Alabama Rail Plan 2008





ALABAMA
Bureau of Modal Programs
Rail Programs
DEPARTMENT OF TRANSPORTATION

Alabama Department of Transportation
Bureau of Multimodal Transportation

Prepared By
BKI BURK-KLEINPETER, INC.
ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS

Alabama Department of Transportation
Bureau of Modal Programs
Rail Section

2008 Alabama Rail Plan

Produced By
BURK-KLEINPETER, INC.
Engineers, Architects, Planners, and Environmental Scientists
4176 Canal Street
New Orleans, Louisiana 70119

In Association With
Parsons Transportation Group
1133 15th Street, NW, Suite 800
Washington, DC20005-2701

Table of Contents

Chapter 4: Abandonments

Chapter 5: Intermodal Facilities

Chapter 6: Passenger Rail

Appendices

List of Figures

List of Tables

Executive Summary

Executive Summary

The 2008 Alabama Rail Plan has been produced for the Bureau of Modal Programs of the Alabama Department of Transportation (ALDOT) by Burk-Kleinpeter, Inc., in association with the Parsons Transportation Group. The previous update was published in 2001. A companion document, the 2008 Alabama Rail Directory, has also been produced. Copies of both documents are available from the Rail Programs Section of ALDOT. Copies of both documents are available from the Rail Programs Section of ALDOT. To obtain copies or for more information, contact Rail Programs at:

Alabama Department of Transportation
Bureau of Modal Programs
1100 John Overton Drive
Montgomery, AL 36110
Tel: (334) 353-6435
Fax: (334) 353-6451

This plan has been produced in accordance with and as a component of the *Alabama Statewide Transportation Plan*, as required by Section 135 of Title 23 of the United States Code. Statewide transportation planning is required by federal law under guidelines established originally by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The state's eligibility for federal transportation funding is dependent on compliance with this statewide transportation planning requirement.

The successors to ISTEA, the Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) continued the guidance of ISTEA and identified seven broad areas of concern that must be considered in the statewide planning process. These areas, listed below, were identified in the *Alabama Statewide Transportation Plan* to ensure that programs and projects:

- Support the economic vitality of the United States and metropolitan areas, especially by enabling global competitiveness, productivity and efficiency;
- Increase the safety and security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility options available to people and freight;
- Protect and enhance the environment, promote energy conservation, and improve quality of life;
- Enhance the integration and connectivity of the transportation system - across and between modes – throughout the United States, for people and freight;
- Promote efficient system management and operations; and
- Emphasize the preservation of the existing transportation system.

The purpose of state rail planning is to examine rail carriers and shippers, communities and other elements comprising the transportation network so that each element can perform its proper role in an efficient and equitable manner. The state's priority is to concentrate on preserving branch lines that are vital to continued rail service to rural communities around Alabama. The state continuously works with local communities and the railroad companies to define projects intended to yield benefits attractive enough to ensure that key branches remain in operation.

Findings of the 2008 Rail Plan Update

The role of the railroad industry is changing from what it has been over the last several decades. Where the primary function used to be hauling coal, timber and other raw materials in manufacturing regions, increasingly, railroads are moving more and more finished consumer goods, often made in Asia, from ports to inland major cities. These new higher-volume freight routes – called "corridors" – often serve the south, where the rail system is less developed and the population is rising.

The railroads are pressing their advantage over their chief rival, long-haul trucking, which has struggled with rising fuel costs, driver shortages and highway congestion. Railroads say a load can be moved by rail using about a third as much fuel as it takes to haul it by truck. And rail transport is becoming even more efficient as the railroads upgrade their lines and logistics companies build large warehouses – distribution centers – along their routes. It is not surprising that demand for rail service increased sharply when the U.S. economy and Asian imports surged in 2003.

Forecasts of U.S. Freight tonnage 2000-2020 indicate that with moderate economic growth (e.g. 3.1 percent compounded annual growth rate), import/export freight tonnage would double by 2020 and domestic freight tonnage could increase by about sixty percent.

Rail inventory

The State of Alabama is criss-crossed by over 3,750 miles of track. Twenty-seven railroad companies operate within the state hauling 193 million tons of cargo annually. According to the AAR, the Class I railroads operate 2,684 miles of track in Alabama, about 71 % of the total mileage of the state. While this appears to be down some 1,416 miles from the 4,100 miles reported in the *2001 Rail Plan Update*, most of this reduction can be accounted for as reporting anomalies, that is, railroads reporting miles of track in 2001 instead of miles of road (or route miles). This certainly appears to be the case with Norfolk Southern, which reported 2,141 miles of track operated in 2001, but only 1,371 in 2008. (When asked about the loss of 770 miles of road between 2001 and 2008, officials at NS stated that this was not the case, that it must have been a reporting error.) It is suspected that several other railroads reported in the same manner.

Alabama has only one Regional/ Class II railroad: Alabama & Gulf Coast Railway (AGR). The AGR operates over 429 miles of track from Columbus, MS to Pensacola, FL and from Kimbrough, AL to Mobile, AL. In Alabama, the AGR operates 344 miles of track hauling paper products, coal, cottonseed, and lumber with a system wide volume of 58,000 carloads annually.

Today there are 22 Class III railroads operating in Alabama. Some of these companies operate line haul services, others operate only within switching yards, and others are privately owned lines serving a single company. Many Class III railroads took over track taken out of service by larger Class I railroads. By serving only businesses that were built along spur lines, these smaller railroads are able to thrive in areas were larger carriers were not.

Line Density and Usage

In 2006, a total of 117.9 million net tons of traffic was originated or terminated, or both, in Alabama. Coal dominates the railroad traffic base in Alabama, accounting for about 39 percent of total tonnage and 48 percent of tons terminated in Alabama. In 2006, 1.5 million more tons of coal originated in Alabama than in 1999, when 9.7 million tons originated in the State. Terminated coal tonnage has continued to increase, rising from 24.3 million tons in 1999 to 26.8 million tons in 2006. This increase in gross tons is mostly reflected on the Burlington Northern Santa Fe (BNSF) Birmingham Subdivision. Among other leading commodities, nonmetallic minerals, metal products, and transportation (autos) rose to the "Top Five", while glass and stone and chemicals dropped out. Metallic ores (iron ore) and lumber experienced significant declines.

Thirty six percent of Class I railroad route miles in Alabama handle more than 20 million Gross Ton Miles per Route Mile (GTM/M). Twenty million GTM/M, and higher, is a common, informal standard by which to define a system's core network, or by which to focus capital improvement programs to achieve the greatest economies of scale. The line segment having the highest GTM/M in the state lies between Stevenson and Bridgeport (10 miles), over which Norfolk Southern has trackage rights on CSX, and handles 67.2 million GTM/M. This line segment is part of CSX's Nashville–Atlanta line, and Norfolk Southern's Memphis/Birmingham–Knoxville line. The line segment having the second highest GTM/M is between NS's Norris Yard and 50th Street (8 miles) in Birmingham. This line has a density of 63 million GTM/M, reflecting the funnel effect of NS lines converging on Birmingham. Both of these line segments, however, are short distances, and not typical of main line traffic density in Alabama.

During the past twenty years, the Class I railroads both in Alabama and nationally, either sold or leased most of their light density line segments to shortline operators. Most of the roughly 1,000 miles of shortlines in Alabama, excluding 152 miles of traditional switching and terminal companies, were established during this period. Nevertheless, there remain in Alabama some Class I railroad line segments with less than one million GTM/M. The future of such line segments depends upon many variables. These include future traffic prospects for each line, profit margins on the existing traffic (e.g. chemicals versus wood chips), and the perceived strategic value of each asset, as well as each line segment's utility for shortline operation.

Abandonments

The spate of mergers, acquisitions, spin-offs, and abandonments that took place shortly after deregulation of the railroads in 1980 seems to have abated in recent years. The flurry of activity was a response not only to deregulation but also to the need to rationalize the inland transportation systems in response to the change in international shipping technology, particularly containerization, and the resulting intermodalism. (For more information on this topic, see Chapter 5. Intermodal Facilities.) While much activity continues across the nation and in Alabama in terms of mergers, spin-offs, acquisition and the granting of trackage rights, outright abandonment is becoming a relatively rare thing. This can be seen as a good sign, meaning that there are fewer and fewer unprofitable rail lines in Alabama.

It is gratifying to report in this Rail Plan Update that the trend of declining filings for abandonment has continued in this reporting period. Only seven abandonments occurred during the last seven years and they were mostly minor adjustments. The only significant abandonment was as a result of the demise of the Pine Belt Railroad, which ceased operations in 2001 and subsequently filed for abandonments of its two main lines in 2002 and 2003, respectively.

Intermodal Facilities

Intermodalism is one of the most rapidly changing activities in rail transportation, driven by technological advances, deregulation in the 1980s, and the ongoing quest to ship goods more quickly and more cheaply across the nation and the globe. From 1980 to 2007, intermodal traffic in the U.S. has grown from 3 million trailers and containers to 12 million.

The transportation industry has seen changes in the past 30 years which have been described as a change from a “push system” to a “pull system.” In the past, manufacturing and distribution were designed to support mass production, retailing and warehousing. Today, orders and purchase patterns pull goods through the supply chain, requiring retailers, manufacturers and suppliers to track demand in response to computer and communication data interchange. These technologies have reduced the risk of over or under production, as well as the need to maintain large, costly inventories. Technological advances in intermodalism respond to these needs, including the emergence of new partners and new roles for veteran companies to broker the transportation process.

Passenger Rail

Since the early 1990’s, the nation has become increasingly interested in furthering the development of high-speed ground transportation or high-speed rail. High-speed rail in the United States is generally meant to include passenger rail service operating at a “cruising speed” of 125 mph (200kmph) or higher between station pairs, where resulting downtown to downtown journey times are competitive with airplanes for business travel.

Since January 2002, there are eleven high speed rail corridors that have been designated by the FRA under ISTEA and TEA-21. One of these, the Gulf Coast High-Speed Rail Corridor, has two of its three segments located in Alabama. One is the *Sunset Limited* route between Mobile, AL and New Orleans, LA. The other is the corridor from New Orleans to Atlanta, GA.

The existing freight routes in these corridors are among the highest density in Alabama for CSX and NS, respectively. Corridor planning under FRA guidance has been completed for the New Orleans to Mobile segment and between Lake Charles, LA and Meridian, MS. Corridor planning from Meridian to Atlanta, GA is pending allocation of matching funds from the state of Alabama. In addition the High-Speed Rail Corridor, reinstatement of former passenger service, such as the Gulf Breeze and the Gulf Coast limited, should be considered in the future.

Future Outlook for Alabama Railroads

Generally speaking, the condition of the railroads in Alabama is good. The same trends seen around the nation are occurring in Alabama, also. The Class I railroads continue to rationalize their systems by streamlining their routes and forging alliances with other Class I railroads where necessary. While continuing to move their traditional "heavy, dumb stuff" (i.e., coal, grains, chemicals, and minerals), they see new opportunities in high value manufactured products, both imports and domestically-produced goods. Meanwhile, Regional and Local railroads continue to find their niches in serving local communities.

The new container terminal, Choctaw Point, in the Port of Mobile, along with its Garrows Bend Intermodal Container Transfer Facility, signifies a new era of international trade for the State of Alabama. In addition, large corporate production centers across the state, such as the Thyssen-Krupp steel plant north of Mobile, will generate significant freight traffic. Other large generators of freight include:

- Honda plant in Lincoln, AL (Talladega County)
- Mercedes plant in Vance, AL (Tuscaloosa County)
- Hyundai plant in Montgomery County
- Kia plant in West Point near the Alabama/Georgia State Line
- Toyota engine plant in Huntsville, AL (Madison County)

Chapter 1: Introduction

1. Introduction

The Alabama Rail Plan 2008 Update has been produced for the Bureau of Modal Programs of the Alabama Department of Transportation (ALDOT) by Burk-Kleinpeter, Inc., in association with the Parsons Transportation Group. The previous update was published in 2001. A companion document, the 2008 Alabama Rail Directory, has also been produced. Copies of both documents are available from the Rail Programs Section of ALDOT. To obtain copies or for more information, contact Rail Programs at:

Alabama Department of Transportation
Bureau of Modal Programs
1100 John Overton Drive
Montgomery, AL 36110
Tel: (334) 353-6435
Fax: (334) 353-6451

Purpose and Authority

The *Alabama Rail Plan 2008* has been produced in accordance with and as a component of the *Alabama Statewide Transportation Plan*, as required by Section 135 of Title 23 of the United States Code. Statewide transportation planning is required by federal law under guidelines established originally by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The state's eligibility for federal transportation funding is dependent on compliance with this statewide transportation planning requirement.

The successors to ISTEA, the Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) continued the guidance of ISTEA and identified seven broad areas of concern that must be considered in the statewide planning process. These areas, listed below, were identified in the *Alabama Statewide Transportation Plan* to ensure that programs and projects:

- Support the economic vitality of the United States and metropolitan areas, especially by enabling global competitiveness, productivity and efficiency;
- Increase the safety and security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility options available to people and freight;
- Protect and enhance the environment, promote energy conservation, and improve quality of life;
- Enhance the integration and connectivity of the transportation system - across and between modes – throughout the United States, for people and freight;
- Promote efficient system management and operations; and
- Emphasize the preservation of the existing transportation system.

The purpose of state rail planning is to examine rail carriers and shippers, communities and other elements comprising the transportation network so that each element can perform its proper role in an efficient and equitable manner. The state's priority is to concentrate on preserving branch lines that are vital to continued rail service to rural communities around Alabama. The state continuously works with local communities and the railroad companies to define projects intended to yield benefits attractive enough to ensure that key branches remain in operation.

Given this philosophy, a series of goals were adopted and published in the *Alabama Statewide Transportation Plan* to govern the development of the Alabama Rail Plan:

1. Maintain a viable rail freight and passenger transportation system that is essential to the economic viability and continued prosperity of all the regions of Alabama.

2. Ensure the maintenance of efficient rail service by promoting and relying on privately owned and operated rail common carriers.

3. Participate in the planning and coordination of all modes of freight and passenger transportation in Alabama.

4. Utilize public funds, made available by the federal government, to the extent that such use is justified, will lead to a long term solution that does not require further public funds, is of assistance to the economic well being of the state, its localities and its residents, and only when all other solutions have been declared impractical.

5. Continue to promote and enforce safe railroad practices so as to ensure safety and operating values, the safe carriage of hazardous materials, and the maintenance of rail rolling stock and trackage.

6. Solicit input from relevant railroads, rail users, governmental agencies, other organizations and the general public in performing rail transportation planning functions.

7. Recognize the importance of the rail mode to the economic development of Alabama, including the development of its energy resources, in the transportation process.

8. Promote the viability of the private railroad mode via the analysis and possible modification of certain rail system components.

9. Maintain a continuing and cooperative rail planning process.

Because Alabama's freight railroads are privately owned and operated, the primary mission of ALDOT is to support the state's railroads by ensuring safe and efficient operations. This is

achieved, in part, through the development of the *State Rail Plan*. As part of this plan, ALDOT works with local communities and the railroad companies in defining projects that will ensure key railroad branches remain in operation. ALDOT also works with railroads to identify safety needs. The state's diagnostic teams recommend improvements and the railroads install and maintain these improvements.

General Trends in the Rail Industry

"The one constant in railroading these days is change."[1] For decades, railroads spent little on infrastructure, even going so far as to tear up surplus track and shrink routes. However, since 2000, they've spent $10 billion to expand tracks, build freight yards and buy locomotives. And what's more, they have an additional $12 billion more in upgrades planned.[2]

This build-out is coming as the industry transitions away from its primary role in recent decades of hauling coal, timber and other raw materials in manufacturing regions. Increasingly, railroads are moving more and more finished consumer goods, often made in Asia, from ports to inland major cities. These new higher-volume freight routes – called "corridors" – often serve the south, where the rail system is less developed and the population is rising.[3]

The railroads are pressing their advantage over their chief rivals, long-haul trucking, which has struggled with rising fuel costs, driver shortages and highway congestion. Railroads say a load can be moved by rail using about a third as much fuel as it takes to haul it by truck. And rail transport is becoming even more efficient as the railroads upgrade their lines and logistics companies build large warehouses – distribution centers – along their routes. It is not surprising that demand for rail service increased sharply when the U.S. economy and Asian imports surged in 2003.[4]

Forecasts of U.S. Freight tonnage 2000-2020 indicate that with moderate economic growth (e.g. 3.1 percent compounded annual growth rate), import/export freight tonnage would double by 2020 and domestic freight tonnage could increase by about sixty percent.[5]

Mergers and Acquisitions

In the beginning, all railroads were shortlines. Most early railroad charters were issued for railroads with the magnitude of the 17-mile Mohawk & Hudson or the 26-mile Boston & Lowell. But most of the early railroads soon combined with their neighbors to form longer railroads. For example, seven railroads formed a route from Albany to Buffalo, with a change of company in every major city. In 1853, they merged to form the New York Central Railroad. Similar consolidations and

1 Edward A. Lewis, "A Proliferation of Shortlines and Regionals," Trains Magazine, July 8, 2006.
2 Daniel Machalaba, "New Era Dawns for Rail Building," Wall Street Journal, February 13, 2008, page A1.
3 Machalaba.
4 Machalaba.
5 American Association of State Highway Transportation Officials (AASHTO), "Transportation Investment in America, Freight-Rail Bottom Line Report."

mergers occurred everywhere, as the dominant trend for over one hundred years was for growth and merger.[6]

In 1970, that trend was altered suddenly and drastically by the bankruptcy of the Penn Central Railroad, which was reorganized as Conrail, followed closely by the bankruptcy of the Rock Island and Milwaukee Roads. Between 1970 and 1983 more than 26,000 miles of Class I rail lines were disposed of by these three companies. Some lines were picked up by other Class I railroads, some were simply abandoned, but most became shortline railroads.[7]

These large railroads needed to streamline their operations. They had thousands of miles of duplicate lines and light-density lines that couldn't generate enough revenue to meet the cost of operating them. But some of those lines had more economic value to the communities they served, to keep local factories in operation, than they did to the railroad. In those cases, public money was frequently used to lease or purchase lines that didn't fit into the Class I railroad's plans.

These new, publicly owned shortlines needed someone to operate them. But not the Class I railroads, they were bogged down with standard wages and restrictive work rules. They wanted something new, and different – shortline railroads with responsive local management and non-union labor. The trend that started with Conrail, then spread to former Rock Island and Milwaukee Road lines, soon spread across the Great Plains.[8]

In the mid-1980s, solvent prosperous railroads began to look at their maps and eliminate routes that were poor sources of revenue or that didn't fit with the rest of the railroad. These routes were sold to become regional railroads. This divestiture, or downsizing, was made easier by the Staggers Act of 1980. Divestiture was necessary for railroads to compete with trucks, which themselves had been the beneficiaries of deregulation. Large railroads usually have high terminal costs that preclude competitive pricing, and their labor unions have often been unwilling to realign wages and work rules to meet new market conditions. On the other hand, shortlines often have less expensive terminal costs and are free of union agreements. Mergers and acquisitions continue today, though at a reduced pace from the 1980s and 1990s. Still, in the near term, there will likely be more and more regional and local railroads serving local industries and communities.[9]

Abandonments

Since the nation-wide wave of abandonments that followed the deregulation of the railroad industry in 1980, there has been a decreasing trend in the annual rate of abandonments. Following the national trend, Alabama has had a lower rate of abandonments per year for each of the following periods since deregulation.

