short line information.

CPKC-CSXT Connection via Meridian and Bigbee Railroad.

CPKC and CSXT in early June 2023 announced the intent to establish a direct connection and interchange at Myrtlewood, a community located nine miles west of Linden, using the MNBR that connects Meridian and Montgomery. STB preliminarily approved the separate deals with MNBR as minor transactions gave final approval in late 2024.

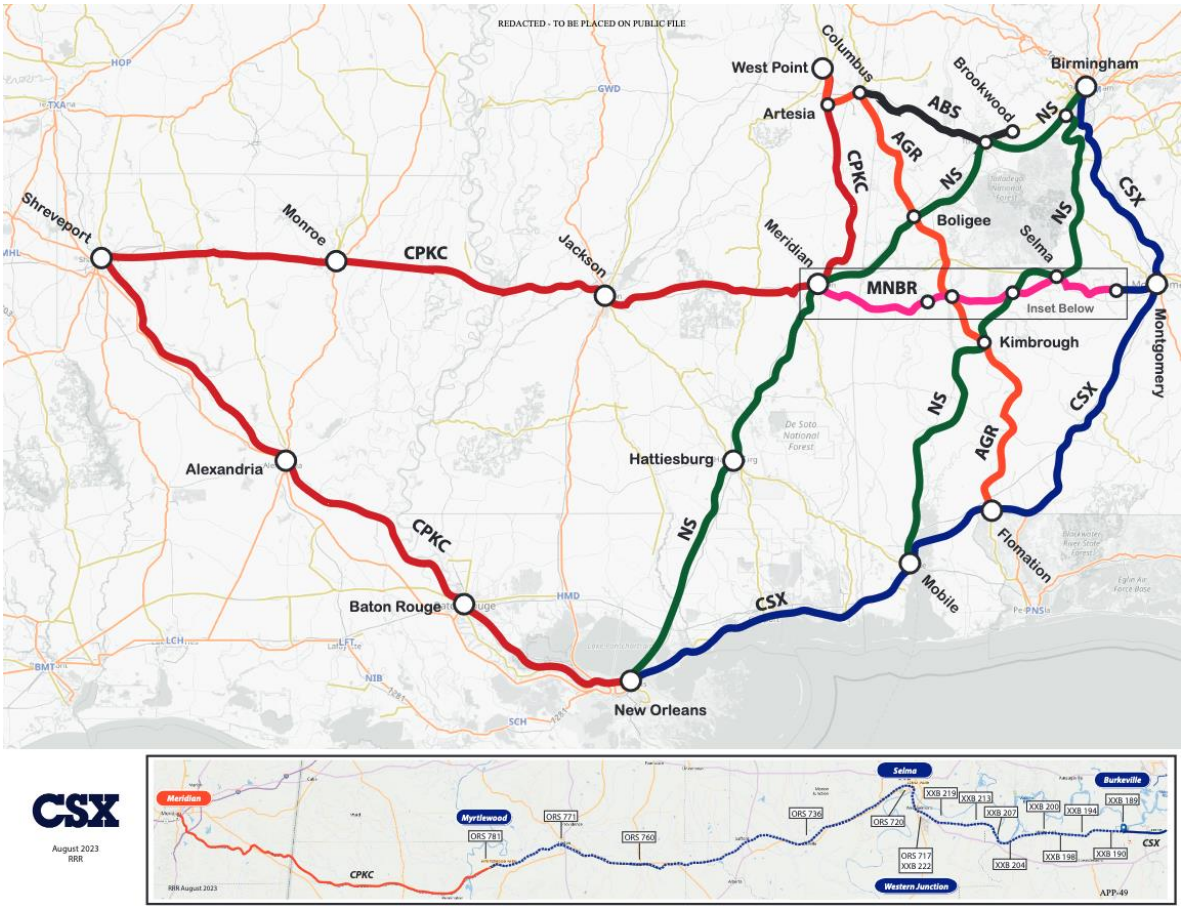
Former MNBR

The construction of MNBR connecting Meridian to the west end of a CSXT predecessor L&N spur in Myrtlewood was completed in 1935. MNBR began leasing the CSXT branch line between Myrtlewood and Burkeville and using trackage rights on CSXT between Burkeville and Montgomery in 2003, shortly before the 2005 acquisition of MNBR by G&W. MNBR currently interchanges with CPKC and NS in Meridian and CSXT in Montgomery, and in between where it intersects with AGR at Linden and with NS at Selma. MNBR's traffic currently is all or nearly all local traffic.

CPKC purchased will and operate the original 50.4 mile-long MNBR-owned portion of the MNBR between Meridian and Myrtlewood. CSXT terminated the MNBR lease and has resumed operation of the line between Myrtlewood and Montgomery.

The transaction establishes a new and the only CPKC-CSXT interchange south of Memphis, providing a direct connection between CPKC customers in Texas and Mexico via Shreveport on the CPKC north-south trunk line between Chicago and Mexico and southeastern U.S. CSXT network customers. The Shreveport-Meridian-Montgomery route is 158 miles shorter than a CPKC-CSXT connection via New Orleans as shown in Figure 23. The interchange would directly compete with the CPKC-NS interchange at Meridian. STB filings stated CPKC and CSXT expect to interchange one train pair with an average volume of 70 railcars per train, for at least the first five years.

Figure 2-3 CSXT-CPKC Montgomery-Shreveport Routes via MNBR and New Orleans



MNBR will continue to provide service to the local customers along the original MNBR between Meridian and Myrtlewood, including the Georgia-Pacific Paper Plant at Naheola, and connect with other railroads without interchange restrictions. CSXT granted AGR 9.5 miles of trackage rights between Linden, where the CSXT-owned branch line crosses AGR at grade, and Myrtlewood to enable AGR to maintain direct interchange with MNBR.

2.1.4 Rail Freight Terminals and Intermodal and Multimodal Connections

Multimodal transportation is the movement of cargo or freight from origin to destination using more than one mode of transportation. Intermodal transportation is the multimodal transportation of containerized freight. "Intermodal rail" refers to multimodal movements of containerized freight where rail is one of the modes.

Container transfer between truck chassis and railcar

The location and density of Alabama intermodal and rail multimodal connections and freight terminals largely mirror Alabama metropolitan populations and historical and recent industrial development.[30] Metropolitan Birmingham has by far the largest population of Alabama's metropolitan areas and the most intermodal rail and multimodal connections and freight terminals.

Table 2-2 Alabama Intermodal Container Transfer Facilities

Mode [1]	Railroad(s)	Location	Name
Ship & Hwy	CN and CSXT	Port of Mobile	Garrows Point ICTF
Hwy	CSXT	Bessemer	Central Alabama ICTF
Hwy	NS	McCalla	Birmingham RIF
Hwy & Air	NS	Huntsville	Mitchell International Intermodal Center
Hwy	CSXT	Montgomery	(ICTF in development)
Hwy	CSXT	Decatur	(redevelopment to ICTF in progress)

1 Mode is/are the other than rail principal transportation mode/s in the transportation of commodity or product. Container movement between origin and destination may involve other than rail and the indicated mode.

2 CSXT intermodal service was recently established, and current traffic volume is low.

[30] This Plan uses "intermodal" to refer the subset of multimodal transportation of containerized cargo or freight transported by more than one mode.

Table 2-2 identifies Alabama Intermodal Container Transfer Facilities (ICTFs). Containers are transferred between ship or highway transportation modes and railcars at ICTFs.[31] Containers are commonly 20, 40, 48, and 53 feet in length. The latter three container lengths correspond to common domestic semi-trailer lengths. Forty-foot containers are the most common in use in international trade. There are currently four ICTFs within Alabama. A fifth ICTF located in Montgomery is under development by ASPA. ASPA has considered another ICTF on NS at a location to be determined in northern Alabama.

Table 2-3 Selected Rail Freight Multimodal Connections

Type	Mode [1]	Railroad	Location	Name
Rail car	Ship	TASD	Port of Mobile (upriver)	CG Rwy (Ferry to Mexico)
Note 2	Ship	TASD	Port of Mobile (upriver)	Riverfront Yard
Transload	Ship & barge	TASD	Port of Mobile	McDuffie Coal Terminal
Transload	Barge	BHRR	Birmingport (W-NW of B'ham [3])	Port Birmingham
Transload [4]	Highway	CSXT	Birmingham	(Boyles Yard) Transflo
Transload [4]	Highway	CSXT	Montgomery (near Maxwell AFB)	Transflo
Transload	Barge	NS	Decatur (Tennessee R.)	Morgan Co. Ports Auth.
Transload [4]	Highway	NS	Mobile	Thoroughbred Bulk Terminal
Transload	Barge	TSRR	Florence (Tennessee R.)	Port of Florence
Auto	Highway	BNSF	Birmingham	(East Thomas) Finley Blvd
Auto	Highway	CSXT	Birmingham	(Boyles Yard) TDSI
Auto	Note 5	CSXT	Montgomery	Hyundai Motors
Auto	Highway	CSXT	Talladega	Inter-rail Transport (TDSI)
Auto	Highway	NS	McCalla	Birmingham RIF
Auto	Note 5	NS	Lincoln	Honda
Auto	Note 5	NS	Vance (Tuscaloosa)	Mercedes Benz
Auto	Ship	TASD	Port of Mobile	(Rail service in development)

1 Mode is the other than rail principal transportation mode/s in the transportation of commodity or product. Movement between origin and destination may involve other than rail and the indicated mode. The table identifies primarily public water mode or railroad-operated bulk facilities operated by Class I railroad subsidiaries that store commodities or products in railcars at the facility.

2 Multiple types of transfer between ship and rail including bulk, break bulk, and Ro-Ro.

3 Located on Locust Fork of the Black Warrior River, a Tombigbee River tributary. Principally coal and ore.

4 Bulk transload facility with products stored in railcars.

5 Vehicles loaded at assembly plant for rail shipment to domestic distribution facilities (hwy mode) or export (ship mode, Ro-Ro). Vance Alabama-assembled vehicles are currently exported via the Port of Brunswick.

[31] Transfers between ship and railcars may involve short highway vehicle movement between docksides and ICTFs.

Figure 2-4 Alabama Intermodal and Rail Freight Multimodal-Facilities

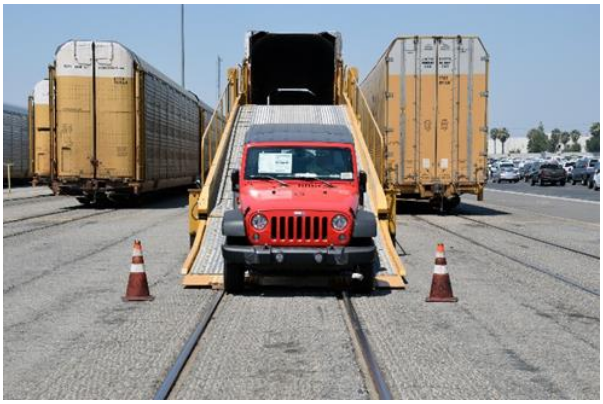
Figure 2-5 Rail-served Alabama Ports

Commodity transfer between tank car and truck at bulk transfer facility

Table 2-3 identifies selected multimodal connections including Class I railroad subsidiary bulk storage-transfer facilities and motor vehicle railcar loading-unloading facilities. Figure 2-4 maps the location of the ICTFs and multimodal connections of Tables 2-2 and 2-3. Bulk as the name implies, concerns bulk commodities such as coal, ore, chemicals, grain, and sand and aggregates. Bulk commodity rail multimodal facilities that serve as commodities storage-distribution facilities where the commodities are stored on site, sometimes with railcars serving as storage vessels, are known as bulk transload facilities.

Alabama automobile rail multimodal facilities consist of adjunct facilities at Alabama's three automobile assembly plants, off-plant-site facilities, and a Port of Mobile Ro-Ro facility to be served in the future by rail.[32] Automobiles loaded at Alabama plants or nearby off-plant site facilities are transported by rail to other domestic off-plant-site facilities for further transportation via highway, or to ports for export. Similarly automobile imports may be loaded on railcars at ports for distribution at off-plant-site facilities for further transportation via highway.

Vehicles driven onto and off of railcar



Motor vehicles include light trucks, sport utility utility vehicles, and crossovers. The transportation of motor vehicles is multimodal in that motor vehicles loaded on railcars at the plants use another mode or modes in addition to rail enroute to destination.

The ASPA deepwater Port of Mobile is by far Alabama's most significant water-rail multimodal connection. Other ports where water-rail freight transfer may occur are located along Alabama's river system, primarily the Tennessee and Tombigbee Rivers. River-rail freight transfer may occur at six other ASPA ports and at seven other ports or locations, some private. Figure 2-6 maps locations where water-rail freight transfer may occur.[33]

[32] Many other locations are multimodal connections in the manner of automobile assembly plants. For example, at least some chemicals loaded directly into railcars where they are produced are very likely are delivered to bulk transfer facilities for last leg movement by truck. Auto assembly plants are included in Table 2-2 because nearly all vehicles leave assembly plants by rail, and to map them with non-plant loading-unloading facilities.

[33] Some of the port facilities have low traffic volumes or low rail traffic volumes. A few have rail transfer capability but have not been active for an extended period or have rail traffic volumes so low or infrequent that they could be described as inactive.

2.1.5 Rail Freight Infrastructure

Rail Freight Yards.

Table 2-4 identifies the largest railroad-owned general operating yards. The table does not include yards serving a single or small number of customers. The latter may be owned entirely or in part by the customer.

Table 2-4 Principal Alabama Railroad-Owned Yards

Yard Name [1]	Railroad	Location	Comment
Class I Railroads			
East Thomas [2]	BNSF	Birmingham	
Boyles	CSXT	Birmingham	Former hump yard
Calera	CSXT	Calera	
Oakworth	CSXT	Decatur	
Dothan	CSXT	Dothan	
Flomaton	CSXT	Flomaton	
Sibert	CSXT	Mobile	
S&NA	CSXT	Montgomery	Former L&N yard
Chester	CSXT	Montgomery	Former W Rwy of AL yard
Ernest G. Norris	NS	Irondale	Hump yard
Sheffield	NS	Muscle Shoals	(Idled) hump yard
Decatur	NS	Decatur	Multiple yards
Selma	NS	Selma	
Gadsden Industrial Park	NS	Gadsden	Storage yard
Other Railroads			
Gadsen	ATN	Gadsden	
Tuscaloosa	ABS	Tuscaloosa	Line leased from CPKC
Dothan	BAYL	Dothan	
Fairfield New Yard	BHRR	Bessemer	
Elliott	BHRR	Fairfield	
Flint Ridge	BHRR	Fairfield	Storage Yard
Interchange	TASD	Mobile	
Riverfront	TASD	Mobile	
McDuffie Terminal	TASD	Mobile	
Coosa Pines	RJAL	Coosa Pines	Storage Yard

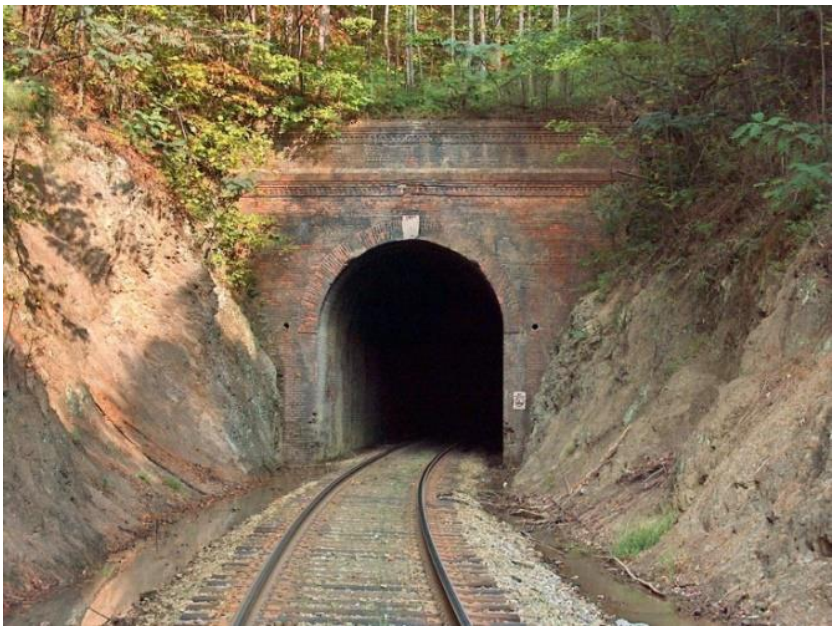
1 Major yard names in **bold font**.

2 East Thomas is the name of a Birmingham neighborhood.

Tunnels and Vertical Clearances.

Vertical clearances from top of rail to an overhead structure along a rail route may limit the viability of the route for intermodal rail service and/or motor vehicle transportation by rail. Standard container heights are 8.5-feet, and 9.5-feet "high cube". Routes accommodating double stacked high cube Containers on Flat Cars (COFC) are the most efficient. Double stack refers to intermodal train service where railcars carry two layers of containers, one stacked upon another. Double stack enables a train of given length to carry twice as many containers, significantly reducing train crew and flatcar equipment cost per container. Rail transportation's primary advantage relative to trucking is its cost, in turn, price to its customers.

West Portal of 2,431 foot-long (Plate C) NS Coosa Mountain Tunnel



Railcars with double stacked high cube containers are typically 20 feet-3 inches above the top of rail, including 15 inches between top of rail and the bed of a railcar upon which the bottom container is seated.[34] The tallest motor vehicle carrier railcar (autorack) height is typically the same 20-feet-3-inches above top of rail, though there are many 19-foot above top of rail autoracks in service.

The additional clearance required between a container or a railcar and bridge or other overhead obstruction is a railroad prerogative, but six inches is common. The standard for highway overpasses of railroads for decades has been a minimum 23 feet above the top of rail.[35] Many old overpasses, however, were constructed with less vertical clearance. Many railroad tunnels were typically constructed long ago with much less vertical clearance before the advent of intermodal container and multi-level autorack railcars. Many tunnels have since been modified to provide additional vertical clearance.

[34] It is uncommon but railroads may operate double stack intermodal with a requirement that the containers or at least one of two stacked containers be regular and not high cube on specific lines due to vertical clearance restrictions. Those lines would also limit some use of the tallest autorack railcars.

[35] The emergence of railroad requests for a minimum 23.5 feet for new construction or reconstruction is a new development. The purpose of the additional 0.5 feet is to provide some cushion for track maintenance activities that raise track elevation and yet maintain a 23-ft vertical clearance.

Table 2-5 identifies the ten railroad tunnels currently in railroad use within Alabama, three of which do not accommodate double stack intermodal traffic. Figure 2-5 maps the location of the tunnels identified in Table 2-5.

Two notable tunnels that cannot accommodate double stack intermodal trains are the 2,431 foot-long Coosa Mountain and 1,198 foot-long Oak Mountain tunnels that are both located near Leeds on the NS CGA Columbus, GA-Leeds line. The CGA line perhaps would be used for autorack and/or intermodal traffic if the vertical clearance was not limited by the tunnels to 15-foot-9-inch high Plate C railcars.[36] Increasing the vertical clearance of the tunnels to accommodate double stack container trains would be a substantial undertaking. All other principal Alabama NS lines accommodate high cube double stack traffic.

The BNSF and CN Alabama lines can accommodate high cube double stack intermodal traffic. All principal CSXT lines can accommodate high cube double stack intermodal except the Birmingham-Brookwood line.[37]

Table 2-5 Alabama Railroad Tunnels

Tunnel Name	Railroad	Railroad Line *(CSXT Subdivision, NS District)*	Length (feet)	Vertical Clearance [1]
Blount	CSXT	Nashville-Birmingham *(S&NA North)*	886	Double stack
Hayden	CSXT	Nashville-Birmingham *(S&NA North)*	2,192	Double stack
Parkwood [2]	CSXT	Birmingham-Montgomery *(S&NA South)*	929	Double stack
Waldo	CSXT	Manchester, GA-Birmingham *(Lineville)*	498	Double stack
Cook Springs	NS	Atlanta-Birmingham *(East End)*	802	Double stack
Coosa Mountain	NS	Columbus, GA–Leeds *(CGA)*	2,431	Plate C
Oak Mountain	NS	Columbus, GA–Leeds *(CGA)*	1,198	Plate C
Hardwick	ATN	Birmingham-Wellington	1,340	Double stack
Roper Hill	ATN	Birmingham-Wellington	1,108	Double stack
Laney	ATN	Wellington-Gadsden	949	Plate F

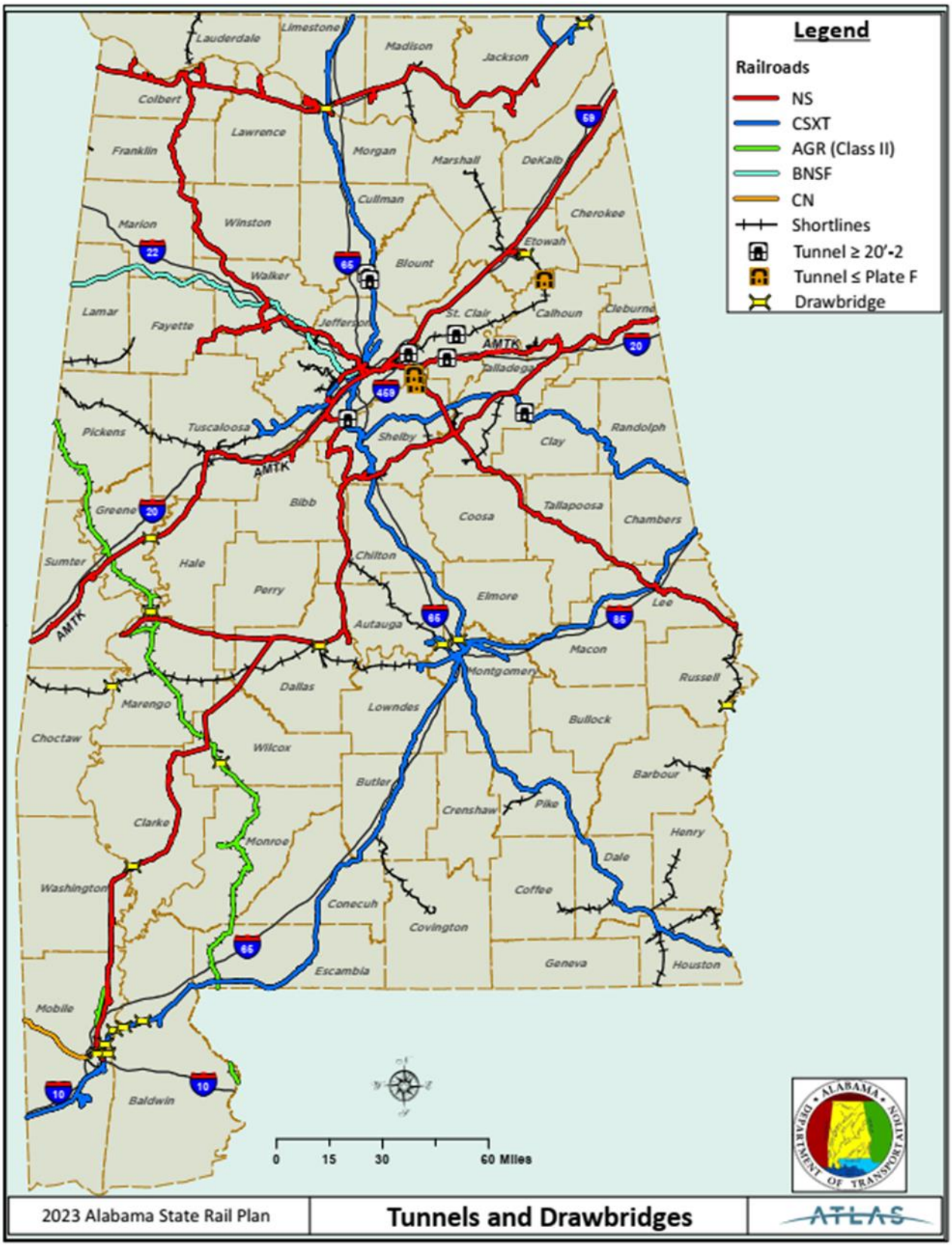
1 Double stack = high cube double stack. 15-ft-9-inch above top of rail Plate C railcars may move over nearly all North American rail lines. Most North American lines accommodate 17 ft high Plate F railcars. (Plate F boxcars are known as high cube boxcars.) Rail routes that accommodate Plate F railcars also accommodate TOFC.

2 Also known as Brocks Gap or Shades Mountain.

[36] Standard railcar cross-section drawings, or plates, are designated Plates B, C, E, and F. Plate B cars may be moved across any North American rail line. Plate C is the general North American minimum standard outside of New York and New Jersey.

[37] The CSXT Montgomery-Bainbridge, GA line had been restricted to maximum 19-foot 2-inch intermodal loads (at least one regular height container when double stacked) and autorack railcars prior to the recent removal of a low highway overpass in Georgia.

Figure 2-6 Alabama Railroad Tunnels and Movable Bridges



Movable Bridges.

Figure 2-6 also maps the location of Alabama's 18 movable rail bridges that are identified in Table 2-5. Six of the bridges are clustered just north of Mobile and span the Mobile and Tensaw Rivers and tributaries. The Tensaw River of the Mobile-Tensaw delta and the Alabama River and its Coosa River tributary have little commercial traffic.[38] The five bridges over the Alabama and Coosa Rivers are normally positioned for rail traffic.

CSXT Bayou Sara Swing Bridge

NS Lift Bridge at Decatur, AL

There are nine swing, eight lift, and one bascule-type movable rail bridges in Alabama. The swing spans of Alabama swing bridges turn horizontally about a center pier. Lift bridges have a bridge span that may be raised vertically to permit passage of watercraft below. A bascule rail bridge is a drawbridge with a draw span that pivots vertically at one end of the span, balanced by a counterweight when it opens, to permit watercraft to pass. (See photos.)

Single Leaf Bascule Bridge

CSXT and NS each operate over the other railroad's Tennessee River bridges at Decatur and Bridgeport respectively. The bridges are normally positioned for rail traffic and the combined rail traffic on each of these bridges is heavy (Bridgeport 11 CSXT and 13 NS trains per day, Decatur 15 NS and 27 CSXT trains per day). They each are important southeastern

[38] The Coosa River is effectively non-navigable for freight traffic.

U.S. railroad infrastructure especially because their being out of service would disrupt both NS and CSXT rail network operations.[39]

Table 2-6 Alabama Railroad Movable Bridges

Waterway	Railroad	Location	Type	Opening Frequency[1]
Mobile River Tributaries				
Three Mile Creek	CSXT	Mobile	Swing	Opened 2.8 times / day, avg 20 mins [2]
Three Mile Creek	TASD	Mobile	Bascule	
Chickasaw Creek[3]	CSXT	Mobile	Swing	Opened 8.7 times / day, avg 45 mins
Bayou Sara	CSXT	N. of Mobile	Swing	Opened 0.2 times / day, avg 24 mins. Normally closed, 8 hrs notice for 6pm-10am
Tensaw River	CSXT	NE of Mobile	Swing	Normally closed; 10 hrs notice
Mobile-Tombigbee-Black Warrior Rivers				
Mobile River	CSXT	N. of Mobile	Lift	Opened 6.0 times / day, avg 39 mins. Normally closed, remotely operated
Tombigbee River	NS	Jackson	Lift	Operated remotely from Decatur
Tombigbee River	MNBR	Naheola	Lift	
Black Warrior River	AGR	Demopolis	Lift	Automated closing
Black Warrior River	NS	E. of Eutaw	Lift	NS subsidiary AGS
Alabama-Coosa Rivers				
Alabama River	AGR	S. of Yellow Bluff	Swing	Normally closed; 24 hrs notice
Alabama River	MNBR	Selma	Swing	Normally closed; 24 hrs notice
Alabama River	CSXT	NW of Montgomery	Lift	Normally closed; 24 hrs notice (former ICG)
Alabama River	CSXT	N. of Montgomery	Swing	Normally closed; 24 hrs notice
Coosa River	ATN	Gadsden	Swing	Normally closed; 6 hrs notice (former CSXT)
Other Rivers				
Tennessee River	CSXT [4]	Bridgeport	Lift	Normally closed
Tennessee River	NS [5]	Decatur	Lift	Normally closed
Chattahoochee River	HOG	E. of Cottonton	Lift	RR inactive, normally open

1 Bridges are normally open to river traffic except as indicated otherwise. Opening frequency and average open times per an STB filing by CSXT and NS.

2 U.S. Army Corps of Engineers is seeking comments on a proposal that the bridge be opened for 75 minutes 3 times daily and otherwise closed.

3 May also be known as Chickasawbougue.

4 NS Chattanooga-Bridgeport-Memphis line trackage rights on CSXT bridge.

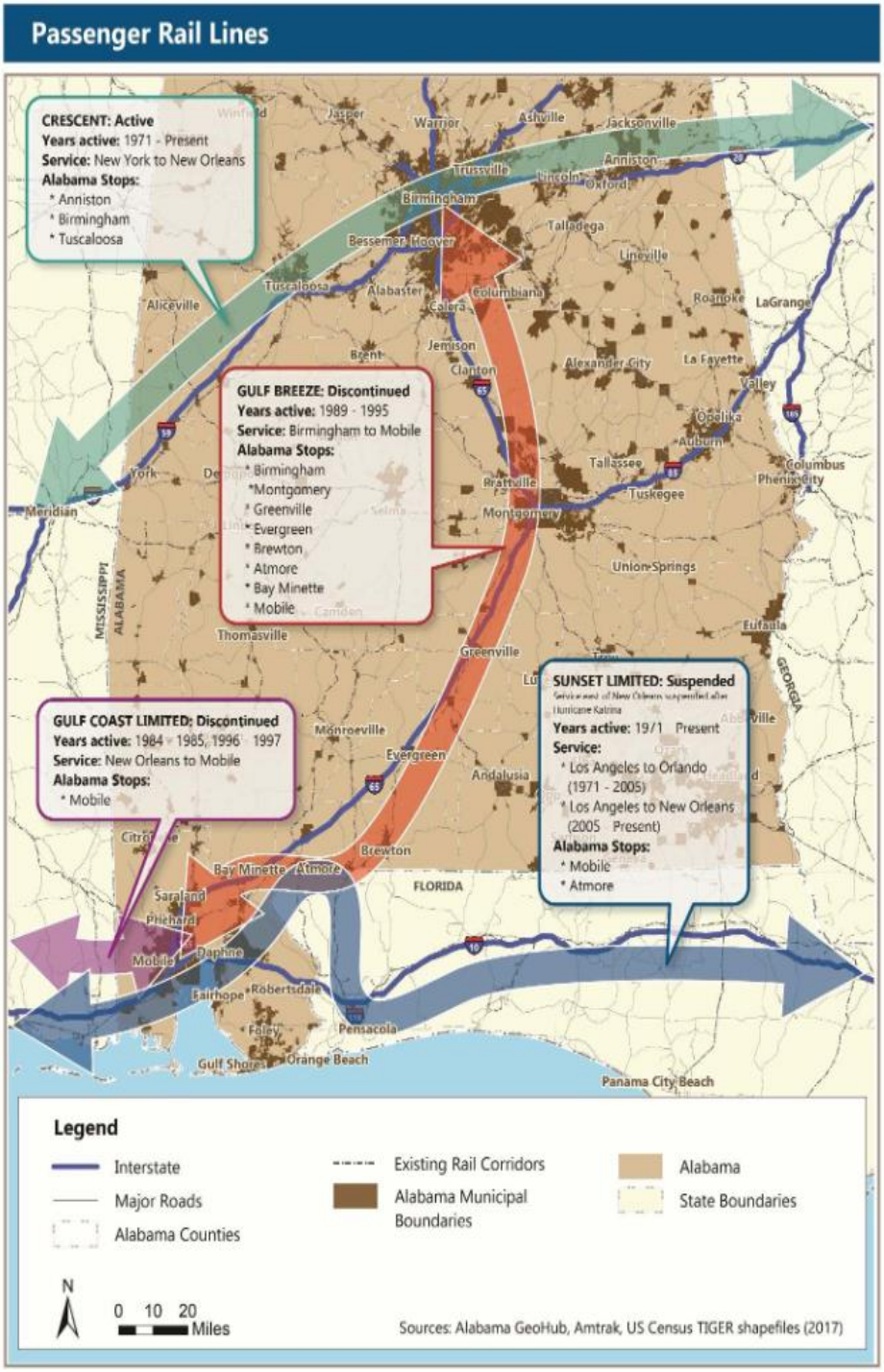
5 CSXT Nashville-Decatur-Birmingham line trackage rights on NS bridge.

[39] The use of an NS Tennessee River bridge at Florence by CSXT predecessor L&N was discontinued in 1988. The CSXT Nashville-Memphis line bridge at New Johnsonville, TN, 155 miles downstream of Decatur, and the Class II Paducah & Louisville Railway bridge located near the Tennessee-Ohio River confluence at Paducah, KY 75 miles downstream of New Johnsonville and are the only two Tennessee River railroad bridges downstream of the Decatur Tennessee River Bridge.

2.2 Passenger Rail Services

Figure 2-7 from an Alabama passenger rail feasibility study identifies Alabama passenger rail service since the 1971 formation of the quasi-public National Railroad Passenger Corporation that does business as Amtrak. The only operational Alabama passenger service today is the *Crescent*.

Figure 2-7 Passenger Rail in Alabama Since 1971



2.2.1 Existing Amtrak Service

Amtrak Overview.

Amtrak (https://www.amtrak.com/home), headquartered in Washington, D.C., serves more than 500 destinations in 46 states and three Canadian provinces. Amtrak operates more than 300 trains daily over 21,400 miles of track. It receives federal and state operating subsidies, though none from Alabama state or local governments.[40]

Amtrak Network

Amtrak currently provides the only rail passenger service in Alabama, excluding two tourist trains that operate on track isolated from the general rail network. Amtrak service in Alabama consists of Trains 19 and 20, known as the *Crescent*, operated each day between New York City and New Orleans, with New Orleans-Mobile-Montgomery connecting motorcoach service. The *Crescent* operates across Alabama on 233.1 miles of NS-owned track with stations at Anniston, Birmingham, and Tuscaloosa. Amtrak *Crescent* crew change locations are New York City, Washington D.C., Charlottesville, VA, Atlanta and New Orleans.

Alabama Amtrak-served Facilities.

The Anniston Station and parking lot were purchased in 2001 from NS for $55,000 by the City of Anniston. The station was recently remodeled using federal Transportation Enhancement Funds

[40] Amtrak long distance routes are those over 750 miles. State-supported routes are less than 750 miles.

and its platform is being extended. A new passenger Birmingham Intermodal Facility that opened in 2018 serves:

- Amtrak *Crescent*
- Greyhound and Megabus intercity buses
- Birmingham-Jefferson County Transit Authority MAX city buses
- a dedicated shuttle to and from Birmingham-Shuttlesworth International Airport

The Tuscaloosa Station, built in 1911, and adjacent parking are owned by NS. The Tuscaloosa station building serves as an office for local NS maintenance-of-way operations.

Amtrak Performance.

Primary measures of passenger train performance are ridership, finances, and on-time performance (OTP). Table 2-7 presents *Crescent* ridership information for stations between Atlanta and New Orleans for selected years between 2000 and 2021 inclusive.

Table 2-7 Amtrak *Crescent* Ridership 2000-2021 [1,]

Station	2000	2006	2012	2019	2022 [2]
Atlanta			101,827	68,127	51,289
Anniston	5,655	4,014	6,209	4,244	2,567
Birmingham	30,139	24,376	47,250	37,605	21,968
Tuscaloosa	11,224	7,222	12,290	9,323	5,581
AL Subtotal	***47,018***	***35,612***	***65,749***	***51,172***	***30,116***
Meridian, MS [3]			12,120	9,173	4,809
New Orleans				56,723	35,707
NYC-NOLA		**252,072**	**304,266**	**295,180**	**200,502**

1 Combined boardings and alightings.
2 Reduction from daily to 3 day / week service due to COVID began October 2020. Resumption of daily service in June 2021 was reduced to 5 day / week service in January 2022. Daily service resumed again in June 2022.
3 Other stations between Meridian and New Orleans are Laurel, Hattiesburg and Picayune, MS, and Slidell, LS.

The AL SRP generally describes 2019 performance preceding the COVID pandemic's disruption of rail transportation. Passenger rail transportation was especially disrupted with Amtrak services temporarily eliminated or their frequency reduced. Systemwide Amtrak service and demand are returning to their pre-pandemic levels. Amtrak overall FY22 ridership was 70 percent of record 2018 ridership. Total New York City-New Orleans *Crescent* FY22 ridership was 68 percent of record FY19 ridership. Alabama *Crescent* FY22 ridership was notably less at 59 percent of FY19 ridership. It is unlikely Amtrak ridership will return to pre-COVID levels until at least 2025.

The time of day of service influences ridership. The southbound Train 19 schedule has mid-day station stops in Anniston, Birmingham, and Tuscaloosa, and arrives in New Orleans at 9 pm. The northbound Train 20 schedule has mid-afternoon to early evening station stops in Tuscaloosa, Birmingham, and Anniston with an 11 pm (Eastern Time) stop in Atlanta enroute to a 1:45 pm Washington, D.C. stop the following day and a New York City arrival at 6 pm later that day. The trains when on time meet near Tuscaloosa. The northbound *Crescent* departs at 1:01 pm and the southbound *Crescent* at 1:11 pm.

Top city pairs by ridership, 2019

1. Birmingham - New Orleans, LA	354 mi
2. Tuscaloosa - New Orleans, LA	299 mi
3. Birmingham - New York, NY	1,023 mi
4. Birmingham - Washington, DC	798 mi
5. Birmingham - Atlanta, GA	164 mi
6. Birmingham - Slidell, LA	319 mi
7. Anniston - New Orleans, LA	418 mi
8. Tuscaloosa - Atlanta, GA	219 mi
9. Tuscaloosa - New York, NY	1,078 mi
10. Birmingham - Hattiesburg, MS	237 mi

The generally daytime schedule between Alabama stations and New Orleans and Atlanta is convenient for travel between Atlanta, Birmingham, and New Orleans, the three largest metropolitan areas in their respective states. The majority of Alabama trips are to and from Atlanta and particularly New Orleans.. The schedule north of Atlanta is less desirable for most Alabama travelers. The northbound Atlanta 11:30 pm departure and southbound Atlanta 9 am arrival require overnight travel for trips terminating or originating north of Atlanta.

Table 2-8 displays 2019 ridership, load factor, and farebox recovery ratio for long distance southeastern U.S. Amtrak trains including the *Crescent*. None of the individually identified trains of Table 2-8 are state-supported. The load factor is the ratio of the number of occupied seat-miles to total seat-miles. The *Crescent's* load factor south of Atlanta is notably lower than north of Atlanta. Recovery ratio is the ratio of revenue to operating expenses.

Table 2-8 FY2019 Southeastern U.S. Amtrak Train Statistics

Train (Origin-Destination)	**Round trips/week**	**Ridership** (thousands)	**Load Factor**	**Recovery Ratio** [1]
City of New Orleans (Chicago-New Orleans)	7	235.7	53%	44%
Crescent *(NYC-New Orlans)*	***7***	***295.2***	***53%***	***48%***
Palmetto (NYC-Savannah)	7	345.3	45%	79%
Silver Meteor (NYC-Charleston, SC- Miami)	7	353.5	66%	55%
Silver Star (NYC-Columbia, SC-Miami)	7	390.0	60%	54%
Sunset Limited (New Orleans-Los Angeles)	3	92.8	48%	28%
Nationwide long distance		4,544.8	41%	53%
Nationwide state-supported		15,440.7	58%	93%
Northeast Corridor		12,525.6	59%	176%

1 Nationwide state-supported routes incurred average operating losses of $0.03 per passenger-mile including state support and $0.15 per passenger-mile excluding state support. Nationwide non-state-supported routes incurred average operating losses of $0.20 per passenger-mile.

Amtrak defines On-Time Performance (OTP) as the total number of on-time trains divided by the total number of trains operated on that route. A train is on-time if it arrives at its endpoint within an identified number of minutes, or tolerance, of its scheduled arrival time. The magnitude of the tolerance considers train travel distance but is capped at 30 minutes for routes longer than 550 miles.[41] Table 2-9 displays route-miles and OTP for southeastern U.S. Amtrak trains including the *Crescent.* Nationwide 2019 OTP for long distance trains was 50 percent.

Table 2-9 Southeastern U.S. Amtrak Train On-Time Performance, 2019 and 2022

Train	Route Miles	Year	
		2019	2022
Palmetto	829	62%	70%
City of New Orleans	926	70%	61%
Crescent	***1,377***	***29%***	***57%***
Silver Meteor	1,389	42%	54%
Silver Star	1,522	29%	28%
Sunset Limited [1]	1,955	20%	19%
Nationwide long distance		50%	44%

1 Amtrak's worst OTP route. The general operating conditions and freight operations on the Sunset Limited's largely western U.S. route vary from the other routes included in the table.

Amtrak train delays are categorized as attributable to the host railroad, Amtrak itself, or "other" as described below. Nationally approximately 56 percent of delay for the 2010-2019 decade has been due to host railroads. Delay due to Amtrak was 30 percent, but decreased to 22 percent in the 2020-2022 period likely due to reductions in Amtrak operations.

- Host Railroad - Delay due to freight train operations and track and signal delays related to railroad infrastructure and/or maintenance work being done on tracks or signal systems, including delays arising from reduced speeds required for safe operation because of track defects or signal problems
- Amtrak - Delay related to turning and servicing Amtrak equipment, locomotive failures, passenger train holds for connecting trains and buses, lack of crew, and detours
- Other – Delay caused by weather, non-railroad third-party factors such as customs and immigration, movable bridge openings for waterway traffic, police activity, grade crossing crashes or commercial power loss

OTP very generally is inversely correlated to trip length for the six trains identified in Table 2-9 as could be expected given that late is defined as arrival more than 30 minutes after scheduled arrival for all routes greater than 550 miles.

[41] On-Time is defined as 10 minutes or less late for trips equal to or less than 250 miles, plus five minutes for each additional 100 miles route length up to 30 minutes or less late for trips greater than 550 miles.

2.2.2 Tourist-Excursion Trains and Railroad Museums

Alabama has two tourist train operations that are associated with not-for-profit 501(c)(3) museums; the Heart of Dixie Railroad Museum located in Calera, AL; and the North Alabama Railroad Museum located in the Chase Community just east of Huntsville, AL.

There is no regular Alabama state funding of the tourist train museums. The museums are eligible to apply for grants from both government and private entities and occasionally do so. The museum's operation and their mission to preserve and educate appears to be viable for the foreseeable future given that each has operated for fifty-seven or more years.

Heart of Dixie Railroad Museum.

The Heart of Dixie Railroad Museum (HODM) (https://www.hodrrm.org/) was founded in 1963 to preserve the sights, sounds, and artifacts of railroading. Revenue from tourist excursion ticket sales, museum gift shop sales and donations are primary fund sources for museum operations. The museum periodically applies for funding via Shelby County's Tourism that is awarded on a competitive basis.

Shelby & Southern Station

The museum offers rides on a steam locomotive operating on the one-half mile of track of the Shelby & Southern Narrow Gauge Steam Railroad, and rides with a diesel-electric locomotive pulling restored coaches on the Calera & Shelby (C&S) Railroad.[42] There were approximately 35,000 riders in 2022, approximating pre-COVID ridership. The steam locomotive operates at the museum Saturdays 9:30 am – 2:30 pm and some Sundays for special events.

C&S locomotive and coach

The C&S 2023 train ride season is March 4 through December 17. Theme rides are offered, mostly on Saturdays, on the C&S for Valentine's Day date night, Mardi Gras, Wine Tasting, Easter, Mother's Day, Father's Day, Military/Veterans Honor, Wild West Day, Summer Sunset date night, Pumpkin Junction, Fall Foliage, North Pole Express, Christmas at the Station, and Cheers to Christmas date night

[42] Steam locomotive No.3 and its coaches formerly operated at the Birmingham Zoo as the Magic City Express 1976–2001.

Heart of Dixie Museum Gift Shop

The Museum Gift Shop is fully accessible and contains ADA compliant restrooms. The parking lot is paved, and the site has level sidewalks with wheelchair ramps to enter buildings. There is a lift available for coach access for those in wheelchairs or with limited mobility who may not be able to navigate the stairs onto the coaches. Some excursions (i.e., the Ozan Wine Train and Pumpkin Patch Express) do not accommodate wheelchair loading and unloading during events that occur other than at the Calera Depot.

Rail Safety Day is the first Friday of June. This partnership with Operation Life Saver of Alabama is an educational experience for the public. Short educational sessions are presented, and each attendee is provided a free ticket to take a train ride that day.

North Alabama Railroad Museum.

The North Alabama Railroad Museum (NARM) (http://www.narm.info/), incorporated in 1966, is an all-volunteer organization. The museum and its train operations are primarily funded with excursion ticket revenue. There were approximately 7,500 riders on its tourist excursion trains in 2022, approximating pre-COVID ridership. Volunteers perform much of the museum's education, staffing and restoration activities.

The museum is located just east of Huntsville in Chase, AL. Its mission is to preserve railroad history in north Alabama and southcentral Tennessee. The museum includes the Chase Depot and over thirty pieces of rolling stock. Self-guided walking tours of the museum are allowed most days during daylight hours at no cost.

Mercury and Chase RR boarding area

The museum operates a vintage train that it markets and the Mercury and Chase Railroad. Train rides require ticket purchase. Regular excursions operate over the entire length of the museum's five mile-long track, making the 10 mile-long round trip in a little over one hour. The 2023 train ride season is April 8 through December 9. Special excursions include Peter Cottontail, Spring Fling Special, Mother & Son Special, Father's Day Special, Flip Flop Fun, Magic on the Mercury & Chase, Punkin' Pickin' Extravaganza, Fall Color Special, North Star Limited, and Santa Train.