6 Lewis.
7 Lewis.
8 Lewis.
9 Lewis.

From 1981 to 1991 the annual rate of abandonments was 6 per year. Between 1992 and 2001 the annual rate dropped to 1.11, with only one officially filed abandonment occurring after 1997. From 2002 to 2007 there have been seven abandonments in Alabama, lowering the annual rate to 1 per year. As of the drafting of this report there have been no abandonments in Alabama in 2008.

The decreasing trend in the annual rate of rail line abandonment may be a sign of the increasing health of the railroad industry. Consistent demand for freight transportation has created a stable market in which large and small rail operator can operate profitably.

Increasing the Weight of the Standard 100-Ton Rail Car

In January 1995, the AAR adopted standard S-259 making it acceptable to run 286,000 pound cars throughout the North American rail network[10]. However, the tracks and bridges of much of the nation's short-line system are inadequate to handle the newer 286,000-pound and 315,000-pound railcars now coming on line. It has been estimated that the cost of upgrading the nation's short-line system to handle 286,000-pound railcars will be $6.9 billion. In recent years, these needs have been largely addressed by public investment.[11]

Making these investments and realizing their benefits will require a new partnership among the railroads, the states, and the federal government. This partnership must address the public benefits of system-wide freight-rail investments as well as local improvements. The states and the federal government have three basic tools for investing in freight-rail improvements.

- Grants from transportation programs such as the surface transportation program and state general transportation programs.
- Loan and credit enhancement programs such as the Rail Revitalization and Improvement Funding program (RRIF) and Transportation Infrastructure Finance and Innovation Act (TIFIA) program.
- Tax-expenditure financing programs, including accelerated depreciation, tax-exempt bond financing, and tax-credit bond financing. These programs can be used to provide targeted, income tax benefits for investments made to improve the efficiency or increase the capacity of the freight-rail system.

Federal Rail Assistance Programs

The current federal surface transportation authorization titled the "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)" was signed into law on

[10] "AAR's Heavy Axle Load Program Yields Benefits to Railroads", Railway Track and Structures, November, 2000. September 2008.

[11] Transportation- Investment in America: Freight Rail Bottom-Line Report, American Association of Highway and Transportation Officials, 2008.

August 10, 2005. The act authorizes the federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009.

These federal programs form the basis of most transportation system capital funding programs across the country. Although one additional rail program (Capital Grants for Rail Line Relocation Projects) was added to the various programs included in the authorization bill, it did not change the overall picture for funding of rail system improvements.[12] Unlike some other transportation modes, rail does not have a dedicated (formula) funding source. The funding programs for rail (freight, transit, or inter-city) are all discretionary programs, which means that projects need to compete with each other, on a national basis, for the limited amount of funds in the program. This is a very different approach to funding than for the highway system where each state is "guaranteed" an amount of funding and it is up to each state, with some limitation, to decide which projects to advance.

The following is a brief review of the primary existing federal funding programs authorized (or reauthorized) under SAFETEA-LU as well as a description of the recently enacted tax credit for regional and shortline railroads.[13]

SAFETEA–LU

SAFETEA-LU is the latest transportation authorization act, which continues many of the policies and programs that originated in the Intermodal Surface Transportation Efficiency ACT of 1991 (ISTEA). The Transportation Equity Act for the 21st Century (TEA-21), which was the authorizing act between ISTEA and SAFETEA-LU was in effect between 1998 and 2005.

SAFETEA-LU continues to include the trademark of flexibility that has characterized the three authorization acts discussed above. This flexibility allows states and metropolitan planning organizations to employ federal funding from various sources in rail projects. Typically, federal funding for rail projects has come from Transportation Enhancement, Rail-Highway Grade Crossing Program (i.e., the Section 130 program), High-Speed Rail Development, and other programs. The following sections provide further detail regarding these federal programs that could be used to fund rail system improvements in Alabama.

Transportation Enhancements

Ten percent of a state's Surface Transportation Program (STP) is set aside for Transportation Enhancements, which encompass a broad range of environmentally-related activities, including rehabilitation and operation of historic transportation buildings, structures, or facilities and preservation of abandoned railroad corridors.

[12] Vermont State Rail and Policy Plan. (Parsons Brinckerhoff, 2006).
[13] Vermont State Rail and Policy Plan.

Section 130 (Highway-Rail Grade Crossing Program)

The Highway Safety Act of 1973 established the Rail-Highway Crossing Program, which became known as the Section 130 Program (from its designation in Title 23 of the United States Code). The goal of this program is to provide federal support in efforts to reduce the incidence of accidents, injuries and fatalities at public railroad crossings. States may utilize the Section 130 Program, which is administered by the Federal Highway Administration (FHWA), to improve railroad crossings using a variety of methods, including installation of warning devices, elimination of at-grade crossings by grade separation, or by consolidation and closing of crossings.

High-Speed Rail Crossing Improvement Program

The FRA administers the High-Speed Rail Crossing Improvement Program, funded at $50 million over the 5-year period (FY 2005-FY 2009) of the SAFETEA-LU. The program's aim is to reduce or eliminate hazards at highway-rail grade crossings in designated high-speed rail corridors. (Alabama has two such corridors: the Norfolk Southern route between Anniston and Meridian and the CSX route from Mobile to New Orleans.)

High-Speed Rail Corridor Development

SAFETEA-LU reauthorized the Swift Act and expanded eligible expenses from "planning" to "development" of high-speed rail corridors. $70 million is authorized annually for corridor development and $30 million for high-speed rail technology improvements.

Capital Grants for Rail Relocation Projects

SAFETEA-LU established this new grant program to provide financial assistance for rail line relocation or grade separation of track that is interfering with a community's motor vehicle flow, its quality of life, or its economic development. The program authorizes $350 million for each fiscal year 2006 – 2009. At least half the grants awarded must not be more than $20 million each and the federal share is not to exceed 90% of the total cost of the project. (The rules established for this program were scheduled to be completed in October 2006, but have been delayed. Further, funding for this program has not been authorized as of the date of this writing.)

Credit Assistance Programs

In addition, SAFETEA-LU authorizes two credit assistance (direct loans, loan guarantee) programs.

Rail Rehabilitation and Improvement Financing (RRIF).

The RRIF program provides direct loans and loan guarantees to state and local governments, government-sponsored authorities and corporations, railroads, and joint ventures that include at least one railroad. Eligible projects include (1) acquisition, improvements or rehabilitation of intermodal or rail equipment or facilities (including tracks, components of tracks, bridges, yards, buildings, and shops, (2) refinancing outstanding debt incurred for these purposes, or (3) development or establishment of new intermodal or railroad facilities. The current program is also authorized to provide loans to rail shippers with access to only one rail carrier in order to construct

rail access to a second carrier, without requiring the project to be part of a railroad joint venture application.

Some onerous provisions of this program, which was established in TEA-21, have been eliminated by SAFETEA-LU; however, even with these changes the future of RRIF is uncertain. The Administration's proposed budget for FY 2007 completely eliminated funding for the program, but Congress did not go along. Under this program the FRA Administrator is authorized to provide direct loans and loan guarantees up to $35 billion, with up to $7 billion being reserved for projects benefiting freight railroads other than Class I carriers.

This program is currently under a Notice of Proposed Rulemaking (NPRM) by the FRA. The NPRM establishes an equity contribution for applicants "who are larger than small entities" or who have credit ratings of less than investment grade.[14] The NPRM also sets the limit of direct loans or loan guarantees for a single borrower at $500 million. Comments must be received by August 8, 2008.

Transportation Infrastructure Finance and Innovation Act ("TIFIA").

Enacted as part of TEA-21, TIFIA established a federal credit program for eligible transportation projects of national or regional significance. The program's goal is to leverage federal funds by attracting substantial private and other non-federal co-investment in critical improvements to the nation's surface transportation system.[15]

Through TIFIA, the U.S. Department of Transportation (DOT) provides federal credit assistance to highway, transit, rail, and intermodal freight projects, including seaports. The amount of TIFIA assistance may not exceed 33 percent of total project costs. The program targets only large projects, generally those costing more than $50 million.

The TIFIA program offers three types of financial assistance: secured loans, loan guarantees, and standby lines of credit. Secured loans are direct federal loans to project sponsors. Loan guarantees provide full-faith-and-credit guarantees by the federal government to institutional investors that make loans for projects. Standby lines of credit represent secondary sources of funding in the form of contingent federal loans that, if needed, supplement project revenues during the first ten years of project operations.

Both public and private project sponsors may apply for TIFIA assistance, but all prospective borrowers must demonstrate that the proposed project is consistent with State and Local transportation plans.

[14] Federal Register / Vol. 73, No. 111/ Monday, June 9, 2008 / Proposed Rules, page 32516.

[15] U.S. House of Representatives, Committee on Transportation and Infrastructure, Hearing on "Financing Infrastructure Investments." June 9, 2008.

To fund TIFIA, SAFETEA-LU provides $122 million in contract authority from the Highway Trust Fund for each of fiscal years 2005 through 2009 to pay the subsidy cost (and administrative expenses) of credit assistance.

As of April 2008, the TIFIA program had approved $4.8 billion in credit assistance to 15 projects representing a total or $18.6 billion of infrastructure investment.

Rail Planning in Alabama

Rail planning occurs throughout Alabama, at all levels of government (state, regional and local), and across a wide range of issues, from grade-separating important vehicle thoroughfares, to extending rail lines to new terminals or plant sites, to applying for "quiet zones" or "rails-to-trails" designations. But when it comes to rail issues, all issues - like politics – are local issues. This section reviews the various railroad planning issues that government entities frequently get involved with.

Rail Safety

Rail safety is probably the top priority for the hundreds of communities in Alabama that have railroads operating within them. It is a national priority, too. The Institute for Transportation Research and Education at North Carolina State University surveyed rail safety needs, focusing on highway-rail at-grade crossings. They estimated that some $13.8 billion is needed for additional warning systems, grade separations, grade-crossing eliminations, and track relocations for both freight and passenger systems. These needs have usually been addressed by a combination of private and public investment. The State of Alabama has in the past applied and received funding for grade crossing improvements through the federal 1103(f) program.

In terms of rail industry safety standards, each railroad company stresses its safety plan for its employees and non-employee visitors. Further, the Association of American Railroads (AAR) promulgates safety standards and tests new equipment to assure that safe equipment is used in the field.

Operation Lifesaver

Operation Lifesaver started in Idaho in 1972 when the national average of collisions at highway-rail grade crossings exceeded 12,000 annually. A six-week public awareness campaign called "Operation Lifesaver" was sponsored by the office of Governor Cecil Andrus, the Idaho Peace Officers and Union Pacific railroad as a one-time, one-state initiative.

During the campaign's first year, Idaho's crossing-related fatalities dropped by 43 percent. The next year, the Operation Lifesaver campaign spread to Nebraska, where their collision rate was reduced by 26 percent. Kansas and Georgia experienced similar success the following year. Between 1978 and 1986, while Operation Lifesaver operated under the auspices of the National Safety Council, all forty-nine continental states and the District of Columbia started independent Operation Lifesaver

programs. In 1986, the national program was released from NSC and incorporated as a national, non-profit, 501(c) (3) educational organization.

In 2007, there were 104 collisions between trains and motor vehicles in Alabama, with 15 fatalities. For more information, visit www.oli.org.

Hurricane Evacuation Planning

One area that has apparently not come under the scrutiny of state, regional or local government agencies is railroad hurricane evacuation planning. Asked to look into the state of rail planning in the event of hurricanes, the Alabama, Baldwin County and Mobile County Hurricane Operations Plans were obtained and reviewed. None of them accounts for railroads in their planning. The State plan basically calls for the reverse-laning of Interstate I-65 for hurricane evacuation. All rail crossings on the interstate are grade separated, so that wouldn't be a problem. The two county plans call for phased evacuations of zones, starting with the lowest areas nearest the coast, to designated northbound state roads and Interstate-65.

When asked about any directives about railroad operations during the evacuation period, Mr. Roy Wulff, Emergency Operations Director in Baldwin County, said there were none. He also said the only railroad in Baldwin County is the CSX and he was not aware if there had ever been any complaints about railroads blocking evacuation routes during hurricane evacuations.

Mr. Mike Hennessy, Emergency Management Officer for CSX, was contacted and asked about emergency operations in Mobile and Baldwin Counties during hurricane evacuations. He said that if the Mobile area was a well-defined target for a major hurricane, overhead traffic would be re-routed away from the area three to four days ahead of the event. Local equipment would be moved to higher ground and secured two days before expected landfall. Any passenger service – there currently is none – would also be shut down two days before the event. Basically, the railroad implements its plan well in advance of the period when residents would be evacuating, thereby avoiding potential conflicts.

Quiet Zones

A Quiet Zone is a stretch of rail line that contains one or more consecutive public crossings at which locomotive horns are not routinely sounded. The Federal Railroad Administration (FRA) is required by law to issue regulations that require a train to sound its horn when approaching and entering a public crossing. However, this law also permits the creation of exceptions to the rule when the constant sounding of horns would deteriorate the quality of life for people living near a railroad crossing. While there is no maximum length for a quiet zone, the rule establishes a minimum length of at least ½ mile along the length of the railroad right-of-way

In these exceptions, Supplementary Safety Measures (SSMs) may be implemented. SSMs include:

- Four-quadrant gates which block all entering and exiting travel lanes.
- One-way streets with gates that block all travel lanes.

- Gates with medians or channelization devices that prevent vehicles from swerving around crossing gates.
- Temporary closures which allow for the suspension of routine horn sounding during certain hours (10pm-7am) by eliminating vehicle access to the crossing.

For more information on the creation of Quiet Zones, visit the FRA website at www.fra.dot.gov.

Rails-to-Trails

The Rails-to-Trails Conservancy (RTC) is a national, non-profit organization founded in 1986 that works with local communities to preserve unused rail corridors by transforming them into multi-use trails. Based in Washington, DC, the RTC has helped convert over 13,900 miles of unused rail lines into trails and greenways.

Rails-to-Trails works toward achieving their mission at the national level through the promotion and protection of policies which make trail-building possible. At the local level they provide information and technical assistance to communities engaged in the project development process. The Federal Transportation Enhancement Program (TEP) and the Railbanking statute are two tools which contribute significantly to the success of the program.[16]

The Transportation Enhancement Program (TEP) is the primary mechanism for funding rail-to-trail conversions. The program is managed by each state's Department of Transportation (DOT). The purpose of the program is to expand travel choice and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of the transportation experience – nationally approximately 9% of TEP funding has been used for rail-trail conversions since the program's start in 1992.[17]

Railbanking is a voluntary agreement between a railroad company and a trail agency to use out-of-service rail corridors for trails until a railroad needs the corridor again for rail service. In these instances, a railbanked corridor is not considered abandoned and as such, can be sold, leased or donated to a trail manager, rather than reverting to adjacent landowners. The Railbanking statute (National Trails Systems Act, 16 USC 1247 [d]) allows for the preservation of corridors which would otherwise become abandoned, while relieving railroad companies of the burden of maintaining unused rail corridors. Although approximately 20 percent of the nation's rail-trails are railbanked, none of the rail-trails in Alabama fall into this category.[18] (For more information on the Rails-to-Trails Conservancy, visit the website at: http://www.railtrails.org/index.html).

---

[16] Rails-to-Trails Conservancy, <http://www.railstotrails.org/index.html>. August 6, 2008.

[17] National Transportation Enhancements Clearinghouse, "Rail Corridor Preservation Fact Sheet" <http://www.enhancements.org/Factsheets/te_8.pdf> August 6, 2008.

[18] Rails-to-Trails Conservancy, Railbanking. http://www.railstotrails.org/whatwedo/trailadvocacy/railbanking.html. August 6, 2008.

Existing Rails-to-Trails Projects

In Alabama, there are nine public trails that have been created on abandoned rail corridors.

Chattahoochee Valley Railroad Trail

The Chattahoochee Valley Railroad Trail is a 7-mile trail created in 2000 which connects Shawmut to Riverview in the city of Valley in Chambers County, AL.

The Chief Ladiga Trail

The Chief Ladiga Trail, Alabama's first and longest rail-to-trail conversion stretches thirty-three miles from Anniston to the Alabama-Georgia state line on an unused CSX corridor. This project began in 1990, when the Calhoun County Commission purchased twenty-two miles of abandoned rail corridor using a Land and Water Conservation Fund (LCWF) grant. Throughout the 1990s, a series of grants were secured to fund its construction. This 33-mile corridor is maintained by Calhoun and Cleburne Counties in Alabama.

Wild Horse Creek Trail

The Wild Horse Creek Trail is a 3.2-mile trail on an abandoned railroad bed from T.S. Boyd High School to Hwy 78 in Dora, AL. The project, completed in 2000, was funded through the Alabama Department of Transportation Transportation Enhancement (TE) Program. It is maintained by the City of Powder Springs in Walker County, AL.

Marion Walking Trail

The Marion Walking Trail is a 1-mile paved walking trail located in Marion, AL. The rail bed remains in tact for approximately twelve miles to the south and connects up with the town of Marion Junction in Perry County.

Old Railroad Bed Trail

The Old Railroad Bed Trail, a 2-mile crushed stone and dirt trail was among the nation's first rail-to-trail conversions. In 1990, the Land Trust of Huntsville and North Alabama purchased the line, constructed the trail, and continue to maintain it today. The trail begins at the Bankhead Parkway in Huntsville and terminates two miles later at the Monte Sano Preserve in Madison County.

Richard Martin Trail (Limestone Trail)

This 8-mile trail is composed of crushed stone and gravel, and connects Veto to Hays Mill. It is currently maintained by the Limestone County Parks and Recreation Department. Transportation Enhancement funding in 1993 and 1999 contributed to the trail's development.

Robertsdale Trail

This 2 mile asphalt trail connects Hughen Street to East Silverhill in Robertsdale, AL. The grade is said to continue approximately twelve miles to Foley. Transportation Enhancement funding in 1996 and 1999 contributed to this trail's development in Baldwin County.

TVA Nature Loop

This 2.5-mile asphalt and gravel trail begins at an Old Railroad Bridge near Florence in Colbert County and ends on the south shore of the Tennessee River near Thunder, AL.

Vulcan Trail

This 1-mile asphalt rail-trail connects Richard Arrington Blvd in Birmingham to 11th Place South. Transportation Enhancement funding in 1996 contributed to this trail's development in Jefferson County.

The Geneva Trail

The Geneva Walking Trail is approximately 4 miles long and consists of three trails joined together. Part of this trail is on an abandoned railroad bed and part is on top of the new levee. It begins behind the new fire station on County Road 22 and ends at the Choctawhatchee River. This trail is partially paved and part asphalt and gravel. Geneva County

Rails-to-Trails Expansion Plans and Opportunities

At the outset of this planning process, requests were made of all of the Metropolitan Planning Organizations (MPOs) and Rural Planning Organizations (RPOs) to provide updated information about ongoing projects and plans for Rails-to-Trails conversions in their areas. The following table summaries those responses.