The parking lot has both paved and unpaved parking with limited designated handicap parking available. The site is fairly level. It is necessary to cross tracks to reach the Depot from the parking area. There is a crossing that is wheelchair accessible. There is no lift available for passengers to board trains, but a ramp is available for wheelchairs or those with limited mobility who may not be able to navigate the stairs into the coaches.

Other Railroad Museums.

Other Alabama railroad museums include the Foley Railroad Museum & Model Train Exhibit (https://foleyrailroadmuseum.com/) and the National Register of Historic Places Stevenson Railroad Depot Museum and Fort Payne Depot Museum.

Fort Payne Depot Museum

(https://fortpayne.org/community/museums/)

Stevenson Railroad Depot Museum

2.3 Safety and Security

2.3.1 Section 130 Program

ALDOT administers the federal aid Railway-Highway Crossings Program (RHCP) of Title 23, United States Code, Chapter 1, Section 130 (23 USC § 130) that is commonly referred to as the Section 130 Program (https://highways.dot.gov/safety/hsip/xings/railway-highway-crossing-program-overview). The Program provides funds for hazard elimination at public highway-rail crossings. Section 130 Program funding, a set-aside from the Highway Safety Improvement Program, is a primary Alabama rail safety program. Tables 4-2 and 4-3 detail Section 130 programmed projects.

The IIJA, also known as the BIL, continued the 2021 MAP-21 total national Section 130 Program funding of $245 million per year for the years 2022-2026. Eash state's allocation is based on an apportionment formula. Fifty percent of the apportionment is based on the ratio of public crossings in a state to public crossings in all states.[43] The FY22 Alabama Section 130 Program allocation was $5,047,891, the 19th highest allocation among the states.[44]

IIJA changes to the Section 130 Program:

- The requirement that at least half of Program funds be used for installation of protective devices at crossings was eliminated, but protective devices installation remains an eligible expense
- Federal funding of Program projects was increased from up to 90 percent of project cost to up to 100 percent for projects obligated in federal FY22 and thereafter
- The maximum match payment made by the Program to a local government of a railroad's incentive payment to a local government to permanently close a public grade crossing was increased from $7,500 to $100,000

Closed Crossing

[43] FHWA Notice N 4510.858. State Section 130 Program allocations are 50 percent based on the number of public crossings, 20 percent on Federal-Aid highway vehicle-miles, 17.5% on payments into the Highway Trust Fund, and 12.5 percent on Federal-Aid highway lane-miles.

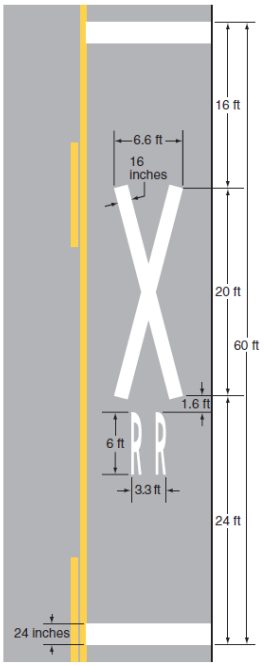
[44] The Alabama Section 130 Program allocation was $4,507,292 in 2013 and $4,866,013 in 2018.

Crossing safety improvements that may be funded by the Section 130 Program include:

- Installation, upgrade or improvement of active warning devices.[45] Examples of upgrades or improvements include replacing flashing light only warning devices with gates and flashing lights, replacing antiquated signal control equipment, cantilevered flashing light structures, and incandescent flashing lights with LED flashing lights.

R15-1

W10-1



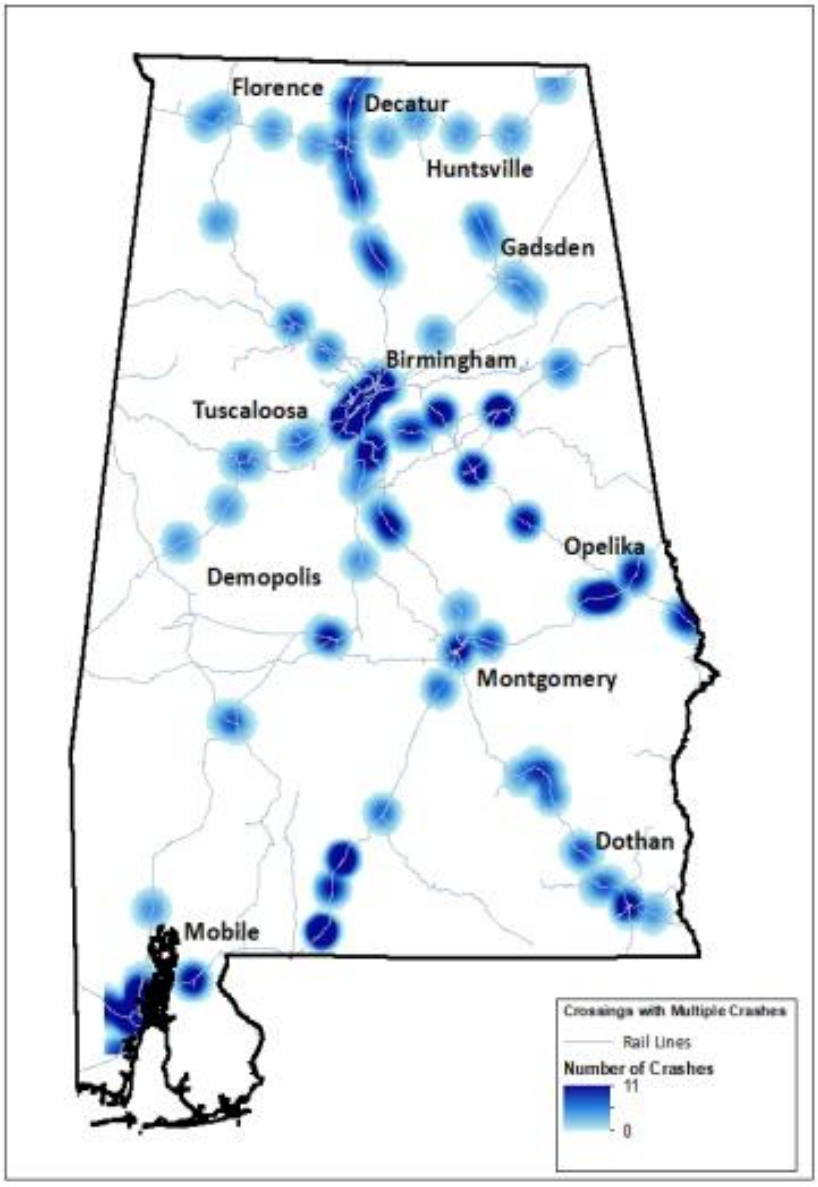
- Installation, upgrade or improvement of passive warning devices - Crossbuck signs, stop lines and advance warning signs and pavement markings, lane delineators, and center, lane and edge lines adjacent to crossings.
- Matching up to $100,000 of a railroad's incentive payment to a local government to permanently close a crossing.
- Road construction to establish alternate access to a crossing to be closed, or to improve crossing geometry.
- Installation or improvement of traffic signal pre-emption and/or pre-signals at active warning device crossings located near signalized intersections.
- Installation of medians or raised medians.
- Installation of sidewalks and pedestrian improvements at crossings.

[45] Crossing warning devices may be classified as passive or active warning devices. Passive warning devices typically consist of regulatory and warning signs and pavement markings. Active warning devices typically consist of automatic gates, and/or flashing lights, and a bell or bells, that indicate a train approaching or occupying a crossing. Active warning device crossings also have passive warning devices.

The two primary strategic categories used by ALDOT to identify and select Program projects are summarized below.

- Priority Ranking List (PRL) utilizes a composite score of reactive and predictive performance measures that include the USDOT Accident Prediction and Crash Severity Weighted USDOT Accident Prediction equations, New Hampshire Hazard Elimination Index, and the University of Alabama Highway Grade Crossing Safety Performance Function
- Hazard Elimination Application (HEA) provides an opportunity for local agencies, road authorities, ALDOT Region and Area Offices, and railroad companies to identify hazardous crossings and request funds for rail crossing safety improvements.

Crossings with Multiple Crashes (2007-2016) *(from the Alabama SAP)*



The Section 130 Program is a primary program in the implementation the of *Alabama Rail-Highway Grade Crossing Action Plan (SAP)*, The Action Plan's goal is to reduce crossing fatalities and crossing crashes each by three percent annually in particular by focusing on multi–crash crossings. Multi-crash crossings are defined as crossings experiencing more than one crash in the most recent five-year period. Crossings with three or more crossings.

See the Alabama SAP for additional information on ALDOT Section 130 Program administration, crossing inventory and data analysis, crash risk assessment, and the evaluation, engineering, education, and enforcement strategies to be used accomplish the goal.

There are 5,009 crossings in Alabama including 2,293 private crossings. One-half of the public crossings are equipped with active warning devices.[46] Two-thirds of the active warning device crossings are gate crossings and one-third are flashing lights only crossings. There were an annual average 84.4 crossing crashes during the 2018-2022 period that resulted in an average annual 7.4 fatalities and 34.6 personal injuries. Thirty percent of the crashes occurred at gate, 28 percent at flashing light, and 42 percent at passive crossings. Three-quarters of the crashes occurred at CSXT and NS crossings collectively. Over one-sixth of statewide 2018-2022 crashes occurred in Jefferson County where 6.7 percent of Alabama's public crossings are located. Thirty percent of statewide crashes occurred in Shelby, Mobile, Talladega and Tuscaloosa counties collectively where 12 percent of public crossings are located.

2.3.2 Operation Lifesaver

ALDOT supports the Alabama Chapter of Operation Lifesaver (AL OL) (e-mail alabama@oli.org) through representation on the Chapter's Board of Directors and financial support in the amount of $68,750 annually. AL OL partners with the Alabama Department of Education, Alabama Traffic Safety Center, Alabama Trucking Association, Alabama Law Enforcement Agency, the state coordinator of public safety in Alabama, and railroads BNSF, CSXT, NS and short line holding company G&W.

Operation Lifesaver, Inc (OL) is a national nonprofit public safety education and awareness organization dedicated to reducing crashes, fatalities, and injuries at crossings and trespassing on or near railroad tracks. OL promotes rail safety through public awareness campaigns and education initiatives, including free safety presentations by authorized volunteers to school groups, driver education classes, school bus drivers, community audiences, professional drivers, law enforcement officers, emergency responders, and others.

2.3.3 Alabama Public Service Commission Inspection

The Railroad Commission of Alabama, established in 1881, was succeeded in 1915 by the Alabama Public Service Commission (APSC). The ASPC's jurisdiction was expanded to include regulation of track and equipment in 1976. The ASPC's Railway Safety Section partners with the Federal Railroad Administration (FRA) under 49 CFR Part 212 in the track and motive power and equipment inspection disciplines. Inspections concerning the other three other FRA disciplines, hazardous materials, operating practices, and signals and train control are performed by FRA employees.

[46] Crossings are commonly classified by the most sophisticated warning devices type at the crossing. Passive warning devices are signs and pavement markings that warn only of the crossing and not a train approaching or occupying the crossing. Active warning device crossings are generally categorized as gate and flashing light or flashing light only crossings. Active warning device crossings have passive warning devices.

The APSC Railway Safety team consists of an administrator and three inspectors that collectively have 90 years of rail industry experience. The team is certified and authorized by FRA to perform inspections and enforce FRA track and motive power and equipment regulations, monitor compliance with Railroad Workplace Safety regulations, and enforce state regulations. The track inspection discipline includes structures. Table 2-10 summarizes inspection activities over the 2020-2022 period.

Table 2-10 APSC Inspection Activity

Activity or Defects	Year		
	2020	2021	2022
Track Inspections	198	182	162
Track Miles Inspected	1,473	1,865	1,994
Bridge Observations	176	150	244
Track-related Defects	1,423	880	876
Equipment Inspections	138	134	133
Freight Cars Inspected	8,336	9,286	6,936
Locomotives Inspected	48	46	89
Equipment-related Defects	1,269	1,278	1,688

The APSC team promotes railway safety and regulatory compliance by performing track and equipment inspections on every rail carrier operating in Alabama. Team members investigate rail incidents and complaints. Railway Safety inspectors also conduct railway education seminars for railroad employees to help ensure an understanding of railroad regulations and safe practices.

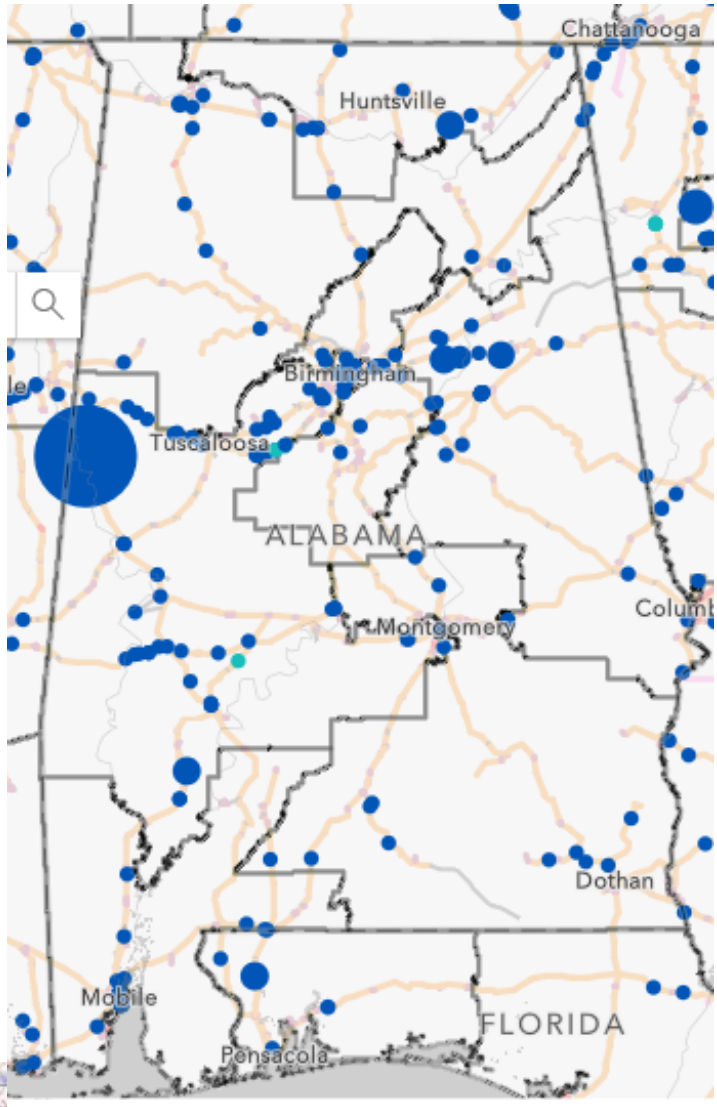
APSC staff uses a drone to observe railroad operations and ensure compliance

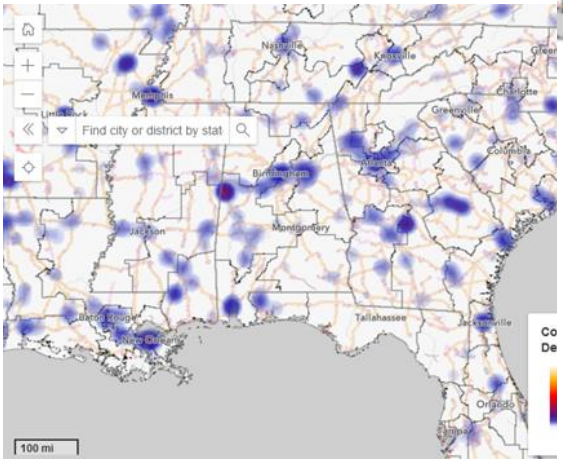
Broken joint bar identified during an APSC track inspection

2.3.4 Alabama Derailments

At right is a screenshot of an interactive map of train derailments reported to FRA in the 2012-2023 period.[47] Below is a screenshot of the map at southeastern U.S. scale. The maps do not include derailments in train yards.

The sizes of the circles indicate total derailment damage cost. The large circle near the Mississippi state line was an $8 million derailment. The small circles indicate the locations of derailments with less than $1 million in damage. The circles slightly larger than the small circles identify derailments between $1 million and $2 million in damage. Green colored circles indicate injury or death in connection with the derailment.





[47] Ahmed, Zuhayr. (2023) *"Interactive Rail Safety Map: Derailments Across the U.S."* National League of Cities, Washington, DC (https://www.nlc.org/resource/interactive-rail-safety-map-see-derailments-in-communities-across-the-u-s/)

2.4 Trends and Alabama Rail Market Sectors

2.4.1 Background

Alabama's population increased 5.1 percent in the 2010-2020 period, nearly one-third less than the 7.4 percent U.S. increase. Nearly all Alabama population growth occurred in or near metropolitan areas. The Alabama population is older than the overall U.S. population, particularly in the 50 counties where population decreased.[48]

The population of nine Alabama counties, eight of which are located between Tuscaloosa and the Alabama panhandle, decreased between 10 and 30 percent.

Agricultural use of land in Alabama decreased drastically in the 20th century. Much of Alabama's former cotton land was abandoned for agriculture, planted with pine trees or converted to pastureland. Conversion of agricultural land to forestland has resulted in Alabama having the fourth largest commercial forestland base in the U.S., fostering lumber, wood, pulp and paper products industries. Alabama's tree harvest volume has been increasing two percent annually.

Poultry and egg production arose in the Cumberland plateau on former agricultural land, and the Black Belt was transformed for a time into cattle country. The Alabama landscape between metropolitan areas is currently dominated by woodlands, pine plantations, scattered pastureland and hayfield and small homesteads. Agriculture remains significant but represents a declining share of the state's economy.

World War II defense industries nudged Alabama industrial development that historically was rooted in the iron and steel industry of Birmingham. Iron and steel arose in Birmingham because of accessible deposits of iron ore, metallurgical coal, and limestone. Iron and steel remain important, but food products, manufactured goods, wood products and paper, and chemicals and plastics have reduced reliance on primary metals. The Marshall Space Flight Center at Huntsville has been a major contributor to the state's economy. The Flight Center and supporting industry, combined with other high-value industries, have established the Huntsville area as an important technology nexus and a driver of the state's economic growth.

The number of non-U.S. companies operating and building industries in Alabama increased greatly beginning in the last decade of the 20th century. Alabama attracted its first automobile assembly plants, built by foreign corporations, in the 1990s. Supporting manufacturers have followed, along with another assembly plant in the 21st century.

[48] The Alabama population 65 and over increased from 13.7 to 17.6 percent of total population during the 2010-2020 period compared to an increase from 12.7 to 16.8 percent in the U.S.

Birmingham has emerged as a financial and commercial center for major state banks, regional utilities, national insurance companies, and international construction concerns as the importance of primary metals has decreased. The shift reflects the overall trend of the Alabama economy where currently approximately three-fourths of nonagricultural employment statewide is in the service sector.

2.4.2 Freight Rail Industry Trends

Some long-term railroad industry trends have largely run their courses. Other longterm trends continue while other trends have arisen over the last decade or two.

Industry trends that developed following the 1980 Staggers Act that have largely run their course include track abandonments, Class I railroad divestitures to short line railroads, Class I railroad consolidations, and the rise of short line railroad holding companies. Containers replacing trailers in intermodal rail transportation is a long-term trend that seems to be largely approaching conclusion.

Intermodal rail traffic has been increasing for over three decades in volume and as a fraction of rail traffic. It declined 20202023 decline attributable to softness in the domestic sector but is again increasing. Inland ports development, predominately an intermodal rail concept that emerged three decades ago, continues to grow rail traffic. Public-Private Partnerships have evolved as an important source of infrastructure improvement capital with the federal government expanding funding available to match private investment. Reductions in rail trip times have enabled smaller railcar and locomotive fleets to handle increasing traffic volumes. Class I railroadowned railcar fleets have long been shrinking. Large railroad customers and leasing companies have succeeded railroads as the largest owners and managers of railcar fleets.

The adoption of precision scheduled railroading by Class I railroads is a relatively recent trend. Its concepts have been adopted in some form by all Class I railroads and PSR continues to evolve.[49] More recently, Environmental, Social and Governance is another trend in the rail industry and among businesses in general.

Precision Scheduled Railroading.

Precision Scheduled Railroading (PSR) shifts railroad operations focus from train movements to railcar movements. Pre-PSR railroad operating practice focused on unit trains (trains carrying the same commodity shipped from the same origin to the same destination), and hub and spoke network operation and railcar classification at hump yards, as the most efficient means of

[49] BNSF has not much adopted PSR, but BNSF management has been receptive to adopting elements of it.

moving freight.[50] PSR focuses on point-to-point railcar movements operating over the most direct route with the least intermediate handling.

The transition to and adoption of PSR rekindled a period of Class I rail network traffic consolidation though on a much smaller scale than post-Staggers Act. PSR eliminated intermodal service on some low traffic volume routes and at low traffic volume intermodal locations.

PSR's railcar movement instead of train optimization focus combined with distributed power advancements is resulting in longer trains. Distributed power refers to separate locomotives or locomotive motive power groups placed within a train. Distributed power within a train eliminates head end locomotive power dragging the entire train. The maximum tractive effort that can be exerted on railcar couplers governs train weight (and hence indirectly length) when power is head end only. Railroads tout the reduced fuel consumption and emissions of fewer but heavier trains operating along more direct routes.

The PSR concept was first pioneered in the mid-1990s by E. Hunter Harrison while at the Illinois Central Railroad (IC). It was adopted at CN a few years later when CN acquired IC and Harrison assumed the role of CN Chief Executive Officer (CEO). The trend toward PSR accelerated after PSR was adopted by CP in the mid-2010s when Harrison became CP's CEO, and later at CSXT in 2017 when Harrison became CSXT's CEO.

CSXT largely completed the transition to PSR prior to COVID's disruption of the economy and supply chains. CSXT closed railcar classification humps at Boyles Yard in Birmingham and Tilford Yard in Atlanta and discontinued its Mobile and New Orleans intermodal operations (though CSXT handles very low volumes of Mobile container traffic.)

NS began gradually implementing elements of PSR in 2019. Hump classification at Sheffield Yard has been discontinued. PSR implementation on NS overlapped with pandemic-related network changes. NS finished motor vehicle unit trains were discontinued in 2020 because of pandemic-related assembly plant shutdowns. Much of that automotive traffic was blended into general merchandise trains instead of motor vehicle unit trains when vehicle production and

[50] Classification yards are used to separate and sort arriving railcars to various tracks based on car destination. Blocks (groups) of railcars from selected tracks are coupled to each other to form departing trains. Flat yards are constructed on flat or nearly flat ground requiring locomotives to shove (push) or pull railcars to various tracks. Hump classification yards have a hump or small hill. They use gravity instead of locomotives to propel railcars to various tracks. Single railcars or a block (cut) of a few coupled railcars from a long block of railcars are uncoupled as they shoved to the crest of the hump. The cars roll by gravity through a series of switches and retarders. The switches are lined to direct the railcars to the desired track. Retarders control railcar speed by squeezing railcar wheel flanges as the cars pass through the retarder. Railcars must have enough speed to roll through the switches and along the destination track to its end or to couple to railcars already in the track, but not so much speed that they slam hard into car stops at track end or hard-couple to railcars already in the track. Note that hump yards have auxiliary and supporting flat yards.

hence finished motor vehicle transportation initially resumed. NS in July 2022 launched a revised Thoroughbred Operating Plan/Service Productivity Growth (TOP|SPG) simplifying routes with more direct single-market origin to single-market destination service. It primarily focuses on intermodal rail, auto and unit-train networks.

Other Class I railroads have adopted PSR, or at least elements of it, in recent years. PSR moving freight with less railroad infrastructure, equipment such as locomotives, and labor has produced superior financial results. Overall employment at Class I railroads decreased by 28 percent between 2011 and 2021. Railroads however have paused and in some instances retreated from or are considering retreating some from PSR as Congressional pressure concerning operational safety and blocked crossings has mounted.

"Just in time" logistics are under review as a result of supply chain disruption initiated by COVID. PSR's focus on optimizing the productivity of labor and railroad investment in equipment and track has reduced train movement and storage capacities. The STB has been responding to shipper complaints about generally inadequate service in addition to service complaints arising from the adoption of and transition to PSR. Longer trains blocking crossings as a result of PSR has attracted STB, FRA and Congressional attention.

Environmental, Social and (Corporate) Governance.

Environmental, Social, and Governance (ESG) is a holistic approach to financial investment and sustainability. Many railroads, like many other industries and business sectors, have adopted ESG goals. Shippers may use rail instead of trucks to achieve their own supply-chain emissions goals or those of the shipper's customers. Railroads reducing their carbon footprint improves the marketability of their transportation service to businesses with ESG goals in addition to railroads achieving their own ESG goals.

Greenhouse Gas (GHG) emissions are an important if not the primary emissions concern. CSXT's goal is a 37.3 percent reduction in Scope 1 and Scope 2 GHG emissions in 2030 from 2014.[51] The NS goal is a 42 percent reduction by 2034 from2019.

[51] Scope 1 emissions are direct GHG emissions that occur from sources that are controlled or owned by an organization. Scope 1 railroad emissions are those associated with locomotives or railroad motor vehicles. Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling. They are accounted for in a railroad's GHG inventory because they are a result of the railroad's energy use. (Scope 3 emissions, also referred to as value chain emissions, include all non-scope 1 and 2 sources. Scope 3 emissions quantification is not required by GHG Corporate Protocol.)

Railcar Fleet Ownership, Maintenance, and Storage.

An ongoing trend is decreased railroad ownership of railcars and increasing ownership by non-carriers (private-owned cars), principally railcar lessors. Railroads owned 80 percent of railcars when the Staggers Act deregulated railroads in 1980. Demand for new railcars decreased because of efficiencies arising from deregulation that enabled railroads to transport more freight using fewer railcars. Financial institutions saw investment opportunities in railroads' decreasing interest in outright ownership of railcars when new railcar demand returned in the 1990s.

Railcar Shop

Freight railcar leasing companies owned 54 percent of railcars in 2018. Shippers and railroads each owned 18 percent. TTX Company, the railroad-owned railcar company that owns and operates pools of autorack and intermodal flat cars, as well as boxcars, gondolas, and general merchandise flat cars, accounted for ten percent of the total railcar fleet in 2018. Only five percent of all new railcars manufactured since 2018 are railroad-owned.

The equipment ownership trend combined with railroad decisions to outsource certain rail car repairs even on its own fleet has shifted railcar maintenance from railroad to outside party facilities. Railcar maintenance by noncarrier parties has thus grown to be a substantive sector of the railroad industry. Alabama has many sizable non-carrier railcar maintenance facilities, most of which are located near Birmingham.

Locomotive Shop

Railcar storage capacity has been reduced by railroad yard eliminations or reductions in yard size. Railcar demand is not uniform across car types. The number and types of railcars in active use ebbs and flows with rail transportation demand and network fluidity. Limited interchangeability among car types constrains railroads' ability to deploy surplus cars and manufacturing lead time constrains obtaining new railcars. The duration of a cycle from railcar surplus to insufficient supply may be many years.

Private railcar owners contract with railroads for storage of surplus railcars. On-system railcar storage capacity can be an issue for Class I railroads that have pared track. Many short lines, particularly those with small car fleets, provide railcar storage as an additional line of business. Railcar storage revenue may be a significant or even the single largest revenue source for some short line railroads.

Railcar storage volume is currently low, the overall railcar fleet is slightly declining in size, and supply and demand for railcar types is currently relatively balanced. Demand for tank cars and to a lesser extent covered hoppers is a little tight and the supply of open top hoppers slightly exceeds demand. Alabama and Georgia Power collectively own 10,000 open top hopper railcars, and own and operate supporting railcar maintenance facilities. They are among the largest North American owners of open top hopper cars used to transport coal. Investment in railcars and supporting railroad infrastructure and facilities by Southern Company, parent of the two power companies, will decrease as use of coal to generate electricity decreases.

Open top hopper railcar

<u>Inland Ports</u>.

The term "inland port" has multiple definitions, the common thread being a multimodal freight transportation center providing value-added logistics services. The Port of Tucson, for example, is a large multimodal, multi-commodity transload facility providing rail access to Mexico as well as U.S. locations for southwest shippers without direct rail connectivity. Its intermodal role is principally to provide backhaul cargo for containers returning to southern California ports from the east. Huntsville is a relevant Alabama example of an inland port. It combines an airport and intermodal terminal with an industrial park.

Another definition is of inland port is an inland ICTF with rail shuttle service to a major port. Among the earliest U.S. inland ports of this type was the Virginia Inland Port (VIP) served by NS that opened in 1989 at Front Royal, Virginia, 175 miles from the Hampton Roads Port of Virginia. It was developed to divert regional container traffic moving by truck to the Port of Virginia to rail alleviating congestion at the port and on roadways to the port to the benefit of both truckers and shippers. From a shipper's perspective it serves as a marine terminal and is designated a U.S. Customs port of entry. The concept has been so successful that nearly every big box store retailer established a distribution center in the vicinity of VIP.

More recently South Carolina Ports in 2013 opened Inland Port Greer, located 195 miles (212 rail-miles) from Port of Charleston and served by NS, to serve a Spartanburg BMW assembly plant that had opened in 1994. Other major companies have since joined BMW as users of Port Greer. Port Greer's capacity has been doubled since it was first opened. Inland Port Dillon, located 160 miles from Charleston and served by CSXT, opened in 2018.

The Georgia Ports Authority opened the Appalachian Regional Port in northwestern Georgia in 2018. It is served by CSXT and located 340 miles (388 rail-miles) from Savannah. A new $170 million Northeast Georgia Inland Port served by NS and located 216 miles (324 rail-miles) from

Savannah is in development and expected to open in 2026. An Inland Port in Cordele, GA, 152 miles (160 rail-miles) from Savannah that opened in 2011, has not lived up to expectations. The route to the Cordele facility uses the Heart of Georgia Railroad and a few-mile-long segment of CSXT in Savannah. The Cordele area does not have a large source of containerized import or export traffic. The West Point, GA KIA assembly plant located 100 miles away from Cordele that opened in 2009 is too far away to use the facility.

Class I railroad service in much of the U.S. is largely a duopoly as subsequently discussed further. The promotion of a balanced and competitive railroad network may have played a small role in SC and GA each having partnered with both NS and CSXT in developing inland ports.

Public-Private Partnerships.

Inland Ports are examples of Public Private Partnerships (P3s) between railroads, port authorities, and in some cases other governmental agencies**.**

NS Crescent Corridor

P3s have included rail corridor improvements as well as terminals. An example was the NS Crescent Corridor between New York, and Memphis and New Orleans. The Crescent Corridor, developed in the 2007-2014 period, was a $2.5 billion public-private intermodal-focused partnership between NS, and state and federal governments. Its development included line improvements, and new and improved rail terminals, including the $97.5 million Birmingham RIF in McCalla on the New Orleans line that opened in 2012.[52] The Crescent Corridor's Memphis line traversing northern Alabama serves the Huntsville International Intermodal Center

Other examples of corridor improvements developed at approximately the same time were the Heartland Corridor and National Gateway. The Heartland Corridor, the first federal-state (Virgina, West Virginia and Ohio) partnership increased clearances in 28 tunnels and remedied 24 other overhead obstructions enabling high cube double stack service between Norfolk and Columbus, Ohio. The National Gateway, a federal-state (Pennsylvania and Ohio)-CSXT

[52] Other new NS Crescent Corridor intermodal terminals were opened in Memphis, Knoxville, Charlotte and in Pennsylvania. The undertaking constructed 300 miles of new passing tracks and additional main track.

public-private partnership designed to improve rail connections between mid-Atlantic ports and the Midwest. It similarly upgraded eleven tunnels and remedied 29 other overhead obstructions to establish the 21+ foot vertical clearance required to accommodate high cube double stack intermodal trains.

Short Line Holding Companies.

Holding company ownership of most Alabama short lines has been generally stable for a decade. No significant changes are anticipated. The mid-1980s through early 2010s was a period of short line railroad formation and growth and eventual short line consolidation under railroad holding company ownership.

Genesee & Wyoming (G&W), operator of 113 North American short lines with collectively more than 13,000 track-miles is perhaps the largest North American short line holding company. It established itself in the 2005-2012 period as the largest operator of Alabama short lines. It operates ten of Alabama's 22 total short lines and 46 percent of Alabama's total short line route-miles.

Watco, operator of 40 North American short line railroads, acquired four Alabama short lines in the 2005-2012 period. Patriot Rail is the holding company for MSCI and TSRR. The Huntsville & Madison County Authority's HCMR, Southern Company's SERX, and ASPA's TASD are the only railroads that remain independent and are not holding company subsidiaries.

Class I Duopoly.

There was a flurry of Class I railroad mergers in the late 1990s when CN purchased the Illinois Central, the Burlington Northern and the Atchison, Topeka & Santa Fe merged to form BNSF, Union Pacific (UP) absorbed the Southern Pacific, and CSXT and NS purchased and apportioned Conrail between themselves. The recent acquisition of KCS by CP, the two smallest Class I railroads prior to their merger forming CPKC, still the smallest Class I railroad, is very likely the last merger of U.S. Class I railroads for many years to come. The Class I U.S. and Canadian railroad network now consists of three pairs of approximately equal-sized railroads. Each pair serves approximately the same geographic area; CN and CPKC serve Canada and the Mississippi Valley; CSXT and NS serve the eastern U.S., and BNSF and UP serve the western U.S.

Large portions of each of the geographic areas, particularly in the east, are essentially Class I railroad duopolies. Class I railroad service in the U.S. south of the Great Lakes and east of the Mississippi River, excluding New England and the State of Mississippi, is largely an NS-CSXT duopoly though BNSF, CN and CPKC extend into Alabama.

Railroad customers that may be served directly by multiple Class Is where Class Is cross or are otherwise near each other, or that may be served by a short line connecting to multiple Class Is best stand to benefit from Class I competition. Developers of industrial property, and industrial development authorities have recognized this and prioritize obtaining property for industrial development served by multiple Class I railroads or short lines that connect to multiple Class I railroads. The greater Birmingham area in particular has numerous CSXT and NS lines and a BNSF line.

Abandonment and Divestiture.

The only recent significant railroad abandonment in Alabama was the November 2022 abandonment of the Alabama Railroad LLC (ARL). The 47.5 mile-long spur line ARL connected to CSXT at its south end in Flomaton. Its northern end was located near Monroeville. Future significant-in-length Alabama abandonments seem unlikely.

Prior to ARL abandonment, the only significant abandonment since 2007 was a 43 mile-long abandonment by the Alabama & Florida (AF) Railway in 2011.[53] The AF abandoned the Andalusia to Geneva eastern end of a spur line that connects to CSXT at Georgiana. AF successor TNHR operates the 36 mile-long remainder of the spur line between Georgiana and Andalusia.

The 1980 Staggers Act initiated acceleration of Class I railroad consolidations abandonments and divestitures.[54] The Alabama railroad network prior to Staggers had 25 percent more route miles than at present. It largely consisted of Class I railroad through routes or through route small railroads with a close marketing relationship to a Class I or a Class I ownership interest. Deregulation initially led to a consolidation of overhead traffic on fewer lines concurrent with the nine Class I railroads operating in Alabama consolidating into four. The loss of overhead traffic caused many lines to no longer be viable, or no longer be viable as Class I railroad operations. Alabama track abandonments increased from an average of 32 miles per year in the 1971-1980 period to an average of 85 miles per year in the 1984-1993 period. The abandonments were concentrated in south Alabama as may be seen by comparing the current Alabama rail network of Figure 2-1 with the 1950s Alabama Rail Network of Figure 2-8.

Class I railroad divestitures by sale or lease of lines to short lines were greatest in same mid-1980s to early 1990s period as were abandonments. Class I sales of lines initially leased to short lines occurred over a longer period with some lines being leased to short lines for years prior to their sale. See Appendix B for 1970-2014 abandonments.

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[53] The abandonment, STB docket AB-1073X, may not be completely finalized.

[54] CSX was formed in 1980 as a holding company for Chessie System and Seaboard Coast Line and merged to form CSXT in 1986. Norfolk & Western Railway and Southern Railway formed NS Corporation in 1982 and fully merged to form NS Railway in 1990.

Figure 2-8 1950s Alabama Rail Network

2.4.3 Freight Rail Market Sectors

The general disruption of the COVID-19 pandemic on the economy, and particularly to supply chains and logistics, have upended some traffic trends and made traffic forecasting more difficult. Since the pandemic, Russia's invasion of Ukraine and associated economic sanctions have further disrupted global trade. Global fossil fuel energy markets have become chaotic as a result of the invasion. The following informal market sector discussions were prepared from publicly available information.

Intermodal Rail Traffic and TOFC vs COFC.

Container-on-flatcar (COFC) intermodal traffic has generally been growing robustly since the latter part of the last century. Traffic growth paused and dipped for a few years during the 2008-2010 recession and again during the pandemic. It recovered one-half of the 2020 year over year loss in 2021, but traffic decreased three percent in 2022 and is down four percent through July 2023. It has resumed growing as the economy grows. Alabama has taken actions to accommodate and encourage its growth.

Mixed double stack COFC (left) and TOFC (right) train

Trailer-on flatcar (TOFC) traffic has been diminishing in intermodal rail market share and in absolute terms since the 1990s. Modern TOFC (also known as piggyback) service first began to be widely used in the 1950s for North American domestic transportation. Interstate construction was occurring and trucking was rapidly capturing freight market share from railroads. Trailers could be driven onto flatcars without requiring a means of hoisting the trailers onto flatcars. TOFC requires only a truck tractor and not a separate chassis because the trailer box and wheels are a single unit. TOFC service dominated American intermodal rail transportation well into the 1980s.

Containerized intermodal traffic began making its mark in the late 1950s when ships began to be built specifically to transport containers. The efficiency of stacking containers on ships was very compelling and containers quickly became the standard for most international freight. Increasing international trade and domestic truck movement of containerized international freight, the development of 48-foot and then 53-foot domestic-use containers comparable in capacity to 48-foot and 53-foot semi-trailers, and the greater efficiency of COFC, especially

double stack COFC, eroded TOFC market share.[55] TOFC loads decreased from 60 percent of U.S. intermodal rail loads in 1988 to 8.5 percent in the first one-half of 2021.

Parcel companies such as United Parcel Service, less-than-truckload companies, and trucked temperature-controlled freight, are currently the primary TOFC users. Canada and Mexico have already phased out TOFC. TOFC volumes may reach a tipping point where TOFC may generally no longer be supported by the general railroad industry, though BNSF and NS have expressed continuing support for TOFC.[56] NS however will be ending its Triple Crown intermodal service, a specialized type of rail intermodal trailer movement currently particular only to NS that since 2015 has focused on transportation of automobile parts between Detroit and Kansa City.[57]

Electric Power Generation Coal Traffic.

James H. Miller, Jr Electric Generating Plant on Locust Fork of the Black Warrior River

Global warming began to attract attention approximately two decades ago. Reducing greenhouse gas emissions as a cause, combined with reducing other adverse air quality impacts associated with use of coal to generate electricity, concerns about ash ponds, and hydraulic fracturing flooding the market with inexpensive natural gas initiated a profound trend away from use of coal in the 2010s. Coal's 50 percent share of U.S. power generation in 2007 decreased to 27 percent in 2018 and 20 percent in 2022. The U.S. Energy Information Administration projects it will decrease to less than 10 percent in 2030. CSXT coal transportation revenue decreased from approximately one-third of its 2010 revenue to 16 percent of its revenue in 2022. NS coal transportation revenue decreased from over one-quarter of total revenue in 2010 to 14 percent in 2022.

[55] International Organization for Standardization (ISO) containers are 8 ft wide, 20 or 40 ft in length, and 8.5 ft or 9.5 ft (high cube) in height. Forty-foot containers are the most common in international trade, accounting for approximately two-thirds of containerized freight by volume. Twenty-foot containers account for approximately one-quarter by volume.

[56] BNSF has the largest U.S. rail intermodal traffic volume. TOFC accounted for 11 percent of its of its first one-half 2021 intermodal volume. TOFC accounted for 8 percent of NS first one-half of 2021 intermodal volume.

[57] Triple Crown Service utilizing roadrailers first appeared on American railroads in the 1950's. Roadrailers are placed directly on special railroad dual axle wheelsets (also known as trucks) instead of rail flatcars. Service is expected to end with its special equipment wears out.

Alabama Power parent Southern Company, the nation's third-largest electric utility, once operated 66 coal-fired generating units at various power plants capable of collectively producing 20,450 megawatts (MW). It has announced it will operate only eight units generating 4,300 MW by the end of 2030.

Alabama Power has completely closed its coal-fired Gorgas and Gadsden Electric Generating Plants, and the Tennessee Valley Authority has completely closed its coal-fired Colbert and Widows Creek Fossil Plants. Coal units have been closed or converted to natural gas at Alabama Power's Barry, Gaston, and Greene County Electric Generating Plants.

Alabama Power operates coal-fired electricity generators at Electric Generating Plant Miller northwest of Birmingham, Plant Gaston in Wilsonville, and Plant Barry at Bucks north of Mobile.[58] Plant Miller may be served by BNSF or NS. It consists of four coal-fired generators with a capacity of 2.64 MW. Plant Gaston may be served by NS or CSXT. Its five generators consist of four gas-fired generators with the ability to be minimally coal-fired and one generator that is primarily coal-fired with the ability to be natural gas-fired.

Reductions in railroad coal traffic within Alabama over the past decade are much less than the southeastern U.S. in general because of the Alabama steel industry, and coal exports and imports at the Port of Mobile McDuffie Terminal, one of the largest coal terminals in the U.S.

Coal accounted for 48 percent of the rail freight tonnage terminating in Alabama, 69 percent of intrastate rail freight, and 29 percent of the rail freight moving through the state in 2011and was not among the top eight commodities originating in Alabama per the 2013 AL SRP. Coal accounted for 45 percent of terminating freight, approximately two-thirds interstate freight, and 27 percent of rail freight moving through the state in 2022. Coal originating in the state is forecast to decrease from 7.5 million tons to two million tons by 2036 and thereafter remain stable. Coal terminating in the state is forecast to decrease from 18 million tons to nine million tons in 2036 and to five million tons in 2050.

[58] 2.37 MW capacity Plant Barry consists of six units, two of which are coal-fired. The plant is currently served by barge, the rail turnout (switch) to the plant having been removed two decades ago and the remainder of the lead track removed since then.

Automotive Traffic.

Automotive traffic includes automobiles, light trucks, SUVs and crossover vehicles. The term automotive traffic in the railroad industry generally refers to finished vehicles that are moved in unit trains and mixed merchandise trains, though railroads move vehicle parts in boxcars and in intermodal containers.

The automotive industry in Alabama was launched when Mercedes-Benz opened an assembly plant in Vance in 1997. Honda and Hyundai followed, opening assembly plants in Lincoln in 2001 and in Montgomery in 2005 respectively. Toyota began manufacturing engines in Huntsville in 2003. Annual production capacity exceeding 1.3 million motor vehicles ranks Alabama among the top five states in production. See Figure 2-9 for assembly plant and motor vehicle distribution center locations.

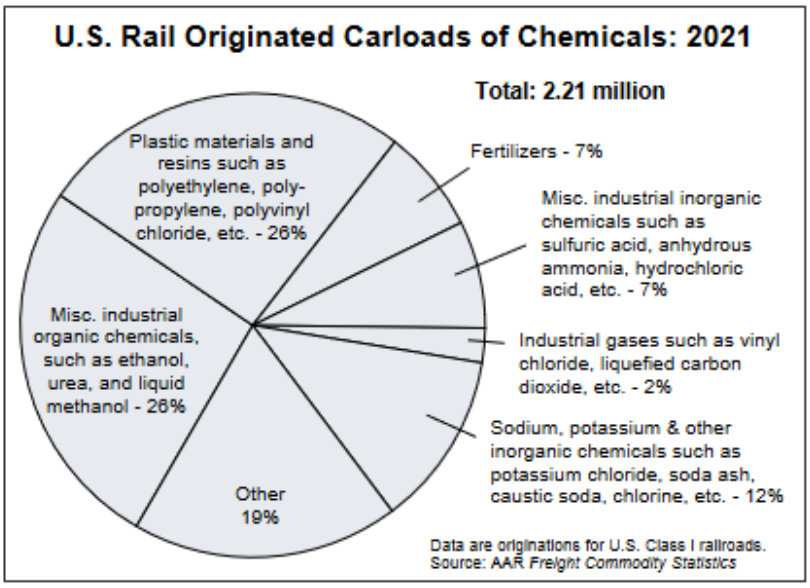
Alabama, like other states, aggressively pursues new assembly plants. Assembled motor vehicles and parts are Alabama's most valuable export, exceeding $8.5 billion in 2021. Germany, China, and Canada are the three leading destinations. Mercedes exports its Alabama assembled vehicles through the Port of Brunswick, the nation's second largest Ro-Ro traffic port.

Loading of bi-level autorack railcar

Nearly three-quarters of new automobiles and light trucks purchased each year in the U.S. are moved by rail. Autoracks may be Automax with adjustable deck heights for bi-level or tri-level configuration; bi-level with two decks that carry up to ten light trucks, SUVs and mini-vans; tri-level with three decks that carry up to 15 sedans; and uni-level for vehicles such as truck-tractors, farm equipment, and recreational vehicles.

Figure 2-9 Automobile Assembly and Distribution Facilities

Chemicals.



There are over 200 chemical manufacturers in Alabama. Chemicals are Alabama's second largest export with export shipments of $2.7 billion in 2022. Chemicals produced in Alabama include caustic soda, oxidants, light stabilizers, emissions catalysts, phenol, acetone and a variety of specialty chemicals. The Alabama chemical industry is substantially concentrated in a 55 mile-long corridor located between Theodore south of Mobile, where 25 chemical manufacturers are located, and McIntosh in Washington County north of Mobile. There is a smaller second concentration of manufacturers in Morgan County.