Table 1-1
MPO and RPO Rails-to-Trails Responses

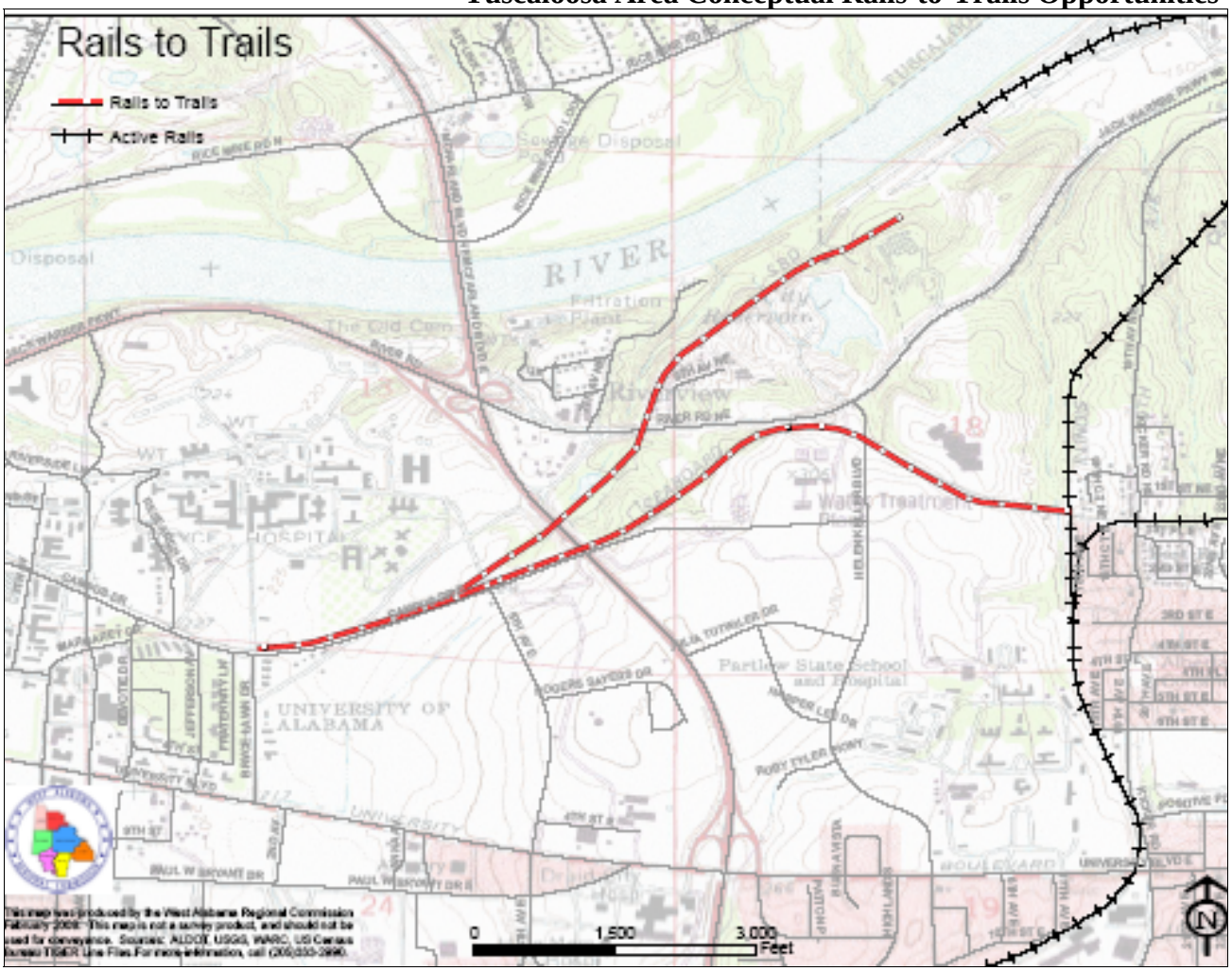
Name	Region	Response
Northwest Alabama Council of Local Government (NACOLG)	Shoals	No plans included in response
West Alabama Regional Commission (WARC)	Tuscaloosa	See below
Regional Planning Commission of Greater Birmingham (RPCGB)	Birmingham	No plans included in response
East Alabama Regional Planning and Development Commission (EARPDC)	Calhoun	See Below
South Central Alabama Development Commission (SCADC)	Montgomery	No plans
Alabama Tombigbee Regional Commission (ATRC)	Camden	No plans included
Southeast Alabama Regional Planning and Development Commission (SEARP&DC)	Dothan	No response
South Alabama Regional Planning Commission (SARPC)	Mobile	See Below
Central Alabama Regional Planning and Development Commission(CARPDC)	Outside Montgomery	No plans
Lee-Russell Council of Government (LRCG)	Auburn-Opelika	No plans
North Central Alabama Regional Council of Government (NARCOG)	Decatur	No plans

Top of Alabama Regional Council of Government (TARCOG)	Outside Huntsville	No Response
Columbus-Phenix City Metropolitan Planning Organization	Columbus-Phenix City	See Below
Etowah Area Metropolitan Planning Organization	Etowah	No response
Huntsville Area Metropolitan Planning Organization	Huntsville	No plans
Southwest Wiregrass MPO	Dothan	No response
Montgomery Area MPO	Montgomery	See below

Compiled by Burk-Kleinpeter, Inc., 2008

The West Alabama Regional Commission (Tuscaloosa Area MPO, West Alabama Rural Planning Organization) included information about rail-to-trail conversion projects under discussion in the Tuscaloosa area. There are two segments of unused rail lines north and east of the University that the City of Tuscaloosa and the University of Alabama have expressed interest in converting to multi-use paths, although as of the writing of this report, ownership was in question. The trails would connect the University campus to the Riverwalk park system and to student housing. (See Figure 1-1)

Figure 1-1
Tuscaloosa Area Conceptual Rails-to-Trails Opportunities



Source: West Alabama Regional Commission

The East Alabama Regional Planning and Development Commission included several planning phase projects for rail-trail conversion in their area. These include:

- The City of Anniston is currently negotiating with Norfolk Southern to acquire a 5.5 mile segment of the former Norfolk Southern 'N' line. This would extend the Chief Ladiga Trail.

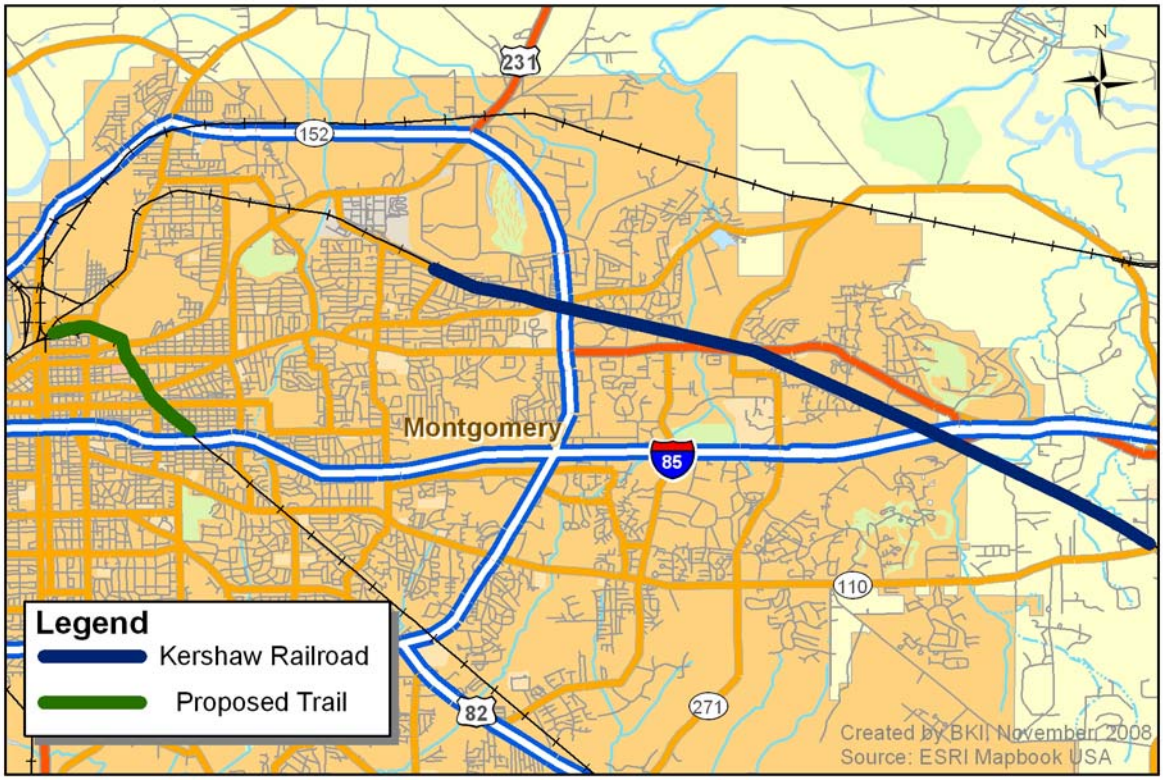
- There is community interest in acquiring and converting a portion of the Tennessee, Alabama & Georgia railroad (TAG) line which runs for 15 miles from Gadsen to Minlow, GA.

The South Alabama Regional Planning Commission noted in their response that their Transportation Improvement Plan (TIP) includes a Whistler Bike Trail sponsored by the City of

Pritchard for 2008. This path follows an abandoned railway from a point near I-65 and exit 9, along SR 17 and terminates near SR 158.

The Montgomery Area MPO has plans for a new trail running along the abandoned rail line from downtown to near I-85. Also, there is a potential plan to reuse the Kershaw rail line for a commuter oriented trail. This project would be a "Transit Oriented Development" type project.

Figure 1-2
Old Kershaw Railroad and Proposed Rails to Trails Route in Montgomery, Al



Regional and Municipal Rail Planning

Rail planning also occurs within governmental units below the level of the Alabama Department of Transportation. Regional Planning Commissions (RPCs), Regional Councils of Governments (COGs), and Metropolitan Planning Organizations (MPOs) all deal with rail issues and must consider rail when developing their Long Range Transportation Plans.

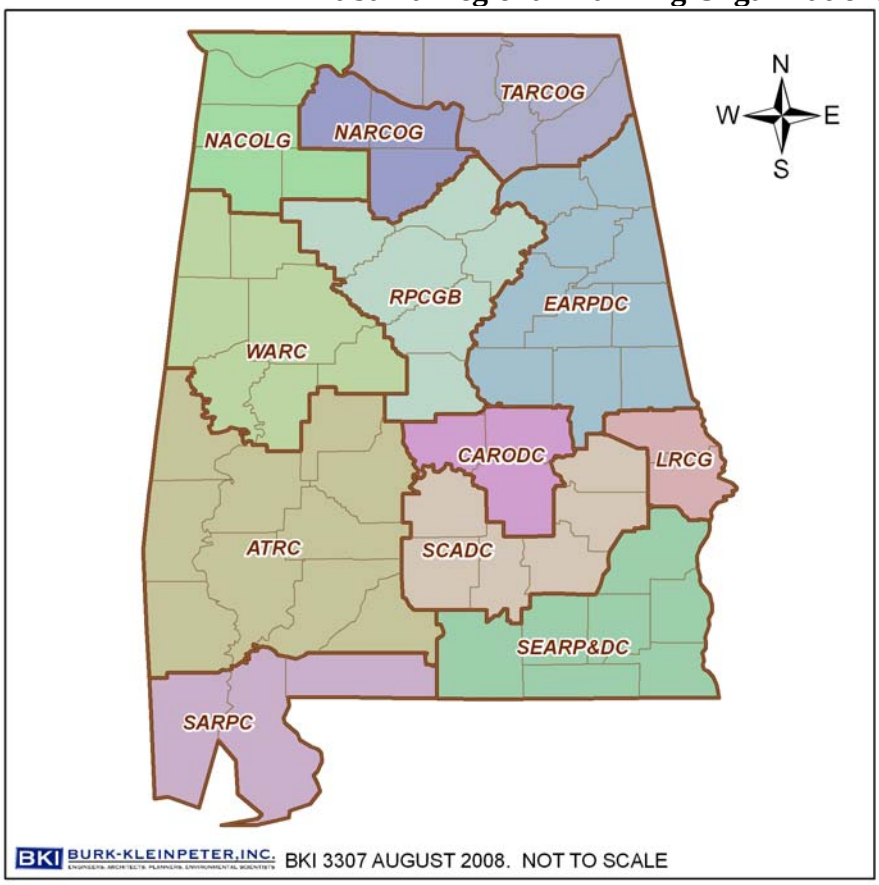
Alabama's twelve regional councils were created in the period between 1963 through 1971. Much of the impetus for the creation of regional planning organizations in Alabama came from the passage of the Public Works and Economic Development Act of 1965 and the Appalachian Regional Development Act of 1965, which provided respectively for the establishment of Economic

Development Districts (EDDs) and Local Development Districts (LDDs). Administrative funding was provided through the Economic Development Administration (EDA) and the Appalachian Regional Commission (ARC) for operation of districts tasked with responsibilities for strategic policy development to address economic development and quality of life issues on a multi-jurisdictional basis. The U.S. Department of Housing and Urban Development also funded local planning assistance and regional planning initiatives and issued guidelines in 1969 which established a system of certification for area-wide planning organizations. During this period, municipal and county governments in Alabama voluntarily coalesced through regional compacts into the twelve regional councils present in Alabama today.[19]

The formation of the regional councils in Alabama has its basis in state law. The earliest authorization for formation of a regional planning commission was enacted by the Alabama State Legislature in 1935. In 1963, the legislature passed additional legislation authorizing multi-jurisdiction planning in response to requirements contained in the Federal Aid Highway Act of 1962. That legislation provided the basis for formation of regional councils in the period from 1963 to 1969. In 1969, Act 1126 revamped the state's enabling legislation authorizing the governing bodies of local governments to establish regional planning and development commissions and to petition the governor for certification. That act, with subsequent amendments, has provided the statutory authority for the operation of the regional councils in Alabama since that time. By 1971, the regional councils of Alabama had emerged in the form which is seen today. In 1971 Governor George C. Wallace, through executive order, established the current boundaries and certified the existing regional councils. (Refer to Figure 1-3, below.)

[19] Alabama Association of Regional Councils, "About AARC" <http://www.alarc.org/about/index.html> September 17, 2008.

Figure 1-3
Alabama Regional Planning Organizations



Source: BKI, August 2008

The roles of the regional councils in Alabama have evolved over time to respond to the needs and goals of their respective member governments. In the early years, the missions of regional councils focused on tasks such as local planning assistance and grant writing, response to the EDD and LDD responsibilities, and regional planning studies funded by the U.S. Department of Housing and Urban Development.

During the 1970s, Regional Councils in Alabama assumed other responsibilities including management of human services programs. Many of the regional councils took on the responsibility of establishing Area Agencies on Aging (AAAs) and implemented locally-based programs for the elderly with funding from the Alabama Commission on Aging under the Older Americans Act (OAA). Many of the regional councils also implemented Older Worker Training Programs under Title V of the Older Americans Act. Additionally, seven regional councils assumed responsibilities as the Metropolitan Planning Organization (MPO) for transportation planning in designated metropolitan areas. It is their role in transportation planning that is of interest here.

Regional Planning and Development Commissions

One area where the regional councils are similar is in their responsibility to create Long-Range Transportation Plans, Unified Work Plans, and Transportation Improvement Plans (TIPs) for the region. These documents address the transportation needs of the region and lay out a framework to finance and construct improvements. The regional councils are profiled below.

Region 1: Northwest Alabama Council of Local Governments (NACOLG)

The Northwest Alabama Council of Local Governments (NACOLG) is the regional planning and intergovernmental coordination agency comprised of the five-county region of Colbert, Franklin, Lauderdale, Marion, and Winston Counties, along with the municipalities therein. It also serves as the MPO for the Shoals/Florence area. While NACOLG is not a government, it is an extension of city and county government through which officials get together to decide issues of regional importance and work together to solve problems that stretch beyond local government boundaries. All NACOLG policy decisions are made by local elected officials. This insures all NACOLG programs and policies reflect the interest of the member governments.

The Long-Range Transportation Plan 2030 focused primarily on traffic and highway improvements, but two projects were identified as intermodal projects. One, a rail relocation of Norfolk Southern tracks, which extend through the southern portion of the study area, would reduce the number of at-grade crossings in traffic congested areas in the Shoals Area. This railroad relocation would potentially improve both auto and rail efficiency. The other project was an access road to the state docks. (Railroads within the Region: NS, BNSF, TSRR, RRC)

Region 2: West Alabama Regional Commission (WARC)

The West Alabama Regional Commission is made up of representatives from seven counties - Bibb, Fayette, Greene, Hale, Lamar, Pickens and Tuscaloosa - and thirty-seven municipalities. The Commission is governed by an executive committee and a board of directors and receives its funding from federal matching grants, member government dues, an annual appropriation from the State of Alabama, and contract fees.

The Tuscaloosa Area MPO - part of the WARC RPO – has updated its Long-Range Transportation Plan to 2030. This plan calls for:

- Converting the train station into an intermodal facility, serving the Transit Authority, Amtrak, and Greyhound,
- Extending rail service to the Tuscaloosa-Northport Inland Dock, and
- Developing the airport to support regional cargo operations.

Within the region there are three Class I railroads including the BNSF, NS, and CSX. The Alabama and Gulf Coast Railroad (AGR), a regional carrier, the Luxapalila Valley Railroad (LXVR) and Alabama Southern Railroad (ABS), both local linehaul carriers, as well as Amtrak, also operate in the area.

Region 3: Regional Planning Commission of Greater Birmingham (RPCGB)

The Regional Planning Commission of Greater Birmingham provides planning services for a six-county region in central Alabama including Blount, Chilton, Jefferson, Shelby, St. Clair and Walker Counties. The Birmingham Metropolitan Planning Organization (MPO), part of the regional agency, is responsible for comprehensive transportation planning in Jefferson and Shelby counties. Members of the MPO include local and state government officials as well as representatives from the Birmingham-Jefferson County Transit Authority (BJCTA) and the Alabama Department of Transportation (ALDOT).

The Birmingham Area Long Range Transportation Plan (LRTP) is the focal point of the MPO's planning programs and activities. Thomas Yards was identified as an intermodal facility where goods can be transferred from one mode of transportation to another. The widening of SR-269 from Maytown City Limits to Port Birmingham will improve access to Port Birmingham.

Within the region there are three Class I carriers including CSX, NS, and BNSF. Also, there are four local railroads that operate track in the area: the Alabama & Tennessee River (ATN), a linehaul carrier; and Birmingham Southern (BS), Jefferson Warrior (JEFW), Southern Electric Railroad (SERX), which are terminal and switching railroads. Amtrak's Crescent Line runs one train in each direction every day using the NS line through Birmingham.

Region 4: East Alabama Regional Planning and Development Commission (EARPDC)

The East Alabama Regional Planning and Development Commission is a voluntary association of the municipal and county governments created in 1971 through the merger of two existing regional agencies, one based in Anniston and one in Alexander City. Its regional service area comprises ten counties extending northward along the boundary between Alabama and Georgia in the northeast part of the state. These counties include: Calhoun, Chambers, Cherokee, Clay, Cleburne, Coosa, Etowah, Randolph, Talladega, and Tallapoosa. The EARPDC is also the MPO for the Calhoun County Area, which has an extensive rail system. Included in this system is the Norfolk Southern Railroad which has approximately thirty-six trains a day through the area. Amtrak provides service to the area twice each day. The Alabama & Tennessee River Railway, Eastern Alabama Railway, and CSXT also operate within the region.

The local transit system provides access to both the Amtrak and Greyhound terminals. Currently, improvements and renovations are being done to the Anniston station to turn it into a multimodal terminal.

Region 5: South Central Alabama Development Commission (SCADC)

The South Central Alabama Development Commission (SCADC) is a public, quasi-governmental agency that includes Bullock, Butler, Crenshaw, Lowndes, Macon, Montgomery (which has its own MPO listed below), and Pike Counties.

Each county in the district has rail service except Crenshaw and Bullock Counties, although the amount of service has significantly decreased over the last decade. Presently, four railway companies serve the district including CSX, the M & B, the Conecuh Valley Railroad, and the Three Notch Railroad. Several of the larger municipalities located in the rural areas and many of the incorporated towns are not served by rail. This has had adverse effect on their development and will continue to affect their ability to attain economic growth. However, the distribution of the rail lines throughout the district is such that several suitable industrial sites can be made available along existing rail lines.

Region 6: Alabama-Tombigbee Regional Commission (ATRC)

The Alabama-Tombigbee Regional Commission was founded in 1970. It is comprised of ten counties, including Choctaw, Clarke, Conecuh, Dallas, Marengo, Monroe, Perry, Sumter, Washington, and Wilcox counties, as well as 47 municipalities within the counties in southwest Alabama. The Regional Commission's goal is to develop and implement policies and programs that can help local governments plan and act together on issues of regional significance. There is no MPO in the region.

The ATRC region is served by two Class I railroads, Norfolk Southern and CSXT, as well as the Alabama & Gulf Coast Railway, a regional railroad, the M & B Railroad, and Alabama Railroad, both local linehaul carriers.

Region 7: Southeast Alabama Regional Planning and Development Commission (SEARP&DC)

The Southeast Alabama Regional Planning and Development Commission (SEARP&DC) was created in 1969. The Commission consists of Barbour, Coffee, Covington, Dale, Geneva, Henry, and Houston counties. The only MPO in the district is the Dothan Area MPO. Railroads operating in the Region include GSWR, WGCR, AF, TNHR, BAYL, CHAT, and CSXT

Region 8: South Alabama Regional Planning Commission (SARPC)

The Mobile County Regional Planning Commission became a tri-county region in 1968 when Baldwin and Escambia Counties entered into full membership with Mobile County, at which time it became the South Alabama Regional Planning Commission. Today, the SARPC has twenty-nine member governments including three counties and twenty-six municipalities.

The SARPC region has a large rail and intermodal presence due to its proximity to the Gulf of Mexico. Within the region there are five Class I railroads (CN, CSXT, NS; BNSF and KCS have trackage rights), a regional linehaul (AGR), and two local railroads (TASD and ALAB). Further, the Alabama State Port Authority has constructed the Choctaw Point and Garrows Bend facilities in the Port of Mobile. In September 2008, the newest container port in the mid-Gulf commenced operations. The Choctaw Point Terminal intermodal facility in Mobile will increase the port's capacity for 20-foot containers from 60,000 to 600,000. (Last year, Mobile handled a mere 23,960 containers.) According to a study by the University of South Alabama, the new terminal will support 310 permanent jobs and generate some $612,000 in annual tax revenues. Mobile Container

Terminal - a joint venture between APM Terminals North America and Terminal Link, a division of CMC CGM – is leasing the terminal from the Alabama State Port Authority.

In order to support the new terminal, the Alabama State Port Authority is developing an 80-acre intermodal container transfer facility (ICTF) at Garrows Bend. At full build-out the ICTF will include five working tracks (each over 3,000 feet long), five storage tracks, two arrival/departure tracks, and a run-around track. It is envisioned that rubber-tired gantry cranes (RTGs) will be used to load and unload containers. The proposed RTG runways are about 2,800 feet long. Both CSX and CN will have direct access to the site. A dedicated highway bridge will link the new container terminal to the new railyard.

Region 9: Central Alabama Regional Planning and Development Commission (CARPDC)

The Central Alabama Regional Planning and Development Commission was established by the voluntary association of the governments of Montgomery, Elmore, and Autauga Counties. The Commission was organized in 1975 as an advisory planning commission. The MPO functions of the CARPDC are handled by the Montgomery area MPO (see below*). CSXT and NS operate in the Region.*

Region 10: Lee-Russell Council of Governments (LRCG)

Lee-Russell Council of Governments is a regional planning and development organization that serves member governments by managing programs, promoting collaborative efforts, and serving as a clearinghouse for federal, state, and local funds. Its members include Lee and Russell County Governments as well as the cities of Auburn, Opelika, and Phenix City.

According to the 2030 Long-Range Transportation Plan for the RPO, the Auburn-Opelika area has two Class I freight rail operators with rail lines traversing through the study area: CSX Transportation and the Norfolk Southern. The CSX line runs from Montgomery to Lanett, passing through downtown Auburn and downtown Opelika, generally parallel to SR 14. CSX provides service to the International Paper plant. The Norfolk Southern line is a secondary main line connecting Birmingham, AL, with Columbus, GA. It passes through Opelika, generally running parallel to US 280. Norfolk Southern operates two stations within the MPO area, at Opelika and Royal City and services the Michelin tire factory. The two lines connect in Opelika. Unfortunately, there are no passenger rail services or intermodal operations in the MPO area.

Region 11: North Central Alabama Regional Council of Governments (NARCOG)

NARCOG is the North-central Regional Council of Governments. NARCOG consists of representatives from seven participating member Governments, including the County Governments of Cullman, Lawrence and Morgan, and the Municipal Governments of Cullman, Decatur, Hartselle and Moulton. Organized in 1966, NARCOG is the Metropolitan Planning Organization for the region.

According to the MPO's Transportation Improvement Plan (TIP), the Decatur area has a comprehensive rail system including two railways, CSX Transportation and Norfolk Southern, both

with offices and yards in Decatur. The CSX line is one of the primary north-south lines in the Nashville Division. It originates near Panama City, FL and passes into the Chicago Division just north of Nashville, Tennessee. Average train count numbers obtained from CSX indicate that 30-35 trains per day pass through Decatur.

The Norfolk Southern rail yard is located near downtown Decatur as well. The Norfolk Southern line is a major east-west line. It crosses the Alabama-Mississippi state line ion route from Corinth, MS to Muscle Shoals, AL on to Decatur. From Decatur, the rail line passes through Huntsville, AL on to Chattanooga, TN. An average of 18-20 trains per day pass through Decatur on this line. There is currently no passenger rail service that operates through the Decatur study area. According to the TIP, areas within the regional transportation system which require attention include:

- Railroad Crossing Safety
- Railroad Noise Identification & Mitigation
- Enhancement of the transportation system within the study area
- Improved data on freight and rail movements within the study area
- Improvement of freight and rail facilities

Strategies mentioned that will be used to address to address those needs include:

- Continuing to support and enhance Railroad Crossing Safety Programs
- Continuing to encourage and support Railroad Noise Identification and Mitigation programs in the study area.
- Continuing to upgrade, repair and begin new construction of the transportation system when funds become available.
- Developing and maintaining a detailed freight study for the study area.
- Continuing to work with local, state and federal committees on Rail – Freight issues.

Region 12: Top of Alabama Regional Council of Governments

Established by a local initiative in 1968, the Top of Alabama Regional Council of Governments (TARCOG) includes the governments of five northeast Alabama counties (DeKalb, Jackson, Limestone, Madison, and Marshall) and the municipalities located in those counties. CSXT, NS, ATN, HMCR, and SQVR operate in Region 12.

Figure 1-4
Norfolk Southern Train near Decatur, AL with Union Pacific Power on the Point

Source: www.alabamarailfan.com

Alabama Metropolitan Planning Organizations

In addition to the seven regional planning organizations that serve as MPOs, there are five municipal-based Metropolitan Planning Organizations (MPOs) within Alabama. MPOs are located in metropolitan areas of 50,000 population and focus strictly on transportation matters.

The role of the MPO in Alabama is to ensure that existing and future expenditures for transportation projects and programs are based on a continuing, cooperative, and comprehensive planning process. This process is designed to foster public involvement by all interested parties through coordination between the MPO, the State Department of Transportation, and transit operators.

Similar to the regional organizations, MPOs are responsible for producing long range plans and TIPs, as well as other community related programs and reports. The five MPOs within the state of Alabama that are separate from the regional agencies are described below.

Columbus-Phenix City Area MPO

The Columbus-Phenix City Metropolitan Planning Organization (C-PCMPO) is responsible for providing transportation policy and overseeing the federal transportation process for the Columbus region, which includes full and fair participation by the public. The C-PCMPO consists of Muscogee and Chattahoochee Counties in Georgia and parts of Russell and Lee Counties in Alabama.

The organization is officially known as the "Columbus-Phenix City Transportation Study" and is the lead agency responsible for administering and coordinating the activities of participants carrying out the required tasks of the transportation process.

The Long Range Transportation Plan (LRTP) serves as a blueprint that details how the existing transportation system works and how local residents would like it to work in the future. In addition, it considers the protection of the value of investments already made in developing the transportation system, while providing resources to pursue innovative solutions to mobility constraints and enhancing travel choices available

Etowah Area MPO

On July 15, 1964, a cooperative agreement between the Alabama Department of Transportation (ALDOT) and the governing bodies of the local area was executed. The responsible agency for the local area was the Etowah Regional Transportation Committee, which met for the first time on July 27, 1964. The coordinator for this committee was the Director of Planning and Engineering for the City of Gadsden.

Since November 17, 1994, the Etowah Area Metropolitan Planning Organization (MPO) has been the MPO for the portion of Etowah County that includes the municipalities of Attalla, Gadsden, Glencoe, Hokes Bluff, Rainbow City, Reece City, Southside and a small segment of Northern Calhoun County. In addition, the municipalities of Ohatchee (Calhoun County) and Steele (St. Clair County) are invited to participate as non-voting members. The City of Gadsden Planning Director serves as the Executive Director of the Etowah Area MPO. The study area covers approximately 230 square miles. The 2000 census figures indicated that the population figure for the Gadsden / Etowah study area was approximately 88,500 people.

The Etowah Metropolitan Planning Organization’s major tasks include the development of a Long-Range Transportation Plan (LRTP) every five years with updates. The recommended projects are prioritized by the EMPO and submitted to the Alabama Department of Transportation for inclusion in the State Transportation Improvement Program (STIP). The EMPO Technical Staff also prepares a Unified Planning Work Program (UPWP) which outlines tasks to be completed as it relates to intermodal planning.

Huntsville Area MPO

The local MPO, formally known as the Huntsville Area Transportation Study (HATS), was established in the 1970s by the Governor of Alabama. The HATS/MPO operates under a signed agreement concerning the transportation planning process for the Huntsville Urbanized Area. The agreement, updated in 1995, was signed by Madison County, the municipalities of Huntsville, Madison, Owens Cross Roads, and Triana, the State of Alabama, and the Top of Alabama Regional Council of Governments. It indicates that the Huntsville Urbanized Area will carry out a 3-C (cooperative, comprehensive, and continuing) transportation planning process. This is imperative, so that coordination with the planned development of the Huntsville Urban Area can occur, and so that the designated jurisdictions can qualify for federal funding assistance for highway improvements.

Figure 1-5
A TASD switcher near the McDuffie Coal Terminal

Source: www.alabamarailfan.com

The HATS/MPO plans and programs transportation improvements for the Huntsville Urbanized Area through the Unified Planning Work Program, Transportation Improvement Program, and the Long-Range Transportation Plan. All federally funded transportation projects in the urban area must be programmed for construction by the HATS/MPO, and be listed in the Transportation Improvement Program and the Long Range Transportation Plan adopted by the HATS/MPO.
The long range transportation plan, also known as the metropolitan transportation plan, addresses a planning horizon of at least 20 years, per federal law. The HATS/MPO's long range transportation plan covers a planning period of 25 years, and is updated every 5 years. The plan includes both long-range and short-range strategies or actions that lead to the development of an integrated multimodal transportation system that facilitates the safe and efficient movement of people and goods, by addressing current and future transportation demand. The HATS/MPO prepares the long range transportation plan in conjunction with the Alabama Department of Transportation.

The International Intermodal Center (IIC) is one of the entities that is owned and operated by the Huntsville Madison County Airport Authority (HMCAA) and provides multi-modal services and facilities at one central hub location. The center supports a range of services for receiving, transferring, storing, and distributing air, rail, and highway cargo. It also features a U.S. Customs & Border Protection Port of Entry with Customs Officials, U.S. Department of Agriculture Inspectors, and Custom Brokers on site. Rail service is provided by Norfolk Southern. (For more information on this facility, see Chapter 5).

Montgomery Area MPO

Public transportation planning has long focused on moving people around; however, understanding and planning for goods movement (freight) has been a part of metropolitan transportation planning requirements since the adoption of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991. Part of the Public sector's challenge of planning for freight is that freight movement is largely generated by the private sector in a competitive rail and trucking industry.

The Montgomery area has two Class I rail freight operators with rail lines traversing through the study area: Norfolk Southern and CSX Transportation (CSX). CSX has the greatest rail presence within Autauga, Elmore and Montgomery Counties with three major lines: Montgomery-Flomaton (110 miles), Montgomery-West Point, GA (89 miles), and Parkwood-Montgomery (87 miles). CSX is the major rail carrier in the Montgomery Area. CSX routes include Nashville to Atlanta and New Orleans via Montgomery.

One Norfolk Southern line branch line traverses through Autauga County from Maplesville to Autauga Creek (41 miles). Norfolk Southern has trackage rights over CSXT on the Autauga Creek to Montgomery line. The average yearly traffic volume on the line is 1.1 million gross ton-miles per mile. Norfolk Southern indicates that traffic on the line is steady to declining.

Freight transportation is important to the Montgomery area's economy. Montgomery freight has the choice of traveling by truck, barge, rail and air, providing modal options to prospective businesses.

Figure 1-6
Alabama & Florida Engine Unit in Andalusia, AL

Source: www.alabamarailfan.com

Southwest Wiregrass Area MPO

The function of the Southeast Wiregrass Area Metropolitan Planning Organization (MPO) is to work with the governmental entities of the area and the Alabama Department of Transportation to determine transportation needs and funding priorities through the Long Range Transportation Planning process. The policies and practices of the MPO are used to guide the development of a balanced transportation system, encourage the preservation of neighborhoods, and protect the environment.

The Southeast Wiregrass area has an extensive rail system. Included in the system are:

- CSX in Dale County to Bainbridge, GA
- CHAT in Dothan, AL to Hilton, GA
- The Bayline from Abbeville, AL to Panama City, FL
- Wiregrass Central to Enterprise, AL

There is no passenger rail service in this MPO area. As a part of its transportation safety planning, the Southwest Wiregrass Area MPO continues to evaluate the safety needs of at-grade crossings as traffic volumes and/or rail line volumes increase.

Freight Rail Plans

In addition to state and regional planning, the private sector railroads also engage in long range planning. Recently, NS unveiled a long range plan which has implications for Alabama.

Norfolk Southern's I-81 Crescent Corridor Initiative

The I-81 Strategy is a plan that will expand service along the NS Crescent Corridor which runs between Texas and New Jersey. The plan calls for the expansion of service and construction of parallel track between Knoxville, TN and Harrisburg, PA along the NS Piedmont and Shenandoah Branches to provide an alternative to on-road shipping via I-81. Along with increasing NS' market in the region, which is thought to be largely untapped as far as long-haul intermodal service, the project will potentially remove nearly one million trucks annually form the corridor, depending on the level of investment.

Because the project covers such a large area, NS is looking for State and Regional buy-in to help move the project forward. In total, the project area involves dozens of state and local governments. Although the process of getting all the separate regions on board will be long and difficult, NS feels the benefits are worth the investment. Among other goals, NS will seek to provide rail service that rivals the delivery time of truck transit by introducing 28 new trains to the network as the project develops. This will benefit businesses searching for shipping options as well as create economic benefits for the regions involved.

Other benefits of reduced highway congestion along the I-81 corridor will include reduced roadway maintenance and expansion costs, lower emissions and fuel consumption, and opportunities for economic development. NS hopes to have the project completed by 2013.

Implications for the State of Alabama

Generally speaking, the condition of the railroads in Alabama is good. The same trends seen around the nation are occurring in Alabama, also. The Class I railroads continue to rationalize their systems by streamlining their routes and forging alliances with other Class I railroads where necessary. While continuing to move their traditional "heavy, dumb stuff" (i.e., coal, grains, chemicals, and minerals), they see new opportunities in high value manufactured products, both

imports and domestically-produced goods. Meanwhile, Regional and Local railroads continue to find their niches in serving local communities.

The new container terminal, Choctaw Point, in the Port of Mobile, along with its Garrows Bend Intermodal Container Transfer Facility, signifies a new era of international trade for the State of Alabama. In addition, large corporate production centers across the state, such as the Thyssen-Krupp steel plant north of Mobile, will generate significant freight traffic. Other large sources of freight include:

- Honda plant in Lincoln, AL (Talladega County)
- Mercedes plant in Vance, AL (Tuscaloosa County)
- Hyundai plant in Montgomery County
- Kia plant in West Point and the Alabama/Georgia State Line
- Toyota engine plant in Huntsville, AL (Madison County)

Chapter 2: Alabama Railroad Inventory

2. Alabama Railroad Inventory

Railroad operations in Alabama have historically been oriented to the movement of goods between major population centers and the Gulf Coast port cities. Through the years, those routes radiating out from the ports have been integrated into a comprehensive rail network. This has worked to Alabama's advantage, as new industries seeking transportation efficiency, particularly intermodal efficiency, have found what they were looking for in Alabama, especially in terms of rail and waterborne shipping.

General Overview

Figure 2-1 on the following page depicts the statewide rail network in the year 2008. As can be seen on the map, the state is criss-crossed by rail lines. According to the most recent report by the AAR, total rail miles of road operated in the State of Alabama is 3,759 miles.[1] As defined by the AAR, "miles of road" is the aggregate length of roadway, excluding yard tracks and sidings, and does not reflect the fact that a mile of road may include two, three, or more parallel tracks. Miles of road operated, less trackage rights, which eliminates double-counting caused by more than one railroad operating the same track, is the measure of the rail network. As published by the AAR, the amount of railroad mileage operated in Alabama, by classification, is shown below in Table 2-1.