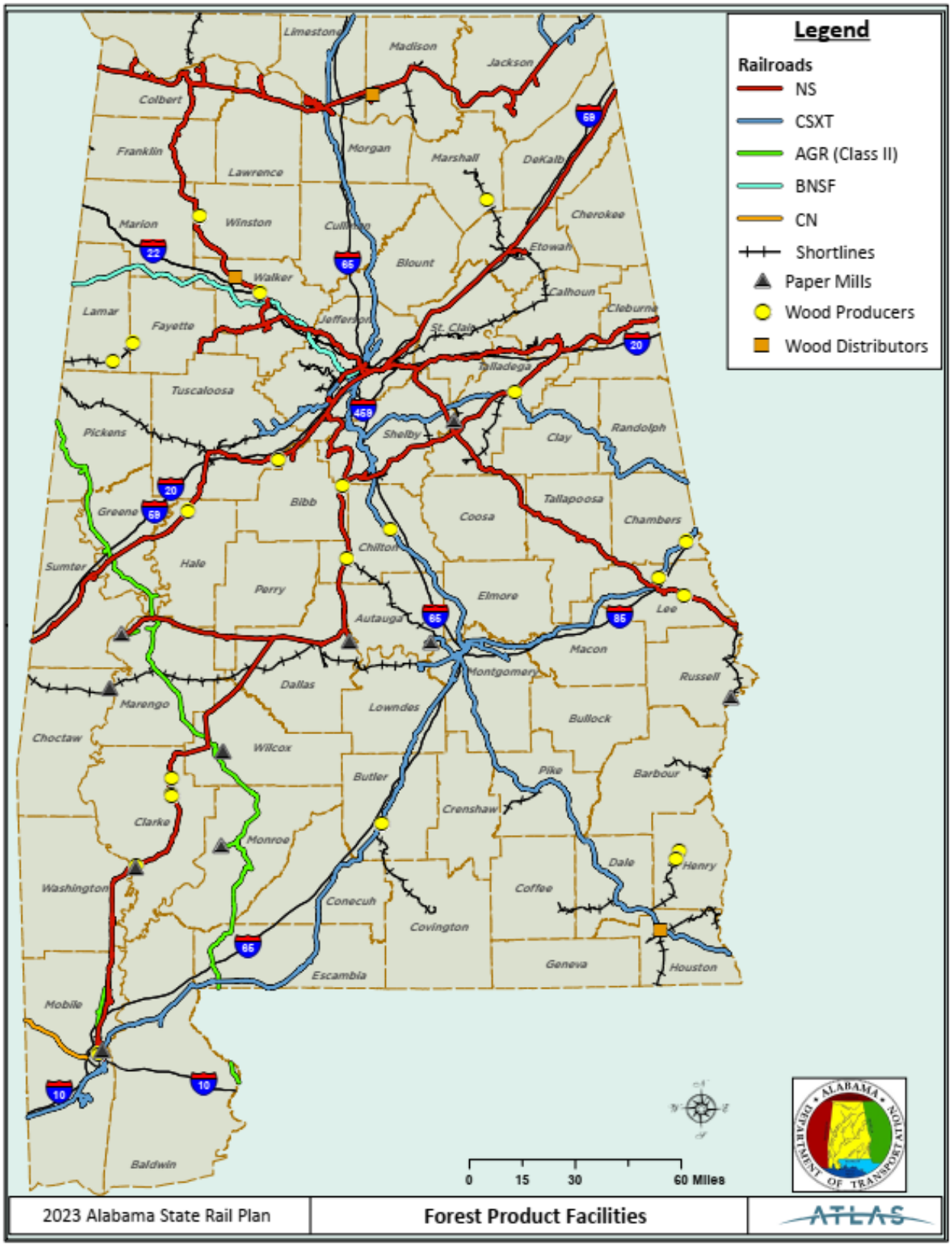
Rail moved 19 percent of chemicals (all chemicals, not only hazmat chemicals) in the U.S. in 2020. That traffic accounted for eight percent of carloads, 12.6 percent of tonnage and 16.6 percent of Class I railroad gross revenue. As noted in the waybill sample analysis, chemical carloads accounted for the second highest originating and terminating carloads, both at 10 percent.

Georgia-Pacific Naheola Paper Plant on Tombigbee River
Served by MNBR is one of six GP forestry products facilities in Alabama

Forest Products.

Forest products produced in Alabama were valued in excess of $12.5 billion and $2 billion were exported in 2021. Production occurs at over 110 Alabama locations including chip mills, sawmills, and papermills. Alabama is the second largest producer of pulp and paper in the US. It is sixth in both lumber and wood panel production. Small rail-served woodyards that were common in the last century have largely been eliminated in favor of trucking logs to processing facilities.

Figure 2-10 Rail-served Forest and Paper Products Facilities



The state's abundant renewable timber resources are such that forest products rail traffic will be as stable overall as the various forest products production, with some opportunity to increase given an average increase in trees of two percent annually. See Figure 2-10 for major forest products facilities.

Sunshine Mills in Red Bay, AL
at the end of the MSCI Redmont Division Line

Agriculture Products and Food Production.

Alabama agricultural receipts totaled $4.7 billion in 2020 with broiler chickens and eggs the top commodities. There were $800 million in exports in 2021 including $341 million in food products, $326 million in agricultural products and $133 million in livestock and related products. The state was third in the U.S. in both poultry and peanut production.

Metals and Materials.

Metals manufacturing emerged in Birmingham because of the area's rich deposit of iron ore, coal and limestone, and metals remain as an industrial base in that area. Metals manufacturing has spread, most notably to north of Mobile at Calvert where ArcelorMittal is constructing an electric arc furnace steel-making facility. Three of the nation's seven major pipe-makers operate in Alabama. Metal manufactured goods exports from Alabama were valued at over $1.3 billion in 2021, and fabricated metal manufacturing exports were valued at $453 million in 2019.

2.4.4 Rail Passenger Travel Trends

It is difficult to determine southern U.S. rail passenger travel trends in light of general disruption in passenger transportation that occurred due to COVID and COVID-related Amtrak service reductions. *Crescent* service was reduced to three trains per week in late 2020. Amtrak restored daily *Crescent* service in June 2021, but the *Crescent* was among nine daily long-distance routes Amtrak reduced to five days per week from early 2022 through most of 2022. *Crescent* ridership in FY2022 was down 43 percent from 2019 ridership while train operations were reduced by approximately one-quarter. *Crescent* ridership is unlikely to recover to near pre-COVID ridership levels in 2024 even though daily operation has been restored, unlike domestic air travel volumes that have recovered to 2019 volumes.

Crescent ridership in the southeastern U.S. had more or less been gradually decreasing year by year in the decade prior to the pandemic. It remains to be seen if it will recover to 2019 volumes in 2025 or later.

2.5 Alabama Rail Freight Traffic Flow Analysis

Carload Waybill Sample.

An analysis of rail freight traffic flows on the Alabama rail network has been conducted using the U.S. Surface Transportation Board's (STB) 2020 Carload Waybill Sample. The STB samples the waybills of railroads that terminate 4,500 or more revenue carloads annually. The carload waybill sample is then used to infer the total quantities of rail freight shipped.

Waybills are freight shipping documents that include information on the shipment origin, destination, commodity or product, and quantity shipped. Waybills identify the commodity or product based on a seven-digit numeric Standard Transportation Commodity Code (STCC). STCC codes categorize commodities or products into 38 groupings that as indicated by the first two digits of the STCC.

The STB has provided ALDOT with records of rail freight using the Alabama rail network originating and/or terminating in Alabama or passing through Alabama between other states. The waybill sample is the best available source of rail freight flow information. The waybill sample information however is confidential and may only be presented at an aggregate level. Therefore, detailed information has been omitted from this analysis or is presented such that it does not divulge specific rail shipment volumes and other competitive information.

The waybill sample captures the movements of both railcars and intermodal containers and trailers on flatcars. The sample identifies and counts the movement of containers on flatcar and trailers on flatcar instead of the count of railcars that transport the containers and trailers. Containers and trailers are collectively referred to as "units."

Rail freight traffic volumes have traditionally been reported based on net tonnage. Reporting based on carloads and units generally much better reflects the value of freight being transported. Heavy commodities such as coal and nonmetallic minerals have very low value compared to relatively light products such as motor vehicles. The average cost at a U.S. mine in 2021 of 110 tons of bituminous coal that would fill a railcar was less than $7,000. Railcars carry 10 to 26 motor vehicles that collectively weigh 17 to 33 tons (average 26 tons) and that are collectively valued at hundreds of thousands of dollars.

Differences in the weight of carloads by commodity or product and carload/units influence the rank and relative traffic volumes measured by tonnage versus carload/units. The typical weight of bulk commodity is 90 to 120 tons per railcar, approximately four times the weight of motor vehicles transported by a railcar. A common rule of thumb is that one railcar equals three to four truckloads. The average weight of the freight within a container is 15 tons. The traffic volume of heavy bulk commodities and products thus rank significantly higher when ranked by tonnage than light commodities or products and containerized freight of all sorts.

Directional Traffic Definitions.

This rail freight traffic flow analysis uses the following standard directional traffic definitions in the interpretation of waybill sample data:

Originating: Tonnage or carloads/(intermodal) units that are loaded at a location within Alabama and are destined for another location within or outside of Alabama. Waterborne freight or cargo arriving at an Alabama port that is transferred to a railcar is originating rail freight.

Outbound: Tonnage or carloads/units that are loaded at a location within Alabama and are destined for a location outside of Alabama. Waterborne freight or cargo arriving at an Alabama port that is transferred to a railcar and destined for a location outside of Alabama is outbound.

Terminating: Tonnage or carloads/units that are loaded at a location within Alabama or outside of Alabama and are destined for a location within Alabama. Freight transferred from railcars to ship or barge at an Alabama port is terminating rail freight.

Inbound: Tonnage or carloads/units that are loaded at a location outside of Alabama and are destined for a location in Alabama. Freight loaded at a location outside of Alabama and transferred from railcars to ship or barge at an Alabama port is inbound.

Intrastate: Tonnage or carloads/units that are both loaded and unloaded at locations in Alabama. Waterborne freight arriving at an Alabama port and transferred to a railcar and unloaded within Alabama is intrastate traffic. Conversely, rail freight loaded at a location within Alabama and transferred from railcars to a ship or barge at an Alabama port and is intrastate traffic.

Pass-through (also known as Overhead): Tonnage or carloads/units that are both loaded and unloaded at locations outside Alabama and that traverse the state.

2.5.1 Alabama Rail Freight Flows by Direction

Inbound, Intrastate, Outbound and Pass-Through.

Most rail freight on the Alabama rail network traffic is pass-through traffic moving between other states. Pass-through traffic, also known as overhead traffic, is 59 percent of the tons and 72 percent of the carload/units moving on the state's rail network as shown in Table 2-11. The prevalence of pass-through traffic is normal for any state because rail shipments generally are long-distance movements across multiple states.

Alabama inbound rail traffic exceeds outbound traffic. Inbound shipments from other states account for 19 percent of tons and 11 percent of the carloads/unit. Outbound movements are 12 percent of the tons and 8 percent of the carloads/units. A small but significant percentage of freight rail traffic moves entirely within Alabama, representing eight percent of tons and four percent of carloads/units.

Table 2-11 Summary of Alabama Rail Traffic Flows by Direction, 2020

	Tons		Carloads-Units		
Direction	**Millions**	**Percentage**	**Quantity**	**Percentage**	**Tons Per Car/Unit**
Inbound	28.8	19%	336,000	11%	85.7
Intrastate	11.0	8%	111,000	4%	99.1
Outbound	17.3	12%	241,000	8%	71.8
Pass-through	89.7	61%	2,357,000	77%	38.0
Total	**146.7**	**100%**	**3,045,000**	**100%**	**48.2**

Source: STB Waybill Sample, WSP Analysis

The much higher inbound, intrastate, and outbound tonnage tons per carload or unit and the lower pass-through tons per carload are indicative of pass-through traffic having a higher percentage of lighter intermodal units or railcars carrying motor vehicles than Alabama inbound, intrastate, or outbound traffic. The 99 average tons per intrastate carload/unit indicates nearly all intrastate rail traffic consists of heavy commodities or products.

2.5.2 Alabama Rail Freight Flows by Commodity

Originating Freight by Commodity.

Coal (STCC group code 11), as shown in Table 2-12, is the highest volume commodity by tonnage originating by rail in Alabama. It is the highest volume commodity both outbound to other states and intrastate. Chemicals (STCC group code 28); nonmetallic minerals (STCC group code 14); primary metal products (STCC group code 33; and clay, concrete glass of stone products (STCC group code 12) each constitute between 10 and 13 percent of originating rail traffic by tonnage and between 6 and 10 percent by carload/units.

Coal mined in Alabama is bituminous coal. Bituminous coal, classified by the U.S. Geological Survey as a middle rank coal between sub-bituminous coal and anthracite, constitutes 45 percent of all U.S.-mined coal.[59] Bituminous coal usually has a high heating value. It is used in electricity generation when its sulfur content is not too high and is used in steel-making. Most Alabama bituminous coal is metallurgical coal, also known as coking coal. Much of it is exported to overseas steel-makers.

A wide range of chemical products originate by rail in Alabama. Sand, gravel, limestone and clay are examples of nonmetallic minerals. Nearly two-thirds of nonmetallic minerals originating in Alabama and moving by rail is broken stone. Most of the rail tonnage shipped from Alabama in the clay, concrete, glass or stone products category is hydraulic cement or lime. "Products" denotes there has been at least some processing of the underlying commodity.

Table 2-12 Originated Alabama Rail Traffic Ranked by Tonnage, 2020

Commodity (STCC group code)	Tons		Carloads-Units	
	Millions	Percentage	Quantity	Percentage
Coal (11)	7.9	27%	67,000	15%
Chemicals (28)	4.0	13%	44,000	10%
Nonmetallic Minerals (14)	3.5	12%	31,000	7%
Primary Metal Products (33)	3.4	11%	37,000	8%
Clay, Glass or Stone Products (12)	2.9	10%	28,000	6%
Intermodal Units	0.5	2%	34,000	8%
Other	7.5	25%	197,000	45%
Total	**29.5**	**100%**	**438,000**	**100%**

Intermodal is ranked ninth by tonnage. The table does not include the commodities ranked by tonnage between Clay, Glass or Stone and Intermodal Units commodity. Those commodities are included in "Other".
Source: STB Waybill Sample, WSP Analysis

[59] Lignite, below sub-bituminous coal, is the lowest rank coal. Anthracite has the highest carbon content, fewest impurities, and the highest energy density of all types of coal.

Primary metal manufacturing includes mills and foundries that make a various upstream metal products such as castings, pipes, and sheet metal by smelting and/or refining ferrous and nonferrous metals from ore, pig or scrap, using electrometallurgical and other process metallurgical techniques, including production of metal alloys by introducing other chemical elements to pure metals. Primary metal products shipped from Alabama are mostly steel products, particularly plate steel.

Coal, followed by transportation equipment that is included in "Other" in Table 2-12, and Chemicals constitute the largest volume or originating carloads/units. Transportation equipment (STCC group 37) shipped by rail from Alabama are predominantly assembled motor vehicles.

Terminating Freight by Commodity.

Coal, as shown in Table 2-13 , is also the highest volume commodity measured by tonnage to terminate shipped inbound from other states and also intrastate by rail within Alabama, followed by chemicals, primary metal products, farm products, and waste or scrap. Coal is also the highest volume commodity in terms of carloads/units, followed by chemicals, intermodal containers, and transportation equipment. Like originating freight, intermodal containers and transportation equipment are not among the top five by tonnage.

Table 2-13 Terminated Alabama Rail-Traffic Ranked by Tonnage, 2020

Commodity (STCC group code)		Tons		Carloads-Units	
		Millions	Percentage	Quantity	Percentage
Coal	(11)	18.6	45%	158,000	30%
Chemicals	(28)	4.9	12%	55,000	10%
Primary Metal Products	(38)	3.0	7%	33,000	6%
Farm Products	(1)	3.0	7%	28,000	5%
Waste or Scrap	(40)	2.3	6%	24,000	5%
Intermodal Units		0.5	1%	35,000	7%
Other		8.7	21%	195,000k	37%
Total		**41.0**	**100%**	**527,000**	**100%**

Intermodal is ranked eighth by tonnage. The table does not include the commodities ranked by tonnage between Waste or Scrap and Intermodal Units. Those commodities are included in "Other".
Source: STB Waybill Sample, WSP Analysis

Inbound coal originating in other states and terminating in Alabama is split between bituminous and sub-bituminous coal. A wide variety of chemicals are shipped to Alabama with ethanol the largest category. Primary metal products consist of steel, particularly steel ingots, and sheet steel. Rail shipments of farm products originating in Alabama and to Alabama are mainly corn, wheat, and soybeans. Waste or scrap shipments consist of iron and steel scrap, likely used as

feedstock for steel mills. The majority of transportation equipment carloads terminating in Alabama, like transportation equipment carloads originating in Alabama, are finished vehicles.

Intermodal containers, chemicals, and food products were the highest volume products to pass through Alabama by rail between other states when measured by either tonnage or carloads/units. Coal, and paper and pulp products (STCC group 26) were among the top five by tonnage moving passthrough or overhead. Transportation equipment and empty intermodal containers (STCC group 42) were among the top five by carload/units.

Intrastate rail movements in Alabama are primarily coal. The highest volumes move from Jefferson County to Mobile County, primarily to the steel industry and the Port of Mobile McDuffie Coal Terminal. More coal moves inbound to Alabama than moves intrastate, but intrastate tonnages are significant.

2.5.3 Alabama Rail Freight Flows by Geography

Originating Freight by County.

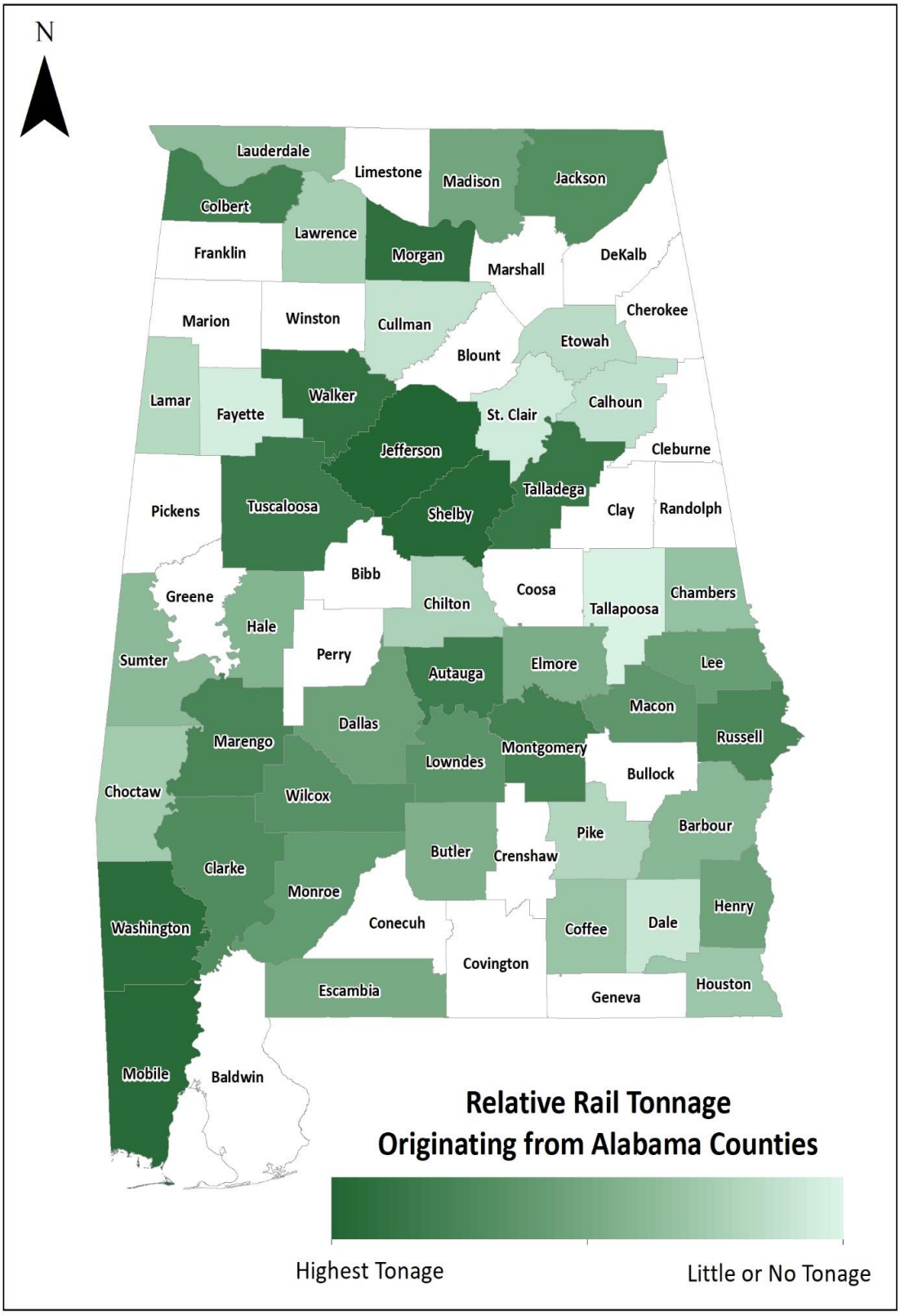
The highest rail freight volumes by tonnage originate from Jefferson, Shelby, Mobile, Washington, and Morgan counties as shown in Figure 2-12.

- Much of the tonnage originating in Jefferson County is coal. Intermodal containers are the highest volume by carloads/units shipped outbound from the county.
- Crushed stone, and hydraulic cement and lime are the highest volume commodities originating in Shelby County.
- Steel and chemicals are a large share of tonnage shipped by rail from Mobile, Washington, and Morgan counties.

Terminating Freight by County.

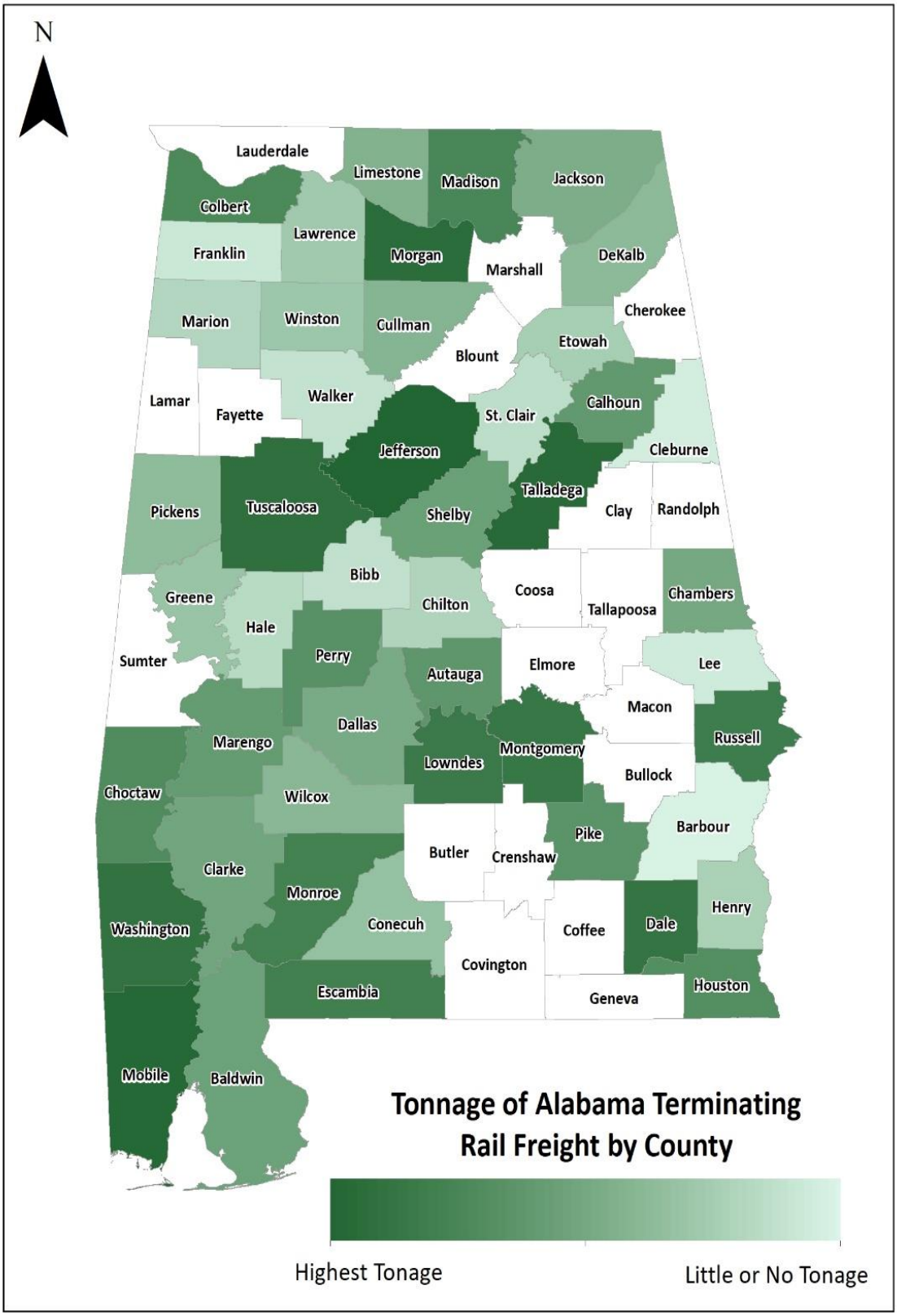
The highest volumes by far of rail freight that terminate in Alabama are destined to Jefferson or Mobile counties, the two most populous counties in the state, as shown in Figure 2-12. The two counties collectively account for about two-thirds of the tonnage and carloads/units terminating in Alabama. Coal is the highest volume commodity shipped to Jefferson County by tonnage (Plant Miller and steel-making) and carloads/units, although a variety of steel, chemical, and petroleum products are shipped to Jefferson County as well. Intermodal containers are the second highest volume by carload/units terminating in Jefferson County. Coal is also the highest volume commodity terminating in Mobile County (McDuffie Coal Terminal). A range of chemical, steel, paper, and other products also account for significant terminating tonnage.

Figure 2-11 Tonnage of Alabama Originating Rail Freight by County



Source: STB Waybill Sample, WSP Analysis

Figure 2-12 Tonnage of Alabama Terminating Rail Freight by County



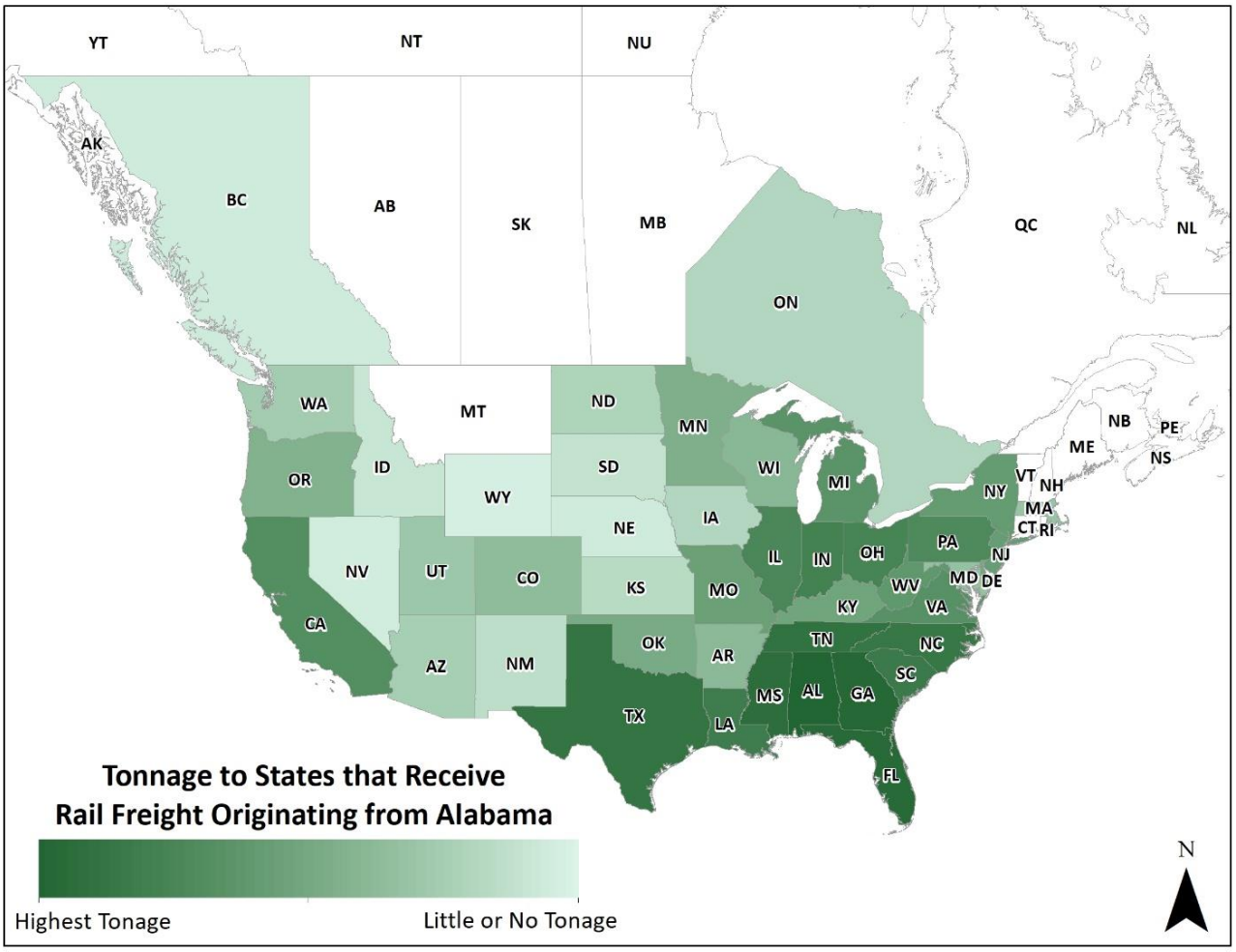
Source: STB Waybill Sample, WSP Analysis

2.5.4 Alabama Rail Freight Trading Partners

Alabama Originating Freight by Trading Partner.

Alabama is its own largest destination of rail freight as shown in Figure 2-13. Alabama intrastate freight rail traffic has higher tonnage than shipments to any other single trading partner state or province, primarily due to coal shipped to Mobile County. After Alabama, the leading destinations for Alabama-originated rail traffic by tonnage are the four states adjacent to Alabama: Georgia, Florida, Mississippi, and Tennessee. The six largest destination states for carload/unit freight originating in Alabama are Georgia, followed by Alabama (intrastate), South Carolina, Florida, Texas, and Tennessee.

Figure 2-13 Alabama Originating Tonnage to States and Provinces



Source: STB Waybill Sample, WSP Analysis

The types of rail freight shipped from Alabama to these states are:

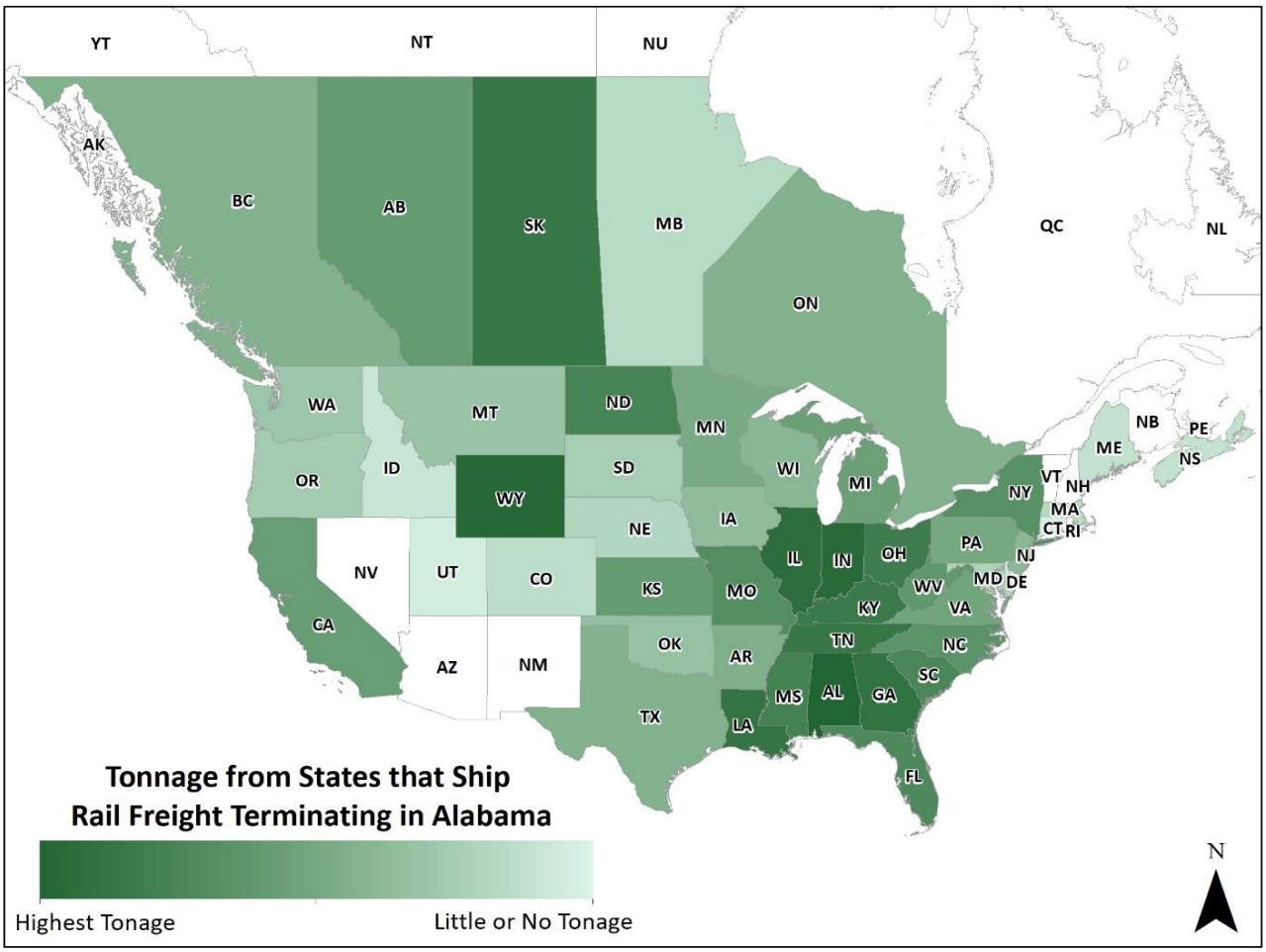
- *Alabama*. Most intrastate traffic is coal. Coal mined within Alabama is high sulfur, high heat content, bituminous coal.
- *Georgia*. Hydraulic cement is the highest volume commodity by tonnage shipped from Alabama and is also a major commodity shipped to Georgia when measured by carloads/units. Intermodal and finished vehicles as measured by carload units are shipped in high volume. Intermodal containers are primarily destined for Savannah. Finished vehicles are primarily destined for export at the Port of Brunswick.
- *Florida*. Commodities shipped from Alabama to Florida consist primarily of nonmetallic mineral products, forest products, chemicals, and steel.
- *Mississippi*. Nonmetallic minerals is by far the highest volume Alabama commodity type shipped to Mississippi both by tons and carloads/units.
- *Tennessee*. Rail shipments from Alabama to Tennessee primarily consist of chemicals, forest products, nonmetallic minerals, paper, and steel.
- *South Carolina*. Commodities shipped from Alabama to South Carolina are primarily empty intermodal containers to Charleston, lime, chemicals, and forest products.
- *Texas*. Commodities shipped from Alabama to Texas are primarily steel, forest products, petroleum products, and chemicals.

Alabama Terminating Freight by Trading Partner.

Alabama is also its own largest trading partner in terms of terminating freight rail tonnage as shown in Figure 2-14. The second largest origination of rail freight by tonnage shipped to Alabama is Wyoming, followed by Indiana, Illinois, and Georgia. By carloads/units, Georgia is the second largest originating state of freight rail shipments to Alabama, followed by Wyoming, Indiana, and Illinois. Commodities shipped from these origins are:

- *Alabama*. Intrastate shipments are mostly coal.
- *Wyoming*. Shipments to Alabama are principally low sulfur sub-bituminous coal.
- *Georgia*. By tonnage, a wide variety of commodities are shipped to Alabama with no one commodity category more than one-third of freight shipped.
- *Indiana*. Shipments by rail are mostly steel, farm products, food products, and chemicals.
- *Illinois*. Commodities shipped by rail to Alabama are mostly farm products, chemicals, food products, coal, and steel.

Figure 2-14 Alabama Terminating Tonnage from States and Provinces



Source: STB Waybill Sample, WSP Analysis

2.5.5 Alabama Rail Freight Traffic Trends

The results of the 2020 Waybill Sample analysis have been compared with the 2010 and 2019 Association of American Railroads state traffic profiles for Alabama that were based on the 2010 and 2019 Waybill Samples. Waybill sample data for the year 2020 is the most recently available, but 2020 was an unusual year because of the COVID 19 pandemic. 2019 Waybill Sample data has been included to provide a better insight into traffic trends under more "normal" conditions. The inclusion of 2019 data also provides perspective on the impact that the pandemic has had on rail freight traffic in Alabama.

As shown in Table 2-14, rail tonnage originating in Alabama increased by 5.4 million tons between 2010 and 2019, but then declined by 8.7 million tons in 2020, falling below the 2010 volume. The number of carloads/units increased between 2010 and 2019. Carload/unit traffic levels then declined in 2020, but unlike tonnage, 2020 carloads/units remained above 2010 levels. The difference is attributable to commodities with higher tonnage per carload/unit, such as coal having declined between 2010 and 2020, while commodities with low weight per carload/unit, such as

intermodal traffic, having increased. Originating primary metal products (steel) and chemicals increased between 2010 and 2020 despite significant drops in traffic between 2019 and 2020, particularly in primary metals products traffic. Both coal and nonmetallic mineral volumes declined to levels below 2010 during 2019.

Table 2-14 Originating and Terminating Rail Traffic in Alabama, 2010, 2019 and 2020

Commodity (STCC group code)	Tons (millions)			Carloads-Units		
	2010	2019	2020	2010	2019	2020
Originating						
Coal (11)	10.2	8.4	7.9	90,800	71,600	67,000
Nonmetallic Minerals (14)	4.9	4.4	3.5	46,900	42,800	31,000
Pulp or Paper Products (26)	3.6	NA	2.6	53,200	NA	35,000
Chemicals (28)	3.5	5.1	4.0	38,000	52,900	44,000
Primary Metal Products (33)	2.9	6.0	3.4	33,900	65,100	37,000
Other	7.6	14.3	8.2	142,200	232,500	224,000
Originating Total	**32.8**	**38.2**	**29.5**	**405,000**	**464,900**	**438,000**
Terminating						
Coal (11)	27.2	21.3	18.6	234,900	181,700	158,000
Waste or Scrap (40)	4.7	2.2	2.3	51,100	24,000	24,000
Farm Products (1)	4.2	3.2	3.0	40,800	31,200	28,000
Chemicals (28)	3.0	4.5	4.9	33,000	47,500	55,000
Metallic Ores (10)	3.0	NA	0.0	30,600	NA	400
Other	8.1	11.6	12.2	131,700	163,400	262,000
Terminating Total	**50.3**	**42.8**	**41.0**	**522,100**	**447,800**	**527,000**

Source: STB Waybill Sample, Association of American Railroads data, WSP Analysis

The decrease in terminating rail tonnage between 2010 and 2020 was driven by drops in coal traffic, waste or scrap, farm products, and metallic ores, the latter from Minnesota. In contrast, carloads/units increased over the same period. Similar to originating traffic, the inconsistency between tonnage and carload/unit trends is because of declines in commodities with high tonnage per carload (e.g., coal and nonmetallic minerals) and increases in commodities with low tonnage per carload (e.g., intermodal and automobiles). Both terminating chemicals tonnage and carloads/units increased.

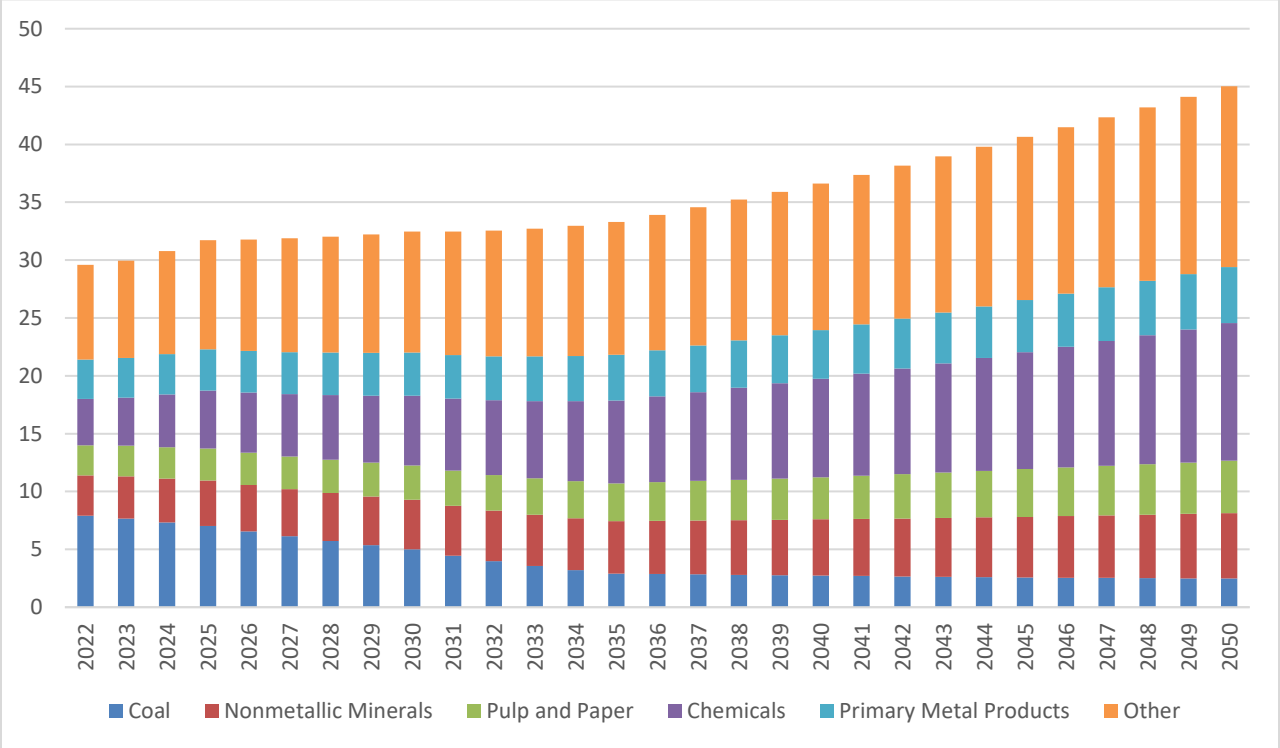
The commodities in Table 2-14 are ranked by 2010 tonnage. Comparing the 2010 ranking with the 2019 and 2020 commodity rankings of Tables 2-12 and 2-13 indicates the increasing prominence of chemicals and highlights changes in the nature of the Alabama steel industry. Chemicals rose in the originating and terminating rankings by tonnage from fourth in 2010 to second in terminating and third in originating tonnage in 2019. Primary metal products rose in the rankings in both originating and terminating tonnage between 2010 and 2020. Metallic ores decreased precipitously but waste and scrap increased in terminating tonnage ranking.

2.5.6 Alabama Rail Freight Forecasts

Originating Freight Forecast.

The U.S. Federal Highway Administration maintains a forecast of commodity freight flows, including rail traffic that originates or terminates in Alabama as part of its Freight Analysis Framework-5 (FAF-5) database. The results of applying forecast commodity growth factors derived from the database to Alabama originating rail traffic suggest that by 2050 originated rail tonnage should be approximately one-half greater than the 2022 tonnage as shown in Figure **2-15**. The growth is primarily driven by increases in chemicals and traffic in the "Other" category that in Figures 2-15 and 2-16 includes intermodal. Partially offsetting traffic growth are forecasted declines in coal.