Table 2-1
Miles of Railroad in Alabama

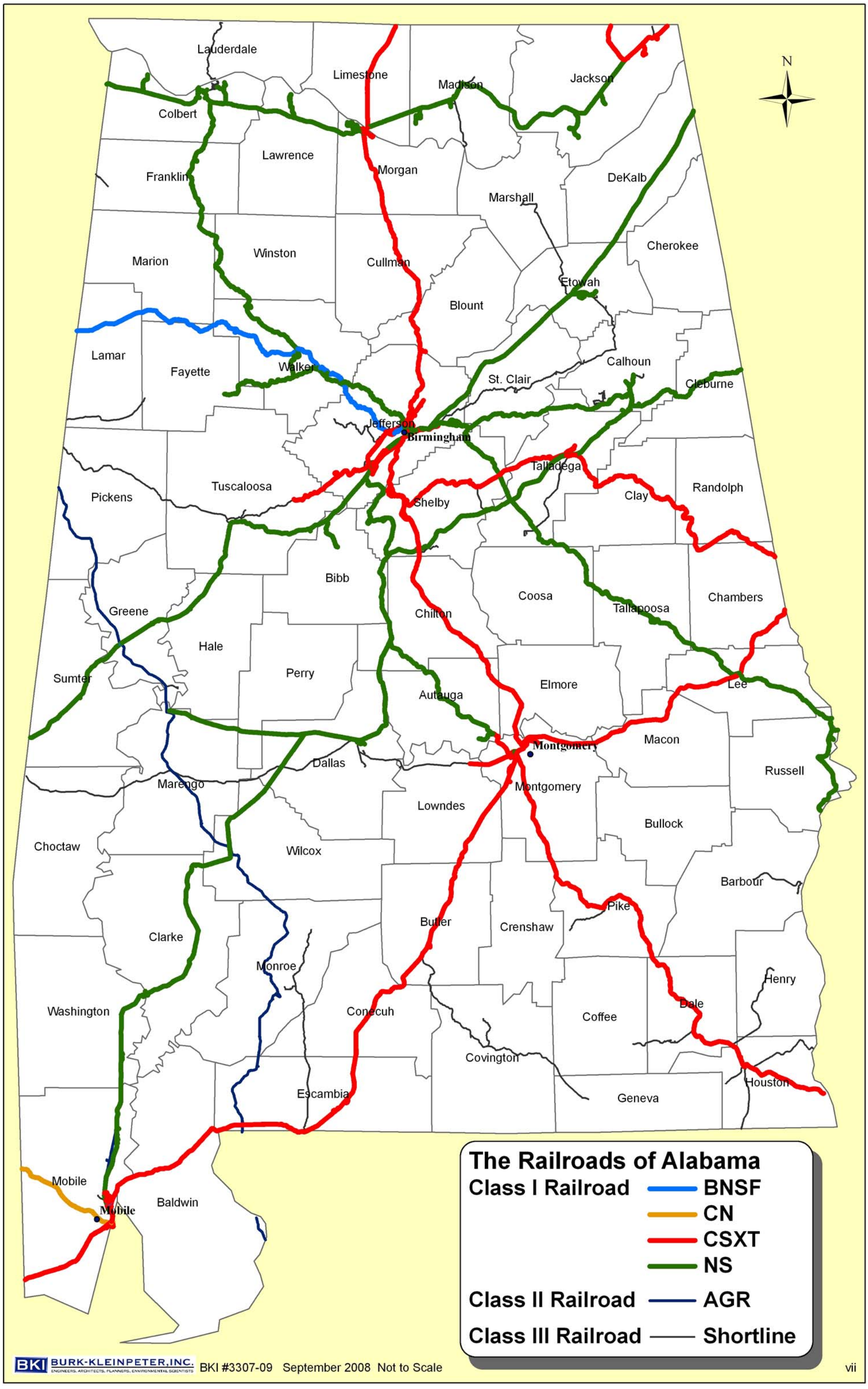
Class of Railroad	Miles
Class I	2,684 miles
Class II/Regional	344 miles
Class II/Local Linehaul	572 miles
Class III/Local Switching and Terminal	159 miles
Total	3,759 miles

Source: Association of American Railroads, 2007.

Classification of Railroads

The classification of U.S. railroads as Class I, II, or III was started by the Interstate Commerce Commission (ICC) in the 1930s.[2] Class I railroads were the largest railroads, as defined by operating revenues. Smaller railroads were classified as Class II or Class III. The exact revenues required to be in each class have varied through the years and they are now continuously adjusted

[1] Railroad Ten-Year Trends, 1997-2006, Vol. No. 24. Policy and Economics Department, Association of American Railroads, 2008.
[2] "Class I Railroad." Wikipedia.org, January 22, 2008.



BKI BURK-KLEINPETER, INC. ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS BKI #3307-09 September 2008 Not to Scale

for inflation. The classifications are important because financial reporting requirements and labor regulations are different for each class. In 1995, the ICC was terminated and the Surface Transportation Board (STB) took over its functions. The STB is an economic regulatory agency that Congress has charged with the fundamental missions of resolving railroad rate and service disputes and reviewing proposed railroad mergers. It is decisionally independent, although it is administratively affiliated with the U.S. Department of Transportation.[3]

Initially, Class I railroads were defined as railroads with operating revenues of at least $1 million and in 1939 there were 132 Class I railroads. The $1 million figure was used until 1956, by which time the number of Class I railroads had dropped to 113. Since then, the cut-off was increased to $3 million in 1963, $5 million in 1965, $10 million in 1976 and $50 million in 1978, at which point only 41 railroads were still recognized as Class I. In 1982 the STB adopted a procedure to adjust the threshold annually for inflation by restating the 1978 threshold of $450 million in constant dollars. In 1992 the STB raised the threshold for Class I status from $50 million in 1978 dollars to $250 million in 1991 dollars. Table 2-2 shows the 1997 -2006 revenue thresholds for Class I railroads.

Table 2-2
Operating Revenue Threshold for Class I Railroads, 1997-2006

Year	Annual Operating Revenue (millions)
1997	$256.4
1998	259.4
1999	258.5
2000	261.9
2001	266.7
2002	272.0
2003	277.7
2004	289.4
2005	319.3
2006	346.8

Source: AAR, 2007.

Today, railroads are classified by the Surface Transportation Board (STB) and by the Association of American Railroads (AAR). For regulatory purposes the STB classifies railroads into three groups – Class I, Class II, and Class III – based on operating revenue. The current STB classifications based on operating revenues are:

[3] Association of American Railroads, "Railroad Ten-Year Trends, 1997-2006."

- Class I - $346.8 million or more
- Class II - $40 million to $346.8 million
- Class III – less than $40 million

In 1979 the financial and operations reporting requirements were dropped for Class II and Class III railroads and nowadays the designations are rarely used. The STB, however, continues to use Class II and Class III designations as labor regulations are different for the two classes.

Based in Washington, DC, the Association of American Railroads (AAR) is committed to keeping the railroads of North America safe, fast, efficient, clean, technologically advanced, and secure. AAR members include the major freight railroads in the United States, Canada and Mexico, as well as Amtrak and several shortline holding companies. In contrast to the STB's regulatory needs, the major focus of a database developed by the AAR's Policy and Economics Department is tracking changes in the railroad industry resulting from the creation of new railroads spun off from the Class I carriers. Some of these new roads are hundreds of miles long, while others operate only one or two miles. The AAR's classification scheme is designed to distinguish between these roads and their different operating characteristics. After reviewing several factors, it was determined that the combination of miles of road operated and revenue was sufficient to make the needed distinction. The definitions for the three AAR categories are:

Class I Railroad

In 2006, the STB Class I Threshold was annual operating revenue of $346.8 million. This threshold is indexed to a base of $250 million in 1991 and adjusted annually in concert with changes in the "Railroad Freight Rate Index" published by the Bureau of Labor Statistics. Seven Class I railroads reported to the STB for 2006. Declassification from Class I occurs when a railroad falls below the applicable threshold for three consecutive years.[4]

Regional Railroad

Regional railroads are non-Class I, linehaul, freight railroads which operate at least 350 miles of road and/or earn at least $40 million in revenue. There were thirty-three Regional railroads nationally in 2006.

Local Railroad

Local railroads include freight railroads which are not Class I or Regional, they operate less than 350 miles of road and earn less than $40 million annually. The local railroad category can be further divided into local line haul carriers and switching and terminal carriers. This latter category is composed of railroads which primarily provide switching and/or terminal services for other railroads. They usually have a relatively large number of employees per track mile. In 2006 there were 196 local switching and terminal railroads nationally.

[4] Railroad Ten-Year Trends, 1997-2006. Policy and Economics Department, Association of American Railroads, 2007.

There is no official or legal definition of "shortline railroad" but the railroad industry as a whole and the American Shortline Railroad Association, in particular, applies the term to railroads with less than 100 miles of mainline track.

Class I Railroads in Alabama

According to the AAR, the Class I railroads operate 2,684 miles of track in Alabama, about 71 % of the total mileage of the state. While this appears to be down some 1,416 miles from the 4,100 miles reported in the *2001 Rail Plan Update*, most of this reduction can be accounted for as reporting anomalies, that is, railroads reporting miles of track in 2001 instead of miles of road (or route miles). This certainly appears to be the case with Norfolk Southern, which reported 2,141 miles of track operated in 2001, but only 1,371 in 2008. (When asked about the loss of 770 miles of road between 2001 and 2008, officials at NS stated that this was not the case, that it must have been a reporting error.[5]) It is suspected that several other railroads reported in the same manner.

Following is a brief profile of the four Class I railroads that operate in Alabama. For more detailed information about these railroads, refer to the *2008 Alabama Rail Directory* published by the Alabama Department of Transportation.

Burlington Northern Santa Fe Railroad (BNSF)

Headquartered in Fort Worth, Texas, Burlington Northern Santa Fe Corporation (BNSF), through its subsidiary The Burlington Northern and Santa Fe Railway Company, operates one of the largest railroad networks in North America, with 32,000 route miles covering 28 states and two Canadian provinces. This vast network covers the western two-thirds of the United States, stretching from major Pacific Northwest and Southern California ports to the Midwest, Southeast and Southwest, and from the Gulf of Mexico to Canada. BNSF operates over 115 million of its own tracks in Alabama, and another 129 miles in trackage rights from other railroads. BNSF handles over 9.3 million carloads of cargo, annually, with 327,465 handled within Alabama.

Canadian National (CN)

Canadian National is a leader in the North American rail industry. Following privatization in 1995 and integration with Illinois Central, Canadian National Illinois Central is now able to provide shippers with more options and greater reach in the rapidly expanding market for north-south trade. The CN operates nearly 21,000 miles of track in Canada and the U.S. with twenty-seven miles of road in Alabama. Annually, CN transports 4.1 million carloads of cargo in North America.

CSX Transportation (CSXT)

CSX Transportation is a major eastern railroad, providing rail transportation and distribution services over a 22,700 route-mile network in 23 states, the District of Columbia and two Canadian

[5] Telephone conversation with Mr. Randall W. Hunt, Manager, Strategic Planning, Norfolk Southern Corporation, June 26, 2008.

provinces. CSX Transportation, a unit of CSX Corporation, is comprised of hundreds of predecessor railroads, the oldest of which dates back more than 170 years. The CSX operates over 1,100 miles of track in Alabama, some of that via trackage rights. Annually, CSX transports 6.6 million carloads, with 140,000 carloads of coal, corn, limestone, and paper products handled in Alabama.

Norfolk Southern Railway Company (NS)

Norfolk Southern is a Norfolk, Virginia based holding company which owns the major freight railroad known as Norfolk Southern Railway Company. The rail operations form a single system of some 21,000 miles of road in 22 states located in the East, the District of Columbia and the Province of Ontario, Canada. NS operates the most extensive intermodal network in the East and is North America's largest carrier of metals and automotive products. System wide, NS handled 5.8 million carloads in 2007. In Alabama, the NS operates 1,371 miles of track and hauls over 6.3 million tons annually.

Alabama's Regional Railroad

Alabama has only one Class II railroad.

Alabama & Gulf Coast Railway (AGR)

The Alabama and Gulf Coast Railway was one of eight freight and scenic shortline railroads owned by StatesRail, a shortline railway holding company headquartered in Dallas, Texas. In January 2002, the AGR became a member of the RailAmerica family as a result of the acquisition of StatesRail by RailAmerica, Inc. The AGR operates over 429 miles of track from Columbus, MS to Pensacola, FL and from Kimbrough, AL to Mobile, AL. In Alabama, the AGR operates 344 miles of track (including trackage rights) hauling paper products, coal, cottonseed, and lumber with a system wide volume of 58,000 carloads annually.

Alabama's Local Linehaul Railroads

In 2006, there were 323 local linehaul carriers in the U.S., of which 15 operate in Alabama.

Alabama Southern Railroad (ABS)

Alabama Southern Railroad began operations on November 20, 2005. Watco Companies, a Pittsburg, Kansas based company which operates 17 shortline railroads and other rail transportation service facilities in 15 states, acquired the railroad from Kansas City Southern in July 2005 through a lease agreement. The ABS Tuscaloosa Branch consists of 85 miles of track running east from Columbus, MS to Brookwood, AL in Tuscaloosa County. ABS interchanges with the KCS at Artesia, with the CSX at Brookwood, and with the NS at Tuscaloosa, AL.

Alabama & Tennessee River Railway, LLC (ATN)

The Alabama & Tennessee River Railway owns and operates over 122 miles of track extending from Birmingham, AL to the rail barge terminal at the Port of Guntersville, AL. ATN interchanges

with CSX at Boyles Yard in Birmingham and with Norfolk Southern (NS) at Alabama City, AL. The rail line hauls cargo including food, corn, soybean products, wood products, metals and scrap, chemicals, and cement.

The Bay Line Railroad, LLC (BAYL)

The Bay Line provides the only rail service to industries in the Panama City, FL area including a paper mill, a large chemical company, one major steel pipe producer, one major steel fabricating company and a deep-water port operated by the City of Panama City. Numerous other smaller industries are located on the Bay Line as well. In Alabama, the BAYL operates 45 miles of main line track located in Houston, Dale and Henry counties and handles over 27,000 carloads per year.

Chattahoochee Bay Railroad (CHAT)

The Chattahoochee Bay Railroad operates on the old Norfolk Southern and H & S Railroad Company lines. It offers limited freight service from a connection with CSX and the Bay Line at Dothan, AL. The 22-mile mainline is 100 pound rail and handles different types of railcars moving to the GE railcar repair shop.

The Conecuh Valley Railroad (COEH)

The Conecuh Valley Railroad is a Class III railroad company owned by Gulf & Ohio Railroads. The company operates a 14-mile rail line from Troy to Goshen handling commodities such as poultry feed ingredients, plastics, vegetable oil, and food products. It also maintains a 100-car capacity storage yard. The COEH interchanges with Class I operator CSX in Troy, AL.

Eastern Alabama Railway Co. (EARY)

The EARY is a 27-mile railroad branch line and is wholly-owned subsidiary of RailAmerica, Inc. It interchanges with both the CSX, at Bemiston, AL, and the Norfolk Southern Railroad at Sylacauga, AL. EARY handles over 15,000 carloads per year and carries commodities such as limestone, paper, rock, and fertilizers.

Georgia Southwestern Railroad, Inc. (GSWR)

Georgia Southwestern Railroad, Inc. is a Class III railroad company operating 287 miles of rail line in Georgia and 16 miles of track in eastern Alabama. GSWR is a privately owned company operating in Alabama from White Oak to Eufaula (at the Georgia state line). The rail line handles lumber, clay, concrete, glass, stone, and chemicals and carries over 11,000 carloads per year (1,628 in Alabama).

The Huntsville & Madison County Railroad Authority (HMCR)

The Huntsville & Madison County Railroad was formed in 1984 to preserve 13.25 miles of track in Huntsville and Madison County. It is a Class III railroad company whose track extends from Huntsville, AL, where it interchanges with Class I Norfolk Southern Railroad, to St. Gobain Company in Norton, AL. The HMCR handles over 29,000 tons annually and provides access to I-565 via two transloading facilities.

Luxapalila Valley Railroad (LXVR)

The Luxapalila Valley Railroad Company is a Class III railroad company that owns 24.5 miles of track in Alabama. The rail line is 34 miles long and connects from Belk to Columbus, MS. The main commodities moved on the Luxapalila Valley line are wood products and gravel.

M & B Railroad, LLC (MNBR)

The M&B Railroad, owned by Genesee and Wyoming, Inc., operates 19 miles of track within the State of Mississippi and 141 miles within Alabama. The rail line connects to three other major operators in Alabama: CSX, NS, and AGR; and the KCS in Mississippi. After Hurricane Katrina, it served as a run-through bridge route for CSX to connect with the Kansas City Southern at Meridian, MS, thereby avoiding interchange at New Orleans, LA. The M&B hauls over 2.98 million tons annually handling cargo such as paper, lumber, minerals, coal and ore, metals petroleum products and other chemicals. It also operates at Craig Field Airport and on Industrial Authority track in Selma, AL in Dallas County

Redmont Railroad Co., Inc. (RRC)

The Redmont Railroad, which is owned by Sunshine Mills, Inc, provides through service between Corinth, MS and Red Bay, AL. With 1.75 miles of track in Alabama and 37.6 miles of track overall, the rail line hauls grain, soybean meal, and meat and bone meal to and from an interchange with Norfolk Southern at Corinth.

Sequatchie Valley Railroad Co. (SQVR)

The Sequatchie Valley Railroad is a Class III railroad company owned by the Tennessee Corporation. The railroad company operates 2.75 miles of track in northeast Alabama from Bridgeport to Patti Rich (at the state line) which continues on to Kimball, TN. The rail line interchanges with Class I operator CSXT in Bridgeport and hauls approximately 118,500 tons per year.

Tennessee Southern Railroad Company (TSRR)

The TSRR operates 118 miles of track with 9 miles in Alabama. Service runs from Florence, AL north across the Tennessee border to Columbia. Handling over 366,000 tons per year, the TSRR offers access to river and truck transportation at intermodal loading facilities in the Port of Florence and Class I interchange with CSX at Natco, TN.

Three Notch Railroad Company, Inc. (TNHR)

The Three Notch railroad began service in 2001 by purchasing a CSX branch line from the Alabama & Florida Railroad. TNHR operates on 38 miles of track between Andalusia and Georgiana, AL, hauling 1,600 carloads per year of agricultural products, fertilizers, and other chemical products.

Wiregrass Central Railroad Co. (WGCR)

WGCR is one of nine shortline railroads owned by Gulf and Ohio Railways. The line operates on 17 miles of track and hauls 4200 cars per year between Newton and Enterprise, AL.

Alabama's Local Switching and Terminal Railroads

Alabama and Florida Railroad Company (AF)

The Alabama and Florida Railroad is an interline carrier which runs from Andalusia to Geneva, AL, a distance of 45 miles and interchanges with the CSX at Georgiana. The AF has standby switch engine service available as needed, public loading docks in Opp, AL, and team track facilities at most stations. The AF hauls 3,700 tons annually.

Alabama Railroad Company (ALAB)

The Alabama Railroad Co. is an interline carrier operating 55 miles of track in Alabama. Standby switch engine service is available as needed and team track facilities are available at all stations. Bulk trans-load facilities are available in Monroeville, AL. The ALAB handles over 86,000 tons of cargo annually.

Birmingham Southern Railroad Co. (BS)

The BS is a Class III terminal and switching railroad that operates 76 miles of track in the Birmingham corridor. The BS also provides service to Port Birmingham, a rail-to-barge transfer facility operated by the Warrior and Gulf Navigation Company. The Port is strategically located on the Warrior-Tombigbee Waterway System and extends the BS network to mid-America and internationally through the Port of Mobile. The BS handles cargo such as iron ore, coke, sulfur, and scrap iron and steel with an annual average volume of over 360,000 tons.