Figure 2-15 Forecast Rail Freight Tonnage Originating in Alabama (millions)



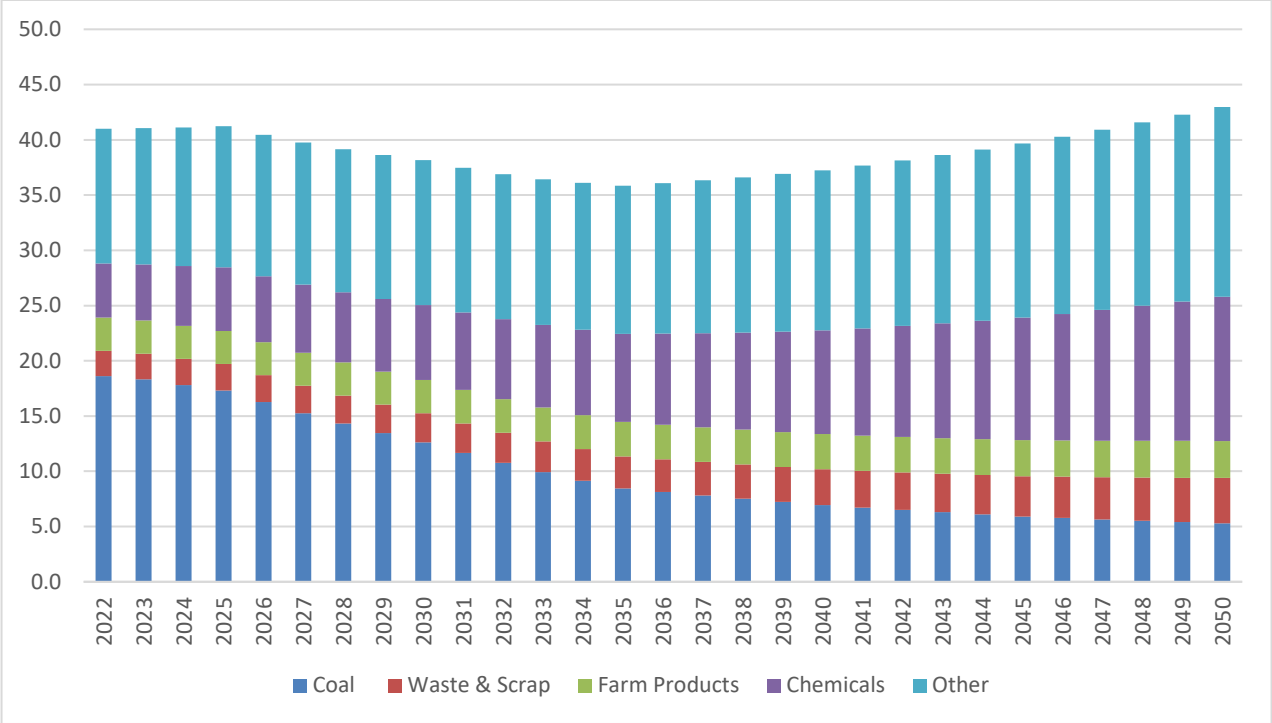
Sources: STB 2020 Waybill Sample, FHWA Forecast, WSP Analysis

Terminating Freight Forecast.

The results of applying the FAF-5 growth factors to rail traffic terminating in Alabama are forecast tonnage volumes that first decline between 2022 and 2035, but then increase through 2050. Terminating tonnage in 2050 is forecast to be approximately five percent higher than 2022 terminating tonnage. Traffic declines as shown in Figure 2-16 are driven by forecasted decreases in terminating coal shipments, which in 2020 (2022 assumed to be similar) accounted for 45 percent of rail tonnage that terminates in Alabama. Counteracting declines in coal are

forecasted increases in chemical and "Other" commodities, which are forecast to increase by 166 and 41 percent, respectively.

Figure 2-16 Forecast Rail Freight Tonnage Terminating in Alabama (millions)



Sources: STB 2020 Waybill Sample, FHWA Forecast, WSP Analysis

2.5.7 Rail Freight Flows by Alabama Region

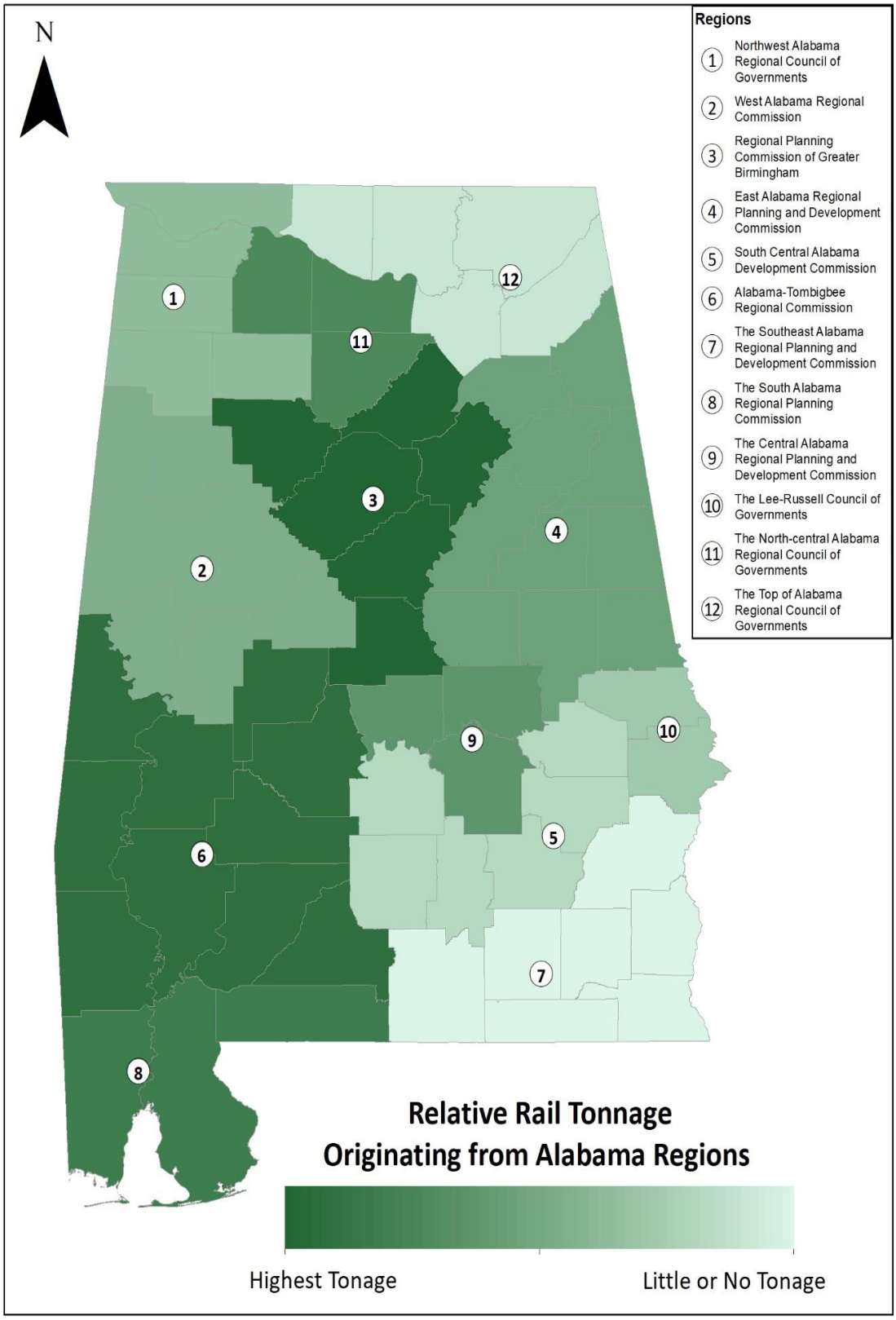
This subsection describes Alabama rail traffic flows by Alabama regions. The regions correspond to the areas of the twelve councils of governments or regional commissions within Alabama. The Councils or commissions coincide with RPO boundaries but include MPOs within RPOs. Each region consists of two to ten Alabama counties including the municipalities within the counties.

Figure 2-17 shows the relative tonnage of freight rail traffic originating from the regions. Region 3, the Birmingham region, has by far the largest volume of originating rail freight. It is followed by Region 6, the Alabama-Tombigbee Region, and Region 8, the Mobile region.

Similarly, the two highest volume regions for terminating rail freight are Regions 3 and 8 as shown n Figure 2-18. The importance of the two regions in both the origination and termination of rail freight is consistent with both regions being populous and industrialized, as well as port activity in Region 8.

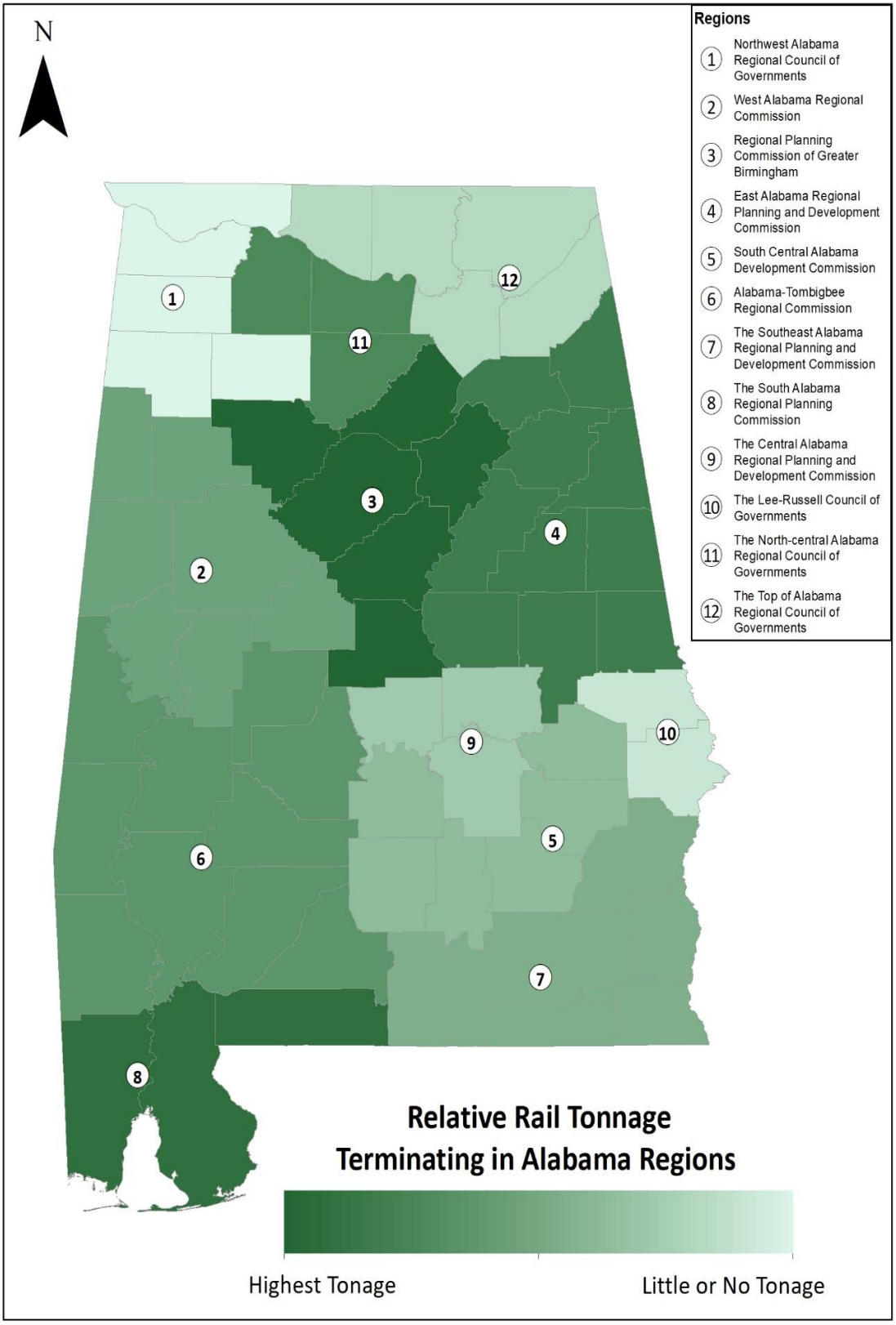
Rail flows to, from, and within each region are described qualitatively rather than quantitatively because of the requirement to keep the waybill sample information confidential. Table 2-15 summarizes commodity traffic flow information by region.

Figure 2-17 Relative Rail Tonnage Originating from Alabama Regions



Sources: STB 2020 Waybill Sample, WSP Analysis

Figure 2-18 Relative Rail Tonnage Terminating in Alabama Regions



Sources: STB 2020 Waybill Sample, WSP Analysis

Table 2-15 Summary of Commodity Traffic Flow by Region

Region No.	Region Abbrev	Flow	State / *Province*	Commodities - Products
1	NARCG	***out***	TN, IN, IL, NC, OH	Chemicals, nonmetallic minerals, forest products, steel, transportation equipment
		in	*QC*, TN	Primary metal products, forest products, chemicals, food products, transportation equipment, waste or scrap
2	WARC	out	TX, GA	Primary metal products, forest products, transportation equipment
		in	*SK*, MO, GA, *AB*, AL	Chemicals, crude petroleum, nonmetallic minerals, waste or scrap, primary metal products (Canada mostly petro & chemicals)
3	RPCGB	out	AL, FL, GA	Coal, non-metallic minerals, lime, hydraulic cement
		in	WY, AL, GA, IL	Coal (by far), chemicals, primary metal products, intermodal containers, transportation equipment, waste or scrap
4	EARPDC	out	AL, GA, VA	Nonmetallic mineral products, transportation equipment, primary steel, pulp/paper/allied products, forest products
		in	AL (by far), IL, IN	Coal (by far), farm products, primary metal products, chemicals, food products
5	SCADC	out	GA, WV	Nonmetallic minerals, forest products, chemicals
		in	IL, IN	Chemicals, farm products, food
6	ATRC	***out***	AL	Primary metal products, chemicals, pulp/paper/allied products, hydraulic cement, forest products
		in	IN, AL	Primary metal products, chemicals, forest products
7	SARPDC	out	FL, NC, LS	Forest products, food products, bauxite, chemicals
		in	IN	Food products, farm products
8	SARPC	out	FL, GA, AL, LS, IN, CA, IL	Primary metal products, chemicals, pulp/paper/allied products, transportation equipment
		in	(far more in) AL, IL	Coal (by far), pulp/paper/allied products, chemicals, farm products, nonmetallic minerals, waste or scrap
9	CARPDC	***out***	FL, GA, many others	Pulp/paper/allied products, nonmetallic minerals, transportation equipment
		in	IN, IL, KY, AL, LS	Food and farm products (IN, IL, KY), chemicals (AL, LS)
10	LRCG	***out***	AL, GA, FL, SC, IL	Pulp/paper/allied products, waste or scrap, forest products, nonmetallic minerals, chemicals
		in	NC, GA, AL, LS, OH	Nonmetallic minerals, chemicals, forest products
11	NARCG	out	NC, AL, TN, GA	Chemicals (by far), primary metal products, food products, waste or scrap
		in	TN, NC, GA, AL (evenly)	Waste/scrap, farm products, chemicals, food products
12	TARCG	out	GA, FL, MO, TX	Pulp/paper/allied products, intermodal containers, gypsum
		in	GA, LS, AL	Chemicals (LS and AL), intermodal containers (GA)

Bold italic font indicates the higher volume flow out or in. Out and in otherwise approximately balanced.

Canadian Province abbreviations: *AB* = Alberta, *QC* = Quebec, *SK* = Saskatchewan

Region 1 - Northwest Alabama Regional Council of Governments / Shoals Area MPO

More freight rail traffic originates than terminates in Region 1. Much of the originating traffic consists of chemicals, although nonmetallic minerals, forest products, steel, and transportation equipment are also shipped from Region 1. Tennessee is the largest destination of outbound freight from Region 1, followed by Indiana, Illinois, North Carolina, and Ohio.

The largest terminating commodity in Region 1 is primary metal products, although forest products, chemicals, food products, transportation equipment, and waste and scrap are shipped to Region 1 in significant quantities as well. The largest origin of rail shipments to Region 1 is Quebec, Canada, followed by Tennessee.

Region 2 - West Alabama Regional Commission / Tuscaloosa MPO

Less freight rail traffic originates than terminates in Region 2. A variety of commodities originate in Region 2, with primary metals, forest products, and transportation equipment having the highest volumes. Rail freight is shipped from Region 2 to numerous destinations with Texas and Georgia being the largest destinations, the latter including motor vehicles exported via the Port of Brunswick.

Chemicals are the highest volume commodity shipped to Region 2, followed by crude petroleum, nonmetallic minerals, waste or scrap, and primary metal products. The largest origins of rail shipments to Region 2 are Saskatchewan, Canada; Missouri; Georgia; Alberta, Canada; and other parts of Alabama. Shipments from Canada are primarily crude petroleum and chemicals.

Region 3 - Regional Planning Commission of Greater Birmingham

Less freight originates than terminates in Region 3. The difference between originating and terminating freight volumes is not large and is relatively well-balanced. Coal is the largest originating commodity, followed by nonmetallic minerals, lime, and hydraulic cement. Much of the Region 3 originating traffic (bituminous coal) is shipped intrastate. Florida and Georgia are the second largest destinations for rail freight originating in Region 3.

Coal is by far also the highest volume commodity terminating in Region 3, followed by chemicals, primary metal products, intermodal containers, transportation equipment, and waste/scrap. Wyoming (bituminous utility coal) is by far the largest origin of freight shipped to the region, followed by intrastate movements, Georgia, and Illinois.

Region 4 - East Alabama Regional Planning and Development Commission

Gadsden-Etowah and Calhoun Area MPOs

Less rail freight originates than terminates in Region 4. The highest volume originating commodities are nonmetallic mineral products and transportation equipment, although primary steel, pulp/paper/allied products, chemicals, and forest products are also shipped from Region 4. Other parts of Alabama, Georgia, and Virginia are the largest recipients of commodities shipped from Region 4.

Coal is by far the highest volume commodity shipped to Region 4, followed by farm products, primary metal products, chemicals, and food products. By far the largest source of freight shipped to Region 4 is other areas of Alabama, consisting primarily of coal shipments, followed by Illinois (mostly farm products) and Indiana (mostly food, farm products, and steel).

Region 5 - South Central Alabama Development Commission

Freight traffic to and from Region 5 is nearly balanced. The highest volume commodities that originate in Region 5 are nonmetallic minerals, followed by forest products and chemicals. Georgia and West Virginia are the largest destinations for rail shipments originating in Region 5, consisting primarily of nonmetallic mineral shipments.

Chemicals are the highest volume commodities shipped to Region 5, followed by farm products and food. Illinois and Indiana are the largest originations of rail shipments to Region 5, consisting primarily of chemicals, food, and farm products.

Region 6 - Alabama-Tombigbee Regional Commission

More rail freight originates than terminates in Region 6. Originating rail traffic from Region 6 is concentrated in a few commodities, including primary metal products, chemicals, pulp/paper/allied products, hydraulic cement, and forest products. Other areas of Alabama are the largest destinations of rail shipments from Region 6.

Primary metal products are the highest volume commodities to terminate in Region 6, followed by chemicals and forest products. Indiana is the largest source of rail tonnage shipped to Region 6, primarily consisting of primary metal products. Alabama itself is the second largest origin of rail shipments to Region 6.

Region 7 - Southeast Alabama Regional Planning and Development Commission .

Southeast Wiregrass Area MPO

Less freight originates than terminates Region 7. Forest products are the top commodities originating in Region 7, followed by food products, bauxite, and chemicals. Florida is the largest destination of rail shipments from the region, primarily consisting of forestry products. Florida is followed by North Carolina and Louisiana, which primarily are shipped food products.

Food and farm products are the primary commodities that terminate in Region 7. Indiana is the largest source of both commodities.

Region 8 - South Alabama Regional Planning Commission / Mobile and Eastern Shore MPOs

Far less rail freight originates than terminates in Region 8. The top commodities that are shipped from Region 8 are primary metal products, chemicals, pulp/paper/allied products, and transportation equipment. The destinations of commodities shipped from Region 8 are scattered throughout North America, but principally are Florida, Georgia, other parts of Alabama, Louisiana, Indiana, California, and Illinois.

Coal is by far the largest commodity shipped to Region 8, followed by pulp/paper/allied products, chemicals, farm products, nonmetallic minerals, and waste/scrap. Other parts of Alabama and Illinois are the largest sources of freight shipped to Region 8, primarily consisting of coal shipments destined for the Port of Mobile.

Region 9 - Central Alabama Regional Planning and Development Commission / Montgomery MPO

More rail freight originates than terminates in Region 9. Pulp/paper/allied products are the highest volume commodities shipped from Region 9, followed by nonmetallic minerals, and transportation equipment. Region 9 ships rail freight to a broad range of destinations with Florida and Georgia being the largest.

Farm products, chemicals, and food products have the highest volumes that terminate in Region 9. Indiana, Illinois, Kentucky, other parts of Alabama, and Louisiana are the largest origins of rail freight shipped to Region 9. Indiana, Illinois, and Kentucky primarily ship food and farm products to Region 9, while other parts of Alabama and Louisiana mainly ship chemicals to Region 9.

Region 10 - Lee-Russell Council of Governments / Auburn-Opelika and Columbus-Phenix City MPOs

More rail freight originates than terminates in Region 10. Pulp/paper/allied products are the highest volume commodities shipped from Region 10, followed by waste/scrap, forest products, nonmetallic minerals, and chemicals. Other parts of Alabama, Georgia, Florida, South Carolina, and Illinois are the primary recipients of rail freight originating in Region 10.

Nonmetallic mineral products, chemicals, and forest products are the highest volume commodities terminating in Region 10. North Carolina, Georgia, other parts of Alabama, Louisiana, and Ohio are the largest sources of freight terminating in Region 10.

Region 11 - North-central Alabama Regional Council of Governments / Decatur Area MPO

Freight rail traffic to and from Region 11 is relatively evenly matched with the originating rail freight volume being slightly less than the terminating rail freight volume in the region. Chemicals are by far the highest volume commodities that originate in Region 11, followed by primary metal products, food products, and waste/scrap. Rail shipments from Region 11 are distributed across several destinations with North Carolina, other parts of Alabama, Tennessee, and Georgia receiving the highest volumes.

Waste/scrap, farm products, chemicals, and food products are the highest volume commodities that terminate in Region 11. Freight volumes are distributed comparatively evenly among origin states that ship to Region 11. Tennessee, North Carolina, Georgia, and other parts of Alabama are the largest sources of rail freight.

Region 12 - Top of Alabama Regional Council of Governments / Huntsville MPO

Freight rail flows to and from Region 12 are balanced. Pulp/paper/allied products are the highest volume commodities originating in Region 12, followed by intermodal containers and gypsum. Numerous states receive shipments from Region 12. Georgia, Florida, Missouri, and Texas receive the most tonnage.

Chemicals, intermodal containers, and primary steel products are the highest volume commodities terminating in Region 12. Georgia, Louisiana, and other parts of Alabama are the largest origins of freight shipped to Region 12. Chemicals are the primary commodities shipped from Louisiana and other parts of Alabama, while intermodal containers are the primary commodity shipped from Georgia.

Chapter 3: Passenger Rail Needs and Opportunities and Proposed Improvements and Investments

Note that some of the proposed projects in Chapter 4, such as grade separations where Amtrak's Crescent *operates or that would be used by proposed passenger train services, qualify in some measure as passenger rail improvements.*

This Chapter first presents projects associated with existing Amtrak *Crescent* service. It then discusses the Southern Rail Commission's Alabama passenger service rail priorities, New Orleans-Mobile and Mobile-Montgomery-Birmingham services, and Interstate 20 (I-20) Corridor service that the Southern Rail Commission (SRC) has supported by resolution.

Discussion of the Alabama elements of national passenger rail visions follow, including how Alabama intersects with Amtrak's "Connects Us" plan released in 2021 and the earlier USDOT 2009 High Speed Rail Vision. Chapter 3 concludes with discussion of the passenger rail proposals of the Huntsville and Montgomery MPOs. Figure 3-1 maps the various passenger services discussed in Chapter 3.

Very few U.S. passenger rail services generate revenue that exceeds operating expenses, in which case outside capital investment assistance is required as well. Amtrak's *Crescent*, the only rail passenger service currently operating within Alabama, requires both financial operating and capital support.

Passenger rail capital costs include locomotive and coach acquisition, rolling stock support infrastructure, stations, and track and signal improvements. New locomotives and coaches cost $3,000,000 or more each.

New second track under construction

New track costs approximately $1,500,000 per mile excluding earthwork, rail bridges, highway bridges, grade crossings and crossing signals, turnouts (switches), wayside signals, and right-of-way acquisition. Total track infrastructure cost is on the order of $5,000,000 per mile or more.

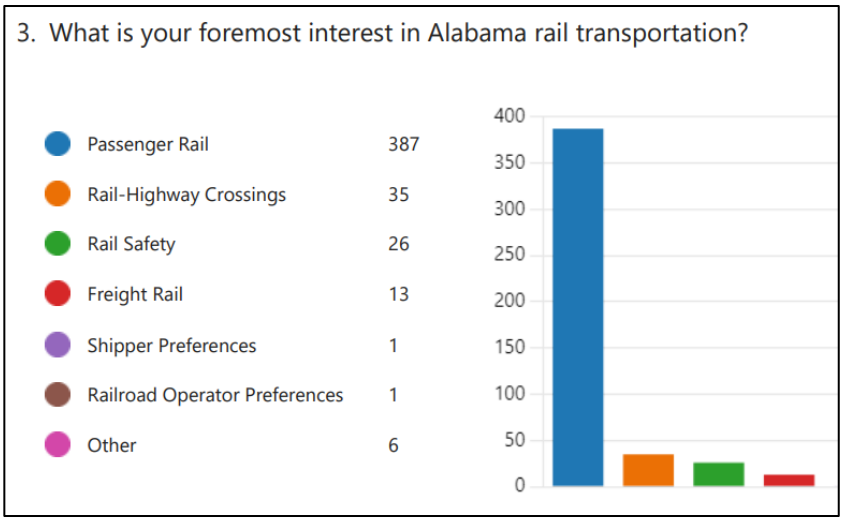
There is little available unused track capacity on the Alabama Class I railroad network. New rail passenger services operating one-half dozen trains or more

per day in each direction as have been proposed could require construction of an additional track throughout much of a new passenger train's route.

Opportunities to improve existing or initiate new Alabama passenger rail service are limited by the availability of the large amount of capital required, and especially by state and local government reluctance or inability to commit to provide the continuing financial support required to sustain operations. State and/or local governments committing to financially support operations for an extended period is a general requirement for federal capital to be used to improve and/or initiate new services. A commitment of support for an extended period is because railroad capital assets have relatively long service lives. Federal operating expense assistance for a limited period for new services is generally predicated on commitment of state and/or local governments to financially support operations for a specified minimum period.

There is a need to consider increasing intercity passenger rail service given an aging population and increasing interstate and highway congestion. The number of Alabamians aged 65 years or more increased by 34.5 percent in the 2010-2021 period from 13.8 percent to 17.6 percent of total population, far more than any other age group. The Alabama population overall is increasingly urban. Six largely urban Alabama counties accounted for 94 percent of the state's population increase in the 2010-2021 period.[1] Population during that same period decreased in 38 counties, nearly all of which are rural. Two-thirds of those counties are located in southern Alabama and especially in southwestern Alabama.

Survey question result



There is public interest in Alabama rail passenger service based on public responses to a survey soliciting AL SRP input. Interest in passenger rail was identified as the foremost interest by 82 percent of survey respondents. The next most expressed interest was rail safety. Passenger rail was the second most important interest of respondents that selected rail safety as their foremost interest. The greatest number by far of survey respondents, 47 percent, identified themselves as residents of Madison County. Ninety-four percent of Madison County respondents selected passenger rail as their first or second interest.

[1] Counties in order of increase in population, Madison (Huntsville), Baldwin (east side of Mobile Bay), Lee (Auburn-Opelika), Tuscaloosa, Shelby (metro Birmingham) and Limestone (Athens, west of Huntsville).

3.1 Federal Funding

New rail programs and increased federal funding for passenger rail resulting from the Infrastructure Investment and Jobs Act of 2021 (IIJA), also known as the Bipartisan Infrastructure Law (BIL), are passenger rail opportunities. Potential federal funding sources that could assist in enhancing or establishing new passenger rail service are identified below. Funding information is within parenthesis. IIJA funding applies to the FY22-FY26 period.

Limited to passenger rail only:

- **FSP-National** ($4.5B in FY22). The Federal-State Partnership for Intercity Passenger Rail Grant Program provides grants for capital projects that reduce the state of good repair backlog, improve performance, or expand or establish new intercity passenger rail service, including privately operated intercity passenger rail service, if an eligible applicant is involved. (https://railroads.dot.gov/federal-state-partnership-intercity-passenger)

- **Corridor Identification and Development Program** ($500k initial award per selected corridor), created by the IIJA, funds identification of new intercity passenger rail corridors and develops the necessary service planning elements. (https://railroads.dot.gov/corridor-ID-program)

- **REG** ($250M per year IIJA). The Restoration and Enhancement Grant Program provides operating assistance to initiate, restore, or enhance intercity passenger service. (https://railroads.dot.gov/grants-loans/competitive-discretionary-grant-programs/restoration-and-enhancement-grant-program)

- **IRC** ($5.8M per year IIJA). The Interstate Rail Compacts Program, created by the IIJA, provides funding for interstate rail compacts administrative costs and to conduct railroad systems planning, promotion of intercity passenger rail operations, and the preparation of grant applications. (https://railroads.dot.gov/grants-loans/competitive-discretionary-grant-programs/interstate-rail-compacts-grant-program)

Limited to rail only:

- **CRISI** ($5B per year IIJA). The Consolidated Rail Infrastructure and Safety Improvements Program funds projects that improve the safety, efficiency, and reliability of intercity passenger and freight rail, leveraging private, State, and local investments to support safety enhancements and general infrastructure improvements. (https://railroads.dot.gov/grants-loans/competitive-discretionary-grant-programs/consolidated-rail-infrastructure-and-safety-2)

- **RCEG** $500M per year IIJA). The Railroad Crossing Elimination Grant Program is a new program created by the IIJA. It provides funding for highway-rail or pathway-rail grade crossing improvement projects that focus on improving the safety and mobility of people and goods. (https://railroads.dot.gov/grants-loans/competitive-discretionary-grant-programs/railroad-crossing-elimination-grant-program)

- **RRIF** (authorized to $35B in outstanding principal amounts). The Railroad Rehabilitation and Improvement Financing Program provides direct loans and loan guarantees to finance development of railroad infrastructure. (https://www.transportation.gov/buildamerica/financing/rrif)

Not limited to rail:

- **RAISE** ($2.2B in FY22). The Rebuilding American Infrastructure with Sustainability and Equity Program (successor to BUILD that succeeded TIGER) is a competitive grant program providing funding for rail, and other surface transportation of local and/or regional significance. Selection criteria include safety, sustainability, equity, economic competitiveness, mobility, and community connectivity. (https://www.transportation.gov/RAISEgrants)

- **TIFIA.** The Transportation Infrastructure Finance and Innovation Act program provides direct loans, loan guarantees and standby lines of credit to finance surface transportation projects of national and regional significance. Project eligibility was expanded by the IIJA. TIFIA (https://www.transportation.gov/buildamerica/financing/tifia/tifia-credit-program-overview)

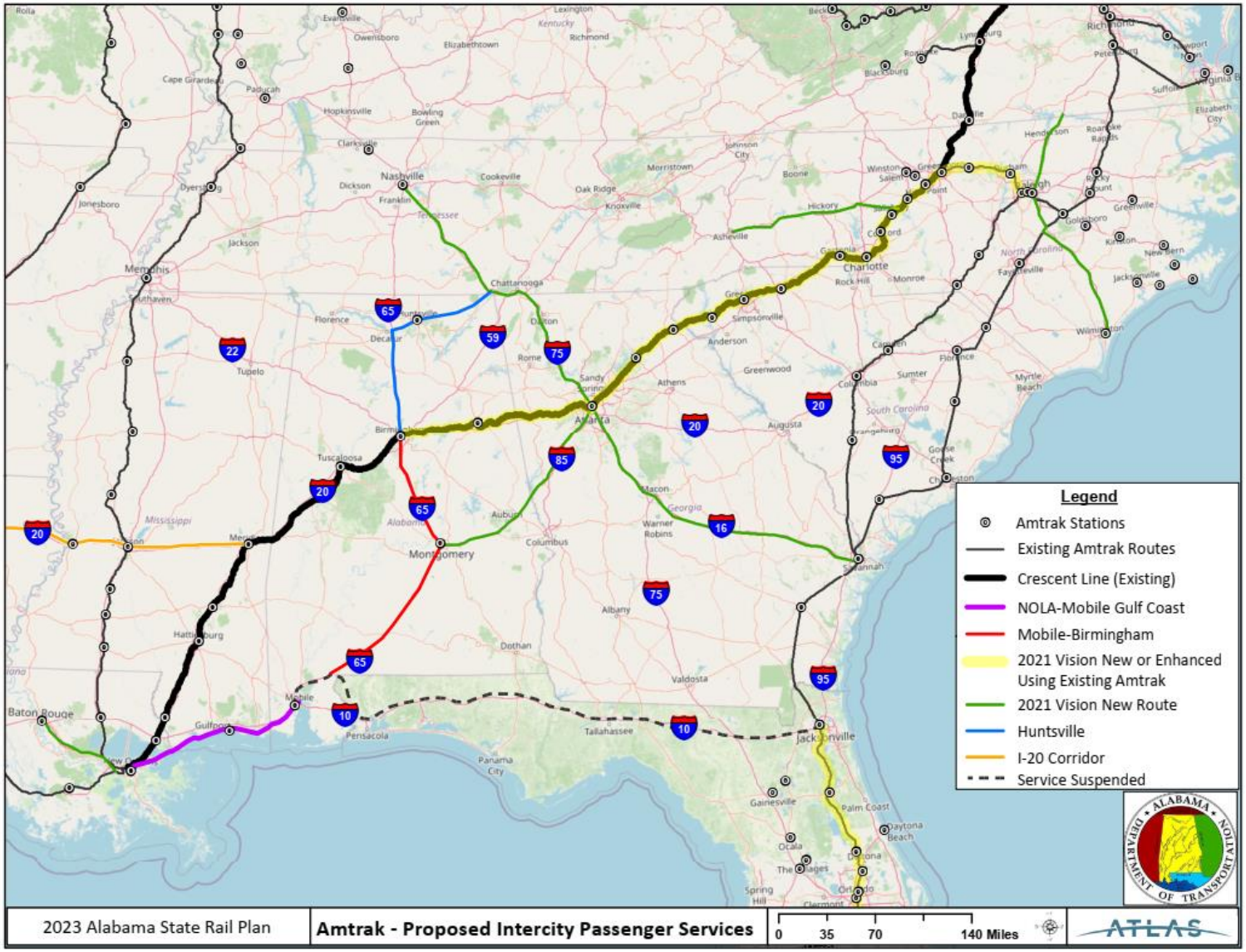
- **MPDG**. The Multimodal Project Discretionary Grants program supports the three major discretionary grant programs identified below. The three involve surface transportation projects designed to strengthen supply chains, spur economic development, and improve daily life. (https://www.transportation.gov/grants/mpdg-program)

    - **MEGA** ($1.8B for FY24). The Mega Grant Program (the National Infrastructure Project Assistance program) supports large, complex projects that are difficult to fund by other means and likely to generate national or regional economic, mobility, or safety benefits. (https://www.transportation.gov/grants/mega-grant-program)

    - **INFRA** ($8B per year IIJA). INFRA (the Nationally Significant Multimodal Freight & Highway Projects program) awards competitive grants for multimodal freight and highway projects of national or regional significance to improve the safety, efficiency, and reliability of the movement of freight and people in and across rural and urban areas. INFRA is part of the Multimodal Project Discretionary Grants program. (https://www.transportation.gov/grants/mega-grant-program)

    - **RURAL** ($675M for FY24). The Rural Surface Transportation Grant Program supports projects that improve and expand the surface transportation infrastructure in rural areas to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life. (https://www.transportation.gov/grants/rural-surface-transportation-grant-program)

Figure 3-1 Existing and Proposed Intercity Passenger Services



(A new more inland higher speed New Orleans-Mobile route proposed by SRC is not included in Figure 3-1)

3.2 Projects - Existing *Crescent* Service

Current passenger rail service within Alabama is limited to Amtrak's New York City- New Orleans *Crescent* that makes station stops in Anniston, Birmingham, and Tuscaloosa. Passenger service within Alabama is comparable to peer states that do not support passenger rail operations with state funds. Table 3-1 identifies recently completed and on-going projects in connection with existing Amtrak *Crescent* service.

Table 3-1 Amtrak *Crescent* Service Supporting Projects

Location	Project (past projects highlighted yellow)	Cost	Funding Source	Sponsor
Anniston Station	Station rehabilitation (2008)	$645,600 $161,400	FHWA [1] City	City
Birmingham Station	Birmingham Intermodal Facility (BIF) constructed to replace smaller Max (transit) and Amtrak stations (2018)	$32,600,000 $6,000,000	FTA City	BJCTA
	BIF enhancements, and construct pedestrian corridor connection to platform (2016) (2021)	$109,500 $250,000	FRA to SRC	SRC BJCTA
Anniston Station	ADA and parking improvements, construct additional 150 ft-long platform north of 4th St (in design, 2023 construction)	$2,000,000	AMTK	AMTK
	Extend platform 400 feet (2023 grant)	$139,500	Fed thru SRC	City
Tuscaloosa Station [2]	New Tuscaloosa Station (The City is seeking to have SRC reallocate funding awarded for a new station to be used to improve the existing Amtrak Station)	$314,457 $1,500,000	SRC City	City

1 Transportation Enhancements Program.

2 The Tuscaloosa MPO LRTP identified a need for additional and more secure parking, drainage improvements, and station renovation.

The current Tuscaloosa Amtrak station, located on Greensboro Avenue approximately one mile south of downtown Tuscaloosa and 1.5 miles southwest of the University of Alabama campus, is the least satisfactory of the Alabama *Crescent* stations. The station building, constructed in 1911, is located on an approximately 0.8-acre NS-owned parcel. The station shares the building and parcel with local NS maintenance-of-way / signal employee offices and railroad materials storage. Station parking is limited, and overnight parking is prohibited. The *Crescent* boarding area between Greensboro Av and Hargrove Road is approximately 600 feet long.

Existing Tuscaloosa Amtrak Station

The SRC provided funding to be used along with City funding to construct a new station at a new location. The City of Tuscaloosa and NS were unable to reach an agreement in 2019 to relocate a proposed new 3,000 square station that would be located 3.6 miles east of the existing station at the southern end of the former Leland Shopping Center in Alberta. NS had safety concerns about limited sight distance (3.1° left curve at and east of proposed station location) that the City considered too costly to mitigate or remedy, if satisfactory mitigation or remedy were even possible, making relocation to that site unfeasible.

3.3 Southern Rail Commission Service Proposals

Katrina-damaged track

The Southern Rail Commission (SRC), created by a 1983 compact between Louisiana, Mississippi, and Alabama, is an advocate and proponent for new and improved passenger rail service within the three states. Georgia, Florida and Texas have at various times been invited to join the SRC but have declined to do so.

The SRC's first overall priority is to reestablish New Orleans--Mobile passenger rail service identified as (1) on the diagram of SRC Alabama Priority Projects on the following page. The three day per week Orlando, FL-Los Angeles route of Amtrak's *Sunset Limited* was truncated to New Orleans-Los Angeles after Hurricane Katrina devastated track along the Gulf Coast in 2005.[2]

SRC's second Alabama-related priority is establishing passenger service between Birmingham, Montgomery and Mobile identified as (2) on the Priority Projects diagram on the following page. Passenger rail service between those cities was last operated 1989-1995 by a train known as the *Gulf Breeze*. The service used CSXT track and made intermediate station stops in Montgomery, Greenville, Evergreen, Brewton, Atmore and Bay Minette. Its operating subsidy was shared between Amtrak and the state. There were 7,737 passengers and Alabama contributed $1.3 million to operations during the last full year of *Gulf Breeze* operations in 1994.[3]

[2] CSXT trains that operated through Montgomery and Mobile to the UP at New Orleans were detoured at Montgomery to Selma and over the M&B and Meridian Speedway to Shreveport, LS until the Mobile-New Orleans line was restored to service in Feb 2006.

[3] Amtrak operated the *Gulf Breeze* as a section of the New York City- New Orleans *Crescent* that split from the southbound *Crescent* or was joined to the northbound *Crescent* at Birmingham.

Gulf Breeze at Montgomery, 1995

Another rail service promotion of the SRC is extension of New Orleans-Mobile service to Orlando on new more inland rail alignment between New Orleans and the Florida panhandle, combining New Orleans--Mobile service with Baton Rouge-New Orleans service and extending it to Orlando, identified as (3) in the diagram below. SRC is also promoting the establishment of New Orleans--Baton Rouge service and a resolution of support for I-20 Corridor between Meridian, MS and east Texas.

3.3.1 New Orleans-Mobile Intercity Service

Amtrak, with the support of SRC, has engaged with CSXT and NS, owners of the rail line that would be used by New Orleans-Mobile service, and also the Alabama State Port Authority (ASPA) concerning resumption of New Orleans-Mobile intercity service. Two trains daily each way of three-hour 18-minute travel time making intermediate station stops in Bay St. Louis, Gulfport, Biloxi and Pascagoula, MS, are proposed. The New Orleans-Mobile service would connect in New

Orleans with Amtrak's existing *Sunset Limited*, *City of New Orleans,* and *Crescent* trains. Table 3-2 identifies expenditures in connection with initiation of New Orleans-Mobile service.

The SRC in a 2017 report proposed $60 million in improvements in connection with proposed New Orleans-Mobile intercity service. CSXT and NS sought much greater rail line capacity improvements than proposed by SRC and Amtrak. ASPA opposed the new service because of concerns it would adversely impact Terminal Railway Alabama State Docks (TASD) and other rail-related Port of Mobile operations. A third-party estimate developed on behalf of CSXT and NS proposed 14 capacity improvements estimated to cost $405-$440 million.

The four railroad parties reached a settlement agreement to support passenger and freight rail service on the corridor that would be used by New Orleans-Mobile service. The STB on November 23, 2023 granted their request to hold the matter in abeyance during execution of the conditions identified within the settlement agreement. A $178,400,000 CRISI grant for line capacity improvement requiring a 20 percent non-federal match was awarded in September 2023. Thereafter the four parties shared their agreement that the grant and matching funding would adequately fund the capacity improvements necessary for service resumption.

Table 3-2 Amtrak New Orleans-Mobile Service

Location or Classification	Project [1] (other state's projects/commitments are highlighted yellow)	Cost (thousands)	Funding Source
Bay St. Louis, MS	Station reactivation	$500	FRA/SRC
Gulfport, MS	Platform const & ped access to transit station	$198	FRA/SRC
Biloxi, MS	Platform canopy, ADA & sidewalk improvements	$252	FRA/SRC
Pascagoula, MS	Restore historic station	$660	FRA/SRC
Brookley, AL	Potential future Mobile Int'l Airport rail station [2]	unknown	Mobile
Mobile, AL	Mobile rail station development	$3,000	Mobile
Infrastructure	Capacity & rail infrastructure improvements (2018)	$33,000	CRISI
	Capacity & rail infrastructure improvements (2022)	$178,400	CRISI
	Collectively MS, LS, ASPA, AMTK, CSXT & NS	*$68,700*	*Match*
Operations	First year operating subsidy	$4,360	FRA [3]
	Additional initial operating subsidy	$5,450	FRA [3]
	Mississippi and Louisiana	*$1,400*	*Match*
	City of Mobile for Alabama		
Development	Corridor Development	$500	CIDP/SRC

1 Construction making the Mississippi station platforms ADA compliant has been completed.

2 The Master Plan guiding a $250M airport terminal construction project to begin 2023 identifies a future potential rail station in connection with its planning document 2040 horizon.

3 Restoration and Enhancement Grant.

Amtrak is to resume service in 2025. The Alabama matching funds will largely be provided by ASPA and some will be provided by the City of Mobile. ASPA identified three conceptual projects totaling an estimated $46,000,000 that would support passenger rail at Mobile. It is unknown if any of these projects are among the agreed to improvements. Additional information is expected to be available in the future.

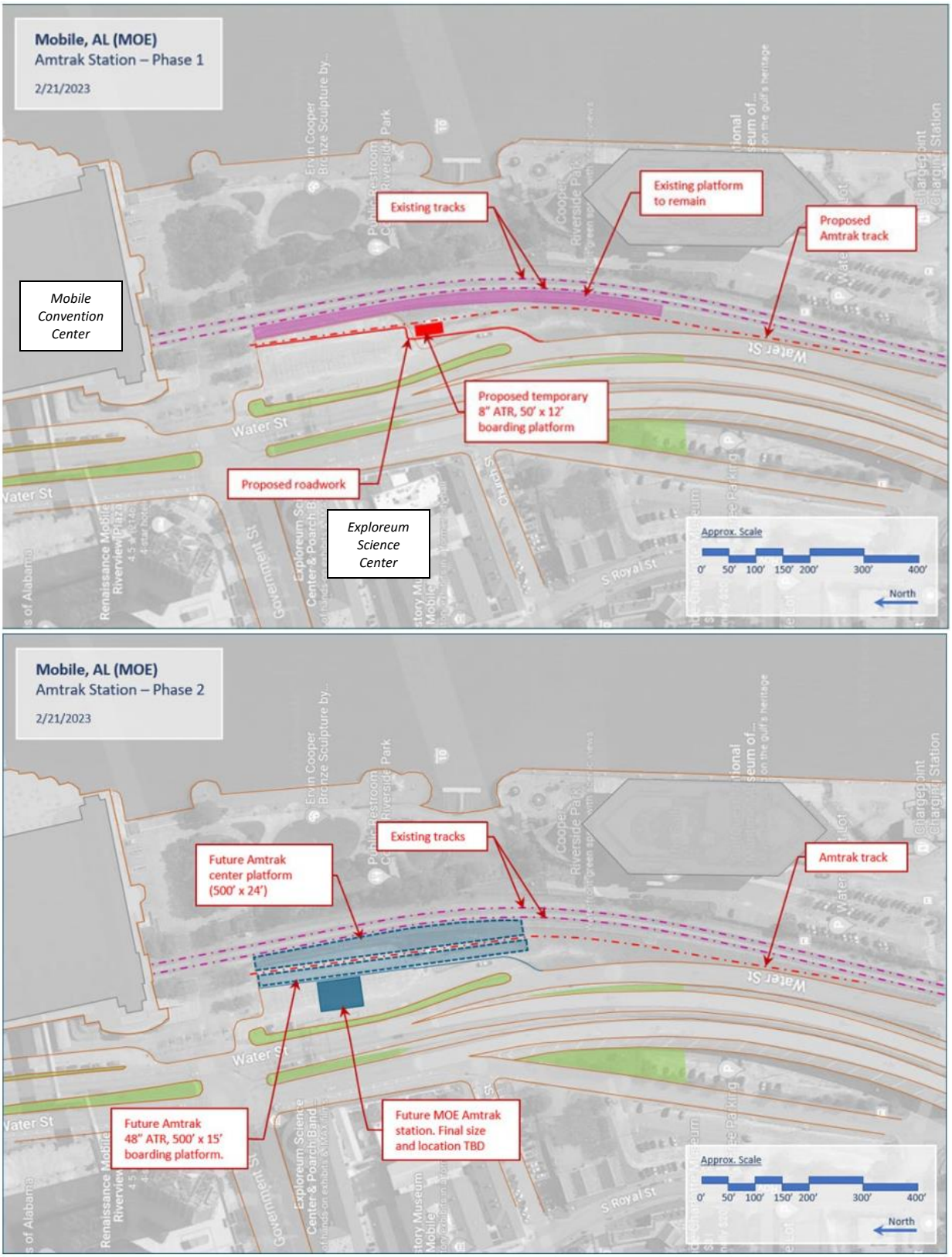
- A $40,000,000 TASD Three Mile Creek flyover over CSXT would significantly reduce main track congestion between downtown Mobile and multiple freight rail yards located one mile north.
- A $4,000,000 Bob Hope Siding extension would provide passenger train storage and additional freight capacity when not used to store passenger trains. Current New Orleans-Mobile service planning is construction of a New Orleans-Mobile layover track at Mobile just south of the Convention Center that approximately corresponds to the south end of the Bob Hope Siding extension.
- A $2,000,000 Virginia Street Lead Track Improvement would reduce main track congestion by providing provide non-main track capacity supporting Garrows Point ICTF and McDuffie Coal Terminal operations.

These three projects are described in detail in *Section 4.2 ASPA Plans*. That Section groups all ASPA projects together in part because the projects increase Mobile freight rail capacity that is beneficial to TASD.

It is proposed that the New Orleans-Mobile service Mobile passenger station be located downtown adjacent to and south of the Arthur R. Outlaw Convention Center, and across Water Street from the Exploreum Science Center. Phase 1 is proposed to consist of a new New Orleans-Mobile spur track serving an initial 50 foot-long by 12 foot-wide boarding platform. It is proposed that later the initial platform be replaced by a 500 foot-long by 15 foot-wide platform, the existing platform located along the west side of CSXT No.1 main track be replaced with a 500 foot-long by 24 foot-wide center platform located between CSXT No. 1 main track and the new New Orleans-Mobile service spur track, and a new passenger station building, size and specific location to be determined, be constructed. The boarding platforms of the intermediate Mississippi station stop are already in place and ADA compliant. See Figure 3-2.

The CSXT line to be used by New Orleans-Mobile service passes alongside Mobile International Airport (BFM) at the Brookley Aeroplex. BFM is located two miles southwest of Garrows Point ICTF and McDuffie Terminal, and three miles south of downtown. Construction of a new $250 million BFM passenger terminal in connection with the Mobile Airport Authority's relocation of commercial service to the Aeroplex from the Mobile Regional Airport (located 12 miles west of downtown) was supposed to begin in 2023. The BFM Master Plan (planning horizon 2040) guiding the airport's development identifies a future potential rail station.

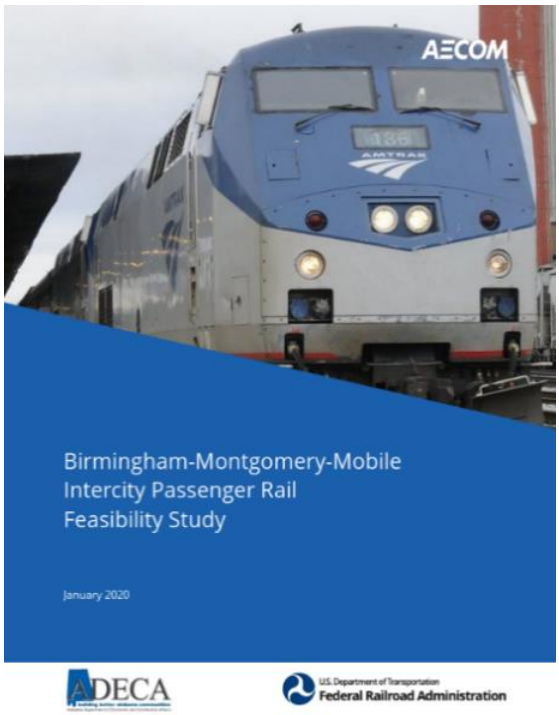
Figure 3-2 Mobile Passenger Station (Phase I above, Phase II below)



3.3.2 Birmingham-Montgomery-Mobile Intercity Service

The feasibility of passenger rail service on the CSXT Birmingham-Montgomery-Mobile line has been studied. An Alabama Department of Economic and Community Affairs (ADECA) feasibility study of Birmingham--Montgomery passenger rail service funded by FRA, the cities of Montgomery and Birmingham and Montgomery County, was published in 2013.[4] The study evaluated an alternative that added commuter rail service between Calera and Birmingham with intermediate station stops in Pelham/Alabaster and Hoover. ADECA subsequently completed a Phase II feasibility study published in 2020 that extended intercity service from Montgomery to Mobile.[5] Subsection *3.4.1 Huntsville Services* discusses the Huntsville MPO's proposal that new Birmingham-Mobile passenger service be extended north to Huntsville. It also proposes a Huntsville-Bridgeport connection to proposed Atlanta-Chattanooga-Nashville service.[6]

Title Page of ADECA Phase II Study



The studies considered three alternative intercity service train speeds each at service frequencies of one, three and six daily round trips and thus nine service scenarios. The three train speed scenarios were:

- 48 mph average speed on CSXT, comparable to former *Gulf Breeze* service[7]
- higher 70 mph average speed service on CSXT
- high 101 mph average speed on new alignment along the I-65 corridor

Annual Birmingham-Mobile intercity ridership estimates varied widely between 55,850 and 550,300 because of the substantial train speed and frequency differences between the alternatives. Capital cost estimates varied between $552 million and $12.6 billion, and annual

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[4] "*Birmingham to Montgomery Passenger Rail Feasibility Study*" https://adeca.alabama.gov/wp-content/uploads/Birmingham-to-Montgomery-Passenger-Rail-Study.pdf

[5] "*Birmingham-Montgomery-Mobile Intercity Passenger Rail Feasibility Study*" https://static1.squarespace.com/static/5302778ee4b07a6f640874ef/t/5de80adc3674c470776839cf/1575488249883/Montgomery+to+Mobile+Passenger+Rail+Feasibility+Study.pdf

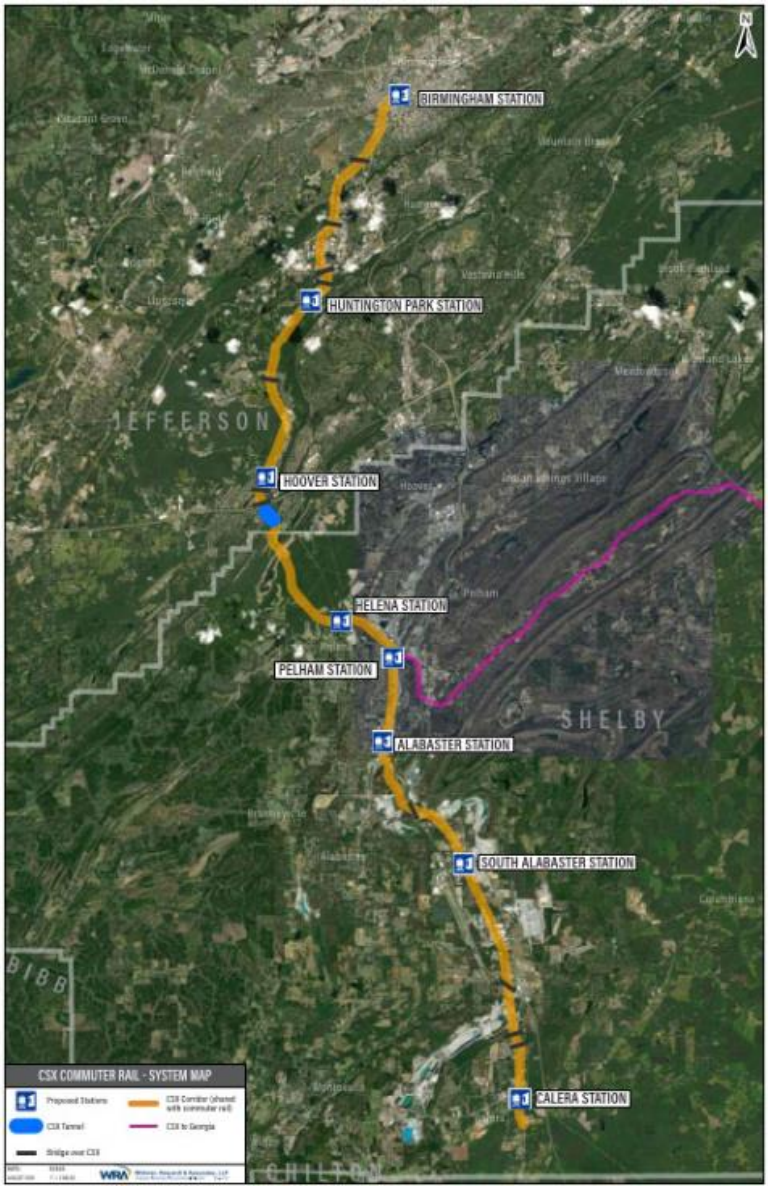
[6] The City of Birmingham aspirationally supports extension of I-65 Corridor passenger service north to Nashville and/or Huntsville and Birmingham-Chattanooga service. Secondarily the City aspirationally supports passenger service to Memphis and Jacksonville, FL.

[7] Alternatives did not include *Gulf Breeze*-served Evergreen, Brewton, and Bay Minette station stops.

operating subsidies varied between minus $1.2 million (revenues exceeding operating expenses) and $55 million. The middle of the scenarios with respect to both train frequency (three round trip trains per day), and an average 70 mph speed on CSXT, was best based on the scoring system used to evaluate the alternatives. The scenario had an estimated capital cost of $1.3 billion, 233,000 annual ridership generating revenue of $8.9 million, and would require an estimated annual operating subsidy of $12.8 million.

3.3.3 Calera-Birmingham Commuter Service

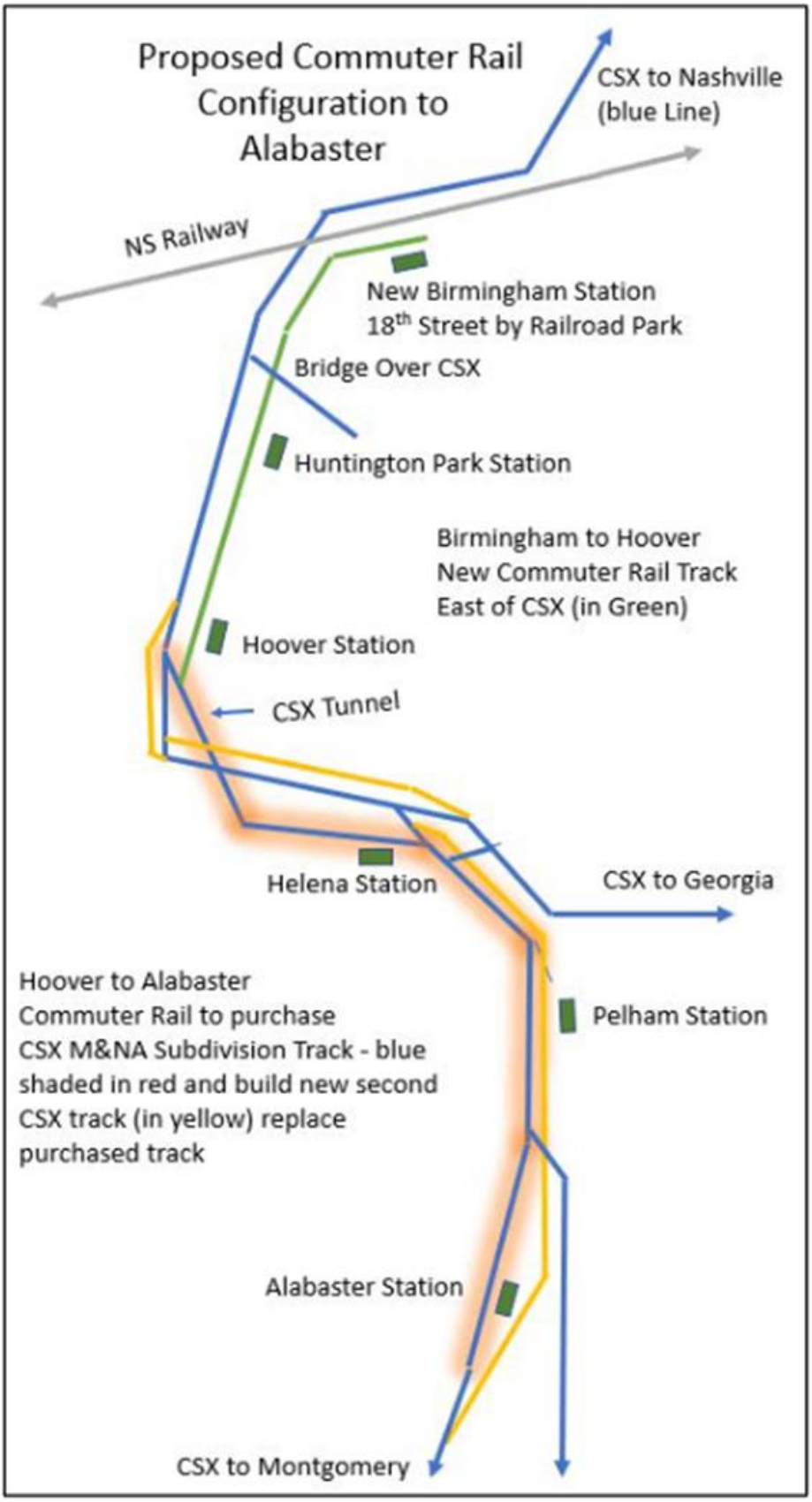
Portion of CSXT used by commuter service in gold



A study of Calera-Birmingham commuter rail prepared for Regional Planning Commission of Greater Birmingham was published in 2019.[8] The study placed the Birmingham station at 18th Street. It placed commuter rail stations at Huntington Park, Hoover, Helena, Pelham, Alabaster, south of Alabaster and Calera. It contemplated construction of an additional track on CSXT right-of-way between Birmingham and Alabaster that would be used by commuter trains.

Estimates, based on four morning inbound and four evening outbound commuter trains, were 1,834 daily ridership, $949 million capital cost, and an annual operating cost of $11.2 million. The study estimated the service would require an annual $9.7 million operating subsidy.

[8] "*Commuter Rail Study*" https://static1.squarespace.com/static/5bfc5ef3f93fd4e73b6c10fa/t/5db74575839b7009dda6c07d/1572291968240/Birmingham_Commuter_Rail_Report_August-2019.pdf



Commuter Rail Study
Birmingham-Alabaster
Configuration

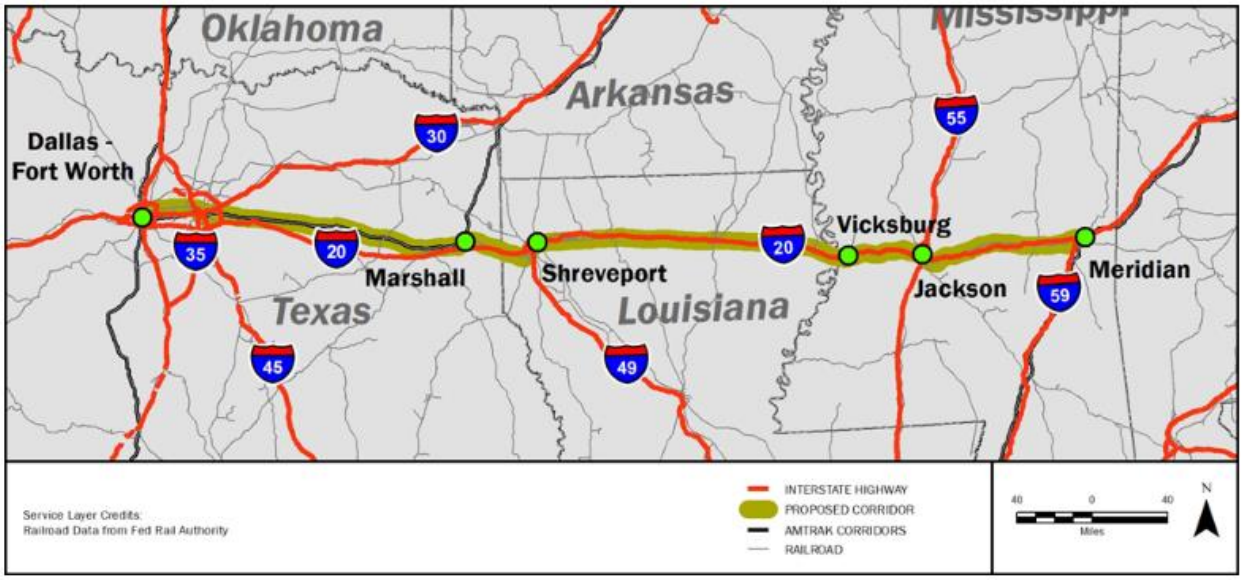
Blue - existing CSXT track

Green - new commuter rail track

Shaded tan - line sale to commuter rail entity

Yellow - replacement track for line sale track

3.3.4 Interstate 20 Corridor Intercity Service



Dark gray lines identify Amtrak routes. The rail line to be used by proposed I-20 service is highlighted yellow. The rail line is located very close to I-20 between Marshall and Meridian.

The I-20 Corridor Council (https://www.i-20corridorcouncil.com/) was formed to re-establish passenger rail service along the I-20 Corridor between Ft. Worth and Atlanta. The new service would use the Fort Worth-Marshall, TX portion of Amtrak's *Texas Eagle* route between Chicago and Los Angeles, and connect to the *Crescent* at Meridian, MS.[9] The route would use 40 miles of Union Pacific track between Marshall and Shreveport and the 320 mile-long Meridian Speedway, a CPKC-NS joint venture, between Shreveport and Meridian. New stations in Shreveport/Bossier, Monroe and Rustin, LA and Vicksburg and Jackson, MS, are proposed. The service merits mention because it could be used by Alabamians for rail travel to and from west central Mississippi, northern Louisiana, and northern east Texas. USDOT awarded $500,000 in Corridor Identification and Development funding to the SRC for I-20 Corridor service development.

Amtrak's Texas Eagle Intercity Service

A 2015 Amtrak feasibility study determined I-20 corridor service would not require operating subsidies from the states through which it traverses. A 2017 Texas DOT capacity study determined the Ft. Worth-Meridian portion would require $84,000,000 to construct new passing sidings to increase capacity and $7,500,000 for the new stations. The SRC in 2015 executed a resolution of support of I-20 corridor service but there otherwise has been no expressed Alabama state government support.

[9] The *Texas Eagle* is merged with the *Sunset Limited* west of San Antonio.

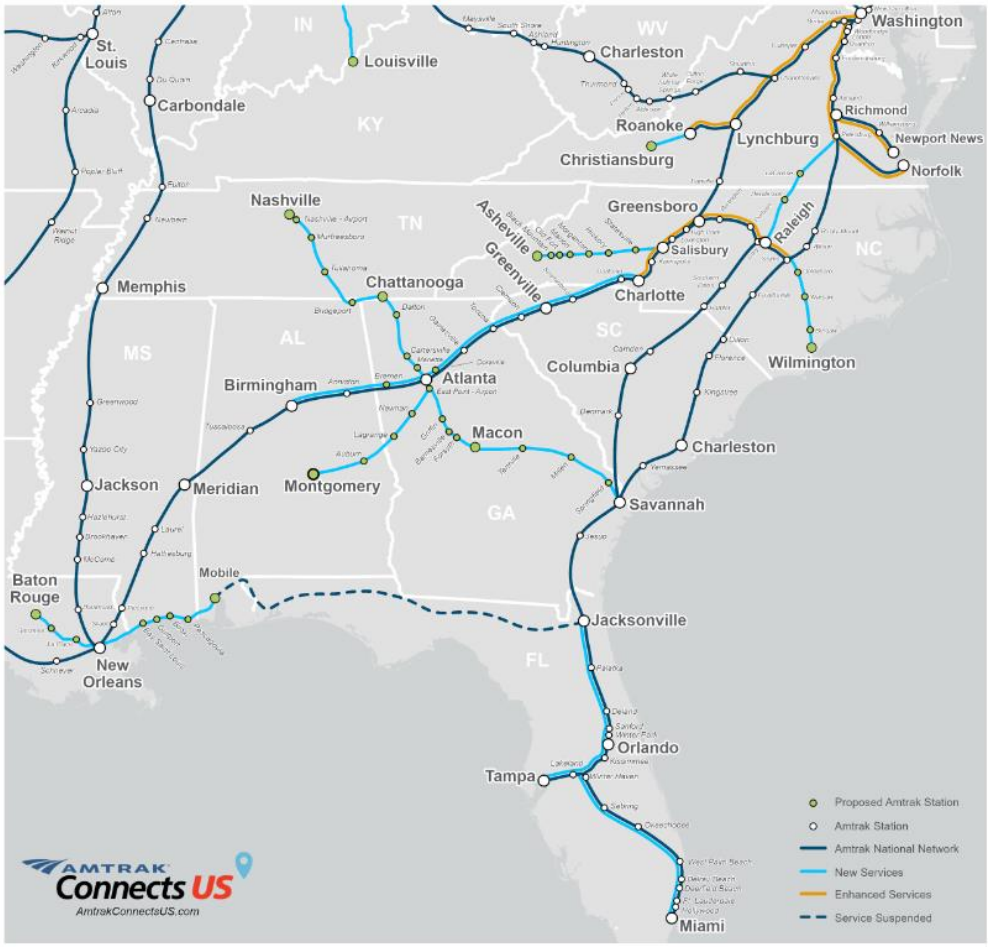
3.4 National Passenger Service Visions

3.4.1 Amtrak 2021 Vision

Amtrak in mid-2021 released "*Amtrak's Vision for Improving Transportation Across America*" that would establish 39 new routes and enhance 25 existing routes over a 15-year period.[10] The *2021 Vision* enhancements portion largely focused on service improvements and additional station stops.

The *2021 Vision* would establish Atlanta and New Orleans as connecting hubs for new and increased intercity services. The *2021 Vision* includes twice daily round-trip New Orleans -Mobile intercity service as described in the previous SRC subsection. The New Orleans-Mobile service would connect in New Orleans to new New Orleans-Baton Rouge intercity service, SRC's second highest priority, as well as the existing Amtrak trains, *Crescent*, *City of New Orleans*, and *Sunset Limited*.

Southeastern U.S. Portion of 2021 Amtrak Vision



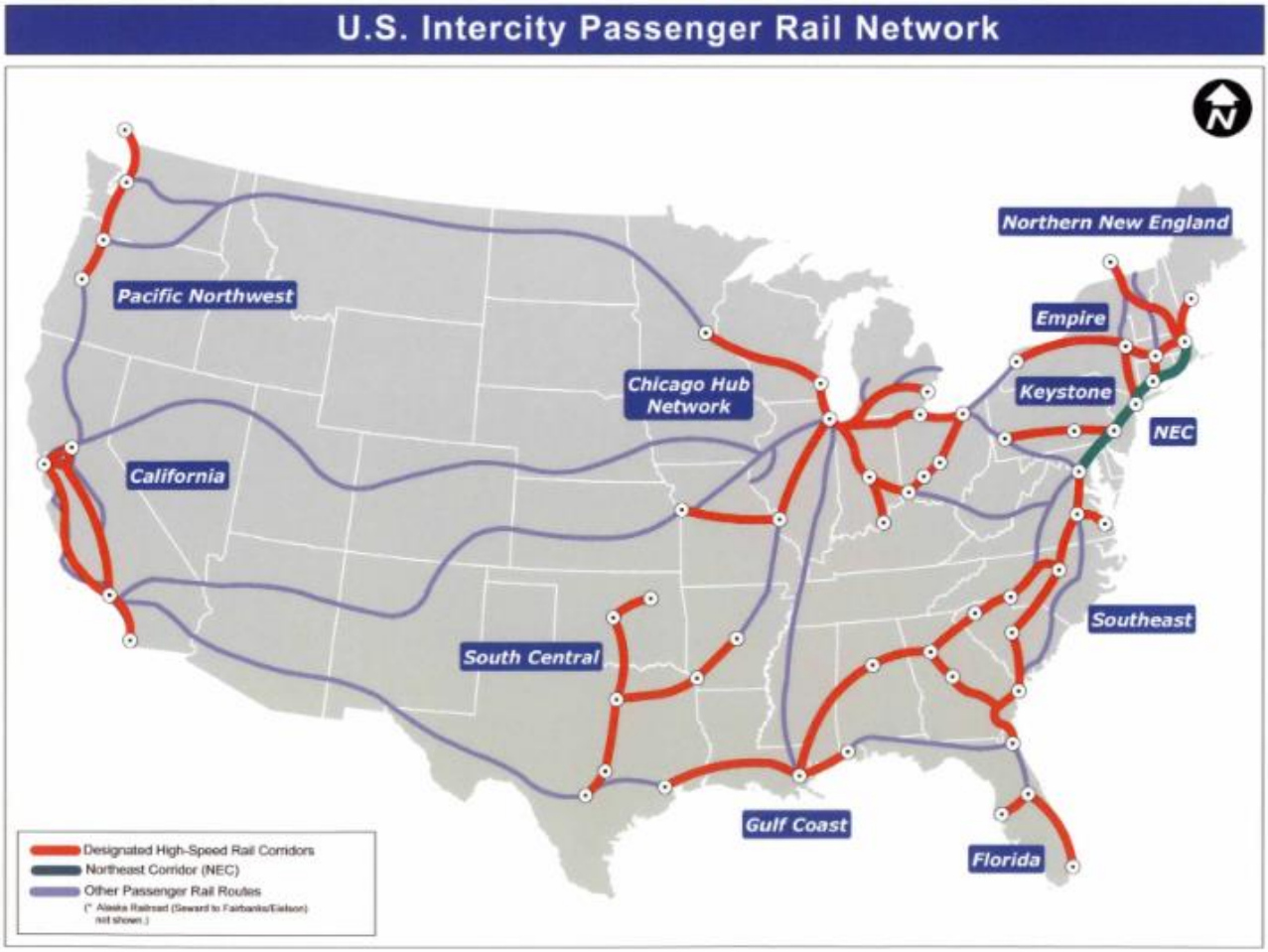
[10] "*More Trains. More Cities. Better Service.*" https://www.amtrakconnectsus.com/wp-content/uploads/2021/06/Amtrak-2021-Corridor-Vision_2021-06-01_web-HR-maps-2.pdf

Other Alabama elements of the *2021 Vision* include:

- Adding one daily Atlanta-Birmingham round trip train on the existing Amtrak *Crescent* route that would make intermediate station stops in Anniston, and at a Bremen, GA station that is not currently served by the *Crescent* [11]
- New thrice daily Atlanta-Montgomery round trip trains with three-hour 20-minute travel time that would make intermediate stops in Auburn, and LaGrange and Newnan, GA, and directly or via a very short transit trip Atlanta's Hartsfield-Jackson International Airport.
- New twice daily Atlanta-Nashville round trip trains that include an intermediate stop in Bridgeport in the northeastern corner of Alabama among seven other intermediate stops including directly or via a very short transit trip the Nashville International Airport

3.4.2 USDOT 2009 High Speed Rail Vision

2009 High Speed Rail Vision



Existing HSR Northeast Corridor in green. HSR Corridors in red. Other intercity routes in purple.

[11] Three new daily round trip trains would operate between Atlanta and Charlotte, and Atlanta and Savannah

"*Vision for High-speed Rail in America*", published by USDOT in 2009, was a strategic plan for implementing high-speed passenger rail.[12] The USDOT-designated High-Speed Rail (HSR) corridors associated with the 2009 vision are shown above.

The HSR route through Alabama connected the Mobile-Houston Gulf Coast HSR Corridor at New Orleans to Atlanta on the western of the two Southeast HSR routes. Topography and existing land development are obstacles to development of HSR along or near the existing *Crescent* route within Alabama, especially between Atlanta and Birmingham.

Acela, the fastest passenger train in the US, has a top speed of 150 mph over portions of its 457 mile-long Northeast Corridor route between Boston and Washington, D.C.

The average speed of Amtrak's *Crescent* based on its four-hour seven-minute scheduled travel time between Birmingham and Atlanta is 45 mph despite the line's 79 mph passenger/60 mph freight line speeds, due primarily to numerous curves.[13] Making incremental improvements to increase speed on the existing NS rail route would be challenging. Numerous municipalities and adjacent land development along the line make curve flattening and wholly new HSR route tie-ins to existing alignment segments that would reduce route distance and increase travel speed costly and environmentally impactful.

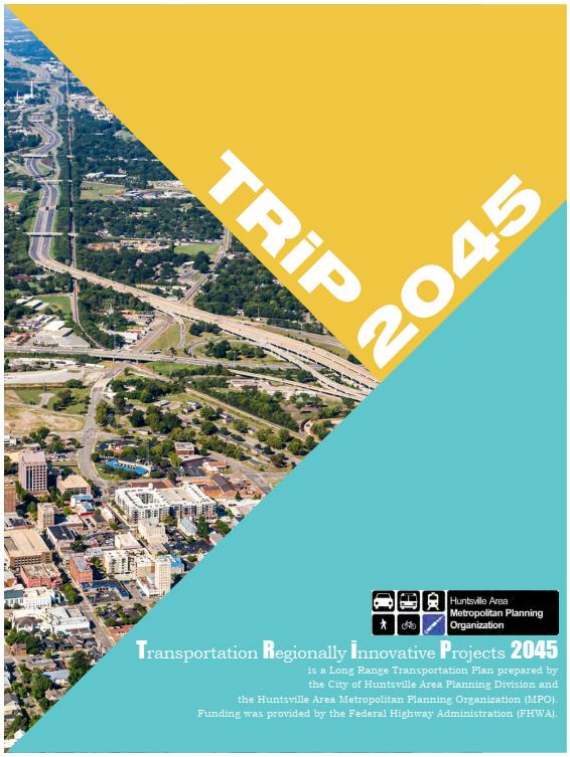
[12] https://railroads.dot.gov/sites/fra.dot.gov/files/fra_net/16536/2009_VISION%20FOR%20HIGH%20-%20SPEED%20RAIL%20IN%20AMERICA.PDF

[13] The Anniston and Tuscaloosa station stops and associated deceleration, dwell time, and acceleration each add a few minutes to travel time. The Anniston stop would reduce an otherwise 79 mph average Birmingham-Atlanta speed to 76 mph.

3.5 Other Potential Alabama Passenger Services

3.5.1 Huntsville Services

TRiP 2045 Cover Page



The Huntsville MPO current TRiP 2045 Long Range Transportaiton Plan (LRTP) proposes that any new Mobile-Birmingham intercity rail passenger service be extended north to Huntsville. The service extension to Huntsville would operate on CSXT from Birmingham north to Decatur and then on NS across the Tennessee River and east to Huntsville. The service could perhaps include station stops at Cullman and/or Decatur. Transit planning in the LRTP also identified the NS line as a possible future Huntsville commuter rail corridor for study.

The LRTP proposes discussion with Amtrak of the additional rail capacity infrastructure required for extension of service north of Birmingham to Huntsville be initiated in the 2025-2035 period. The LRTP proposes rail capacity and station construction in the 2035-2045 period. Service extension to Huntsville would improve metropolitan Huntsville's accessibility to Birmingham Shuttlesworth International Airport and its greater number of flights and destinations. It would also establish single rail line intercity passenger service connection of Alabama's four largest metropolitan areas.

Huntsville Depot

The Huntsville MPO's LRTP was adopted in 2021 prior to publication of *2021 Vision*. The next update of the LRTP is anticipated to propose study of additional new rail passenger service on NS between Huntsville and Bridgeport. The new service would be designed to connect at Bridgeport to *2021 Vision*-proposed new Atlanta-Nashville rail passenger service. The Atlanta-Nashville service would operate on CSXT, including the Chattanooga-Bridgeport segment where NS Chattanooga-Memphis line trains operate on CSXT. The connection to Bridgeport and Atlanta-Nashville service would provide rail transportation between Huntsville and Atlanta's Hartfield-Jackson and Nashville International Airports.

The Cumberland Plateau and Alabama Valley and Ridge topography are obstacles to a good direct highway route between Huntsville and Atlanta. Passenger rail service between Huntsville and Atlanta would improve metropolitan Huntsville access to HJIA's direct flights to 150 U.S. cities and 2,900 daily flight arrivals and departures.[14]

Feasibility studies of the new services west and east of Huntsville services could perhaps be combined into a single study of the new services individually as well as study of a combination of them into service through Huntsville connecting the *2021 Vision's* proposed Atlanta-Nashville service and existing *Crescent* service at Birmingham.

A comprehensive statewide study, perhaps in partnership with Georgia, could combine study of the *2021 Vision's* Atlanta-Nashville and Atlanta-Montgomery services with a new Bridgeport-Mobile service connecting to New Orleans-Mobile service (or perhaps operating as an extension of New Orleans-Mobile service). The Bridgeport-Mobile service would feature access to the *Crescent* at Birmingham and new Atlanta-Montgomery service at Montgomery. A comprehensive study could perhaps also consider the effect of new I-20 Corridor service on the other proposed services within Alabama.

3.5.2 Montgomery Commuter Service

Montgomery Union Station, circa. 1900

The Montgomery MPO Long Range Transportation Plan identified a proposal to study the feasibility of commuter rail operation on a lightly used short CSXT spur when new or small starts funding can be obtained.[15] The spur serves Gunter Industrial Park east of downtown. The commuter train operation would extend east-southeast from the end of the spur on the abandoned extension of the line along Atlanta Highway US80 to Chantilly Parkway south of the Mt. Meigs locale.

[14] The Chattanooga Metropolitan Airport is located directly alongside the CSXT Atlanta-Nashville route. A station could perhaps be located there.

[15] (LRTP link, https://montgomerympo.com/DOCS/2022/MontgomeryMPO2045LRTP_January2022_March2022Edits_JRWA_MA-1.pdf)

Chapter 4: Proposed Freight Rail Improvements and Investments

Some of the improvements in this Chapter are located on the Crescent *or New Orleans-Mobile passenger train routes and thus would improve rail infrastructure used by passenger trains. The details of three ASPA projects that are identified in connection with resumption of New Orleans-Mobile passenger service in mind are included in this Chapter because they would benefit freight rail in addition to passenger rail, and to place all ASPA projects in one chapter. The projects may or may not be part of the package of improvements in negotiation and under development in connection with resumption of New Orleans-Mobile passenger service.*

This Chapter includes many recent projects or projects currently in progress. Much of the state's public investment in intermodal and freight rail is in the form of tax credits in connection with privately-owned new or expanded industrial development that uses rail. The private party and rail project plans remain confidential for competitive reasons until there is an agreement between the state and the private party. Recent and in-progress projects in this Chapter exemplify the type of Alabama projects and grant applications that may be anticipated in the future.

Freight railroad ownership and operations in Alabama, excluding TASD at the Port of Mobile and HMCR in Huntsville, are entirely private sector enterprises. Private enterprise railroads often keep specific details of their improvement and investment plans private. Railroad-planned or proposed improvements associated with new or existing customers may not be publicized until customer agreements have been executed if specific information about rail improvements is publicized at all. Other improvements may involve railroad operational or capacity improvements that railroads do not want to inform rail competitors of.

Chapter 4 begins with public-private partnerships with details that are a matter of public record, followed by the public freight and intermodal rail improvements and investments of ASPA.[1]

The federal Section 130 Program administered by ALDOT that funds crossing safety improvements is Alabama's most significant direct involvement in freight rail improvements and investments. This Chapter includes a summary of Section 130 Program improvements and investments.

The improvement and investment plans of those railroads that have shared that information with ALDOT follow the Section 130 Program discussion in Section *4.2 Section 130 Program Projects*. Their plans include visionary or aspirational improvements that may not have detailed costs, identified funding sources, and/or specific timelines.

[1] Disclosure of public-private partnership negotiations, depending on circumstances, may be exempt from Alabama Open Meetings and Public Records Laws. States commonly exempt economic development negotiations from open records disclosure.

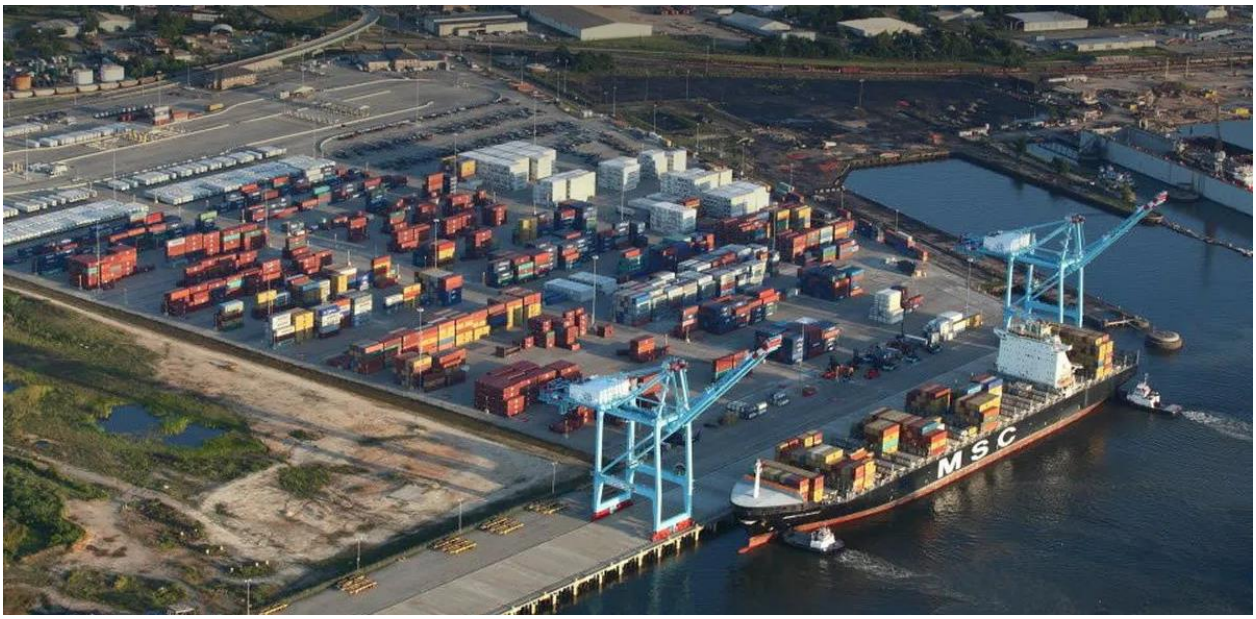
4.1 Alabama State Port Authority Plans

ASPA has been planning and implementing public and public-private rail-related port improvements since the beginning of the century. ASPA railroad subsidiary TASD serving the Port of Mobile handled 166,614 revenue railcars in FY2022.

The McDuffie Coal Terminal was expanded in 2004. It is currently being further expanded as part of a $45 million capital program in support of new Alabama mine investment that will increase annual coal export capacity to 20 million tons by 2026. Over the long-term export coal volume arriving by rail is expected to decrease. Rail-transported coal currently constitutes 56 percent of total port tonnage and is expected to constitute 50 percent of total volume in 2026.[2]

TASD has handled railcars for railcar ferry operator CG Railway (CGR) since CGR commenced operations at the Port of Mobile in 2007. CGR acquired two new larger 135 railcar ferries in late 2021. CGR 2022 traffic volume increased by 4,000 railcars from 22,396 railcars in FY2021. CGR may acquire another ferry in the next few years that would add an additional 13,468 railcars to current annual capacity.

(Garrows Bend ICTF out of view to left) ***Port of Mobile APM Choctaw Point Terminal***



ASPA's export grain elevator, where 99 percent of the total tonnage arrives by rail, was modernized and expanded in 2008, the same year the APM Terminals container facility at Choctaw Point was opened. CN initiated intermodal container service between the Garrows Bend ICTF and Memphis, St. Louis, Chicago and Canada when the ICTF opened in 2016. CSXT began operating intermodal rail service between the ICTF and Chicago in 2022. CSXT intermodal Port traffic volume is currently low.

[2] The relative total of rail-transported coal is expected to decrease because barge coal is expected to increase by 80%.

Figure 4-1 Mobile Track Network

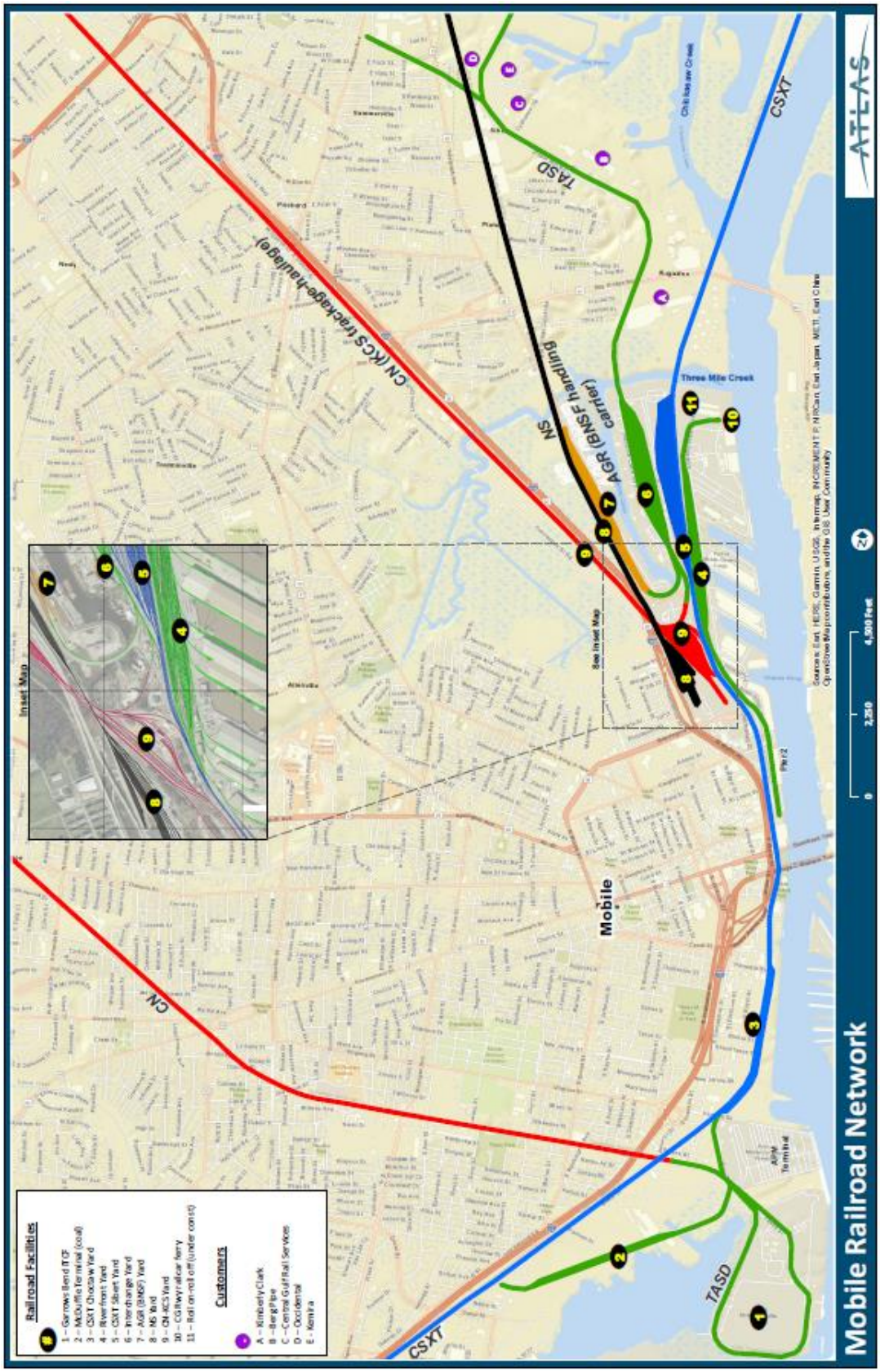


Table 4-1 ASPA Rail Infrastructure-related Projects

Name	Amount	Comment
Intermodal Rail	***$168,000,000***	
New 3,000-ft Mobile ICTF motor vehicle bridge	$ 25,000,000	Connects APM Terminal to Garrows Bend ITCF and adjacent logistics park; $38M March 2022 USDOT grant [1]; 2025 completion
Garrows Bend ICTF expansion	$ 15,000,000	ICTF expansion by ASPA-APM partnership in development; adds 6,000 track-feet to facility's existing 9,000 track-feet
Garrows Bend ICTF expansion		Subsequent phase(s) beginning at the earliest 2025 continue expansion to 500,000 TEU buildout by constructing an additional 18,000 track-feet
New Montgomery ICTF	$ 58,000,000	New ICTF construction by ASPA-CSXT partnership; FY2022 Omnibus Appropriations Act $67.3M [2] and IIJA funding; 2024 or 2025 completion. ASPA plans to operate the facility.
Birmingham RIF improvement (A-USA Phase I)[3]	$ 18,000,000	Access and capacity improvements between Burstall and the Birmingham RIF in connection with new NS intermodal service between the Port of Mobile and the RIF
New north Alabama ICTF (A-USA Phase II) [3]	$ 52,000,000	Planning underway for 2023-2027 period development of additional north Alabama additional intermodal facilities
Terminal Rwy (TASD)	***$ 38,000,000***	
Chickasaw Lead	$ 7,500,000	New 10,000 ft-long track north of TASD Interchange Yard includes modifying a bridge to accommodate a second track
Interchange Yard improvement	$ 29,500,000	14,800 feet of new additional track at higher elevation reducing sea level rise risk; land acquired in 2022 ($22M)
Interchange Yard improvement		Subsequent phase(s) will improve and elevate 13.1 miles of existing yard track in the 2023-2027 period ($7.5M)
Positive Train Control (PTC)	$ 1,000,000	Equip six locomotives with PTC technology. Lowest ASPA priority for FY2022 Omnibus Act funding.
Passenger Rail	***$ 46,000,000***	*Projects for or supporting New Orleans-Mobile passenger rail*
New Three Mile Creek Flyover	$ 40,000,000	Flyover bridge connecting the TASD Interchange and Riverfront (Dockside) Yards providing for train movements between the yards not requiring use of CSXT main tracks
Bob Hope Siding extension	$ 4,000,000	Southward siding extension to expedite TASD movement across CSXT main tracks and for use for overnight New Orleans-Mobile passenger train storage
Virginia Street Lead improvement	$ 2,000,000	Track extension(s) increasing the maximum lengths of McDuffie coal without requiring multiple tracks in yarding the trains
	$252,000,000	

1 $38M is the Port of Mobile portion of a $100M grant to Port and Mobile Airport Authority for multi-modal transportation hub improvement. Some of the $38M will fund logistics park site development expenses.