Jefferson Warrior Railroad Company (JEFW)

The JEFW is a shortline rail line which operates an intermodal distribution facility in the Birmingham area and provides access to three Class I rail lines: BNSF, CSX, and NS. Over its 12 miles of track, JEFW hauls commodities such as coal, coke, minerals, and scrap metals. JEFW also operates a 300 car storage facility in Birmingham.

Terminal Railway Alabama State Docks (TASD)

The Terminal Railroad, which has operated for over 70 years, operates 10 locomotives and over 75 miles of track in an 8-mile corridor, with a classification yard that is an interchange with four class one railroads (CSX, NS, BNSF, and CN). The two yards inside the docks compound have approximately 29 tracks each for storing and classifying railcars and handle 130,000 carloads per year. Commodities handled include coal, wood products, iron ore, metal scrap, and grain.

Alabama's Unclassified Railroads

There are some entities that are called railroads, but which do not operate trains or which only operate proprietary trains to or on private property (i.e.: plant sites). These trains are not common carriers[6] and they do not appear in the lists of U.S. railroads by the Association of American Railroads. There are three such entities in Alabama.

Andalusia & Conecuh Railroad Co. (ACRC)

Andalusia and Conecuh Railroad Company owns 2 miles of track in the City of Andalusia, which is classified as industrial. Service on the line is provided by the Three Notch Railroad Company, Inc. The Andalusia & Conecuh Railroad Company is owned by Alabama Electric Cooperative, Inc.

The Huntsville & Madison County Airport Authority

The Huntsville-Madison County Airport Authority is a public corporation under the laws of the State of Alabama. The Airport Authority governs all operating entities at the airport including the International Intermodal Center, Industrial Jetplex, and Foreign Trade Zone No. 83. Rail cargo to and from the Airport is handled in the International Intermodal Center which is able to move containers on a direct spurline connected to the Norfolk Southern mainline. On the site is parking for 1700 wheeled units, an 800 load stacking area, and two 45-ton gantry cranes. In 2006, the ICC handled over 152 million tons of inbound and outbound cargo.

Southern Electric Railroad Company, Inc. (SERX)

The Southern Electric Railroad operates in Jefferson County (near the City of West Jefferson) and in Shelby County (near the City of Wilsonville). The railroad is a wholly owned subsidiary of the Southern Company, an electric power provider, and delivers fuel to electric generating plants owned by the company. The SERX connects with CSX, BNSF, and NS and handles approximately 13.5 million tons of coal per year.

[6] A common carrier is an organization that transports people or goods and offers its services to the general public under license or authority provided by a regulatory body. A common carrier holds itself out to provide service to the general public without discrimination for "the public convenience and necessity". A common carrier must further demonstrate to the regulator that it is "fit, willing, and able" to provide those services for which it is granted authority. Common carriers typically transport persons or goods according to defined and published routes, times, schedules, and rate tables upon the approval of regulators. Public airlines, railroads, bus lines, cruise ships, motor carriers (Truck companies) and other freight companies generally operate as common carriers.

Chapter 3: Line Density and Usage

3. Line Density and Usage

The purpose of this section is to examine the level of utility for rail line segments in Alabama, including Class I, Class II regional, and Class III local linehaul railroads. The level of utility, commonly referred to as "traffic density," determines the operating cost structure of a line segment by setting the requirements for facilities necessary to handle the traffic.

Components of this structure include:

- the number of main tracks,
- the train control system,
- operating speeds, and
- the capital spending program.

Railroad traffic data presented herein are based on the Rail Waybill Data sample, as compiled by the U.S. Surface Transportation Board, and supplemental data published by the Association of American Railroads. Throughout this discussion, year 2006 traffic data is compared to the 1999 data presented in the *Year 2001 Alabama Rail Plan Update* so that trends during the seven year period can be identified. It should be noted that there is a lag of about two years between the current year and the data presented in the Rail Waybill Sample.

Overall Rail Freight Traffic in Alabama

The rail traffic in Alabama for the year 2006 totaled approximately 193 million tons. This number includes traffic that originated and terminated within the state (Intrastate traffic), traffic that either originated or terminated within the state (Interstate traffic) or traffic that moved through the state but did not terminate or originate within the state (Overhead traffic). Table 3-1 indicates the rail traffic flows in Alabama. Note that slightly more than half the tonnage (53%) passes through the state as overhead traffic.

Table 3-1
Alabama Tonnage Flows, 2006
(All commodities, tons in millions)

From	To	Tons	Percent
Alabama	Alabama	13.9	7%
Out-of State	Alabama	42.1	22%
Alabama	Out-of-State	34.3	18%
Out-of-State	Out-of-State	102.8	53%
	Total	193.1	100%

Source: U.S. Surface Transportation Board, Rail Way Bill Sample, 2008

Rail Traffic Originated and Terminated in Alabama

A total of 117.9 million net tons of traffic was originated or terminated in Alabama, or did both, in 2006. Alabama rail tonnage is summarized in Table 3-2, below.

Table 3-2
Rail Traffic in Alabama, 2006
(Millions of net tons)

		Originated Tons		Terminated Tons*		Intrastate Tons*	
		Tons	%	Tons	%	Tons	%
Ala	**TOTALS**	48,148,681	100%	55,936,090	10%	13,847,579	1%
01	Agriculture	198,808	0%	4,847,921	9%	21,316	0%
10	Metallic Ores	104,600	0%	3,242,069	6%	104,600	1%
11	Coal	11,204,859	23%	26,793,332	48%	8,935,919	65%
14	Non-metallic Minerals	7,257,600	15%	1,362,548	2%	1,067,820	8%
20	Food	303,040	1%	734,781	1%	0	0%
24	Lumber	1,816,564	4%	1,777,668	3%	538,880	4%
26	Pulp & Paper	4,924,404	10%	1,045,040	2%	189,720	1%
28	Chemicals	4,108,496	9%	2,772,912	5%	418,080	3%
29	Coke	539,576	1%	805,036	1%	50,296	0%
30	Plastics	1,679,890	3%	2,295,584	4%	978,078	7%
32	Concrete, Glass, Stone Products	2,196,476	5%	431,208	1%	262,360	2%
33	Metal Products, including Steel	7,080,776	15%	3,109,320	6%	449,960	3%
37	Transportation (autos)	5,278,252	11%	2,019,723	4%	449,550	3%
40	Waste, Scrap	775,140	2%	3,671,004	7%	381,000	3%
46	FAK (intermodal)	680,200	1%	1,027,944	2%	0	0%
**	all Other	0	0%	0	0%	0	0%

** Intrastate Tons are included in both originated and terminated tons*
Source: U.S. Surface Transportation Board, Rail Way Bill Sample, 2008

Coal dominates the railroad traffic base in Alabama, accounting for about 39 percent of total tonnage and 48 percent of tons terminated in Alabama. In 2006, 1.5 million more tons of coal originated in Alabama than in 1999, when 9.7 million tons originated in the State. Terminated coal tonnage has continued to increase, rising from 24.3 million tons in 1999 to 26.8 million tons in 2006. This increase in gross tons is mostly reflected on the Burlington Northern Santa Fe (BNSF) Birmingham Subdivision.

Among other leading commodities, nonmetallic minerals, metal products, and transportation (autos) rose to the "Top Five", while glass and stone and chemicals dropped out. Metallic ores (iron ore) and lumber experienced significant declines.

Intrastate Rail Traffic

According to the U.S. Surface Transportation Board's 2006 Rail Waybill Sample, approximately 12 percent of the 117.9 million net tons of rail traffic in Alabama both originated and terminated in Alabama. Coal, non-metallic minerals, plastics, and primary forest products, were the principal commodities in this category. Coal accounted for 65 percent of intrastate rail tonnage. Collectively, these four commodity groups accounted for 85 percent of intrastate rail traffic. Table 3-3 summarizes Alabama intrastate rail traffic.

Table 3-3
Alabama Intrastate Rail Traffic, 2006
(Net Tons)

Commodity	Net Tons	Percent of Total
Coal	8,341,383	65
Metallic ores	104,600	1
Primary forest products	728,620	5
Plastics	978,078	7
Crushed Stone	1,067,820	8
Chemicals	418,080	3
Waste and scrap	381,000	3
Metals and metal products	449,960	3
Other	1,588,982	11
Total	13,846,759	100

Source: U.S. Surface Transportation Board, Rail Way Bill Sample, 2008

Primary intrastate coal traffic flows were basically between NS- and CSX-served mines near Birmingham and electric utility plants, as well as McDuffie Terminal, at the Port of Mobile. No rail-borne intermodal container or trailer traffic either originated or terminated in Alabama in 2006.

Traffic Volume by Geographical Area

Table 3-4, on the following page, presents railroad tonnage by region. In order to develop this geographical depiction of rail traffic, twenty-two principal stations on NS, CSX, BNSF, and CN were grouped into four areas. For each area, the net tons originated and terminated on the four Class I railroads are indicated, including the principal stations in the respective areas. In the case of NS and CSX, principal stations are the 12 largest volume stations for each carrier in Alabama.

Coal originations and terminations are significant proportions of traffic in three of the four areas, excluding north Alabama. In north-central Alabama, coal accounts for over two-thirds of the 28.5 million total tons in Table 3-4, above, since both coal origins and major coal-burning utility plants are within this area, at Alabama City and West Jefferson (Palos).

Table 3-4
Traffic Volume by Geographical Area, 2006

Area/Stations	Total Net Tons	Originated Tons	Terminated Tons
North Alabama	4,976,543	2,448,724	2,527,819
Decatur			
Stevenson			
North Central Alabama	28,561,379	8,139,727	20,421,652
Alabama City			
Berry			
Birmingham			
North Birmingham			
Blue Creek			
Palos			
South Central Alabama	8,480,705	7,025,527	1,454,548
Wilsonville			
Roberta			
Selma			
Autauga Creek			
Varnons			
Shorter			
Waugh			
Montgomery			
Mahrt			
Gulf Coast Alabama	13,698,216	4,795,914	8,902,302
Mobile			
Theodore			
Brewton			
McIntosh			
Jackson			

Source: U.S. Surface Transportation Board, Rail Way Bill Sample, 2008

Overhead Traffic

Overhead, or Bridge, traffic is traffic that neither originates nor terminates within the state, but travels across the state. The 2006 Rail Waybill Sample indicates that approximately 100 million net tons moved on trains through Alabama as overhead (bridge) traffic, neither originating nor terminating in the State. This traffic included approximately 2.5 million intermodal containers and trailers, and 925,000 non-intermodal carloads. Coal, again, is a major commodity, constituting 22.5 percent of overhead traffic through Alabama. The primary destinations for this coal are Georgia, Mississippi, and Florida from origins in Illinois, Tennessee, and Kentucky.

Approximately one-third of the overhead bridge traffic through Alabama moves on CSX's 10-mile line segment in northeast Alabama, part of CSX's corridor between Nashville and Atlanta. Other major overhead traffic routes are NS between Atlanta and New Orleans, via Birmingham, and

between Memphis and Chattanooga via Huntsville. CSX routes include Nashville/Atlanta and New Orleans via Montgomery, AL, and New Orleans and Jacksonville, via Flomaton.

Principal rail traffic flows of overhead traffic through Alabama are indicated in Table 3-5, below.

Table 3-5
Principal Overhead Traffic Flows through Alabama, 2006
(All commodities, tons in millions)

Locations of Flow Origin/Destination	Net Tons
LA, TX and FL, GA, SC, NC, VA	22.6
OH, IN, MI, IL, WI, MO, IA, MN and LA, TX, MS, TN, GA, FL	19.1
KY, TN and GA, FL	25.4
CA, OR, WA and FL, GA, SC, NC, VA	2.9

Source: U.S. Surface Transportation Board, Rail Way Bill Sample, 2008

Analysis confirms that chemical traffic originating in Louisiana and Texas, destined to New England and Mid-Atlantic states, continues to utilize railroad interchange points that bypass Alabama rail routes, such as Memphis, TN, St. Louis, MO, and Effingham, Salem and Tolono, IL.

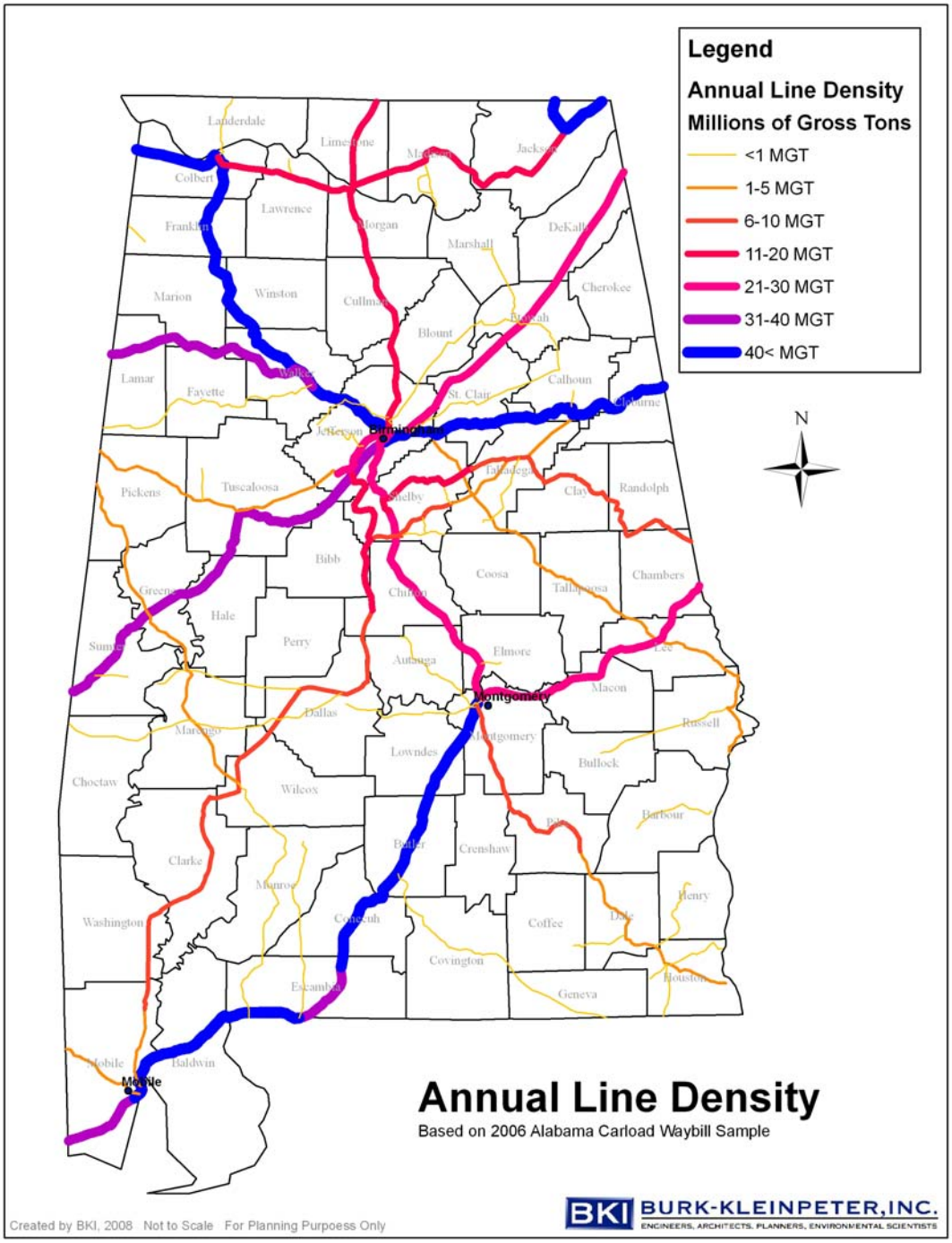
Traffic Density on Major Line Segments

Traffic density is normally measured in gross ton-miles per route-mile (GTM/M). Gross tonnage includes the weight of the rail cars, the contents (revenue tons of freight), and locomotives. Ton-miles are a function of gross weight and distance moved, including both loaded and empty cars. Nationally, approximately forty percent of rail car miles are empty car miles, since a back-haul commodity is frequently not available, or is available only with significant mileage diversion to a back-haul loading location. As a general rule, in order for a rail line to have a traffic density of one million GTM/M, the line would handle about 6,500 carloads per year. (Refer to Figure 3-1.)

Thirty six percent of Class I railroad route miles in Alabama handle more than 20 million GTM/M. Twenty million GTM/M, and higher, is a common, informal standard by which to define a system's core network, or by which to focus capital improvement programs to achieve the greatest economies of scale. The line segment having the highest GTM/M in the state lies between Stevenson and Bridgeport (10 miles), over which Norfolk Southern has trackage rights on CSX, and handles 67.2 million GTM/M. This line segment is part of CSX's Nashville–Atlanta line, and Norfolk Southern's Memphis/Birmingham–Knoxville line. The line segment having the second highest GTM/M is between NS's Norris Yard and 50th Street (8 miles) in Birmingham. This line has a density of 63 million GTM/M, reflecting the funnel effect of NS lines converging on Birmingham. Both of these line segments, however, are short distances, and not typical of main line traffic density in Alabama.

Table 3-6 summarizes the principal Class I line segments with GTM/M above twenty million.

Figure 3-1
Rail Freight Traffic Density in Alabama, 2006



Source: U.S. Surface Transportation Board, Rail Way Bill Sample, 2008

Table 3-6
Traffic Density of Principal Line Segments in Alabama, 2006
(Tons in millions)

Line Segment	Railroad	Miles in AL	Ave. GTM/M
Mobile – Flomaton	CSX	59	46.5
Sheffield – Corinth, MS	NS	34	54.5
Austell, GA – Birmingham – Meridian, MS	NS	249	33.8
Mobile – Pascagoula, MS	CSX	37	34.5
Montgomery – Flomaton	CSX	110	40.3
Amory, MS – Jasper – Palos (Alabama Power Co.)	BNSF	87	39.5
Parkwood – Montgomery	CSX	87	25.0
Montgomery – West Point, GA	CSX	89	28.2
Birmingham (Norris Yard)– Wauhatchie, TN	NS	104	23.9
Birmingham (27th Street) – Sheffield	NS	141	47.9

Source: U.S. Surface Transportation Board, Rail Way Bill Sample, 2008

Compared with the BNSF line segment between Amory, MS and Palos, the line segments in Table 3-6, above, have diverse traffic bases, in terms of commodities handled. The BNSF line segment predominantly handles coal to the James H. Miller Generating Station of Alabama Power Company, at West Jefferson. This low-sulfur coal originates in the Powder River Basin in Wyoming and is the longest single line rail haul of coal in the U.S. A fleet of 135-car trains cycle between Alabama and Wyoming. East of Palos, the BNSF traffic density is 18 million GTM/M. This includes westbound metallurgical coal originating at the USX Oak Grove Mine and destined to the USX Gary Works in Indiana. This coal is interchanged from Birmingham Southern Railroad to BNSF.

There are important line segments within the state having less than 20 GTM/M. The CSX line segments include between:

- Ardmore and Parkwood, with 16.5 million GTM/M
- Parkwood and La Grange, GA, with 16.0 million GTM/M
- Montgomery and Dothan, with 4.5 million GTM/M.