2 $67.3M includes some funds for other than the Montgomery ICTF.

3 A-USA 2022 CRISI grant application was unsuccessful. Corridor projects and phasing subject to change with further project proposals and development.

Other Port of Mobile multimodal facilities include an ASPA-Alabama Steel Terminals, LLC steel coil handling facility that opened in 2016, and a new roll on-roll off (Ro-Ro) terminal with a vehicle processing center and storage capacity for 7,000 vehicles that opened in 2021. Vehicles currently are not moved by rail to and from the Ro-Ro terminal, but ASPA plans are for 150,000 motor vehicle per year capacity including vehicles movements using rail.[3]

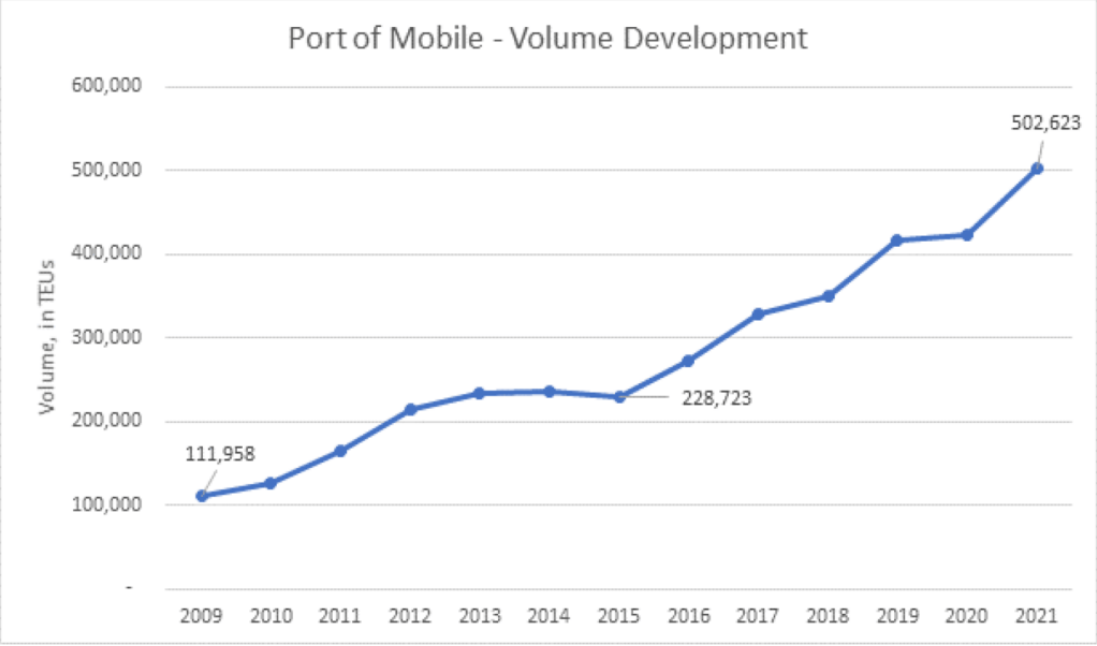
Figure 4-1 depicts the Mobile-area railroad network. Table 4-1 groups and identifies rail-infrastructure-related projects sponsored or supported by ASPA. Additional explanation and/or description for the ASPA projects follow.

4.1.1 ASPA Intermodal Rail Projects

The Port handled 563,191 TEUs in 2022, 11 percent more than in 2021. Intermodal rail container volumes continued a 31-month triple-digit growth streak with 2022 volumes 142 percent greater than 2021.[4]

Table 4-1 identifies five ASPA intermodal rail projects. One of the two Port of Mobile projects would improve the efficiency of container movement between ships and the Garrows Bend ICTF. The other is the multi-phase expansion of Garrows Bend ICTF itself. Two other projects propose to construct new rail-truck ICTFs in Montgomery and in north Alabama. The fifth ASPA intermodal rail project would make railroad improvements at and near the Birmingham RIF to facilitate intermodal train movements between Mobile and the RIF.

Choctaw Point Container Traffic Volume 2009-2021



[3] For comparison, the Georgia Ports Authority Port of Brunswick handled 705,000 Ro-Ro units in its FY2023.

[4] TEU is twenty-foot equivalent units, a measure of container volume in units of 20-foot-long containers. 40-foot-long containers are the most common container size used in international trade. For comparison, the Port of Savannah handled 5.4M TEUs in its FY2023, over one-fifth of which moved to or from the port by rail.

4.1.1.1 Mobile ICTF Flyover and ICTF Expansion.

APM Terminals, a Dutch company among the world's largest operators of container ports, operates the Choctaw Point Terminal and Garrows Bend ICTF. The Choctaw Point Terminal is in the process of being expanded by over fifty acres.

Figure 4-2 depicts the proposed Mobile ICTF motor vehicle flyover bridge concept linking the Choctaw Point Terminal and the Garrows Bend ICTF. The new 3,000 foot-long road connection would directly connect the Terminal where containers are transferred between ship and shore, and the ICTF where containers are placed on or removed from railcars.

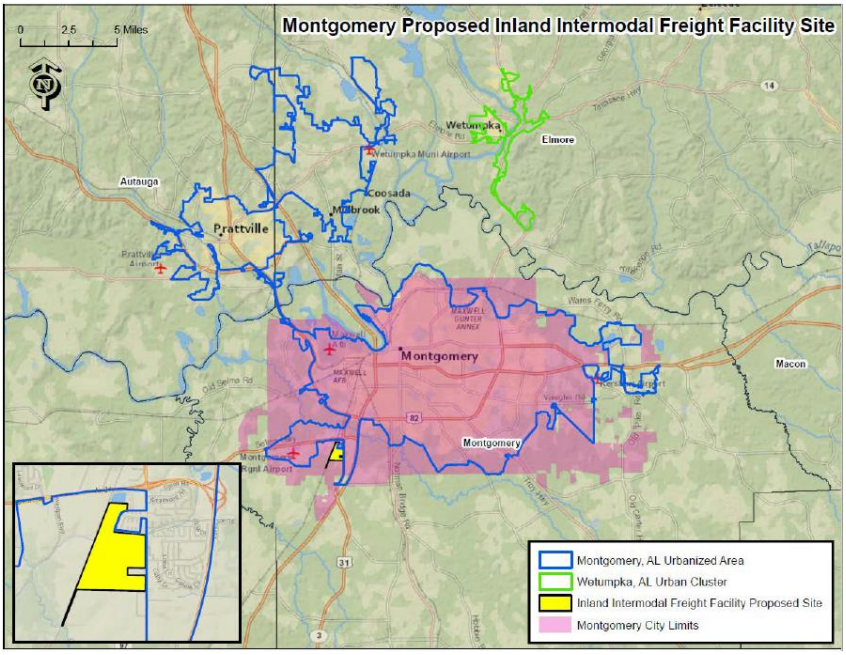
Figure 4-2 Mobile ICTF Flyover

Garrows Bend ICTF track capacity will be nearly doubled upon the 2025 completion of construction of one additional mile of working track that will increase ICTF working track to 12,000 feet. The ICTF will yet have room to expand approximately by one-half its size upon completion of the additional one mile of track.

4.1.1.2 Montgomery ICTF

Figure 4-3 Montgomery ICTF Site Location

ASPA owns the 272-acre site of the proposed Montgomery ICTF located adjacent to CSXT in southwestern Montgomery shown in Figure 4-3. The new ICTF will feature three 3,500 foot-long tracks, truck staging area, container stack yard and handlIng equipment, and service buildings. The ICTF will be served by CSXT from a new track constructed alongside the CSXT main track. ASPA plans to operate the ICTF.



4.1.1.3 Birmingham Regional Intermodal Facility Access Improvement.

Birmingham Regional Intermodal Facility

The NS branch main line to Mobile connects to the NS Birmingham-New Orleans line at Burstall. Burstall, an interlocking at the south end of double main track southwest of Birmingham, is located 6.5 miles northeast of the Birmingham Regional Intermodal Facility (RIF). The Mobile line continues 0.8 miles southwest from Burstall alongside the Birmingham-New Orleans line before the Mobile line diverges southward away from the Birmingham-New Orleans line. The existing track arrangement is not accommodating of intermodal train movements between the Mobile line and the Birmingham RIF.

Trains operating between the Mobile line and the RIF are required to use the congested double main track northeast of Burstall toward Bessemer. A train arriving from Mobile must pull north of Burstall and the movement reverse direction and use 5.2 miles of single main Birmingham-New Orleans track between Burstall and the north end of RIF lead tracks. The Birmingham RIF project will provide additional capacity between Burstall and the RIF that would expedite intermodal rail movement and improve intermodal service reliability, as well as reduce general NS rail network congestion between central Birmingham and the RIF.

4.1.2 TASD Projects

The three TASD projects of Table 4-1 would upgrade rail infrastructure and equipment, increase railcar handling and storage capacity, improve operational safety, and reduce risk to TASD operations because of rising sea levels.

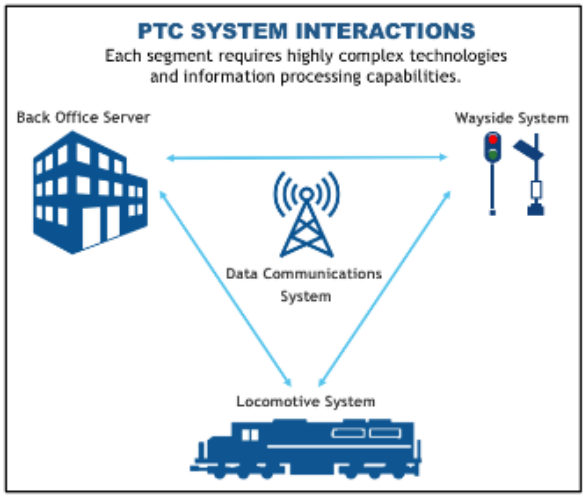
Figure 4-4 Chicksaw Lead Project

4.1.2.1 Chickasaw Lead Project.

The Chickasaw Lead project, shown in Figure 4-4, proposes to increase capacity by constructing a 1.9 mile-long second track along the Chickasaw Lead track from north of the TASD Three Mile Creek Drawbridge to near Terminal Junction, the NS-TASD North Mobile railroad-railroad grade crossing and the associated NS-TASD connection track. A second track increases the efficiency of switching rail customers located along that portion of the Lead. It also would permit movements between NS and TASD's Interchange Yard concurrent with the switching of customers along the Lead.

4.1.2.2 Positive Train Control.

Positive Train Control (PTC) systems are designed to prevent train-to-train collisions, over-speed derailments, incursions into established work zones, and movements of trains through switches not properly lined for train movement. The PTC project would equip TASD locomotives with PTC. PTC, though not required for TASD locomotives, increases operational safety and qualifies for federal funding.



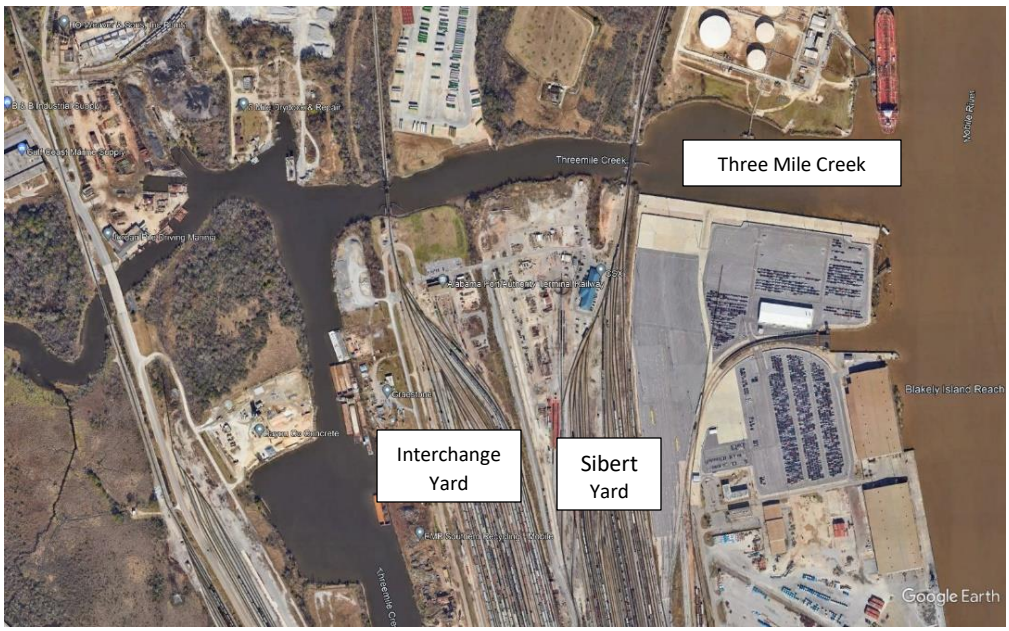
4.1.2.3 Interchange Yard Capacity and Resilience.

The Interchange Yard Capacity and Resilience project's initial project phase constructs additional Interchange Yard tracks to increase yard capacity at higher elevation than existing yard tracks that reduces risk associated with rising sea level. Subsequent phases would increase the elevation of other yard tracks. The work may be eligible for the Transformative, Efficient and Cost-Saving Transportation (PROTECT) Discretionary Grant Program authorized by the IIJA. First round applications for $848 million in competitive funding to make roads, bridges, transit, rail and ports more resilient to climate change began to be accepted in April 2023.

4.1.3 Mobile Passenger Rail Support Projects

Three ASPA projects in Table 4-1 support New Orleans-Mobile passenger rail service by increasing capacity at congested locations. The additional capacity these projects provide would also improve freight rail operations and safety. Two of the three projects increase rail traffic capacity at the south end of CSXT's Sibert Yard. The third project increases capacity downriver near the McDuffie Terminal and Garrows Bend ICTF facilities. The discussion of these projects is included in this subsection to place discussion of all ASPA projects in a single subsection.

Aerial Photograph of Three Mile Creek north of TASD Interchange and CSXT Sibert Yards

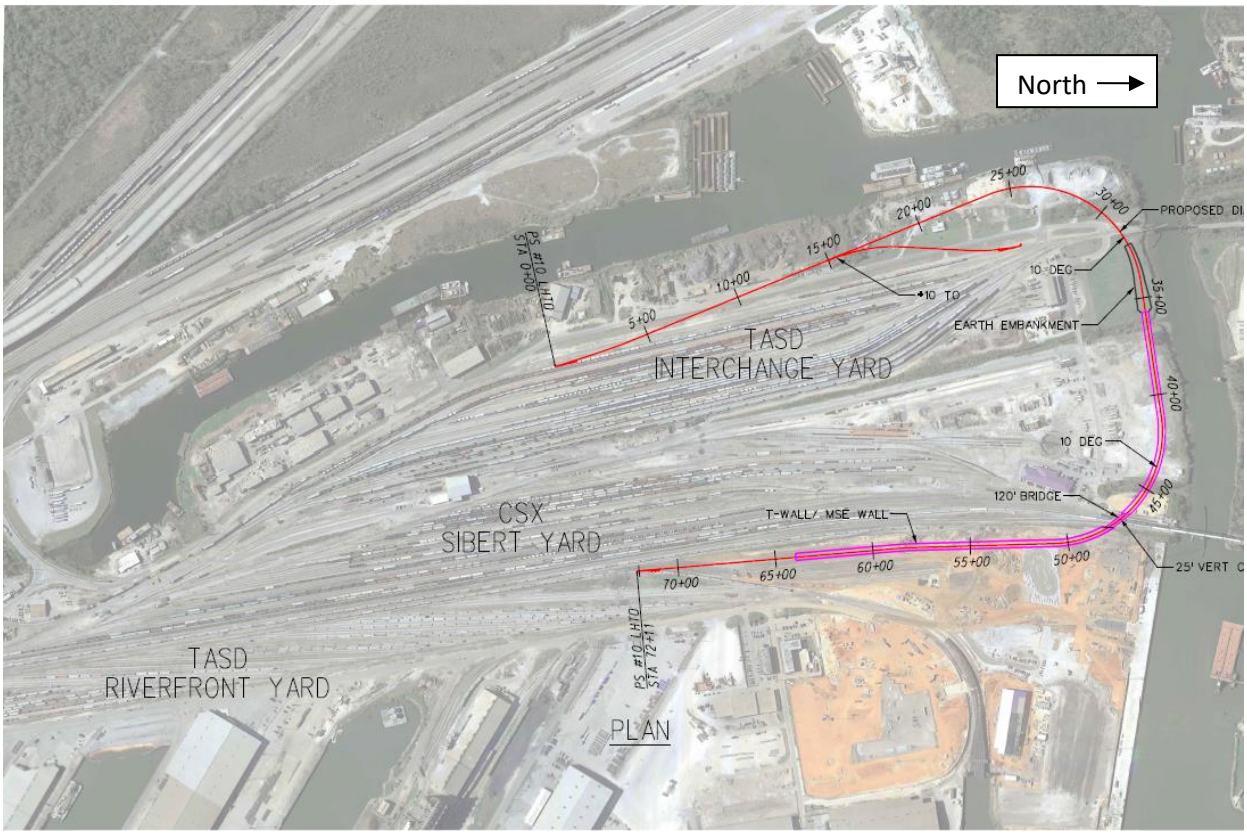


4.1.3.1 Three Mile Creek Flyover.

Figure 4-5 depicts the proposed Three Mile Creek Flyover. CSXT's large Sibert Yard is located between TASD's Riverfront Yard (sometimes also referred to as Dockside Yard) and large Interchange Yard. Rail access to upper Mobile harbor cargo, break bulk, grain and motor vehicle terminals and the CGR railcar ferry is via Riverfront Yard. Interchange Yard serves local Mobile rail customers located along Chickasaw Lead and is used to interchange rail traffic between Mobile-serving railroads and upper harbor Port facilities.

Railcar movements between Interchange and Riverfront Yards require TASD trains pull or shove their entire lengths southward onto CSXT main tracks, crossover from one CSXT main track to the other, and then shove or pull northward into the other yard. TASD movements between the yards block through CSXT main train movements and interfere with CSXT switching activity at the south end of Sibert Yard. The CSXT turnouts and crossovers used by TASD at the south end of Sibert Yard are located approximately one mile north of the Arthur R. Outlaw Mobile Convention Center. TASD movements between Interchange and Riverfront Yards would conflict with passenger trains serving a Mobile station located at the Convention Center.

Figure 4-5 Three Mile Creek Flyover Project



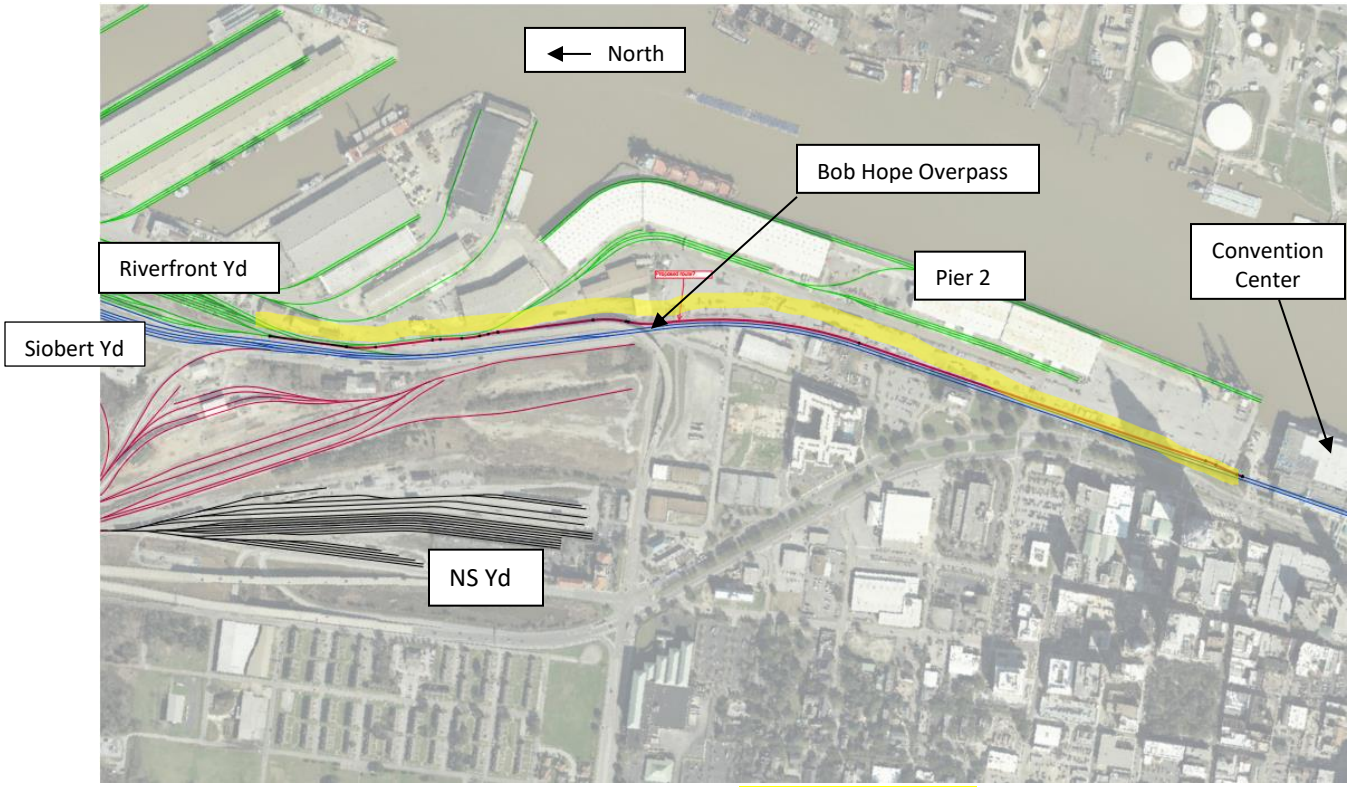
The Three Mile Creek Flyover project proposes a new track along the south side of Three Mile Creek directly connecting Interchange and Riverfront Yards via an overpass of CSXT main and adjacent Sibert Yard Lead tracks. The 7,200 foot-long new connection would allow for TASD movements between the TASD yards without using CSXT main tracks. The west end of the new track would connect to the west side of Interchange Yard approximately 3,200 feet south of the TASD Three Mile Creek Drawbridge. The new track would turn east and cross TASD's Chickasaw Lead at-grade adjacent to and south of the TASD Three Mile Creek Drawbridge and rise to overpass CSXT adjacent to the CSXT Three Mile Creek Swing Bridge. The flyover then would turn south and descend to connect to the west side of Riverfront Yard west of the State Docks Road-Twelfth Street intersection at Alabama Steel Terminals.

4.1.3.2 Bob Hope Siding Extension.

The proposed Bob Hope Siding extension, shown in Figure 4-6, would extend the existing Riverfront Yard siding track located adjacent to CSXT approximately 5,000 feet southward to just north of the Arthur R. Outlaw Convention Center. The extension would parallel the TASD lead track to Pier 2 from Riverfront Yard across State Docks Road. It then would continue adjacent, parallel to and east of the east highway approach to the Bob Hope roadway overpass of CSXT. The siding extension south of the overpass would be adjacent, parallel to and east of CSXT from the Bob Hope overpass to near the Convention Center.

The new track could serve as a layover and/or equipment service location for New Orleans-Mobile passenger trains. It could facilitate TASD movements across CSXT between the Interchange and Riverfront Yards when not in used in connection with passenger train service. (See Figure 3-2 for proposed the Mobile Passenger Station concept.)

Figure 4-6 Bob Hope Siding Extension



Red line siding extension adjacent to blue CSXT is highlighted yellow
Green TASD; magenta ALE (CN-CPKC)

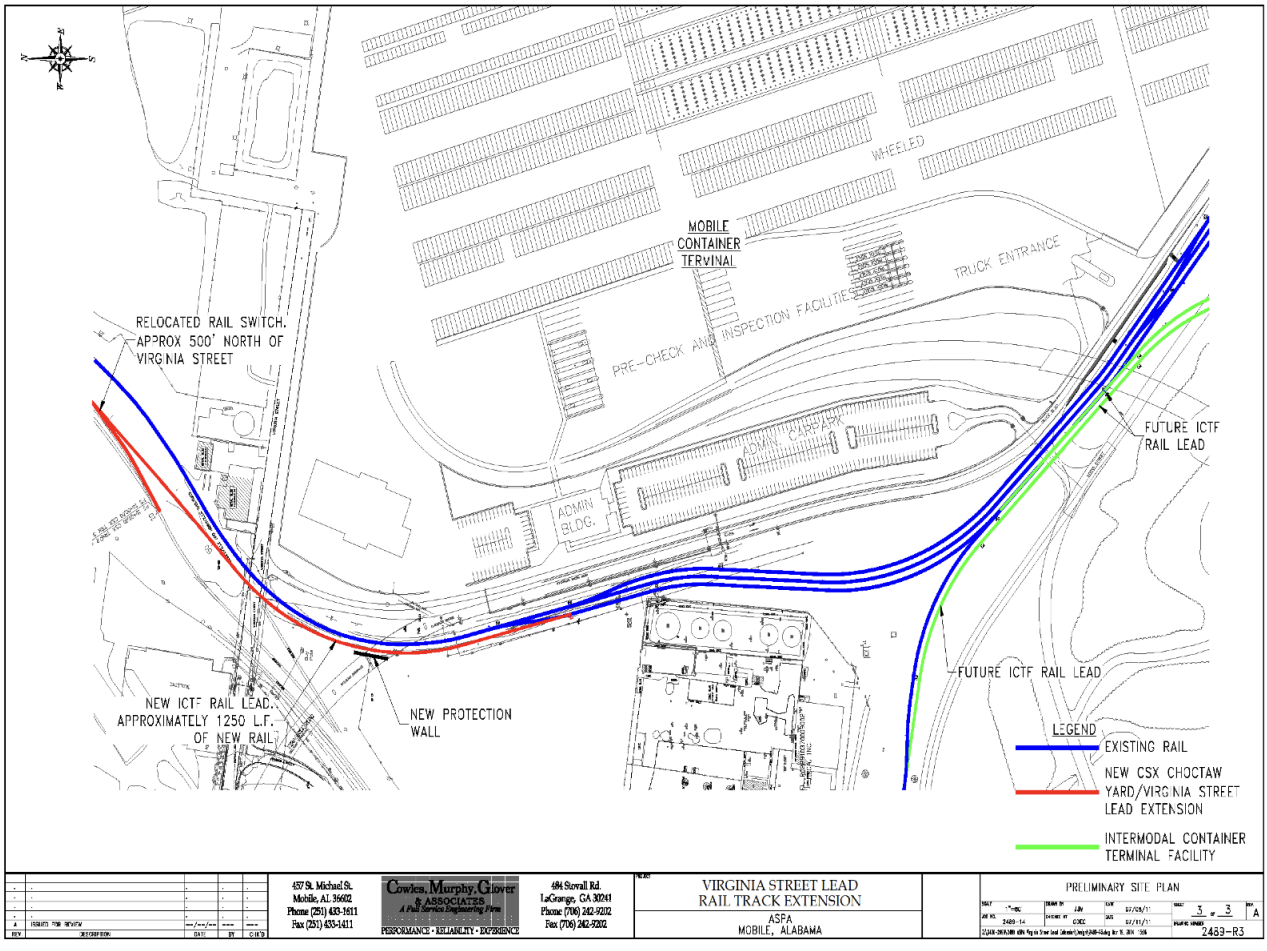
The proposed siding location is east of and adjacent to State Docks Rd from Riverfront Yard to the Bob Hope overpass, and east of and adjacent to CSXT from the overpass to just north of the Convention Center.

4.1.3.3 Virginia Street Lead Improvement.

The Virginia Street Lead track connects the south end of CSXT's small Choctaw Yard to the McDuffie Coal Terminal that is also a lead track to the Garrows Bend ICTF. The Virginia Street Lead improvement project, shown in Figure 4-7, proposes to extend a McDuffie Terminal lead track shown in red north across Virginia Street to Choctaw Yard. (The body of Choctaw Yard is left of the left end of the new red lead in Figure 4-7. Figure 4-7 also shows a proposed second lead track in green to the Garrows Bend ICTF in connection with future ICTF expansion.)

A second Virginia Street Lead track will enable arriving longer unit coal trains to be yarded on a single track without requiring part of the train to be switched to a second track. The second longer track also enables the reciprocal process of longer coal trains departing the coal terminal without having to double over. (Doubling over is the process of coupling together groups of railcars from two tracks to form a longer train on one track.)

Figure 4-7 Virginia Street Lead Improvement



4.2 Section 130 Program Projects

The Section 130 Program is a primary Program in the implementation of the *Alabama Rail-Highway Grade Crossing Action Plan (https://railroads.dot.gov/ALRISA).* Alabama has the eighth highest number of crossing crashes among states annually. Goals of the *Action Plan* include reducing crossing fatalities and crossing crashes each by three percent annually.

The Section 130 Program has been nationally funded at $245 million since 2020 and is funded at that amount through 2026.[5] The Alabama Section 130 Program FY22 allocation was $5,047,891, the 19th highest allocation among the states.[6] Individual state allocations vary some year to year based on changes in input quantities to the apportionment formulae.[7] The Alabama allocation for planning purposes herein is $5.1 million through FY26.

Approximately 20 Alabama Section 130 projects are typically authorized each fiscal year. ALDOT authorized 16 Section 130 projects totaling $4.462 million in FY22, consisting of 14 projects totaling $3,566,000 on CSXT and NS collectively and two projects totaling $896,000 on short line Alabama Export Railroad.

ALDOT currently has programmed 46 projects totaling an estimated $10,535,000. The projects consist of 42 projects collectively on CSXT and NS totaling $8,955,000 and four projects on three short lines totaling $1,580,000. Tables 4-2 and 4-3 identify the projects.

Table 4-2 Section 130 Hazard Elimination Projects

Crossing USDOT ID	ALDOT Project ID	Rail-road	Estimated Cost	Project
728033C 728003K 728030G	RHCH-RR22(901)	NS	$40,000	Raised median and delineators
352277T	RHCH-RR22(902)	CSXT	$406,000	Gates and passive devices
352263K	RHCH-RR21(913)	CSXT	$340,000	Gates and passive devices
728798C	RHCH-RR23(913)	CSXT	$300,000	Cantilever signals and passive devices
728006F	RHCH-RR23(914)	NS	$19,000	Raised median, roadway delineators and passive devices
352264S	RHCH-RR21(914)	CSXT	$341,000	Gates
6 projects	**Total**		**$1,446,000**	

[5] The FAST Act increased Section 130 Program funding of $230M in 2016 by $5M per year through 2020. The 2020 $245M funding level was continued in 2021 prior to enactment of IIJA.

[6] The Alabama Section 130 Program allocation was $4,866,013 in 2018 and $4,507,292 in 2013.

[7] See Subsection *2.3.1 Section 130 Program* for additional information about the Section 130 Program.

Table 4-3 Section 130 Protective Device Projects

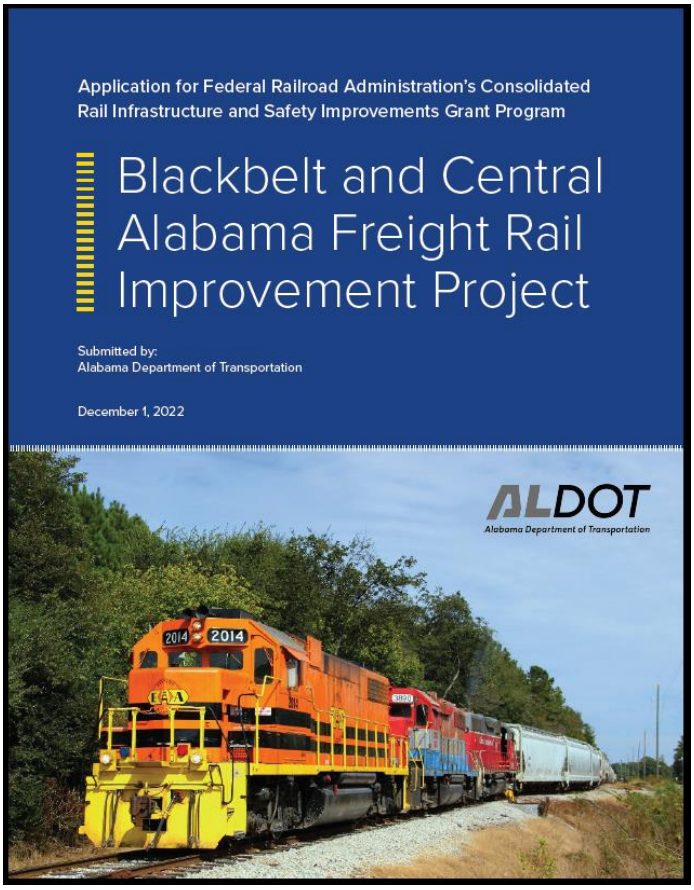
Crossing USDOT ID	ALDOT Project ID	Rail-road	Estimated Cost	Project
349977W	RHPD-RR23(901)	CSXT	$10,000	Passive devices
352253E	RHPD-RR23(902)	CSXT	$31,000	LEDs
639387B	RHPD-RR23(903)	CSXT	$231,000	Gates and passive devices
726756J	RHPD-RR23(904)	NS	$85,000	LEDs and passive devices
725406N	RHPD-RR23(905)	NS	$300,000	LEDs and passive devices
728032V	RHPD-RR23(906)	NS	$300,000	LEDs, passive devices, continuous curb and roadway delineators
725396K	RHPD-RR23(907)	NS	$250,000	LEDs and passive devices
727757U	RHPD-RR23(908)	NS	$12,000	Passive devices
731705J	RHPD-RR23(909)	NS	$300,000	Gates and passive devices
736007H	RHPD-RR17(910)	HMCAA	$600,000	Gates (w/ preemption) & passive devices
352255T	RHPD-RR23(910)	CSXT	$40,000	LEDs
639416J	RHPD-RR21(911)	CSXT	$530,000	Gates and passive devices
352054C	RHPD-RR23(912)	CSXT	$350,000	Gates and passive devices
639320U	RHPD-RR23(916)	CSXT	$360,000	Gates and passive devices
725384R	RHPD-RR21(917)	NS	$700,000	Cantilevers, and continuous curb and roadway delineators
725393P	RHPD-RR23(917)	NS	$200,000	LEDs and passive devices
725383J	RHPD-RR21(918)	NS	$350,000	LEDs and passive devices
725391B	RHPD-RR23(918)	NS	$90,000	LEDs and passive devices
925304X	RHPD-RR23(919)	NS	$15,000	Passive devices
639533E	RHPD-RR23(920)	CSXT	$360,000	Gates and passive devices
731804G	RHPD-RR21(921)	NS	$700,000	Gates, cantilever & roadway delineators
733822L	RHPD-RR23(921)	GSWR	$10,000	Passive devices
731790B	RHPD-RR23(922)	NS	$85,000	LEDs and passive devices
725398Y	RHPD-RR23(923)	NS	$90,000	LEDs and passive devices
727086X	RHPD-RR23(924)	NS	$90,000	LEDs and passive devices
352566U	RHPD-RR23(925)	CSXT	$10,000	Passive devices
353781J	RHPD-RR23(926)	EARY	$370,000	Gates and passive devices
353783X	RHPD-RR23(927)	EARY	$600,000	Cantilevers and passive devices
352055J	RHPD-RR23(928)	CSXT	$10,000	Passive devices
352056R	RHPD-RR23(929)	CSXT	$360,000	Gates and passive devices
352060F	RHPD-RR23(930)	CSXT	$10,000	Passive devices
352098C	RHPD-RR23(931)	CSXT	$10,000	Passive devices
352108F	RHPD-RR23(932)	CSXT	$150,000	Gates and passive devices
727614W	RHPD-RR23(933)	NS	$800,000	Gates, medians and passive devices
727617S	RHPD-RR23(934)	NS	$410,000	Gates, roadway delineators, and passive devices
831203Y	RHPD-RR23(935)	CSXT	$90,000	LEDs and passive devices
36 Projects	**Total**		**$8,909,000**	

4.3 Railroad Plans and Projects

4.3.1 Grant Application Projects

Grade separations grant application projects are discussed in Subsection *4.4.2. Grade Separations*.

4.3.1.1 Eastern Alabama Railway / Meridian and Bigbee Railroad.



ALDOT was the primary applicant for a CRISI grant award in the amount of $15.9 million for a project that would make improvements to Genesee & Wyoming subsidiary railroads Eastern Alabama Railway (EARY) and Meridian and Bigbee Railroad (MNBR). The railroads will fund the $16.6 million remainder of the $32.5 million project total.

The EARY portion of the project consists of replacing the 90-pound jointed rail of 8.3 miles of track with 115-pound continuous welded rail and constructing new 4,480 and 5,280 foot-long sidings near Sycamore to increase railcar storage and handling capacity.[8] The track improvement will enable maximum track speed to be increased from 10 mph to 25 mph along a 7.8 mile-long segment of track between Sylacauga and Sycamore. The new sidings will significantly decrease railcar storage and handling expenses.

The MNBR portion of the CRISI project consists of replacing 100-pound jointed rail with 115-pound continuous welded rail along the 15.1 mile-long track segment between the eastern end of the MNBR track leased from CSXT at Burkeville, and Benton. The 25-mph maximum speed track segment has numerous 10 mph speed restrictions due to poor track conditions that effectively limit maximum speed on the Burkeville-Benton segment to 10 mph. The track improvement will eliminate the speed restrictions and enable maximum speed to be increased to 40 mph.

[8] The standard description of rail size is the rail weight in pounds per yard (3 ft length) of one rail. The "per yard" is typically omitted as being understood.

The project also includes replacing four turnouts (switches) at Whitehall to tracks that serve Alabama Sand and Gravel (ASG). ASG is an important MNBR customer and is the only MNBR customer located along the 33 mile-long MNBR segment between Burkeville and Selma. The higher speed track and new turnouts are important in retaining the existing ASG rail traffic and support diversion of additional ASG heavy-weight truck traffic moving by highway to movement by rail.

The last paragraphs of Subsection *2.1.3 Class III Freight Railroads* described a CPKC-CSXT deal that would establish a new direct interchange between CPKC and CSXT using the MNBR. The deal requires STB approval. CPKC would purchase and operate the MNBR-owned portion of the MNBR between Meridian and the Myrtlewood locale in Alabama, and CSXT would assume operations of the portion of the MNBR east of Myrtlewood currently leased by CSXT to MNBR. CPKC in its STB filing states it intends to invest $55 million to upgrade the infrastructure of the MNBR-owned portion of the MNBR, including $9 million in bridge repair and improvements.

4.3.1.2 Alabama & Tennessee River Railway.

OmniTRAX subsidiary Alabama & Tennessee River Railway (ATN) was awarded a $4.96 million 2021 CRISI grant to fund improvements to:

- siding and wye tracks and rehabilitate the nearby SR 144 grade crossing surface to eliminating switching across SR 144
- restore landslide warning signals to service to allow for 25 mph train speeds between Birmingham and Ragland
- eliminate bridge deficiencies on nine bridge structures to ensure continued 286,000-pound railcar capacity

OmniTRAX was awarded a $37.3 million 2022 CRISI program Transportation Investments for Employment and Safety (TIES) grant for crossties and track surfacing (timber & surface, T&S) on portions of the ATN and two other non-Alabama short lines. T&S is discussed in Subsection *4.3.3 Short Line Railroad infrastructure*. OmniTRAX is providing a 20 percent match. The ATN segment for T&S is the Gadsden-Guntersville spur portion of the ATN. T&S has not occurred on that portion of the ATN since prior to CSXT's divestiture of rail operations on the ATN in 2004.

4.3.1.3 Huntsville & Madison County Railroad.

The Huntsville & Madison County Railroad Authority was awarded a 2022 CRISI grant in the amount of $3.5 million for final design and construction activities to complete the Aldridge Creek railroad bridge to restore it to 286,000-pound capacity, and complete various track-related improvements on the HMCR. HCMR, City of Huntsville and Alabama are collectively contributing a 45 percent match. HCMR was awarded an additional $1 million grant toward bridge replacement, installation of 10,000 crossties, and yard improvement.

4.3.1.4 Alabama Southern Railroad.

WATCO subsidiary Alabama Southern Railroad (ABS) partnered with various state and Tuscaloosa-area stakeholders to apply for a CRISI grant in connection with a $60,335,722 project to fully upgrade the 3,834 foot-long Black Warrior River Bridge at Tuscaloosa. The CRISI application was not selected. The 651 foot-long timber deck central section of the bridge consists of steel girder and through truss spans. The remainder of the bridge is a ballast deck primarily timber trestle structure.

Black Warrior River Bridge in Tuscaloosa

The project would also upgrade the 86 foot-long BF Goodrich Industrial Lead Bridge in Tuscaloosa that provides access to ABS' largest customer, Hunt Refining, a producer of transportation fuels and asphalt products. The project would eliminate timber bridge bents subject to vehicle strikes. Vehicle strikes risk bridge structure damage that in turn could result in the release of hazardous materials transported across the structures.

4.3.1.5 Sequatchie Valley Switching Company Railroad.

A portion of a CRISI grant to Tennessee Ironhorse Resources, Inc. will be applied to subsidiary Sequatchie Valley Switching Company, LLC (SQSC), an 11.5 mile-long short line spur that connects to CSXT at Bridgeport and extends north eight miles into Tennessee. The grant funding will be used to fund 50 percent of the $940,000 expense of replacing a bridge located 2,000 feet north of the Alabama-Tennessee state line. The 58 foot-long Poplar Springs Branch ballast deck timber trestle will be replaced with a steel girder open deck bridge.[9] This project is mentioned as exemplary of future possible Alabama short line projects as discussed in Subsection *4.4.3 Short Line Railroad Infrastructure.*

4.3.2 Other Railroad Projects

Alabama's current primary approach in assisting railroads in the construction of new railroad capacity and infrastructure are various general economic development-based tax credits. The credits, established during the 2015-2021 period, are not limited to rail. The tax credits may be

[9] Tennessee is paying 45 percent and SQSC is paying 5 percent of the total expense. The $23.7 million grant total will improve or replace 42 bridges along ten different TN short lines.

granted in connection with development of rail infrastructure to serve new industry or site preparation for new rail-served industry.

The state's income tax Port Tax Credit, enacted in 2016 and likewise not limited to rail, is based on new and enlarged facility traffic volumes to publicly-owned port facilities and inland ports. The credit may be granted for up to a three-year period. The Port Tax Credit thus indirectly fosters increased rail operations for new rail customers using publicly owned ports.

The various tax credit grants generally require a filing or application in connection with projects or new facilities that will use public ports to determine qualification and eligibility with state approval then required in accordance with the applicable statute. (See Section *1.4 Rail Transportation's Role* for more detail.) Tax credit grants and agreements prior to state approval and agreement execution are generally confidential. The tax credits do not have a fixed aggregate amount. The economic development-based tax credits thus are ad hoc and vary from year to year. There is currently no sunset with respect to submission of filings or applications for the tax credits, thus the granting of credits may continue indefinitely.

Class I Railroad Projects.

Class I railroads did not identify any specific projects in response to a request for Alabama project information. Class I railroad projects not otherwise part of or in support of public-private partnership projects are thus not included herein.

NS and CSXT continue to evaluate passing siding extensions and new siding construction in connection with capacity constraints and increasing train lengths. Gross train weights and hence indirectly train lengths are subject to the railcar coupler maximum force. Train lengths have increased with improvements in distributed locomotive power as well as the adoption of precision scheduled railroading operating practices. (Distributed power is the practice of placing locomotives within and/or at the end of a train to reduce maximum forces exerted on railcar couplers.) NS and CSXT have constructed new passing sidings and extended sidings throughout the southeastern U.S. over the past two decades.

Rail industry media have reported that NS is or will be extending six sidings in Alabama and Georgia by 7,500 to 15,000 feet without identifying the locations. Industry media has reported that NS is or will be building two set off tracks and extending a siding to 4,000 feet in Jackson, AL on its Mobile line where line capacity is an issue as mentioned in the subsequent *4.3.4 A-USA Corridor* subsection.

Industry media reported CSXT is engaged in ten significant siding extension projects in Alabama, Georgia, and North Carolina without identifying the locations. The sidings are each being extended to approximately 12,000 feet and will be in service in 2023 or 2024. Two sidings on the Montgomery-Dothan-Valdosta-Waycross, GA line are among those being extended. A project

under evaluation is Day Siding in Montgomery where CSXT is considering upgrading one railroad bridge and either closing or upgrading a second railroad bridge.

CSXT's Nashville-Birmingham-LaGrange-Waycross line has become a heavy intermodal traffic line over the past three decades. The Coosa Pines, Shocco, Carrara, Wadley and Standing Rock sidings in Alabama were extended to two to three miles in length, the Lineville siding was extended to create four miles of double main track, and new two to 2.5 mile-long Addison, Malone and Broughton passing sidings have been constructed over the past two decades as intermodal traffic grew on the line.[10] CSXT's Montgomery-Dothan-Waycross line currently has light train traffic of only a few trains per day. The CSXT siding extensions may be to develop additional network capacity and/or develop network redundancy between Birmingham and Waycross.