NS line segments with less than 20 million GTM/M include between:

- Sheffield and Stevenson, with 16.8 GTM/M
- Leeds and Columbus, GA
- Birmingham (Burstall) and Mobile

NS traffic density to and from the Mobile area is approximately 8 million GTM/M. Of the four Class I railroads interchanging at Mobile with the Terminal Railway (TASD), CSX handled 65 percent of the 101,253 carloads interchanged in the year 2000, according to TASD.

Neither of the other Class I railroads serving Alabama, Canadian National and BNSF, have line segments with traffic densities greater than 20 million GTM/M.

Class I Railroad Light Density Line Segments

During the past twenty years, the Class I railroads both in Alabama and nationally, either sold or leased most of their light density line segments to shortline operators. Most of the roughly 1,000 miles of shortlines in Alabama, excluding 152 miles of traditional switching and terminal companies, were established during this period. Nevertheless, there remain in Alabama some Class I railroad line segments with less than one million GTM/M. The future of such line segments depends upon many variables. These include future traffic prospects for each line, profit margins on the existing traffic (e.g. chemicals versus wood chips), and the perceived strategic value of each asset, as well as each line segment's utility for shortline operation.

Norfolk Southern

NS has one segment that is lightly used.

Alabama City to Gadsden

The Alabama City-Gadsden line segment is an extension of the line serving Alabama Power Company's Gadsden Plant, to which NS delivered approximately 11,000 carloads of coal in 2000. NS reported no coal deliveries to this power plant in 2006. The extension to Gadsden is without at-grade highway crossings and can provide storage and switching capacity, if needed. Gulf States Steel, Inc., at Alabama City, entered bankruptcy proceedings in July 1999 and ceased operations in August 2000. The remaining traffic at Alabama City primarily is chemicals handled on a switching basis by the shortline Alabama & Tennessee River Railway (ATN).

CSX

Boyles Yard to Greens

The Boyles Yard (Birmingham)-Greens line segment handles chemicals, coke, pulp and paper traffic, along with waste and scrap material. The dominant commodities are chemicals, and coke from Tarrant, AL, which provide above-average unit revenue, justifying a higher level of capital program spending.

In an important change to CSX's rail network in Alabama is the lease of the line segment between Guntersville, and Birmingham. This segment is now operated under the Omnitrax banner and identified as the Alabama & Tennessee River Railway (ATN). The ATN is discussed further in the Shortline traffic density discussion that follows.

Traffic Density on Non-Class I Line Segments

A little over one-quarter of Alabama's shortline mileage has a traffic volume that generates close to, or more than, one million GTM/M. Three shortlines account for most of this mileage. They are the Alabama Southern Railroad (ABS), Alabama & Gulf Coast Railway (AGR), and the Eastern Alabama Railway (EARY).

The ABS operates 49 route-miles within the state, and serves as a contract haulage carrier for the Kansas City Southern (KCS) to access Tuscaloosa and Birmingham from Columbus, MS. The ABS handles 2.0 GTM/M over its route.

The AGR operates over 344 route miles (including trackage rights) in Alabama. AGR operations commenced in September 1997. The AGR interchanges traffic with three Class I railroads; BNSF, NS, and CSXT. Major commodities include lumber, plywood, pulp, paper linerboard, construction aggregates, and chemicals. The average GTM/M for the AGR was 1.9 million in the year 2006. This included trackage rights operations by CSXT between Atmore and Hybart (70 miles) to reach CSXT's isolated track segment at Vrendenburgh, AL. The AGR operates the BNSF's former line segment between Pensacola, FL, and Kimbrough, AL.

The EARY operates 25 route-miles in Talladega County, interchanging traffic with both Norfolk Southern and CSXT, at Sylacauga and Bemiston, respectively. In 2006, EARY handled 5,500 carloads of limestone, calcium, newsprint and paper. The average GTM/M for EARY was nearly 0.85 million with the greater traffic density being in the Gantts Quarry-Sylacauga area.

An addition to the Alabama shortline rail network is the Alabama & Tennessee River Railway (ATN), extending 120 miles between the terminal at the Port of Guntersville and Boyles Yard in Birmingham. The line was leased by Omnitrax from CSXT, effective December 30, 2004. The ATN interchanges with the CSXT at Boyles Yard and the NS at Alabama City. The rail line has a very diverse traffic base that includes food, corn and soybean products, wood products, industrial chemicals and cement. Finally, CSX sold its line in Marengo, Dallas, and Lowndes Counties to MNBR. This railway is owned by Genesee & Wyoming.

Table 3-7 presents a listing of the shortline railroads and the revenue tons data, as available, from the Waybill sample.

Table 3-7
Alabama Non-Class I Revenue Tons Hauled, 2006

2006 Alabama Shortline Mileages and Revenue Tons Handled				
Alabama Shortline		**Alabama Miles**	**Revenue Tons**	**Line**
ALABAMA SOUTHERN	ABS	83	1,123,000	*Tuscaloosa*
ALABAMA & GULF COAST	AGR	99	1,354,880	*Pickensville-Kimbrough*
ALABAMA & GULF COAST	AGR	91	363,600	*Kimbrough-Atmore*
ALABAMA	ALAB	55	142,610	
ALABAMA & TENNESSEE	ATN	122	57,480	
BAY LINE	BAYL	45	313,800	
EASTERN ALABAMA	EARY	27	543,880	
MERIDIAN & BIGBEE	MNBR	31	830,234	
TENNESSEE SOUTHERN	TSRR	9	111,000	
WIREGRASS CENTRAL	WGCR	20	39,000	
Total		**582**		

Source: U.S. Surface Transportation Board, Rail Way Bill Sample, 2008

Terminal Railway Alabama State Docks

In the year 2006, the Terminal Railway (TASD), a subsidiary of the State Docks Commission, handled 101,253 carloads, most of which were interchanged with the five Class I railroads (CSXT, NS, CN/IC, KCS (haulage agreement) and BNSF) serving the 75-mile line at Mobile. The principal rail-hauled export commodities are coal, wood pulp, linerboard, paper and lumber. Imported commodities include iron ore, aluminum, and steel. Neither NS nor BNSF offer intermodal container service at Mobile.

Carload interchange between TASD and the Class I railroads are summarized in Table 3-8, below.

Table 3-8
Terminal Railway Alabama State Docks Interchange, 2006
(Carloads)

Railroad	Inbound	Outbound	Total	Percent Share
BNSF	1,800	2,712	4,512	4
CN	10,288	6.549	16,837	17
CSXT	55,403	10.448	65,851	65
NS	12,285	1,768	14,052	14
Total	79,776	21,477	101,253	100

Source: U.S. Surface Transportation Board, Rail Way Bill Sample, 2008

Chapter 4: Abandonments

4. Abandonments

The spate of mergers, acquisitions, spin-offs, and abandonments that took place shortly after deregulation of the railroads in 1980 seems to have abated in recent years. The flurry of activity was a response not only to deregulation but also to the need to rationalize the inland transportation systems in response to the change in international shipping technology, particularly containerization, and the resulting intermodalism. (For more information on this topic, see Chapter 5. Intermodal Facilities.) While much activity continues across the nation and in Alabama in terms of mergers, spin-offs, acquisition and the granting of trackage rights, outright abandonment is becoming a relatively rare thing. This can be seen as a good sign, meaning that there are fewer and fewer unprofitable rail lines in Alabama.

Applications for abandonment filed with the Surface Transportation Board are normally handled under a "modified procedure." Cases are decided based on the written submissions of the parties. Most abandonment applications are filed by the rail carrier owning the track to be abandoned. The most frequent type of abandonment requests the STB receives is from a railroad stating that the track has not been used for two years or more – called a "Notice of Exemption" – or that the track has so little traffic on it that it is clear that the carrier cannot be making a profit on it – called a "Petition for Exemption."[1]

Pleadings filed in opposition to abandonments are usually filed by shippers or receivers who are stationed along the line to be abandoned, but other persons may also file in opposition, provided that they either challenge the railroad's statements as filed or offer evidence to show that the shippers and receivers on the line would suffer more harm by losing the rail service than the carrier would by continuing to provide the service.

Procedures are available for those who would like to purchase the line and assume the common carrier obligation to provide service over the line, or who would like to offer the carrier a subsidy to continue to provide the service. Procedures are also available to those who would like to see the rail corridor made into a public trail or who would like to put the right-of-way to another public use. (Refer to the Rails to Trails section in Chapter 1.)

For a full description of the abandonment process, Offers of Financial Assistance, requests for Trail Use or a Public Service Condition, please see the "Abandonments and Alternatives to Abandonment" in the Appendix of this document.

The following three sections provide the history of abandonments in Alabama, as reported in the *1992 Alabama Rail Plan*, the *Alabama Rail Plan Update 2001*, as well as this current update.

[1] Surface Transportation Board, Public Information, Resources: Abandonment, 2008.

Abandonments between 1971 and 1992

The list of abandonments in the period 1971 to 1992, shown below in Table 4-1, was published in the *1992 Alabama Rail Plan*. This data was obtained form the Surface Transportation Board (STB).

Table 4-1
Abandonments, 1971 to 1992

Railroad	Date of Decision	Mileage Granted	Location	County
SOU/SBD	04/19/71	2.27	City of Birmingham	Jefferson
C of G	05/19/72	36.32	Eufaula to Union Springs	Barbour, Bullock
CHV	12/07/72	18.80	All of Lee, part of Chambers	Chambers, Lee
C of G	08/06/75	18.76	Lafayette to Roanoke	Chambers, Randolph
SLSF	08/06/75	.10	Bridge spanning Tombigbee River	Pickens
ICG	12/15/75	60.90	Tuscaloosa to Boyles Yard	Jefferson, Tuscaloosa
LN	01/15/76	17.70	Opp to Florala	Covington
LN	08/02/76	17.30	Talladega to Coldwater	Talladega
SOU	11/16/76	14.10	Atlanta Jct., Ga. To Piedmont, AL	Calhoun, Cherokee
C of G	07/27/77	39.00	Clayton to Ozark	Da;e. Barbour
SLSF	12/21/77	20.35	Aliceville to Reform	Pickens
LN	02/14/78	3.10	Fayetteville to Coosa River	Talladega
LN	02/22/78	5.80	Coosa River to Shelby	Shelby
SLSF	09/04/79	41.50	Cochrane to York	Pickens, Sumter
SOU	11/10/79	4.80	Parrish to Highlevel	Walker
LN	03/11/80	16.30	Columbiana to Calera	Shelby
BS	07/26/81	2.50	Dolonah Branch	Jefferson
ICG	11/09/81	1.70	Navco Spur	Mobile
LN	12/14/81	1.80	Readers Gap Branch	Jefferson
LN	12/16/81	2.00	Holt Junction	Tuscaloosa
SOU	03/10/82	23.80	Ewing to Georgia St. Line	Cherokee
ICG	07/17/82	10.90	Pratt City to Bessemer	Jefferson
SOU	09/13/82	30.80	Goshen to Gantt	Crenshaw, Covington
LN	12/16/82	9.90	Tacoa to Gurnee Jct.	Shelby
SBD	06/08/83	15.10	Chetopa to Maxine	Jefferson, Walker
BN	08/29/83	10.90	Pratt City to Bessemer	Jefferson
BN	09/04/83	2.40	Birmingham Zone 500	Jefferson
SBD	10/03/83	4.20	Boyles to Ruffner	Jefferson
SBD	12/27/83	6.38	Elmore to Wetumpka	Elmore
SBD	12/07/83	22.03	Huntsville to Tennessee St. Line	Madison
BN	12/09/83	8.46	Winfield to Brookside	Marion
SBD	01/16/84	11.30	Geneva to Florida St. Line	Geneva
SBD	02/08/84	6.70	Monmouth to Kimberly	Jefferson
SBD	04/13/84	36.50	Bay Minette to Foley	Baldwin
SBD	04/14/84	5.50	Fayetteville to Gantt	Talladega
SBD	08/13/84	16.10	Elba to Enterprise	Coffee
SOU	11/11/84	39.00	Marion to Akron	Hale, Perry
SBD	06/01/85	16.00	Camden to Camden Jct.	Wilcox
SBD	06/01/85	50.00	Corduroy to Western Jct.	Monroe, Wilcox, Dallas
C of G	07/23/85	36.80	Union Springs to Montgomery	Bullock, Montgomery

M&G	07/24/85	11.00	Brownsville to Buhl	Tuscaloosa
SBD	08/24/85	7.18	Anniston to Coldwater	Calhoun, Talladega
SOU	09/15/85	17.14	Boothton to Blocton	Bibb
ASR	10/28/85	10.30	York to Lilita	Sumter
ICG	12/09/85	50.00	Tuscaloosa to Maplesville	Tusc., Bibb, Chilton
C of G	02/28/86	6.10	White Oak to Clayton	Barbour
BN	03/20/86	5.15	Thomas Jct. to 18th Street	Jefferson
SBD	04/12/86	10.20	Athens to Tennessee St. Line	Limestone
SBD	04/20/86	71.95	Mahrt to Eastmont	Montg., Macon, Russell
SBD	08/13/86	1.46	End of line at Monroeville	Monroe
SC	08/15/86	3.10	Lilita to Bellamy	Sumter
SOU	11/13/87	5.60	Ensley Jct. Valley Creek Jct.	Jefferson
CSXT	11/05/87	3.92	Chetopa to Vulcan	Jefferson
A&C	12/04/87	8.00	Andalusia to Gantt	Covington
CSXT	12/09/87	2.50	Lockart to Florida St. Line	Covington
SOU	12/21/87	13.80	Marion Jct. to Marion	Dallas, Perry
SOU	02/04/88	18.30	Gadsden to Ewing	Cherokee, Etowah
CSXT	04/15/88	6.00	Parkwood to Bessemer	Jefferson
CSXT	06/22/88	12.70	Wellington to Maxwellborn	Calhoun
SOU	08/12/88	3.90	Sheffield to Florence	Colbert
SOU	09/26/88	2.63	Isbell to Rockwood	Franklin
CSXT	11/06/88	2.90	Birmingham	Jefferson
C of G	03/08/89	45.96	Hurtsboro to Troy	Russell, Bullock, Pike
SOU	02/19/89	14.00	Jacksonville to Piedmont	Calhoun
C of G	01/28/89	18.18	Lafayette to Roanoke	Randolph, Chambers
AF	01/24/89	1.70	Opp & Geneva	Covington, Geneva
SOU	01/16/89	3.02	Gurnee Jct. to Boothton	Bibb
CSXT	01/13/89	28.65	Maxwellbron to Georgia Line	Calhoun, Cleburne
C of G	06/25/89	35.70	Eufaula to Union Springs	Barbour, Bullock
BN	03/27/89	9.40	Dora to Debardeleben	Walker
CofG	10/13/89	5.31	Central Junction to McCombs	Jefferson
NS	12/31/89	5.10	Vulco to Blocton	Bibb
NS	05/23/90	11.00	Piedmont to Georgia line	Calhoun & Cherokee
CSXT	05/24/90	13.96	Beatrice to Hybart	Monroe
CHV	11/20/91	9.23	Entire line	Chambers
HS	04/29/92	16.00	Taylor to Hartford	Houston & Geneva
SR	05/25/92	58.00	Whistler to Mississippi Line	Mobile & Washington
WGRC	07/10/92	2.00	MP 821 to end of line	Coffee
EARY	10/01/92	12.66	MP 507.73 to MP 508.1& MP 511.7 to MP 522.79	Calhoun
EARY	10/01/92	2.40	MP 508.1 to MP 511.7 Service only	Calhoun

An analysis of the abandonments that occurred in this period shows the clear effect that deregulation of the railroad and trucking industries had in the years after 1980. As can be seen in Table 4-2, below, in the first ten years, 1971 – 1980, there were only sixteen abandonments, less than two per year. However, in the ten years after deregulation, starting in 1981, the number of abandonments per year jumped dramatically, to fifty-eight, or just under six per year, a tripling of that activity.

Table 4-2
Mileage Approved for Abandonment by Year, 1971 to 1992

Year	Abandonments	Mileage	Year	Abandonments	Mileage
1971	1	2.27	1982	4	75.40
1972	2	55.12	1983	7	69.47
1973	0	0.00	1984	6	115.10
1974	0	0.00	1985	8	198.42
1975	3	79.76	1986	6	97.86
1976	3	49.10	1987	5	33.82
1977	2	59.35	1988	6	46.53
1978	2	8.90	1989	10	167.02
1979	2	46.30	1990	2	24.96
1980	1	8.00	1991	1	9.23
1981	4	8.00	1992	5	91.06
			Total	80	1,253.97
			22 Year Avg. Miles Abandoned:		57.00

Source: 1992 Alabama Rail Plan, Alabama Department of Transportation.

Abandonments between 1992 and 2001

The following list of abandonments was reported in the *Alabama Rail Plan Update 2001*. As reported in that document, the turmoil that seemed to engulf the rail industry in the 1980s and 1990s appeared to have tapered off towards the end of the 1990s. In fact, there was only one official filing after 1997.

Norfolk Southern

STB Docket No. AB_290_123_X
Abandoned December 1992
33.0 miles
MP 571.0 to MP IC-604.0
Franklin, Marion, and Winston Counties

Burlington Northern Santa Fe

STB Docket No. AB_6_347_X
Abandoned August 25, 1993
150.72 total miles
Boligee (MP 240.90) to York (MP 268.2) – 27.3 miles of track.
York (MP 728.00) to Bucks (MP 851.40) – 123.40 miles of track.
Greene, Sumter, Choctaw, Washington, and Mobile Counties

Burlington Northern Santa Fe

STB Docket No. AB_6_359_X
Abandoned November 1993
3.08 miles
Between ES 0.00 N to ES 58+98N and ES 0+00 STO to ES 103+53S
STB record incomplete

Norfolk Southern

STB Docket No. AB_290_144_X
Abandoned August 1994
2.20 miles
Between Burstall (MP 35.0) and Rat Valley Creek Junction (MP 37.2)
Jefferson County

Norfolk Southern

STB Docket No. AB_290_171_X
Abandoned August 1995
7.10 miles
Between Jacksonville (MP 48.0) and Fort McClellan, AL (MP 55.1)
Calhoun County, AL

Alabama Railroad

STB Docket No. AB_463_0_X
Abandoned November 1995
3.68 miles
Between Beatrice (MP 662.62) and Corduroy (MP 666.3)
Escambia and Monroe Counties, AL

CSX Transportation

STB Docket No. AB_55_532_X
Abandoned July 1996
0.90 miles
Between MP 968.3 and MP 967.4 in Parkwood
Jefferson County

Norfolk Southern

STB Docket No. AB_290_190_X
Abandoned December 29, 1997
22.10 miles
Between Covin (MP 862.8) and Belk (MP 884.9)
Fayette County, AL

Birmingham Southern

STB Docket No. AB_192_1_X
Abandoned December 1997
3.84 miles
Between MP 146+97.22 to end of line
Jefferson County, AL

CSX

STB Docket No. AB_55_602_X
Filed for Abandonment November 30, 2001. (Granted Extension to November 2003)
0.56 miles
Near Athens
Limestone County, AL
(As of 2003, CSX was still trying to Negotiate Interim Trail Use with City of Athens.)