Other Than Class I Railroad Projects.

Table 4-4 identifies rail improvement and investment proposals and plans that were shared with ALDOT via response to a questionnaire. The table includes projects or work on Class II railroad Alabama & Gulf Coast Railway and also fifteen Alabama short line railroads that collectively operate 64 percent of short line route miles within Alabama. The table does not include the previously discussed projects on TASD or the grant application projects of Subsection 4.3.1, nor a Birmingham Terminal Railway grade separation project discussed in Subsection *4.4.2 Grade Separations*.

The table consists of projects or work that railroads may undertake or aspire to undertake on their own. The table may include projects or work for which the railroad may seek public participation or assistance in whole or in part or tax credits. Railroads may have planned or aspire to projects where public participation will be sought where project information was not provided without respect to whether or not railroads provided some project or work information included in Table 4-4. Table 4-5 projects or work are summarized in Table 5-3.

4.3.3 Short Line Railroad Infrastructure

Alabama's current primary approach in assisting short lines with railroad infrastructure capital investment has been a 50 percent state income tax credit for eligible qualified railroad expenditures of up to $4,100 per mile of Alabama railroad track. The tax credits are capped at an aggregate $4 million maximum and continue through 2027.[11] The credit was initially made available in 2018 and was to sunset in 2022, but the state in 2023 increased the maximum per mile and aggregate maximum and extended availability of the credit to 2027. The tax credit constitutes near-term state investment. The state may choose to extend its availability and aggregate amount causing it to be investment beyond the near term and change.

[10] Standing Rock passing siding was extended in the late 1990s, the others since 2001.

[11] The credit was established by the Railroad Modernization Act of 2019. Credits were first available in 2020 at up to $3,500 per mile and $3.7 million in the aggregate.

Table 4-4 Projects Identified by Railroads (in Response to Questionnaire)

Rail-road	Location	Category	Type	Amount	Description
ABS	Tuscaloosa	Long Term	Capacity	$12,000,000	Hubbard Yard Build Project; add'l capacity for carload growth
AGR	Mobile Sub	Short Term	Crossings	$250,000	Crossing signals
	Mobile	Short Term	Track	$500,000	Mobile Yd tracks 5 & 6 are adjacent to public hwy; rail replacement would reduce broken rail derailment risk
	N. of Pickensville	Intermediate	Track	$800,000	25mph slow order MP 661.1-666.4 (40mph line speed); corrective rail and surfacing scheduled
ATN	Comprehensive	Short Term	Track	$50,000,000	T & S
	Comprehensive	Short Term	Bridge	$5,000,000	Bridge repairs
	Not specified	Intermediate	Track	$20,000,000	Rail replacement
	Various	Intermediate	Crossings	$900,000	New crossing signal equipment at three crossings
BAYL	Webb	Intermediate	Track	$1,800,000	T & S to eliminate two 10 mph slow orders covering 12 miles
	Newville	Intermediate	Crossings	$500,000	Road crossing Hwy N 431
	Headland	Intermediate	Crossings	$500,000	Road crossing Hwy S 431
	Not specified	Long Term	Track	$600,000	Crossties
BHRR	Bessemer	Critical	Crossings	$50,000	32nd St Birmingham
CCH	Phenix City	Intermediate	Crossings	$450,000	Crossing surfaces 728430A SR1; 719011D Colin Powell Pkwy; 728427S Owens Rd; 728432N Gilmore Rd; 728425D Patterson Rd; 728421B Terminal Rd; 728419A Holy Trinity; 728416E Bluff Creek Rd; 719027A Brickyard
	Phenix City	Long Term	Track	$5,000,000	Light rail/turnout and crossing upgrades
	Phenix City	Long Term	Intermodal	$3,000,000	Intermodal Facility
	Phenix City	Intermediate	Crossings	$1,000,000	Crossing signals
COEH	Troy	Long term	Track	$700,000	Storage track T & S
EARY	Sylacauaga	Intermediate	Crossings	$200,000	H&H (-2 trks) MP 454.7 (Gantt's Jct.) due to surface, W 4th St. MP 457.6 (- 2 trks) MP 457.6 (Sylacauga) due to track gage
	Sylacauaga	Short Term	Track	$16,500,000	Replace main track 80AS rail with 115RE lb CWR MP 457.7-477.5
	Sylacauaga	Short Term	Track	$1,900,000	Crossties MP 457.7-477.5
	Sylacauaga	Critical	Track	$260,000	Replace plant 1 lead 80AS rail with 115RE MP 455.3 (~1,800 TF)
	Sylacauaga	Long Term	Track	$600,000	Upgrade 5 TOs from 100RE to 115RE
	Sycamore	Intermediate	Track	$300,000	Ditching and relief Culverts 459-462
GSWR	Eufaula	Problem crossings	Crossings	$350,000	733800L Arch Dr; 733803G Boundary St; 733806C Washington St; 733807J Dale Rd; 733808R US431; 733809R (2 track) Randolph Av
	Eufaula	Long Term	Track	$3,000,000	Light rail/turnout and crossing upgrades
	Eufaula	Long Term	Intermodal	$3,000,000	Intermodal Facility
	Eufaula	Intermediate	Crossings	$800,000	Crossing signals
HMCR	Huntsville	Intermediate	Bridge	$5,000,000	Replace Pinhook Creek Bridge (by Heart of Huntsville Dr)
	Huntsville	Critical	Bridge	$3,000,000	Replace Pinhook Creek Bridge (by junction with NS)
	Huntsville	Critical	Locomotive	$400,000	Locomotive prime mover
	Tanner	Intermediate	Locomotive	$600,000	Locomotive for Tanner
	Tanner	Intermediate	Capacity	$1,000,000	Add 2-3 tracks at Tanner
LXVR	Milport	Critical	Track	$150,000	10 mph slow order (25 mph line speed) at Millport to be eliminated this year
MSCI	Red Bay	Critical	Track	$1,200,000	Rail and crossties - track out of service
RJAL	Childersburg	Short Term	Track	$450,000	3,000 accelerated maintenance tie & surfacing
	Childersburg	Long Term	Track	$450,000	3,000 accelerated maintenance tie & surfacing
THNR	Not specified	Short Term	Track	$10,000	T & S
TSRR	Florence	Other	Crossings	$300,000	Veterns Dr crossing signal improvement
WGCR	Not specified	Intermediate	Track	$10,000	T & S
			Total	**$142.5 M**	

T & S = timber & surface / (cross) ties & surface. Surface typically required with crossties. Rail may require crossties.

The following is a brief simple general discussion for laypeople of railroad infrastructure expenses and short line profitability. Railroad infrastructure expenses consist of operating and capital expenses. Infrastructure operating expenses are the labor, vehicles, tools and equipment, and material expenses in connection with signal inspection and maintenance, track inspection, and minor repairs performed weekly if not daily in support of railroad operations as a result of inspections. Railroad infrastructure operating expenses also include other periodic near-term activities such as bridge and culvert inspection and vegetation control. Capital costs are the investments in longer-lived infrastructure required to continue operations over the longer term. Railroad capital costs are typically relatively expensive because of the long service life of track infrastructure.

A key short line railroad infrastructure element is crossties. Average southeastern U.S. short line railroad crosstie life is very generally approximately 30 years. Crossing signals and components, crossing surfaces, rail and bridges are other important railroad infrastructure that have life cycles varying between a decade and a century or more.

Timber and Surfacing.

Spot Tamper Surfacing Track

There are approximately 3,100 crossties crossties per track-mile at 20.5-inch center to center crosstie spacing.[12] The interaction of rail traffic characteristics, track geometry, rail size and condition, and biological factors affect crosstie life. Timber crosstie life in the southeastern U.S., and particularly along the Gulf Coast, Florida and along the Atlantic Ocean coast as far north as North Carolina, is shorter than anywhere else in the U.S. because of heat, rainfall and the prevalence of wood-decaying organisms. Track curvature is another important crosstie life factor with crosstie life varying inversely with degree of track curvature.

An average 30-year short line railroad crosstie service life translates to an average annual renewal of 103 crossties per mile. Crosstie removal and installation disturbs the track line and surface necessitating track surfacing. Surfacing is the term for the horizontal and vertical lining of track. It typically requiring additional ballast (crushed rock) that is tamped under the crossties that nominally raises the track. Crossties, other than those replaced on occasion to address a very

[12] Center to center crosstie spacing varies by individual railroads or railroad lines. U.S. railroad timber crosstie spacing commonly varies between 19 and 22 inches (3,335-2,880 crossties per mile).

localized deficiency, are generally most economically and efficiently renewed when 500-1,000 per mile require replacement, though short lines may renew fewer crossties per mile. The 500-1,000 range establishes an economy of scale that is generally the most economical in the utilization of mechanized track equipment in replacing crossties and surfacing track. Timber and surface (T&S) refers to crosstie replacement and surfacing at scale. A review of the past 20 years of crosstie replacements on a line can provides a very general indication of current general overall crosstie condition.[13]

Consider a critical need for $1.2 million worth of T&S along a 40 mile-long track segment necessary to maintain continuing rail service. The $1.2 million would replace and surface approximately 200 crossties per mile at $150 per crosstie. A similar size investment in T&S would again be critical to continuing operations within a very few years given crosstie replacement on a 40 mile-long track segment should annually average 100 or more crossties per mile.

Crossing Signals and Surfaces.

The overall service life of a short line crossing signal installation is approximately 50 years. Short line crossing signal installations on single non-signaled track cost approximately $250,000.[14] The maximum service life of the primary control equipment and battery standby power however are approximately 25 years and as such are capital investments.[15] Motion detector equipment typically controls activation of short line railroad crossing signals. Motion detectors cost approximately $13,000 each excluding labor. New storage batteries and battery chargers for standby power when commercial power is off at a crossing cost approximately $5,000 per crossing excluding labor.

Incandescent crossing signal flashing light units are yet common, but but light emitting diode (LED) flashing light units have become the informal standard for crossing signal flashing light units over the past two decades. LED units have superior visibility, longer life and reduced maintenance expense than incandescent bulbs, and much lower electric power use, an added benefit when commercial power is interrupted, and the crossing signals are operating on storage batteries.[16]

LED Crossing Signal Insert

[13] Deferring the replacement of deteriorated crossties for an extended period may accelerate the deterioration of the remaining crossties.

[14] Class I railroad crossing signal installation expense at a single non-signaled track crossing is approximately $300,000 including the railroad's preliminary engineering, reflective in part of the higher cost structure of Class I railroads.

[15] Gate mechanisms may have service lives less than that of the overall crossings signal installation. Gate mechanisms cost approximately $5,000 each excluding labor.

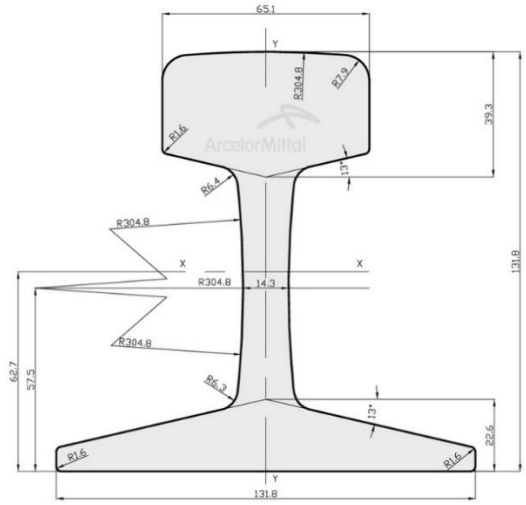
[16] Incandescent crossing signal flashing lights operate on low voltage because they are subject to standby storage battery operation when commercial power is off and rely on optics in their focus. LED flashing lights have the advantage of very good visibility across wider angles of approach.

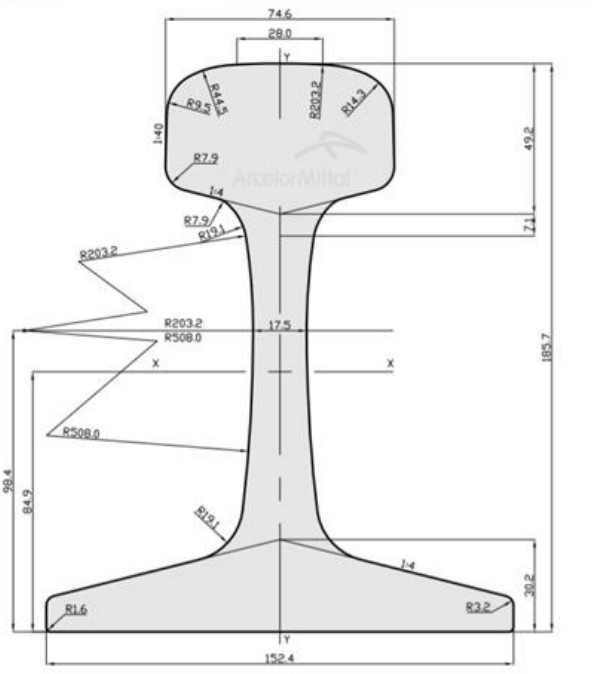
The service life of a short line railroad crossing surface is approximately 25 years. Service life may be less when railroad traffic and heavy vehicle weight highway traffic volumes are high. The track structure at a crossing is typically improved to a state of very good repair when crossing surfaces are renewed because of the difficulty in accessing the track for any repairs between crossing surface renewals. Crossing surface renewal may include all crossties, and rail, tie plates, fasteners and ballast.

Rail.

Railroad industry practice is to identify rail weight in pounds per yard (three-foot) length of rail. The "per yard" is commonly omitted as being understood. The omission of "per yard" generally applies in this discussion, e.g., 112-pound per yard rail is referred to as 112-pound rail. The short line railroad mainline rail general rule of thumb is the installation of 112-pound or heavier rail when rail replacement is required. This or larger size rail is required because current maximum 286,000-pound railcars overstress lesser weight rail.[17] Rail replacement using a different size rail requires different size tie plates and rail anchors. (Rail anchors are fasteners that control longitudinal rail movement relative to the crossties). T&S may accompany rail replacement.

Rail Cross-sections *136-pound rail at right*
85-pound rail below





Rail is an expensive capital cost. It may be difficult for short lines to forecast need for rail beyond the short term when rail condition or increased maintenance expense indicate imminent replacement is needed. Rail life depends upon track speed and curvature, rail metallurgy,

[17] The next common smaller size rail than 112-pound rail is 100-pound rail. Class I railroads typically replace mainline rail with 136-pound or heavier rail.

whether jointed or continuously welded rail (CWR), and the quality of the supporting crossties. On tangent track, 136-pound CWR may have a service life exceeding one billion tons (7 million 286,000-pound railcars) transported over the line. The service life of 85-pound jointed rail is likely 200 million tons or less.[18] Forecasting the remaining rail life of rail in good condition may be difficult. Short line rail life may vary from a critical near-term to a very long-term concern based on rail size and condition, and traffic volumes. A need may develop and be recognized only a few years before it becomes a high priority.

Railcar wheel flanges wear the inside of the top portion or head of the high rail in curves such that the outside rail in curves may require replacement, known as curve patch, prior to the rail no longer being serviceable due to steel fatigue caused by repeated railcar loading. Head rail wear increases with railcar weight and speed and particularly track curvature. The capital cost rail category also includes turnouts (switches) and railroad-railroad grade crossing trackwork. The service life of turnouts (or turnout components) is influenced a little more by the repetitious wear of railcar wheel movements than is rail where stress fatigue controls service life.

The rail of a line with 6,000 annual carloads with an average 90 tons lading per carload is subjected to one million gross tons (MGT) annually.[19] Consider a one MGT line with one-half (100 years) of its 85-pound rail service life remaining. Heavy carloads overstress rail and may reduce the remaining service life by one-half to 50 years.[20] An increase in maximum railcar weights would further reduce remaining service life by further overstressing the rail. Doubling traffic would halve again that remaining life. Alabama short lines with light weight rail and robust traffic may require rail replacement in the next decades.

Timber Bridges.

Timber bridge repair and replacement may be another major challenge increasingly facing Alabama short lines in future decades. Like rail, the repair or replacement expense may be large and the need difficult to forecast beyond the short term. The typical five timber piles of the bridge bents are of particular concern because of the expense of pile replacement and capping the bents under rail traffic.

Timber pile life in some instances has been extended by lower train speeds than the speeds when the lines were operated by predecessor Class I railroads. Lower speeds reduce the impact portion

[18] Main line 100-pound and smaller rail dates to the pre-1980's period when the average loaded railcar weighed 50 tons and 263,000 pounds was the gross maximum carload weight.

[19] Assumes 246,000 gross pounds per carload and a 66,000-gross pounds pound empty railcar movement, and two 260,000-pound locomotive movements average daily (five -day weeks) traffic of 24 carloads.

[20] Smaller rail weights were developed under rail stresses based on the long time general 263,000-pound maximum weight carload standard that has since been succeeded by a general 286,000-pound maximum railcar weight. 263,000-pound maximum railcar are 100-ton railcars based on them being able to carry 100 tons of freight after subtracting the railcar tare weight. 286,000-pound maximum weight railcars are 110-ton railcars.

of the live load. Lower traffic volumes because most short lines no longer carry any through traffic also extends pile life. Posting, the cutting out and replacing of portions of piles with new treated timbers, may also or is being used to extend pile life. Bridge conditions requiring the imposition of railcar weight restrictions can greatly hinder short line operation.

Timber Deck Timber Trestle

<u>Profitability Rules of Thumb</u>.

Rules of thumb concerning branch or spur line profitability were developed about 50 years ago in assessing struggling northeastern U.S. branch or spur lines. The U.S. railroad network was in decline and rapidly losing market share to motor carriers prior to Staggers Act deregulation at the time. The rules are included below as a very rudimentary means of a layman's assessing the financial prospects of short line as a going concern that includes the short line making the periodic significant capital investment to maintain track infrastructure over the long term. The rules of thumb are as follow:

- A branch or spur line annually transporting 100 or more revenue carloads per route mile may be profitable and sufficiently able to recapitalize track infrastructure to continue operations over the long term.
- A branch line annually transporting less than 40 carloads per route mile is very unlikely to earn sufficient revenue to recapitalize its infrastructure.
- A branch line annually transporting 40-99 carloads per route mile is in between with revenue sufficiency often depending upon the commodities carried. The line tended to be profitable and able to recapitalize infrastructure when there was relatively high average revenue per carload traffic (e.g., plastic resins), and unable to recapitalize infrastructure when there was relatively low average revenue per carload traffic (e.g., high fraction of low value commodities such as sand or stone).[21]

Fifteen of Alabama's 21 short line railroads are between 11 and 44 miles in length. Those 15 short lines average 25 miles in length. Table 4-5 identifies various operating and capital

[21] Note that the revenue of rail traffic exceeding 100 carloads per route mile may be insufficient with respect to high capital cost track infrastructure such as rail renewal or bridges replacement, or other major repairs incurred very infrequently or in response to disaster.

infrastructure line items and their costs for a 25 mile-long short line railroad track segment. The table includes unit costs for selected long term high capital cost infrastructure such as rail, turnouts, bridges and crossing signals but does not annualize that investment that may vary greatly even over the long term. The operating and annualized capital expenses over a 10-year period may be characterized as the intermediate term infrastructure expense.[22]

Table 4-5 Railway Infrastructure Costs for a 25 Mile-Long Short Line

Track Infrastructure Line Item	Qty	Unit of Measure	Unit Cost	Life (Yrs)	Total (2023$)
Annual Operating Expenses					
Track Inspection & Repairs	1	Position	$ 80,000		$ 80,000
Crossing Signal Inspection & Repairs	0.25	Position	80,000		20,000
Supplies, Tools, Equipment Rental	25%	Of Labor			25,000
HiRail Vehicle, Maintenance & Fuel	1.0	Each	5,000		5,000
Boom Truck, Maintenance & Fuel	0.25	Each	20,000		5,000
Ditch Opening / Debris Removal	25	Route Mile	2,000	10	5,000
Brush Cutting	25	Route Mile	2,000	5	10,000
Herbicide Spray	25	Route Mile	1,000	1	25,000
Subtotal					***$ 175,000***
Selected Annualized Capital Expenses					
Main Track Crosstie Renewal (Note 1)	25	Track Mile	$ 150	30	$ 375,000
Other Track Crosstie Renewal (Note 2)	2.5	Track Mile	150	30	33,000
Turnout (Switch) Crosstie Renewal (Note 3)	2	Turnouts	225	25	2,000
Road Crossing Surface Renewal (Note 4)	25	Crossing	40,000	25	40,000
Subtotal					***$ 450,000***
Total Annualized Infrastructure Expense (Note 5)					**$625,000**
1 Based on 3,100 crossties per mile and 2,500 crossties per year					
2 Based on 2,560 crossties per mile and 220 crossties per year					
3 Based on 55 crossties per turnout and 9 crossties per year					
4 Based on one crossing per year					
5 Excludes long term capital expense line items below					
Long Term Renewal Unit Capital Expense Line Item Unit Costs					
Rail		Track Mile	$ 1,000,000		
Curve Patch Rail		Rail Mile	550,000		
Turnout		Each	150,000		
Bridge		Bridge Feet	20,000		
Crossing Signal		Each	250,000		

Source: Atlas Technical Consultants

[22] The 30-year service life of crossties is long. It was previously explained T&S expense is intermediate because a fraction of crossties must be replaced periodically at well less than the average 30-year service life of an individual crosstie. Long term infrastructure expenses approach the intermediate term for those short lines with rail in good condition and few or no bridges.

Short line revenue per railcar may be as low as a few hundred dollars per railcar. An average of 40 revenue railcars per short line route-mile per year translates to $625 of each carload's revenue being required for operating and capital infrastructure expenses. The annual infrastructure operating expense from Table 4-5, $175,000, translates to an annual expense of $5,600 per mile and is only 28 percent of the total annualized infrastructure expense of $25,000 per mile. The $175,000 expense translates to $175 per railcar for lines with 100 revenue railcars per route mile, ample enough to continue operations but very likely not near enough to for the infrastructure capital investment required to continue the short line as a going concern beyond the intermediate term.

4.3.4 Alabama-USA Corridor

The Alabama-USA (A-USA) Corridor (https://www.a-usacorridorproject.com/) proposed an Alabama-focused public-private collaborative effort among ALDOT, ASPA, the Alabama Department of Commerce, NS and the federal government. The A-USA Corridor proposed rail capacity increases to improve the Alabama rail network and strengthen eastern U.S. supply chain resiliency and promote Alabama economic development. The A-USA Corridor proposal, though smaller in scale, is in some respects comparable to the NS Crescent Corridor between New York, and Memphis, TN and New Orleans of the public-private partnerships discussed in Subsection *2.4.2 Freight Rail Industry Trends*.

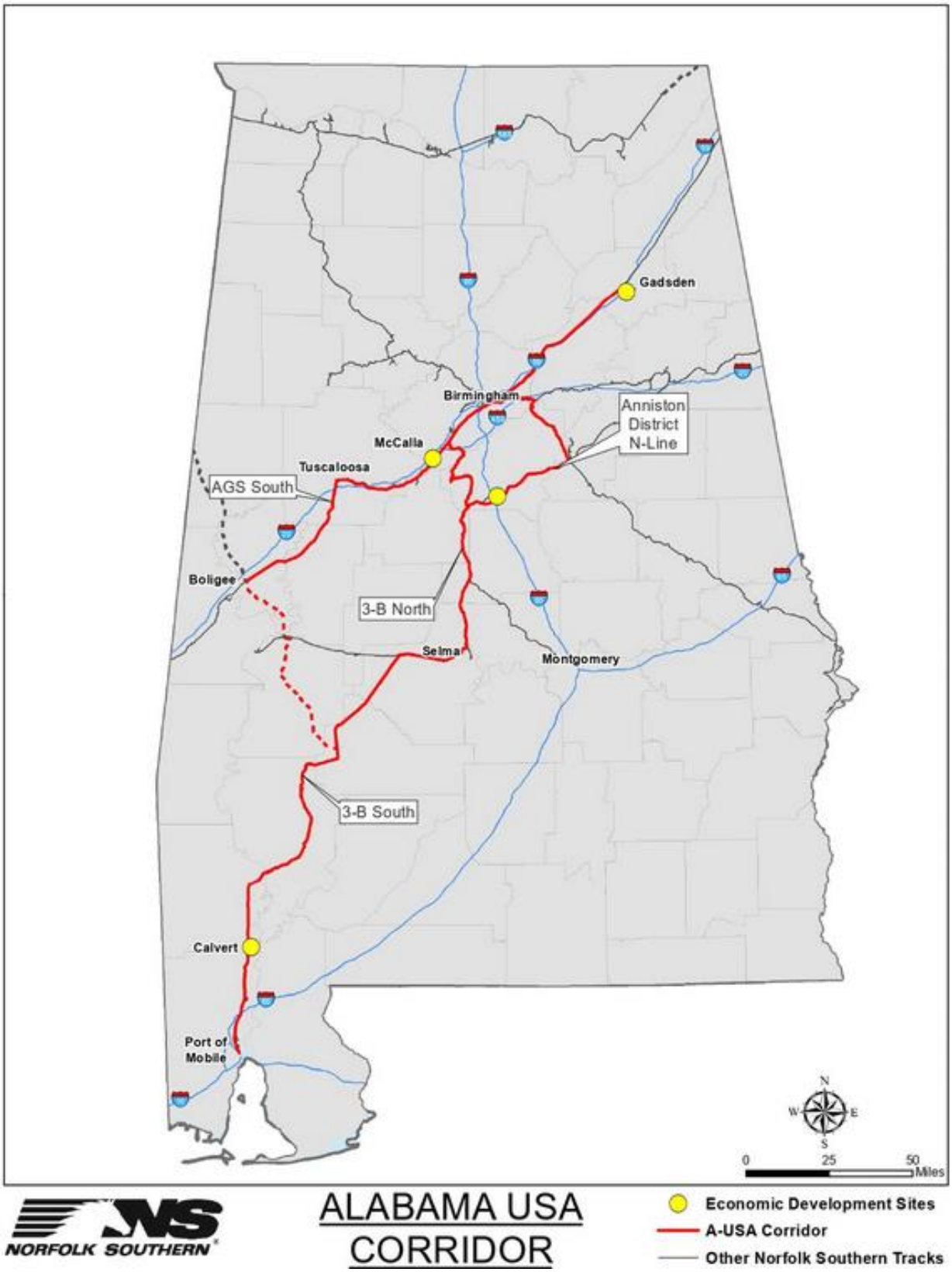
The A-USA Corridor's Phase I 2021 CRISI grant application was unsuccessful. Discussion of the A-USA Corridor proposal is included herein because the improvement of the NS rail route between the Port of Mobile and the Birmingham Regional Intermodal Facility (RIF) at McCalla and establishing intermodal service on that route are important to the state. Improvement of the route and projects to develop NS container traffic on the route are likely to otherwise be pursued collaboratively by Alabama and NS.

Figure 4-8 depicts the A-USA Corridor. The $231.6 million A-USA Corridor proposal would improve the NS rail route between Mobile and the RIF and construct rail infrastructure to better serve the existing steel industry business cluster mega-site at Calvert north of Mobile.[23]

NS' Birmingham RIF service currently operates to and from the northeastern U.S. and Savannah, GA, and from Charleston, SC. The establishment of NS Mobile-Birmingham intermodal rail service would connect Mobile and its Port to the broader NS intermodal network and create a larger base of Birmingham intermodal traffic.

[23] Mega-sites have been important with respect to new very large business and industrial developments, and new business and industrial clusters. Mega-sites are land developments of several hundred to several thousand acres located in suburban or rural areas with nearby workforces. The sites are made "shovel ready" for big business development with additional transportation infrastructure and provision of utilities.

Figure 4-8 A-USA Corridor



The $71.6 million A-USA Corridor Phase I project consisted of track, signal, and yard projects that sought to establish truck-competitive intrastate intermodal rail service between Mobile and Birmingham on NS' 3B District. The 3B District, the Kimbrough-Mobile portion of which also carries AGR (BNSF) traffic, requires substantial capacity improvements to provide the level of service and reliability required of intermodal rail. Phase I projects would:

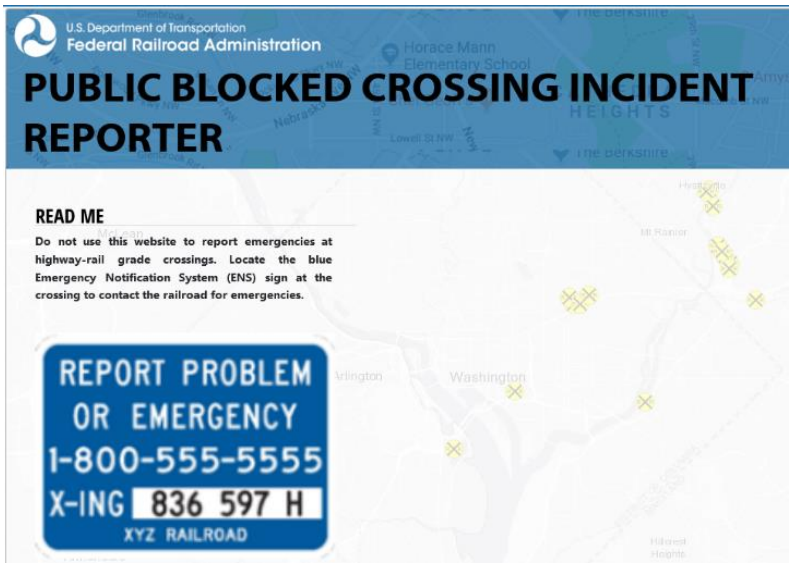
- Signalize the northern portion of the 3B North and the southern portion of the 3B South District
- Extend three passing sidings to approximately 12,000 feet in length
- Construct new track to support yard and customer switching activities
- Expand the Birmingham RIF improve and its connection to the Mobile line

Longer term A-USA proposed to improve other NS rail routes within central Alabama and construct rail infrastructure at and supportive of industrial development of the Westervelt mega-site near Calera south of Birmingham, and the Little Canoe Creek mega-site near Gadsden.

4.4 Other Plans

4.4.1 Blocked Crossings

Incident Report Webpage
(https://www.fra.dot.gov/blockedcrossings/)



There are no federal regulations directly addressing the maximum duration a train may block a public crossing. Railroads in courts of law have successfully challenged state and local laws limiting the time that crossings may be blocked by trains on grounds that state and local laws are pre-empted by federal law. Ala. Code § 37-8-115 relieves train crew from personal responsibility for violating state law or municipal ordinances regulating train occupation or blocking of crossings when crew are executing the orders of railroad superiors. Alabama Code does not however specify any time limit on the time a crossing may be blocked.

Crossings also may be considered blocked when occupied by very long slow-moving trains, or when continuously occupied or nearly so during switching operations. FRA noticed a sharp increase in the volume of complaints about blocked crossings a few years ago coinciding with

increasing implementation of and the transition to PSR. FRA in response in 2019 established a *Public Blocked Crossing Incident Reporter.* Blocked crossings due to operational disruption that occurred in the transition to PSR have subsided, but blocked crossings caused by PSR operations such as longer trains remain.

Blocked crossings have been the subject of relatively recent Congressional action. The FAST Act of 2015 amended the Section 130 Program to include "projects at grade crossings to eliminate hazards posed by blocked crossings due to idling trains". Section 22404 of the Infrastructure and Investment Act of 2021 (IIJA) codified a requirement that FRA maintain a blocked crossing portal to receive information from the public regarding blocked crossings. The section requires FRA submit a report to Congress analyzing three years of blocked crossings. FRA is in the process of reviewing the *Incident Reporter* with respect to IIJA requirements.

Incident Reporter Alabama crossings are generally of two categories. One category consists of crossings with a sole report or very few reports, or multiple reports applicable to a single day or a very few consecutive days.[24] A train mechanical failure, a serious track condition requiring immediate attention or other extraordinary circumstance may be the cause of the blocked crossing(s). The other category consists of crossings repeatedly identified over a period of many months or more. These crossings are better candidates for blocked crossing mitigation measures.

Two blocked crossing-related situations are especially notable: high pedestrian use and no outlet road crossings. It is usually difficult for pedestrians to access alternate crossings that are not blocked. Pedestrians may run or rush to beat a train to the crossing (as do some motorists), or crawl under or cross through a stopped train. These behaviors are likely more common when pedestrians have experience with the crossing being blocked for extended periods. No outlet crossings are those with no other outlet other than the crossing and thus no access to other crossings.[25] Emergency response is of special concern at no outlet crossings.

New road construction or road improvements to provide or improve access to existing grade separations, or to alternate crossings not blocked or blocked less often by standing trains, can mitigate blocked crossings. Intelligent Transportation Systems can provide information to road users and to emergency responders and their dispatchers that crossings are blocked. Actuated or changeable message signs can inform road users that crossings are blocked and direct road users to alternative crossings or grade separations.

[24] An example of many reports occurring in a single day were the 50 collective reports for a small group of Sheffield crossings on 7/14/2022.

[25] A few crossings relatively close together and simultaneously blocked function as no outlet crossings when there is no other access to the broader road network other than use of one of the few crossings.

Table 4-6 identifies crossings of most concern with respect to being blocked that were identified in the development of this Plan. The three sources of identification of blocked crossings were:

- FRA's *Public Blocked Crossing Incident Reporter*
- Crossings reported by railroads as those most reported to the railroads
- Crossings identified by the public in responses to the AL SRP survey

Table 4-6 Blocked Crossings

USDOT ID; Road Name	County; Location / City	Railroad	Sources
Multiple (Note 1)	Shelby; Brantleyville-Wilton	NS	Incident Reporter
Multiple (Note 2)	Shelby; Helena-Calera	CSXT	Incident Reporter / Survey
Multiple; 725374K Chalkville Rd	Jefferson; Trussvillle, N. of Norris Yd	NS	Incident Reporter
727760D; Richardson Dr	Wilcox; Catherine	NS	Incident Reporter
Multiple	DeKalb; Fort Payne	NS	Incident Reporter
877474J; Dauphin St	Mobile; Mobile Convention Ctr	CSXT	Reporter / CSXT / Survey
922833Y; Monroe St	Mobile; Mobile Convention Ctr	CSXT	CSXT / Survey
352567B; Vanderbilt Rd	Jefferson; B'ham N. of Boyles Yd	CSXT	CSXT
352277T-352273R; Fulton Springs Rd	Shelby; Alabaster	CSXT	CSXT / Reporter/ Survey
351241G; Bishop Bottom Rd	Lowndes; N. of Fort Deposit	CSXT	CSXT
831316T; Tysonville Loop Rd	Montgomery; E. of Montgomery	CSXT	CSXT
639378C; Cleves Lane	Talladega; Coosa Pines pass sdg	CSXT	CSXT
352245M; McCormack Dr	Jefferson; New Castle (N. of B'ham)	CSXT	CSXT
Multiple; 725842C SR35	DeKalb; Fort Payne	NS	SRP Survey / Reporter
352634T; Powder Plant Rd	Jefferson; Bessemer	CSXT	SRP Survey
731828V; Sullivan St	Madison; Madison	NS	SRP Survey / Reporter
351461C; Bellingrath Rd	Mobile; Mobile	CSXT	SRP Survey
352090X; Harris Station Rd	Madison; Madison	CSXT	SRP Survey
Four crossings; 352109M-352112V	Morgan; Hartselle	CSXT	SRP Survey
Multiple;	Franklin; Phil Campbell	NS	SRP Survey
Multiple; 32nd St - 42nd St	Jefferson; Birmingham	NS / ATN	SRP Survey

Blue highlight identifies no outlet crossings (or at least one no outlet crossing among multiple crossings).

1 Particularly 727850B Brantleyville Rd and 727415U Depot St, Wilton

2 Particularly 352253E SR261, Helena; and 352277T Fulton Springs Rd, Alabaster

The crossings or clusters of crossings below were identified by examination of the crossings reported to the *Incident Reporter* from its inception through 10/25/2022. [26]

- NS, 3B North District; multiple crossings in Shelby County between the Brantleyville community and Wilton inclusive, particularly 727850B Brantleyville Road and 727415U Depot St, Wilton

[26] The 830 collective reports concerning the following crossings or groups of crossings constituted 42 percent of reports statewide.

- CSXT, S&NA South and Lineville Subdivisions; multiple crossings in Shelby County between Helena and Calera inclusive, particularly 352277T Fulton Springs Rd, Alabaster and 352253E SR261, Helena
- NS, AGS North District north(east) of Norris Yard, multiple crossing in Jefferson County in and near Trussville, particularly 727850B Chalkville Road
- NS, 3B South District; 727760D CR38 crossing in DeKalb County in the Catherine community located 30 miles southwest of Selma [27]
- NS, AGS North District; multiple crossings in Wilcox County in Fort Payne
- CSXT, NO&M, 877474J Dauphin St adjacent to the Mobile Convention Center

CSXT reported the crossings below of most concern to the public as reported to CSXT.[28]

- Dauphin St, 877474J (*Incident Reporter*) and adjacent Monroe St, 922883Y, Mobile, double main track, provides only access to Mobile Convention Ctr on-site parking, and only access to a museum, riverside park and cruise ship terminal
- Vanderbilt Rd, 352567B, Birmingham, double main and running track crossing is located just south of Boyles Yd
- Fulton Springs Rd, 352277T, Alabaster, less than 1.5 miles north of the south end of double main track and within the Helena-Calera segment identified by the *Incident Reporter*
- Bishop Bottom Rd, 351241G, north of Fort Deposit, main and passing siding crossing located 0.2 miles from south end of siding requires 13 miles of travel to an alternate crossing
- Tysonville Loop Rd, 831318T, east of Montgomery, main and switching-storage track for large sand quarry
- Cleves Lane, 639378C, west of Talladega, no outlet main and passing siding crossing of a dead-end road serving a few residences
- McCormack Dr, 352245M, New Castle (north of Birmingham), double main track crossing that is the only access to approximately one dozen residences

[27] Crossing of the only passing siding along the 56 railroad route-miles between Selma and Sunny South siding.

[28] Pelham and Calera crossings where grade separations are discussed in following Subsection 4.4.2 are not included.

4.4.2 Grade Separations

The IIJA created the $3 billion Railroad Crossing Elimination Grant (RCEG) Program to provide funds for the mitigation or elimination of hazards at railway-highway crossings. Grade separations eliminate blocked crossings but tend to be very expensive. The cost of new grade separations in the southeastern U.S. routinely exceeds $10 million. A general estimate, excluding locations with favorable topography, minimal or no existing land development, and/or other favorable circumstances, is $20 million including engineering.[29] Alabama grade separation projects are identified in Table 4-7. Additional information on the Table 4-7 projects follows.

Tuscaloosa 2nd Avenue Overpass of NS and ABS *(opened in 2021)*

4.4.2.1 Pelham CR52 Grade Separation.

The City of Pelham was awarded a 2023 RCEG Program grant in the amount of $41,760,000. The CR52 352255T CSXT crossing used by nine trains per day is located 250 feet west of a CR52 639539V main and passing siding crossing of a different CSXT railroad line used by 18 trains per day. The latter crossing is subject to being blocked by standing trains during train meets, or when a train on that line is stopped waiting to use a connecting track located north of the crossings to transfer to the single-track line. The project will construct an overpass over both lines eliminating both grade crossings. The east crossing is located on the rail line that would be used by proposed Mobile-Montgomery-Birmingham passenger service.

[29] A new overpass in Tuscaloosa that opened in 2021 cost $22.6 million to construct, of which $14.9 million was funded by the University of Alabama and $6 million by an Infrastructure for Rebuilding America (INFRA) grant.

Table 4-7 Grade Separation Projects

Location	Railroad	Comments
Programmed for Construction		
CR52, Pelham (639539V / 352255T)	CSXT	$41.8M RCEG awarded for$54M CST overpass. (Project spans two separate CSXT lines located 250 feet apart)
Ready for Engineering		
SR25, Calera (352290G)	CSXT	$11.7M RCEG awarded for final design and ROW acquisition for SR25 relocation and overpass
Montgomery Avenue, Sheffield (731947E)	NS	2022 RCEG application for engineering was unsuccessful. Estimated $20-$30M construction cost.
Feasibility Study		
Birmingham-Trussville (North [east] of Norris Yard) (South [west] of Norris Yard) [1]	NS	$8M project development 2023 CRISI grant awarded Grade separation and multiple crossing closures. Grade separation(s) and multiple crossing closures
Fort Payne	NS	Feasibility study grant application in development
SR17 Broad St, York [1] (726143F)	NS	Feasibility study 2023 RAISE grant was unsuccessful
Between west side of Birmingham & Bessemer [1]	NS	"Redesign Alabama". City and NS to make a grant application for a feasibility-planning study.
Aspirational		
Dauphin St (877474J), Monroe St (351419D) Mobile	CSXT	Double main track grade crossings providing only access to Mobile Convention Center parking and to a riverfront park, museum and cruise ship terminal
SR269, Port Birmingham (843943M)	BHRR	RPCGB LRTP; no project development currently pending
Bessemer Airport	NS	RPCGB LRTP; no project development currently pending

1 Crossings used by Amtrak *Crescent*

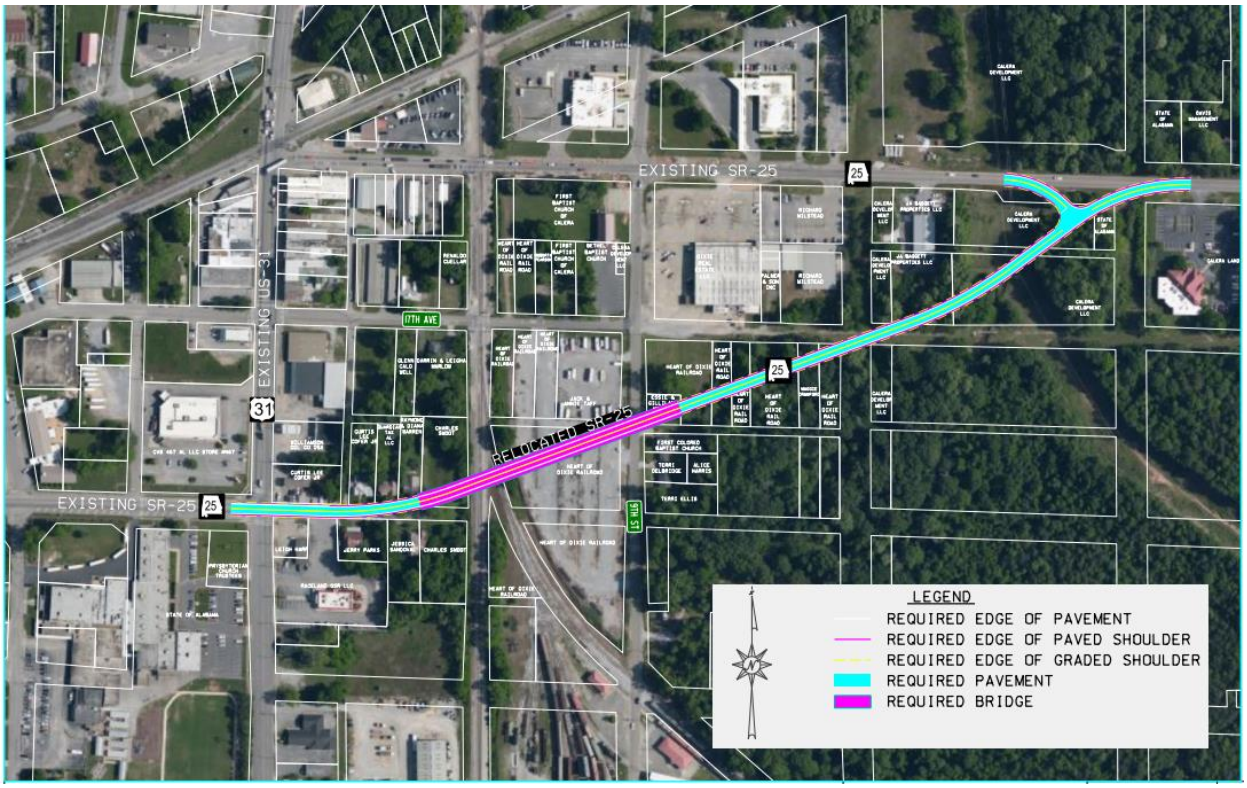
4.4.2.2 Calera SR25 Grade Separation.

Calera was awarded an $11.7 million RCEG Program grant to design and acquire right-of-way for a SR25 grade separation. The 14 train per day CSXT Birmingham-Montgomery line and the five train per day NS Anniston-Wilton lines intersect at grade in central Calera. The CSXT 352290G Main Street SR25 crossing is located one block south of and the NS 727398F Montgomery Highway US31 crossing is located one block west of the railroad-railroad (RR-RR) grade crossing. The RR-RR crossing subjects the highway crossings to being occupied by slow-moving trains, sometimes on one line and then the other with little time between the highway crossing occupations.[30] The time interval between train occupation of the crossings may be inadequate

[30] CSXT maximum speed is 30 mph and NS maximum is 10 mph, with trains sometimes beginning movement across the RR-RR crossing from a stop.

to allow normal highway traffic flow to be resumed between trains. The 1,540-acre Westervelt mega-site is located adjacent to NS one mile east of the RR-RR crossing. Its industrial development may increase NS rail traffic at the RR-RR crossing.

Figure 4-9 SR25 Calera Overpass



Below: SR25 in Calera closed after train collides with truck-semi-trailer
Elimination of highway traffic delay is almost always the most important grade separation benefit, but safety and other benefits may be significant too.

An engineering challenge is the proximity of CSXT line to US31, located parallel to and 500 feet west of CSXT. The elevation of the overpass at track will need to be approximately 30 feet above the elevation of US31 assuming 23-foot vertical clearance at track plus 7-foot bridge structure (girder and bridge deck) depth. The SR25 crossing is located on the route that would be used by proposed Mobile-Montgomery-Birmingham passenger service.

4.4.2.3 Sheffield Montgomery Avenue Grade Separation.

A recent Sheffield grade separation feasibility study identified 731947E Montgomery Avenue as the best location for a new grade separation. The City of Sheffield application for a $2 million Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant for engineering in April 2022 was unsuccessful.[31] The planning-type grade separation construction cost estimate is $20-$30 million. Construction will substantially depend on grants or other financial assistance to the City.

The Shoals metropolitan area population is 150,000. Four miles of NS double track through Tuscumbia and Sheffield is used by 20 through and eight switching trains per day.[32] Sheffield, population 9,000, is partitioned and connectivity to adjacent Tuscumbia and Muscle Shoals is limited when crossings are blocked during train meets or because of train delay into or out of Sheffield Yard. Grade separations or track relocation in response to blocked crossings in Sheffield have been proposed since the early 1990s.

An alternative to a new Sheffield grade separation is track relocation that would relocate approximately 8.5 miles of NS main track between Sheffield Yard and Little Bear Creek south to a more direct five mile-long route generally paralleling and south of US72. The shorter route would reduce train-miles by 30,000 annually (based on 28 trains per day). A better alignment may increase train speeds resulting in train travel time savings in excess of travel time savings based on the distance reduction alone. A track location feasibility study was completed 30 years ago. Track relocation would be substantially more expensive than a grade separation. A low-end order of magnitude expense is in the hundreds of millions of dollars.

4.4.2.4 Norris Yard Area Grade Separations and Crossing Closures.

NS partnered with the City of Birmingham in applying for CRISI grant funding to study the feasibility of grade separations and crossing closures in connection with new track construction at Norris Yard. The $8 million 2023 CRISI "Reduce Extended Delays; Enhance Safety; and Invest in Growing Neighborhoods" (R.E.D.E.S.I.G.N.) funds projects development that improve rail network operations and community safety and access to schools and residential areas. Norris Yard, located at the junction of NS' AGS Chattanooga-Birmingham-New Orleans and former Southern Railway Atlanta-Birmingham lines, is the largest hump classification yard in Alabama. NS operates 11 trains per day on the AGS north of the yard, and two dozen trains per day collectively on shared corridor AGS and Atlanta-Birmingham lines south (west) of the crossing.

[31] The 2021 RAISE grant application was not successful.

[32] There is a 0.7 mile-long segment of single track between Lee, the west wye junction of the Muscle Shoals-Birmingham line, and the east end of double track. This segment notably includes the US 43-US 72 (SR 17-SR 20-SR 157) overpass that can accommodate only one track.

The grant application proposes new grade separations and crossing closures on each side of Norris Yard to improve crossing safety and reduce the incidence of blocked crossings that would be combined with new track construction to increase railroad capacity. Grade separation(s) south (west) of Norris Yard would be of safety benefit to the *Crescent* that operates over the Atlanta-Birmingham line south (west) of Norris Yard.

Chalkville Road Crossing *(West of Norris Yard, Trussville)*

4.4.2.5 Fort Payne Grade Separation.

ALDOT and Fort Payne are cooperating in arranging for a grade separation feasibility study. An order of magnitude estimate of the expense of a feasibility study is $250,000. Design and construction of a grade separation could cost up to $30 million.

The ten train per day NS (AGS) Chattanooga-Birmingham line longitudinally bisects the geographically narrow Little Wills Valley located between ridge-like Lookout and Sand Mountains. Fort Payne, population 14,000, is located in the northern portion of the valley. There are approximately eighteen grade crossings and no grade separations within the approximately ten-mile-long and less than one mile wide most densely developed portion of the city area.

A 1.8 mile-long passing siding is located at and south of the city center. Railroad-served industry is located north of the city center. Crossings are subject to being blocked by slow moving and standing trains during train meets, or in connection with switching that serves rail customers.[33] Passing siding relocation is an alternative for consideration, given the expense of grade separation, if a siding relocation is cost-effective in reducing blocked crossings. Consideration of passing study relocation could be incorporated into a feasibility study.

[33] The passing siding is equipped with spring switches that require trains entering the siding to stop and a crew member hand operating the switch.

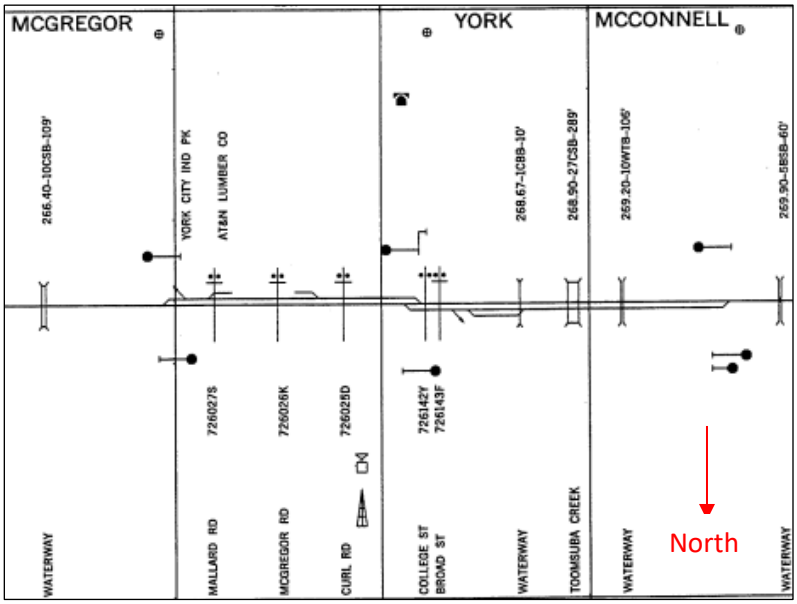
4.4.2.6 York SR17 Grade Separation.

NS has identified the Birmingham-Meridian line segment as among its most congested lines. The line is used by 16 trains per day through the City of York, located near the Mississippi state line in Sumter County in west central Alabama. All five crossings within York are main and passing siding crossings. SR17, the principal of the five crossings, traverses Alabama near the Mississippi state line from Mobile through Florence to the Tennessee state line. The York road network is such that there is no access to alternate crossings at three crossings when the crossings are blocked. The closest alternative crossings when the 726143F SR17 and the College Street crossing located one block away are both blocked are located approximately five miles in either direction and require 11 or more highway travel-miles.

There are staggered 1.2 mile-long and 1.4 mile-long controlled passing sidings on opposite sides of single main track at York. The east end of the 1.4 mile-long west siding overlaps with the west end of the 1.2 mile-long east siding at a railroad interlocking located just east of the SR17 crossing. Train meets involving a train more than 1.4 miles in length block the SR17 crossing.[34]

The track arrangement allows the sidings to be used as a single 2.6 mile-long siding. The sidings used as a 2.6 mile-long siding blocking all five York crossings during trains meets is likely a common occurrence. There are multiple 2.3 mile or more long sidings located between the west end of double main track west of Birmingham and Meridian, indicative that two-mile-long trains are likely common.

Track Chart



Passing siding extension, or a new grade crossing beyond one of the far ends of the sidings along with construction of new roads as necessary to connect the new crossing to other crossings, may be a less expensive alternative to grade separation. Waterways and other circumstances would however make such alternatives difficult. A 2023 RAISE grant to scope a capital project and initiate community engagement, develop a right-of-way acquisitions plan and complete the NEPA process was unsuccessful.

[34] Both trains of a train meet where one of the trains is longer than 1.4 miles requires that both trains operate through a siding. The sidings have No.10 turnouts (switches) that limit trains speeds to 15 mph, thus train speeds in connection with train meets are slow speed in addition to crossings being blocked by stopped trains.

4.4.2.7 Port Birmingham SR269 Grade Separation.

The 2045 Regional Transportation Plan (RTP) of the Regional Planning Commission of Greater Birmingham (RPCGB) aspirationally proposes an 843943M First Avenue SR269 grade separation at the Port of Birmingham. The SR269 crossing, a two BHRR track crossing located just south of the Port Birmingham Yard, is subject to being blocked by arriving and departing trains. SR269 is the only truck access to and from Port Birmingham. SR269 is one of only two highways crossing Locust Fork between the Miller Electric Generating Plant upstream of Port Birmingham and the Driftwood locale downstream from the confluence of Locust Fork and the Black Warrior River. Plant Miller is six miles, and Driftwood is seven miles, as the crow flies from Port Birmingham.

4.4.2.8 Bessemer Airport Grade Separation.

The 2045 RTP of the RPCGB aspirationally proposes a grade separation to improve access to the Bessemer Municipal Airport (Mitchell Field, EKY). The Airport is located one mile west of Morgan Road. Its primary access from Morgan Road is via Aviation Road. NS is west of and generally parallel and adjacent to Morgan Road. The development of a grade separation concept will be difficult because of the proximity of NS to Morgan Rd, and because of challenging topography where NS and Morgan Rd are not very close to each other.

4.4.2.9 Mobile Grade Separation.

Cooper Riverside Park and Vicinity

The *GulfQuest National Maritime Museum of the Gulf* is located in Cooper Riverside Park that is located adjacent to and south of the Mobile Arthur R. Outlaw Convention Center.[35] The Park and the Mobile Cruise Ship Terminal may only be accessed via the 351419D Monroe Street crossing of double main CSXT track. The CSXT line is currently used by 14 through and six switching trains per day. It will be used by an additional four New Orleans-Mobile passenger trains upon beginning of New Orleans-Mobile service.

Mobile aspirationally seeks a grade separation to better connect its riverfront recreational and cultural facilities to the adjacent *History Museum of Mobile* and *Exploreum Science Center* and downtown Mobile, as well as reduce traffic delay at the crossing and improve emergency response.

[35] A pedestrian overpass of CSXT and Water St connects the Mobile Convention Center to downtown Mobile.

Tires being deflated to free box truck stuck at 352077J Forrest Street underpass of CSXT, Athens, AL

4.4.2.10 Functionally Obsolete Railroad Underpasses.

Functionally obsolete bridges are bridges that do not have adequate lane widths, shoulder widths, or vertical clearances to serve current traffic (or bridges that are subject to occasionally flooding). Inadequate vertical clearance at highway underpasses of railroads is a railroad safety concern because of the risk of track becoming misaligned or bridge structural integrity being compromised when a motor vehicle strikes the bridge.

Standard minimum vertical clearance varies by roadway classification. American Association of State Highway and Transportation Officials (AASHTO) policy minimum vertical clearance may be summarized as a minimum 16 feet for major and 14 feet for minor roads. Truck-semi-trailers are 13.5 feet in height. Box trucks commonly have an approximately 10-foot exterior vertical dimension. Underpasses with less than 10 feet vertical clearance are of special concern because box trucks are often driven by non-professional truck drivers.

The magnitude of risk depends on bridge structure type and its robustness and the vehicle weight and speed of vehicles striking the bridge. Many railroad overpass bridges are substantial concrete structures unlikely to be shifted or structurally damaged by vehicle strikes, and vehicles speed are relatively low.

Railroad overpass replacement is generally more expensive than replacement of a highway overpass of a railroad. Construction occurs under rail traffic and typically involves track realignment to an offset temporary bridge while a permanent replacement bridge is constructed, then track realignment to the permanent bridge and removal of the temporary bridge. Table 4-8 identifies various railroad overpasses of highways with less than 14 feet vertical clearance.

Table 4-8 Railroad Overpasses of Highways of Less Than 14 Feet Vertical Clearance

Road / Location	USDOT ID	Rail-road	tpd [1]	Comments
Jack Warner Pkwy, Tuscaloosa	306330E 306328D	ABS	5 2	Timber bents on 14-ft spacing subject to lateral (horizontal) strikes (See 4.3.1.4)
Magazine Av, Opelika	831189F	CSXT	10	10-ft 1-inch clearance, main and passing siding, concrete
Forrest St, Athens	352077J	CSXT	22	10-ft clearance, concrete
Beech Av SW, Cullman	352184Y	CSXT	22	9-ft-8-inch clearance, narrow or one lane width, concrete
SR10, Commerce St, Greenville	351255P	CSXT	12	10-ft clearance, main and passing siding, concrete
Jackson St, Talladega	639319A	CSXT	26	10-ft clearance, steel girder open timber deck
Old US280, Chelsea	639421F	CSXT	26	13-ft-10-inch clearance, steel girder timber ballast deck
20th St, Irondale	639604Y	ATN	2	13-ft clearance, same construction and adjacent to 20th St NS bridges
20th St, Irondale	727997B 960014G	NS	28 28	13-ft clearance, concrete, one bridge with double main track
5th Av N, Birmingham	960176J	NS	23	9-ft 7-inch clearance, concrete semi-arch tunnel, seven tracks
8th Av N, Birmingham	728038L	NS	23	13-ft 7-inch clearance,steel girder open ballast deck, three main tracks
Lomb Av (MLK Jr Dr), Birmingham	728028F	NS	35	13-ft 6-inch clearance, concrete, double main track
22 St, Bessemer	725394W	NS	35	10-ft clearance,concrete, double main track

1 tpd = trains per day

Chapter 5: Summary of Rail-related Investments

This Chapter largely summarizes previously discussed rail-related investments. It was discussed in Chapter 1 that Alabama does not have any regular state or local government revenue dedicated to rail capital improvements. State funding of rail is largely in the form of two types of income tax credits:

- An aggregate-limited 50 percent matching income tax credit of qualified Class II and Class III railroad rehabilitation expenditures (Railroad Modernization)
- Economic development-based tax credits

Only the railroad rehabilitation tax credit is devoted exclusively to rail. It was first made available in 2019 for the 2019-2022 period. The aggregate amount was increased and its time extended to 2027 in 2022. The credit is enormously popular with Class II and Class III railroads. Its continuation beyond 2027 is subject to Alabama General Assembly prerogative and Gubernatorial approval.

The economic development-based tax credits in some measure indirectly support rail. The credits require an application and are granted upon approval, details of which vary with the particular tax credits. The credits may be part of state negotiations with private enterprise seeking to attract new industrial development and negotiation documents may be exempt from Alabama Open Records inquiries.

The economic development-based tax credits are not limited to rail transportation or rail infrastructure development. They may include rail in connection with Class I railroads. They include a *Port Tax Credit* for use of state ports facilities and a *Growing Alabama Tax Credit*. The *Port Tax Credit* is a tax credit based on the weight or volume of new freight passing through state port facilities during a limited period.

One of the foci of the *Growing Alabama Tax Credit* is making sites owned by approved economic development organizations (EDOs) ”shovel-ready” for new industry via site preparation and development of public infrastructure, including development of rail infrastructure. The credit provides a 100 percent tax credit matching a donation to an EDO, up to a limit of 50 percent of total state tax liability for the taxpayer donor. The aggregate limit was initially $20 million with a 2023 sunset when first available. The credit was extended to continue to 2028 with aggregate amount increasing incrementally to $35 million in 2028. Its continuation beyond 2028 is an Alabama General Assembly prerogative and Gubernatorial approval.

Table 5-1 Summary of Rail-related Tax Credits, Grants and Grant Applications

Section / Table	Category	Year(s)	Amount	Comment
	Tax Credits			
	State-funded Railroad Rehabilitation			
1.4	Railroad Modernization Act of 2019	2020-2022	$ 3,700,000 / year	$3,500 per track-mile to Class II and Class III
	(50% RR rehabilitation state income tax credit)	2023-2027	$ 4,500,000 / year	$4,100 per track-mile to Class II and Class III
	State Economic Development-Based Tax Credits			
	Port Tax Credit	since 2016	up to $50 / TEU; $3 / ton cargo	Requires application & approval
1.4	(state income tax credit for state port use)		up to $100 / TEU	(over 3 yrs) Contingent on agreement with the state
	Growing Alabama Act	2021-2023	$ 20,000,000	Total aggregate credit includes other than rail
	(Total Program including other than rail)	2024-2028	inc annually to $35M	Total aggregate credit includes other than rail
	South Alabama Megasite (CSXT)	2019 & 2021	$ 7,000,000	
Table 1-3	Little Canoe Creek Megasite (NS)	2020-2023	$ 8,700,000	
	Montgomery ICTF (CSXT)	2023	$ 12,500,000	
3.2	***Amtrak Crescent Passenger Service***			
	(Passenger) **Birmingham Intermodal Facility**	2018	$ 32,600,000	FTA grant, rail a small element
			$ 6,000,000	City contribution
Table 3-1	Birmingham Station	2016 & 2021	$ 359,500	FRA grant to SRC
	Anniston Station	2023	$ 2,000,000	AMTK
	New relocated Tuscaloosa Station (sidelined)	2019	$ 1,500,000	City. Proposed relocation of station not viable
			$ 314,457	SRC
3.3	***New Orleans-Mobile Passenger Service***			
	Stations - FRA-SRC-Mobile	multiple	$ 4,610,000	
	CRISI grant	2018	$ 33,000,000	capacity & infrstructure improvement
Table 3-2	CRISI grant	2023	$178,400,000	capacity & infrstructure improvement
	Restoration & Enhancement Grant	2025	$ 21,000,000	operations
	CIDP grant	2023	$ 500,000	
4.2	**Section 130 Program** (crossings) (tables 4-2 & 4-3)	2022-2026	~$ 5,000,000 / year	AL allocation of nat'l $245M program total
4.1	**ASPA**			
	Montgomery ICTF (ASPA)	2022	$ 2,042,000	272 acres land for Montgomery ICTF
	Garrow Point ICTF motor vehicle bridge		$ 25,000,000	
	Garrows Bend ICTF expansion		$ 15,000,000	Multiple phases
	Montgomery ICTF			
	Birmingham RIF (A-USA Phase I)		$ 18,000,000	A-USA grant application not approved
	New North Alabama ICTF (A-USA Phase II)		$ 52,000,000	A-USA grant application not approved
Table 4-1	TASD Chickasaw Lead		$ 7,500,000	
	TASD Interchange Yard improvement		$ 29,500,000	Multiple phases
	TASD Yard locomotives PTC		$ 1,000,000	
	New Three Mile Creek Flyover (passenger rail)		$ 40,000,000	
	Bob Hope Siding extension (passenger rail)		$ 29,500,000	
	Virginina St Lead improvement (pass rail)		$ 20,000,000	
	Short lines			
4.3.1.1	EARY & MNBR (G&W) - CRISI		$ 15,900,000	EARY rail & storage; MNBR rail, $16.6M by RRs
4.3.1.2	ATN (Omnitrax) - CRISI	2022	$ 4,960,000	track, slide fence & bridges
4.3.1.3	HCMR - CRISI	2022	$ 3,500,000	Aldridge Creek bridge & track
4.2.1.4	ABS (Watco) - CRISI (not approved)		$ 60,335,732	3,834 ft-long Black Warrior Riv (timber) bridge
4.3.1.5	SQSC (Ironhorse) - CRISI		$ 470,000	bridge within AL (amt is a portion of grant)
Table 4-4	Projects in response to questionaire		$142,500,000	
Table 4-7	**Grade Separations**			
4.4.2.1	CR52 Pelham CSXT - RCEG		$ 41,800,000	Construction
4.4.2.2	SR25 Calera CSXT - RCEG		$ 11,700,000	Final Design and ROW
4.4.2.3	Montgomery Av Sheffield NS (RCEG not approved)			Engineering
4.4.2.4	B-ham-Trussville (Norris Yd) NS - CRISI		$ 8,000,000	Feasibility study
4.4.2.5	Fort Payne NS			Developing feasibility study grant app
4.4.2.6	SR17 York NS - (RAISE not approved)			
4.4.2.7	SR269 Port Birmingham BHRR		aspriational (LRTP)	
4.4.2.8	Bessemer Airport RTP NS		aspirational (RTP)	
4.4.2.9	Dauphin & Monroe St Mobile CSXT		aspirational	
	West side of B'ham - Bessemer NS			Developing feasibility study grant app

The tax credits being relatively new and having been extended and their aggregate limits increased is a sign that they may be continued past their current sunset dates. It is difficult to project what portion of the economic development tax credits will be rail-related or devoted to rail, and it is nearly impossible to specifically identify new specific projects because most are shrouded in secrecy during negotiations between government and private industry. Recently awarded economic development tax credits are perhaps the best publicly available prognosticators of both the magnitude of funding and types of projects.

Alabama's Section 130 Program allocation that is used to improve safety at public grade crossings by reducing the number and severity of crashes is a dedicated source of federal rail-related funding in Alabama. Section 130 Program funding varies slightly from year to year. The current annual Alabama allocation is approximately $5 million. The Section 130 Program funding, based on its history and the history of U.S. transportation legislation may be expected to continue in approximately the same amount in the U.S. transportation legislation following the expiration of the IIJA (BIL) in 2026.[1]

Various federal grant programs are another source of Alabama rail-related investment. Various federal passenger rail, rail only and rail-related programs and identified and summarized in *Section 3.1 Federal Funding*. ALDOT is typically a supporter and not an initiator of rail-related grant applications by other state agencies, local governments and agencies, and railroads. Comparable to tax credit circumstances, federal grant awards and applications are perhaps the best available prognosticators of both the magnitude of federal funding and types of grant-supported projects in the future.

Table 5-1 summarizes project and funding information from various places throughout the report. It includes projects associated with rejected grant applications. The purpose of inclusion is to provide information on the type of Alabama projects that may be expected in near future grant applications or otherwise pursued in Alabama. Also, projects in rejected grant applications may be modified and reformulated and submitted in future grant applications or otherwise pursued in Alabama.

[1] U.S. transportation legislation commonly applies to a five-year period. A continuing resolution, temporary extension or interim legislation continues federal transportation funding if Congressional approval of new legislation does not occur prior to the expiration of existing legislation.

Chapter 6: Coordination and Review

This chapter describes the coordination and collaboration with stakeholders and the general public in the development and review of the AL SRP.

Outreach was initiated early in the planning process and continued throughout in recognition of the importance of early and ongoing stakeholder and public involvement. A broad range of stakeholders were identified and invited to participate, including rail shippers; rail passenger users; state, regional, county and city government agencies; elected officials and agency staff; economic development and business interests; special interest and advocacy groups; the general public; and each of the state's railroads. Involvement from these groups included participating in stakeholder and public meetings and online survey, providing input concerning:

- the proposed state rail vision and goals
- identification of rail issues, needs and potential investments
- rail policies and projects

6.1 Approach to Stakeholder and Public Participation and Involvement

COVID impacted the approach to involving stakeholders and public participation. Public outreach meetings were conducted via online Microsoft TEAMS meetings as has occurred with other ALDOT public outreach efforts because of social distancing and health concerns. Online meetings enabled anyone to participate in any or all the meetings without requiring travel or exposure to potential health impacts related to COVID. The core goals for the plan's stakeholder and public outreach were:

- to raise awareness of the state's rail system and AL SRP planning process
- seek identification of issues, trends, and priorities
- partner to create an actionable plan of policies and programs for the state's rail system

An outreach program was developed to invite stakeholder and public participation, consisting of multiple opportunities to be informed of the features of the state's rail infrastructure and provide input on issues, challenges, needs and desires was developed to meet these goals. These avenues included three virtual stakeholder meetings, two virtual public meetings, and an online survey.

6.1.1 Online Stakeholder Meetings

Three two-hour online stakeholder meetings were held in April 2023. The online stakeholder meetings were regionally targeted toward railroad representatives, railroad customers, government officials and staff, and others with greater knowledge or a more direct connection to Alabama railroads and the railroad industry than the general public. Notice of the meetings and invitation to participate were sent to stakeholders throughout the state. Representatives of all MPOs and RPOs were invited and were requested to widely share the invitation. State legislators on rail-related committees, all railroads and over 50 large rail shippers were invited. Stakeholders were also notified of and encouraged to consider participation in the online public meetings targeted at the general public. ALDOT regional public outreach offices assisted in notification of the meeting.

The stakeholder meetings were identified as north, central and south Alabama meetings, but the notices to stakeholders informed them that they could participate in any meeting and more than one meeting. Those receiving invitations were encouraged to invite other stakeholders to stakeholder meetings, and to invite the general public to online meetings targeted at the general public.

Online Stakeholder Meetings

Region of Focus	Date	Time
North Alabama	April 5, 2023	2 pm – 4 pm
Central Alabama	April 11, 2023	10 am – Noon
South Alabama	April 13, 2023	2 pm – 4 pm

Online Stakeholder Meeting Participation

Region of Focus	Representing				Total
	Stakeholder	Public	State/Fed	Consultant	
North Alabama	2	0	1	6	9
Central Alabama	9	0	5	8	22
South Alabama	11	0	3	7	21

Meeting participants were welcomed and invited to share their views during the meetings. The AL SRP team introduced itself and the meeting agenda was presented and reviewed. Participants were also provided direct AL SRP team contact information in the event there were issues or topics they would rather discuss or share privately. The meeting reviewed the use of the basic features of TEAMS, an introduction to the AL SRP Mission and Goals, time for stakeholder comments and discussion, stakeholder questions and AL SRP team answers, and introduction to the online survey. The stakeholder meeting presentation was nearly identical to the public meetings presentation.

Alabama railroads had previously been solicited for input. They perhaps felt the responses they had submitted or were in process of preparing provided their input because no railroad representatives participated in any online meetings. Similarly, stakeholders notified of the availability of the online survey may have used the survey opportunity to provide input instead of participating in an online meeting.

The AL SRP team sought to spur discussion to identify existing needs and/or concerns and to receive input and feedback, not necessarily to solve the issues and respond to concerns that were raised. Blocked crossings, rail service issues, and temporary discontinuation of service were among the matters most mentioned by participants.

Blocked Crossings, York and Helena.

Blocked crossings in Helena and York in central Alabama near the Mississippi border were mentioned by meeting participants. Helena blocked crossings are identified in subsection *4.4.1 Blocked Crossings*. A York grade separation is discussed in subsection *4.4.2.6 York SR17 Grade Separation.*

The Mayor of York stated it is not uncommon for York crossings to be blocked for 12 or more hours. NS has two approximately equal length sidings in a lap arrangement at York. The route to an alternate crossing requires several miles of travel on unpaved roads. Trains blocking crossings effectively partitions the community, including access to medical and other public facilities. A member of the AL SRP team spoke with the Mayor of York and reviewed options the day after the online meeting.

Rail Service Issue.

A representative of a rail customer located at the end of a spur line explained that their overall operational functionality is often impacted when scheduled deliveries are not received in a timely manner, sharing that the railroad explanation was that the untimely deliveries were a result of crew shortages. The representative mentioned that Alabama-originating shipments to an Alabama destination would oftentimes be routed through other states enroute to the facility.

Discontinued Freight Service.

The Mayor of Red Bay discussed the negative economic impact of the temporary discontinuation of rail service, due to track conditions, on the rail branch line from Corinth, MS to Red Bay in northwestern Alabama. A member of the AL SRP team provided the Mayor with contact names and numbers for Patriot Rail which recently acquired the short line railroad operator of the line. There also an expression of a desire to see the abandoned rail portion of the line east of Red Bay to Haleyville repurposed into a pathway because it is a “beautiful area of our state and our country and would be a beautiful area to open up to tourists.”

6.1.2 Online Public Meetings

Two two-hour online meetings targeted at the general public were held in April 2023. Notices of meetings were distributed to media outlets through ALDOT's public outreach notification contacts and directly to local newspapers and news media outlets. Meeting times were also shared with the stakeholder meeting invitees with a request that they share the dates of the public meetings via their communication networks. ALDOT published the dates of the meetings on their public involvement website (https://www.dot.state.al.us/news/publicinvolvement.html).

Online Public Meetings

Date	Time	Representing				Total
		Stakeholder	Public	State/Fed	Consultant	
April 6, 2023	6 pm–8 pm	1	2	1	6	10
April 12, 2023	6 pm–8 pm	0	2	0	6	8

ALDOT in press releases invited public input in the form of comments and feedback on the AL SRP. Ther releases directed that comments concerning the AL SRP or Alabama's Rail-Highway Safety Program in general be emailed to aldotrail@dot.state.al.us at any time. Notifications shared that the AL SRP public survey link was available for comments through April 30, 2023.

Meeting participants were welcomed and invited to share their views during the meeting. The AL SRP team introduced itself, and the meeting agenda was presented and reviewed. The agenda included directions on using the features of TEAMS, an introduction to the AL SRP Mission and Goals, a time for public comments and discussion and questions and answers, an introduction to the online survey, and continued public comments and discussion. The Coordination and Review Appendix includes a copy of the general public online meeting presentation.

As with the stakeholder meetings, the AL SRP team sought to spur discussion to identify existing needs and/or concerns and to receive input and feedback, not necessarily to solve the issues and concerns that were raised.

Primary discussion and input were by participants from both the Huntsville and Mobile areas expressing a desire for more passenger rail opportunities. An overview of what is in Amtrak's planning documents was provided by the team as information for the participants. Participants from north Alabama commented that they would like to see travel options from Huntsville to the coastal area as well as to Nashville, TN and other destinations to the north. A Mobile area participant expressed a desire for passenger rail service to both Texas and Florida. There was discussion of the various plans and proposals to increase passenger rail service as described in Chapter 3.

A meeting participant expressed concern and disappointment at the small number of participants in the online meetings. It was discussed there had already been good response to the online survey and that the survey responses indicated high general public interest in passenger rail.

6.1.3 Online Survey

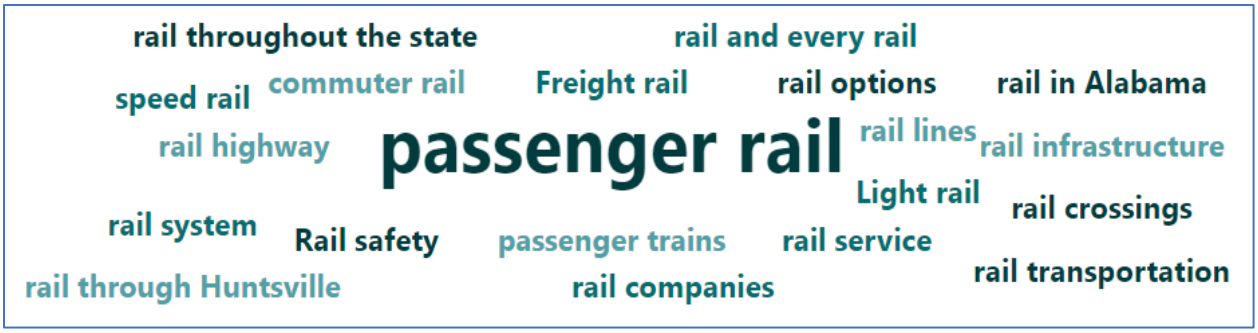
Stakeholders and the general public were notified of the availability of the online survey concurrent with notification of the online meetings and at the meetings themselves. There were 473 responses to the online survey that was available from March 2023 until May 2023. The receipt of the online survey responses relative to the online meeting dates indicate survey completion was very much preferred to providing input via participation in an online meeting because two-thirds of survey responses received in the week between the first meeting on April 5 and last meeting on April 12. Other details below:

- 18.6 percent (88) of total survey responses were received on or before the April 5 first online meeting that was targeted to stakeholders
- 62.6 percent (296) of responses were received on or before the April 6 first online meeting that was targeted to the general public
- 73.4 percent (347) of responses were received prior to April 8
- 87.7 percent (415) of responses were received before the start of the last online meeting on April 13 that was targeted to the general public

The online survey was developed to collect broad based public input on attitudes, opinions, needs and opportunities of rail in Alabama. Its results assisted in establishing an accurate picture of the state's rail facilities, conditions and possible improvements, strategies, and policies. Advertisements for the survey were included in invitations to stakeholder meetings, during stakeholder and public meetings, and ALDOT's media announcements for public meetings and ALDOT's social media channels.

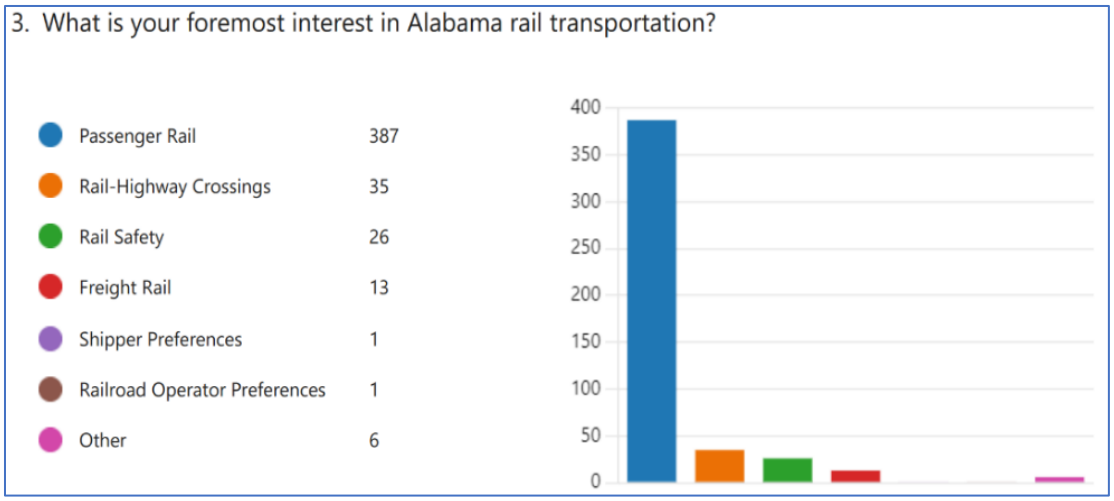
Nearly all of the survey responses were from Alabama residents. Six identified as residents of other states with interest in Alabama rail. There was an option for anonymous participation in the survey. It is not clear if those participants were the general public or participating as representatives of local municipalities, counties, and agencies, private businesses, economic development groups, or civic organizations. The survey included questions regarding passenger rail, rail-highway crossings, rail safety, freight rail, shipper preferences, and railroad updates. Respondents could choose which questions to answer based on their interests. A summary of the survey results is included in the Coordination and Review Appendix.

Passenger rail was the greatest interest of survey respondents by far as indicated by the word cloud and the survey responses below:



Question 3: ***What is your foremost interest in Alabama rail transportation?"***

- *Passenger rail* was selected 82.5 percent (387) of 469 respondents
- *Rail-highway crossings* and *Rail safety* had the second and third most responses at 7.5 percent and 5.5 percent respectively



Item 6: ***Please select your three most important Alabama rail transportation concerns.***

- *Passenger rail* was selected by 76 percent (361) of 472 respondents
- *Condition of railroad lines* was selected by 47 percent (222) of respondents
- *Hazardous material shipped by train* and *Condition of roadway surfaces at crossings* were selected by approximately 33 percent of respondents

Question 8: ***Which of the following would most benefit Alabama rail transportation?***

- *New or improved passenger rail service(s)* was selected by 87.8 percent (409) of 466 respondents with nearly all respondents in strong agreement
- *Shortline railroad infrastructure improvement, Mainline capacity improvement,* and *Preservation of lightly used rail lines for future service* were selected by approximately three-quarter of respondents, split approximately equally between strongly agree and agree.

Question 9: ***Have you traveled by Amtrak train within Alabama?***

- *No* was selected by 68 percent (319) of 469 respondents

Question 12: ***What limits your use of Amtrak within Alabama, or in your opinion limits others use of Amtrak within Alabama?*** (multiple choices were permitted)

- *Lack of destinations served* was selected by 90 percent of 327 respondents
- *Infrequency of trains* was selected by 65 percent of respondents
- *Difficulty in obtaining connecting transportation to departure train station or arrival train station* was selected by 52 percent of respondents

Most survey responses were related to passenger rail needs, issues, and opportunities as would be expected to follow from the overwhelming interest in passenger rail. The word cloud below was derived from the passenger rail-related survey responses.

The following are selected other survey responses:

Item 14: ***Please select the top three factors that would encourage or increase your use of Amtrak in Alabama:***

- *New Amtrak routes* was selected by 286 respondents
- *Additional Alabama station stops* was selected by 233 respondents
- *Reduced travel time (higher train speeds)* and *More frequent service* were selected by 167 and 147 respondents respectively.
- Five other choices were collectively selected by 343 respondents

Question 17: ***On what rail line or between what endpoints (city to city) would be best for new commuter rail service?***

- *Huntsville to Birmingham* was selected by 44 respondents (16 percent)
- *Birmingham to Montgomery*
- *Birmingham to Mobile*
- *Huntsville to Nashville*
- *Huntsville to Atlanta*

Selected questions and responses other than directly passenger-rail related questions and responses:

Item 21 ***Please rate the top issues of concern {for grade crossing identified as hazardous)*** (multiple choices were permitted)***:***

- *Need to upgrade from cross-bucks to flashing lights and gates, Poor traffic control (no preemption)* and *Crossing surface has a hump at the tracks* were identified as concerns by approximately two-thirds of respondents.
- *Poor signage, Poor approach angle or curvature, Poor sight distance along track,* and *Inadequate distance before/after crossing to cross-street intersection* were each identified as concerns by approximately 50 percent of respondents.

Question 24: ***Have you used the Blocked Crossing Incident Reporter? Either the Federal Railroad Administration (FRA) site or the ALDOT website link to the FRA site to report a blocked crossing?*** [Both the survey and online meeting presentations provided links for education and future use: www.fra.dot.gov/blockedcrossings/ www.dot.state.al.us/programs/railHighway.html]

- Yes – 2
- No – 96

Question 29: ***What are your three most important concerns related to freight rail transportation in Alabama?***

- *Condition of rail lines* was identified by 50 respondents of 244 total responses
- *Abandonment / shrinkage of rail network* was identified by 35 respondents
- *Mainline capacity or rail bottlenecks* was identified by 27 respondents
- *Availability of rail service* was identified by 25 respondents
- *Availability of rail-served industrial locations for new businesses* was identified by 21 respondents.
- There were collectively 86 responses to 11 other choices, none of which exceeded 12.

Following Question 29 above, respondents were requested to elaborate on these concerns through an extended response prompt. Some of the responses received included the following:

- "Safe and efficient movement of trains is vital to the economy of the state and the nation."
- "Freight service by rail is more efficient than trucks. Need to have more access to rail service for both existing and new businesses."
- "The railroads need to expand to double tracks to help eliminate bottle necks. They should also replace or rebuild bridges that have outlived their life expectancy and tunnels."

- “I think if trains ran at times that did not conflict with rush hour transit it would make a significant difference in smoother transporting of good between stations”
- “Freight rail produces less pollution than moving the same cargo by truck”
- “A rail-line tipping over in my area caused a mass evacuation because of a toxic spill and poor cleanup by the carrier.”
- “It is important that our state ensure that industrial areas have robust connection to rail networks as the default. Rail freight is more efficient and economical than trucking.”
- “I think putting more passenger trains on the lines is just going to get in the way of freight. Let’s let trains serve business and quit pretending people are going to adopt rail travel again. Again, this isn't the 1800's.”
- “In my Amtrak experience, freight trains are now too long for sidings, which forces passenger trains to wait. More freight should be moved by rail, trucking adds to traffic and wears out roads faster.”

6.1.4 Stakeholder Interviews and Surveys

Foremost stakeholder interests were rail-highway crossings and freight rail with the third most important interest being rail safety. Crossing concerns related primarily to blocked crossings (including emergency responders) with one mention each of Helena Road in Helena and Sullivan Street in Madison. Benefits could be realized from (a) Short line railroad infrastructure improvements, (b) mainline capacity improvements, and (c) added rail connections to industrial and commercial sites. There was also a desire to construct more trails on former rail rights-of-way.

Recommendations for passenger services included: additional station stops, new routes, improved on-time performance and reduced travel time, and added commuter services. Proposed routes included Mobile to Spanish Fort/Daphne on to Foley and Gulf Shores [note: no present or recent past rail lines on this route], Chicago-Huntsville-Birmingham-Helena-Clanton-Montgomery-Gulf Shores, and lines to the major universities. Commentators who self-identified by entity were WestRock, City of Madison, City of Red Bay and City of Enterprise.

Twenty-four of 25 short line railroads and the sole Class II railroad, Alabama & Gulf Coast Railway (AGR) responded to ALDOT surveys. Major Class I survey information is primarily about existing infrastructure.

The short line railroads ranked 15 issues with the results in Table 6-1. In general, the survey average does not portray the wide variance in rankings by railroad – what may be critical for one railroad may be unimportant to another. This represents more the relative importance of the issues. The more important issues all relate to infrastructure rehabilitation.

Table 6-1 Alabama Short Line Issues Ranking

Issue	Importance Ranking 1 (low) to 5 (high)
1. Unavailability of railcars	3.4
2. Trespassers	2.7
3. Poor track conditions	3.3
4. Poor bridge conditions	2.9
5. Poor equipment conditions	2.4
6. Poor support facilities conditions	2.2
7. Inadequate funds to maintain rail lines	3.1
8. Inadequate funds for emergency repairs	2.5
9. Inadequate funds to properly maintain highway crossings	2.8
10. Rail/Highway crossings – poor surface conditions	3.0
11. Rail/Highway crossings need active warning devices	2.9
12. Rail/Highway sight obstructions outside RR right-of-way	2.7
13. Insufficient state/federal-funded programs for industry tracks	3.7
14. Insufficient state/federal-funded programs for rail line rehabilitation	4.0
15. Inadequate service from interchange carriers	3.6

In addition to pre-defined issues listed above, several short line railroads also added "Short line tax credits" as an issue, and one suggested improving communication with and raising Class I railroad service standards.

Short line railroads saw numerous opportunities for generating new traffic, including establishing new planned facilities such as a new paper mill, new pellet plant, new carload transload capability, and ports. Others saw opportunities in areas such as population increases and prevalent shortages in truck drivers. One short line railroad indicated that a power plant will be switching from coal to natural gas which will reduce railcar shipments; however, in the meantime, if the railroads could deliver more coal (currently limited by railroad crew shortages) they would be able to take more rail shipments. With outliers of reduction in traffic to large increases, most report small to moderate increases in rail traffic are anticipated.

Short line railroads also reported various policy changes that they anticipate would improve rail services, including:

- Change tax collection on export petroleum – currently all petroleum must pay states taxes, then must file to reclaim taxes which reduces traffic through Alabama.
- Support short lines and invest in ports
- Funding to increase shipper access
- Bring businesses to Alabama that want to move products by rail
- Funding and supporting more multimodal facilities
- Funding of short line railroad infrastructure projects
- Increase railroad crossing funding to replace obsolete signals and rough crossings
- Endeavor to improve all short lines to carry 286,000-pound railcars at 25 mph

6.1.5 Coordination with Neighboring States

The neighboring states for Alabama include Mississippi, Tennessee, Georgia, and Florida. ALDOT routinely interacts with neighboring states through involvement in national and regional transportation organizations such as the Southern Rail Commission (SRC).

The SRC partners include the states of Alabama, Louisiana, and Mississippi, as well as their state Departments of Transportation; Amtrak; FRA; the Association of American Railroads; Southern Line Pacific; Rail Passengers Association; States for Passenger Rail Coalition; the Center for Planning Excellence; Transportation for America; and Rail-Volution.

Input was sought from the SRC and rail coordinators in all neighboring states were provided an opportunity to review and comment about the AL SRP.

6.2 Involvement of Interested Parties

The following section summarizes how the public and stakeholders were involved in the preparation and review of the AL SRP.

Stakeholders, those who generally have a more than passing interest in the gathering of data, included rail carriers, units of local government, MPOs and RPOs. Stakeholder involvement and public involvement were encouraged and provided through surveys and participation in the public outreach phase of the planning process. Email notifications to a comprehensive list of stakeholders were sent to seek input and feedback for both the online survey and meetings. Emails that were returned as undeliverable were followed up to ensure the intended recipient's contact information was correct or in cases where others had replaced them in their stakeholder role, corrections were made, and the information was re-sent.

6.3 Issues Identified During the Rail Planning Process

The following section summarizes the themes raised during the outreach process regarding freight and passenger rail issues, opportunities, priorities, and potential future actions. These issues helped form recommendations. This input fed directly into the development of plan outputs.

6.3.1 Freight Rail

Based on comments received during the outreach process, the importance of rail transportation in Alabama is recognized. Stakeholders see rail as a true asset, appreciating the positive impact rail has on the efficient movement of goods throughout the state, reduction of highway traffic congestion, reduced pollution, and increased economic vitality. They also recognize the potential and need to further expand and improve resources to continue to improve freight connectivity, and to reduce freight dependency on highways. Safety was a concern that was regularly cited, specifically at rail and roadway crossings and the condition of the rail lines.

The following themes emerged as issues and opportunities from the outreach:

- Increase availability of rail services
- Improve infrastructure (condition of rail lines)
- Increased locations for rail-served industrial sites
- Increase mainline capacity to reduce bottlenecks
- Improve access to shippers located on Short Lines
- Abandonment / Shrinkage of rail networks
- Reported derailments becoming more common
- Safety at crossings
- Blocked crossings for excessively long periods of time

6.3.2 Passenger Rail

The main discussion brought out by the commenters in the public meetings was the desire for more passenger rail opportunities.

Stakeholders, particularly those in unserved or underserved areas, see passenger rail as an essential component of the state's transportation system providing a needed mobility option for travel.

Issues identified with existing intercity passenger service included limited service to major cities in Alabama and neighboring states; inconvenient schedules and frequencies; slow train speeds; and reliability. Comments were also heard citing the need for re-establishing routes such as the Gulf Breeze route which was discontinued in April 1995, and the full restoration of the Sunset Limited route that was taken out of service because of Hurricane Katrina which wiped out tracks along the Gulf of Mexico. Priorities stated for passenger rail include adding new routes to major cities in the state and new stations along routes, station upgrades, improved service times, and increasing support for future enhancements and expansion.

6.4 Recommendations Subjects Identified by Stakeholders

Stakeholders identified the following needs to be addressed:

- Blocked crossings in several locations across the state
- Unused rail corridors
- Port issues and opportunities
- Economic development and freight mobility
- Short line railroad improvements