As shown in Table 4-3, there were only ten filings for abandonment in the nine-year period, less than one per year, on average, with most of it coming from the Class I railroads.

Table 4-3
Mileage Approved for Abandonment by Year, 1993 to 2001

Year	Abandonments	Class I Railroads	Non-Class I Railroads	Total
1993	3*	186.80	0.00	186.80
1994	1	2.20	0.00	2.20
1995	2	7.10	3.68	10.78
1996	1	0.90	0.00	0.90
1997	2	22.10	3.84	25.94
1998	0	0.00	0.00	0.00
1999	0	0.00	0.00	0.00
2000	0	0.00	0.00	0.00
2001	1	0.56	0.00	0.56
Total	10	219.66	7.52	227.18
		Nine Year Average for all Railroads		25.24
		Nine Year Average for Class I Railroads		24.40
		Nine Year Average for Non-Class I Railroads		0.84

Includes one NS abandonment in late 1992 that was not included in the 1992 Rail Plan.
Source: Alabama Rail Plan Update 2001, ALDOT Bureau of Multimodal Transportation.

Abandonments between 2002 and 2008

It is gratifying to report in this Rail Plan Update that the trend of declining filings for abandonment has continued in this reporting period. Only seven abandonments occurred during the last seven years and they were mostly minor adjustments. The only significant abandonment was as a result of

the demise of the Pine Belt Railroad, which ceased operations in 2001 and subsequently filed for abandonments of its two main lines in 2002 and 2003, respectively.

Pine Belt Southern Railroad Co. (PBRR)

STB Docket No. AB_601_0_X
Abandoned June 22, 2002
25.00 miles
From Hurtsboro (MP304.00) to Nuckols (MP 329.00)
Russell, Bullock and Macon Counties, AL

Canadian National/Illinois Central (CN/IC)

STB Docket No. AB_43_175_X
Abandoned January 16, 2004
1.03 miles
Between MP 3.67 and MP 4.70 in Prichard
Mobile County, AL

Pine Belt Southern Railroad Co. (PBRR)

STB Docket NO. AB_601_1_X
Abandoned January 21, 2004
17.4 miles
Between Roanoke Junction (MP 322.40) and Lafayette (MP339.66)
Lee and Chambers Counties, AL.

Norfolk Southern Railway Company (NS)

STB Docket No. AB_290_265_X
Abandoned January 2006
5.80 miles
Between Fort McClellan (MP 55.30) and Anniston (MP 61.10)
Calhoun County, AL
(Notice of Interim Trail Use extended to City of Anniston to February 22, 2008. Notice of Consummation extended to NS to April 22, 2008.)

CSX Transportation, Inc. (CSX)

STB Docket No. AB_55_613_X
Abandoned October 16, 2006
16.47 miles
From Black Creek (MP 384.00 to West Jefferson (MP 400.47)
Jefferson County, AL
(Notice of Interim Trail Use extended to September 26, 2008. Time to exercise abandonment extended to November 25, 2008.)

Birmingham Southern Railroad Co. (BS)

STB Docket No. AB_192_2_X
Abandoned January 29, 2007
0.18 miles
From Old Port Branch to Ergon Terminaling, Inc.'s rail line
Jefferson County, AL

Georgia Southwestern Railroad Co. (GSWR)

STB Docket No. AB_1000_0_X
Abandoned April 25, 2007
4.54 miles
From MP 334.46 in Eufala to MP 339.00 near Eufala
Barbour County, AL
(Subject to trail use.)

As can be seen in Table 4-4, sixty percent of the abandoned miles in this reporting period resulted from the shutting down of the Pine Belt Railroad.

Table 4-4
Mileage Approved for Abandonment by Year, 2002 to 2008

Year	Abandonments	Class I Railroads	Non-Class I Railroads	Total
2002	1	0	25.00	25.00
2003	0	0	0	0
2004	2	1.03	17.40	18.43
2005	0	0	0	0
2006	2	22.27	0	22.27
2007	2	0	4.72	4.72
2008	0*	0	0	0
Totals	7	23.30	47.12	70.42
		Seven Year Average for all Railroads		10.06
		Seven Year Average for Class I Railroads		3.33
		Seven Year Average for Non-Class I Railroads		6.73

**No filings as of August 13, 2008.*
Source: Surface Transportation Board, January 23, 2008.

Rate of Abandonments

As shown in Tables 4-1, 4-2 and 4-3, the yearly average of miles of track lost to abandonments has declined dramatically over the last thirty seven years.

- Fifty-seven miles per year from 1971-1992
- Twenty-five miles per year from 1993-2001
- Ten miles per year from 2002 to 2008

As stated previously, the low rate of abandonments is an indication of the good financial health of the railroads of Alabama.

Chapter 5: Intermodal Facilities

5. Intermodal Facilities

Many people are aware that the products they buy come from other parts of the world, but few are aware of the role that "intermodalism" plays in the availability of just about everything from jeans to computers. Intermodalism is the "seamless movement of containerized goods using different modes of transport like, ships, trains, and trucks."[1]

Intermodalism is one of the most rapidly changing activities in rail transportation, driven by technological advances, deregulation in the 1980s, and the ongoing quest to ship goods more quickly and more cheaply across the nation and the globe. From 1980 to 2007, intermodal traffic in the U.S. has grown from 3 million trailers and containers to 12 million.[2]

The transportation industry has seen changes in the past 30 years which have been described as a change from a "push system" to a "pull system." In the past, manufacturing and distribution were designed to support mass production, retailing and warehousing. Today, orders and purchase patterns pull goods through the supply chain, requiring retailers, manufacturers and suppliers to track demand in response to computer and communication data interchange. These technologies have reduced the risk of over or under production, as well as the need to maintain large, costly inventories. Technological advances in intermodalism respond to these needs, including the emergence of new partners and new roles for veteran companies to broker the transportation process.[3]

Intermodal Methods

Freight transportation was revolutionized by removing the time-consuming process of loading and unloading cargo through the two primary developments: Trailer-on-Flatcar (TOFC) and Container-on-Flatcar (COFC).

Trailer on Flatcar (TOFC)

The concept of Trailer on Flatcar (TOFC) or "piggybacking" was used as early as the late 19th century in the U.S. One example is a service provided by the Long Island Railroad, which loaded entire farm wagons, with farmers, animals and produce on them, and carried them to Long Island City. The circus is a second example of early widespread use of the TOFC concept. This model ultimately evolved into the modern transport of truck semi-trailers upon railcars in the later half of the 20th Century.[4]

---

1 APL: History – Intermodalism.

2 American Association of Railroads, *Rail Intermodal Transportation*, June 2008. <http://www.aar.org/IndustryInformation/~/media/AAR/BackgroundPapers/143.ashx> September 18, 2008.

3 U.S. Department of Transportation, Bureau of Transportation Statistics, *The Changing Face of Transportation*, BTS00-007, Washington, DC: 2000.

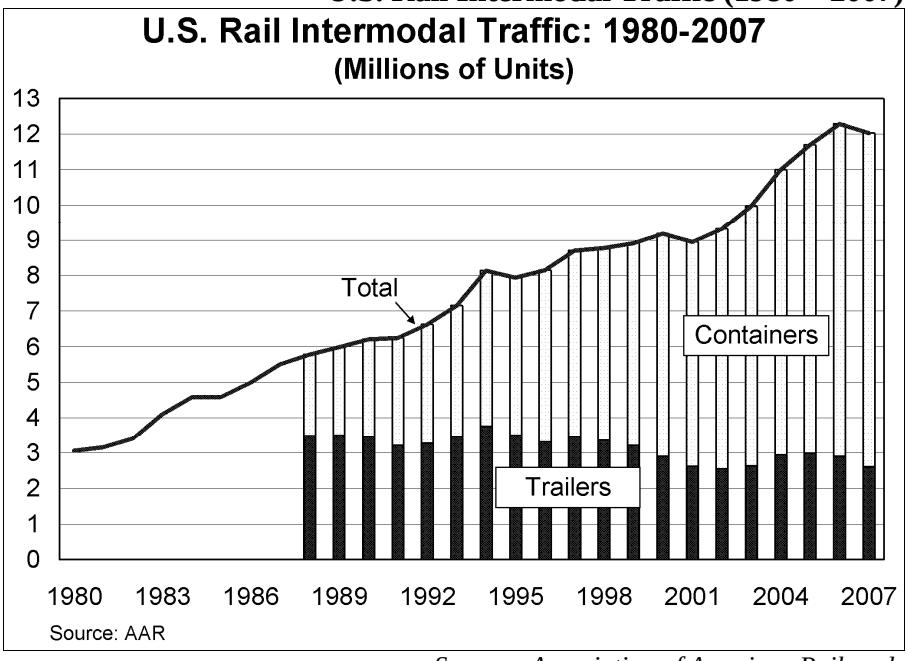
4 Armstrong, John H., The Railroad. What It Is, What It Does. (Simmon-Boardman Publishing Corporation, 1998).

Container on Flatcar (COFC)

Even up through the first half of the 20th Century, merchandise was loaded and unloaded into boxcars, a time-consuming and labor-intensive process. For sea-going vessels, merchandise was transported via a variety of containers, pallets, sacks and barrels. The concept of 'containerization' evolved throughout the first part of the 20th Century. Near the end of World War II, the U.S. Army began using a standard size container (called a transporter) to speed up the loading and unloading of household items for troops, and later, for sensitive equipment. Containerization continued to evolve until the International Organization for Standardization (ISO) set the standard sizes in the 1960's for the two most widely used containers: the Twenty-foot Equivalent Unit (TEU), and the Forty-foot Equivalent Unit (FEU), or literally, '2 TEUs.' These are the main units in use internationally today.[5]

In the late 1980s, TOFC and COFC traffic were about the same, with trailers slightly higher than containers; however, throughout the 1990s and 2000s, container traffic tripled while trailer traffic declined slightly. Virtually all growth in TOFC and COFC since the late 1980s is in the container side of the industry.[6] There are several major contributing factors for this, including its versatility, increased capacity (through double stacking), and the establishment of the "land-bridge" in the U.S.

Figure 5-1
U.S. Rail Intermodal Traffic (1980 – 2007)



Source: Association of American Railroads

[5] Intermodal Freight Transportation, Wikipedia. <http://en.wikipedia.org/wiki/Intermodal_freight_transport> September 18, 2008.

[6] American Association of Railroads.

In order to obtain the greatest efficiency from COFC operations, the double-stack container car (also called the well car) was developed. These cars have a sunken floor which doubles the capacity of the car by allowing for one container to sit atop another - providing the ability to clear tunnels on some routes in the United States.[7]

Intermodal Facilities

The transfer of containers occurs at terminals, where specialized equipment is used to transfer containers from one mode to another. In general, intermodalism that involves rail includes its transfer to either truck or to ship at either an Inland Container Terminal or at a Maritime Container Terminal.

Inland Container Terminals

Inland Container Terminals have the function of transferring goods from rail to truck or from truck to rail. Reliable rail service and good access to the Interstate Highway System are two key features of inland container terminals in the U.S. In many instances, inland container facilities may develop to accommodate increased traffic at a port where expansion is impossible or overly costly at the main port site. They generally have three essential features (1) rail/truck loading and unloading area, including rail siding, (2) storage, including a container yard for storage of empty containers as well as warehousing, and (3) administrative functions for tracking the movement of goods as well as controlling access.[8]

Maritime Container Terminals

Maritime Container Terminals are located within larger ports, or harbors. They are specific sites designed to accommodate container ship and barge docking and the transfer of containers to rail, motor carrier, or storage on site. They tend to include the following features (1) dock, (2) dock loading and unloading interface, (3) truck loading and access (4) on-dock rail terminal and rail access (5) container storage, (6) administrative functions for tracking the movement of goods as well as controlling access.[9]

Equipment

There are two basic types of equipment in use today for the loading and unloading of containers and trailers at both inland and maritime terminals: Container cranes and Side-loaders. Container cranes (also called straddle loaders or gantry cranes) lift containers from above, whereas side loaders (also called a "piggy packer") are gigantic, high speed forklifts which move containers from their side as the name suggests.[10]

---

7 Intermodal Freight Transportation, Wikipedia.

8 Inland Container Terminal, Wikipedia. <http://en.wikipedia.org/wiki/Cargo_terminal> September 18, 2008.

9 Maine Department of Transportation, "Container Terminal Parameters." (The Cornell Group, Inc. January 2007). <http://maine.gov/doc/initiatives/SearsIsland/ContainerTerminal.pdf> September 18, 2008.

10 Armstrong, John H.

Circus loading, which requires only an end of track ramp and bridge plates, is virtually obsolete today.[11]

Transportation Providers

Intermodalism has led to greater diversity of roles for transportation providers, as well as the emergence of third and fourth party operators. This is, in part, because freight is becoming "mode-invisible" with performance (cost, time, reliability) determining the choice between mode and provider. Deregulation of transportation services has increased competition among transportation service providers, changing the relationships between shippers, consignees, carriers, and intermediaries.[12]

In the past, there were more specific distinctions between roles and facilities owned and operated by rail companies versus those owned and operated by motor carriers or shipping companies. Today, the emergence of companies in the business of air-truck, rail-truck, ocean-truck and ocean-rail combinations such as FedEx, UPS Worldwide Logistics, Hub Group Logistics, Schneider Logistics and Ryder Dedicated Logistics reveal the efficiency created by intermodal freight systems.[13]

Third and Fourth Party Logistics Services

In the early 1980's, the first third party logistics service (3PLs) firms emerged to perform outsourced functions including carrier selection, warehousing, rate negotiations, and freight payments. These companies may also perform inventory management, customer order management, etc. More recently, fourth party logistics services (4PLs) have appeared which go a step further – managing an entire supply chain. These companies go well beyond traditional logistics coordination, and may also provide services such as business strategy consulting, business redesign, technology integration, migration to e-systems, etc. [14]

The American Land Bridge

The "American Land Bridge" is a term coined to describe the use of one of several intermodal cross continental rail transportation corridors as a cost and travel time saving alternative to using the Panama Canal or the Straits of Magellan to traverse to a port on another U.S. Coast.[15]

Intermodal Facilities in Alabama

There are important intermodal facilities located throughout the state of Alabama, particularly in the manufacturing and logistics centers of Birmingham, Mobile, Montgomery and Huntsville, Typically, the Class I railroads build and operate their own intermodal yards to serve their client

[11] Armstrong, John H.
[12] U.S. Department of Transportation, Bureau of Transportation Statistics.
[13] U.S. Department of Transportation, Bureau of Transportation Statistics.
[14] U.S. Department of Transportation, Bureau of Transportation Statistics.
[15] Armstrong, John H.

base. However, the key intermodal facilities in Alabama are not owned by the private railroads, they are publicly owned. They are the Port of Mobile and the Huntsville International Airport.

Port of Mobile

The Port of Mobile is owned and operated by the Alabama State Port Authority (ASPA). It functions as a department of the state and receives non-operating revenues, grants and/or appropriations on a regular basis. [16]

The Port of Mobile has traditionally been a bulk and general cargo port, handling coal, liquid bulk, forest products, iron and steel products and poultry. The port has made some recent investments to existing facilities such as the conversion of the McDuffie Terminal into an export/import facility with barge loading operations and two additional cranes at the Berth 2 container terminal.

Location and Access

The Port of Mobile is located near the mouth of the Mobile River, where it empties into Mobile Bay approximately 30 miles from the Gulf of Mexico Sea Buoy. Two interstate systems, I-10 and I-65, are within one mile of the port. The Port is directly served by three Class I railroads (CN, CSX, and NS) and indirectly by two others (BNSF via the AGR and KCS through haulage rights over CN). In addition, the port has access to the Tennessee – Tombigbee Waterway System via the Mobile River.

Class I Railroad Connections

The port is a strategic hub for CSX, utilizing the railroad's Sibert yard located east of the McDuffie Island/Garrows Bend area. The Sibert Yard handles about 35 trains a day of through traffic and provides a staging location for service to the Brookley and Theodore Industrial complexes. CSX delivers coal to the McDuffe Island Coast Facility from the Birmingham area and also handles agricultural products, minerals and paper.

CN serves Mobile with two routes into the city. The first interchanges with Terminal Railway Alabama State Docks (TASD) near the Sibert Yard, and the other line branches off the mainline in the Springfield area of Mobile and serves the McDuffie Island Coal Terminal, Armstrong World Industries facility and the Brookley Industrial Complex.

CN and CSX will have direct access to the Intermodal Transfer Container Facility (ICTF), while NS, BNSF/AGR and KCS will access the ITCF via TASD. TASD operates eight 1,500 HP locomotives on 75 miles of track and has a fleet of 246 50-foot boxcars utilized for transport throughout the United States, Canada and Mexico.

The port authority owns and operates a shortline railroad, the Terminal Railway Alabama State Docks (TASD). TASD provides switching services to area industries located in and around the port and to all rail carriers via trackage rights on CSXT's mainline.

[16] Data on the Port of Mobile provided by Mr. Don Nichols, Port Director, July 17, 2008.

The Central Gulf Railway Ferry (CGRR), which is a four-day rail ferry service to Coatzacoalcos, Mexico, is also served by TASD.

Trades, Shopping Services and Throughput

The Port of Mobile serves as a gateway to foreign trade with Central and South America, the Caribbean, North Europe, and Asia. The main liner services calling the port are Zim Lines and Atlanticargo. Zim Lines connects Mobile to Central and South America, the Caribbean and North Europe with its Global services using Kingston, Jamaica as a hub port. Zim Lines' Asian service makes a weekly direct call at Mobile, as well as a Tampa and Houston. This service is operated as a partnership with Emirates Line and utilizes a string of nine 3,000 TEU vessels. Atlanticargo, a subsidiary of Star Shipping, services the North Europe trade lane with a weekly direct call at the port.

Total annual throughput has increased by 62% from 42,443 TEU in 2005 to 68,823 TEU in 2006. According to port officials the 2007 throughput will reach 94,000 TEU, all of which are international containers. Finished automobiles are the leading export from the state via the port. This sector has grown more than 83% from 2005 and accounts for approximately 36% of the state's total exports. It should be noted that a large portion of the finished automobiles are transported out of state by way of rail carriers. According to a study by the University of Alabama, the forecasted growth in rail traffic due to automobile production from 2003 to 2008 is estimated at 171%.

The inland markets currently served via truck and rail encompasses an approximate 350 mile radius that includes regions of Mississippi, Alabama and Georgia. The port authority estimates that 60% of the current total cargo volumes (bulk, general and containers) are carried via rail. The port's ability to provide seamless rail access to the Mid-West and Eastern hinterlands is perceived as the main asset in the development and marketing of the new facility. Based on market studies, port official are projecting that 88% of the marine terminal volumes will be handled by rail as volumes increase to the levels needed to attract Class I rail lines to service the Lower/Upper Midwest and selected Eastern markets.

Existing Container Terminals

The present container terminal is located at Berth 2 with landside access to Interstates 10 and 65 via a truck gate. The access channel is quite long, about 32 miles, and the present depth is 40 feet. The total berth line is 900 feet and the container marshaling yard adjacent to the berth has 22 acres. The terminal is equipped with two gantry cranes and eight reach stackers. The current throughput is approximately 94,000 TEU, well above the estimated capacity of 75,000 TEU. This overcapacity requires daily movement of containers from the yard to delivery points.

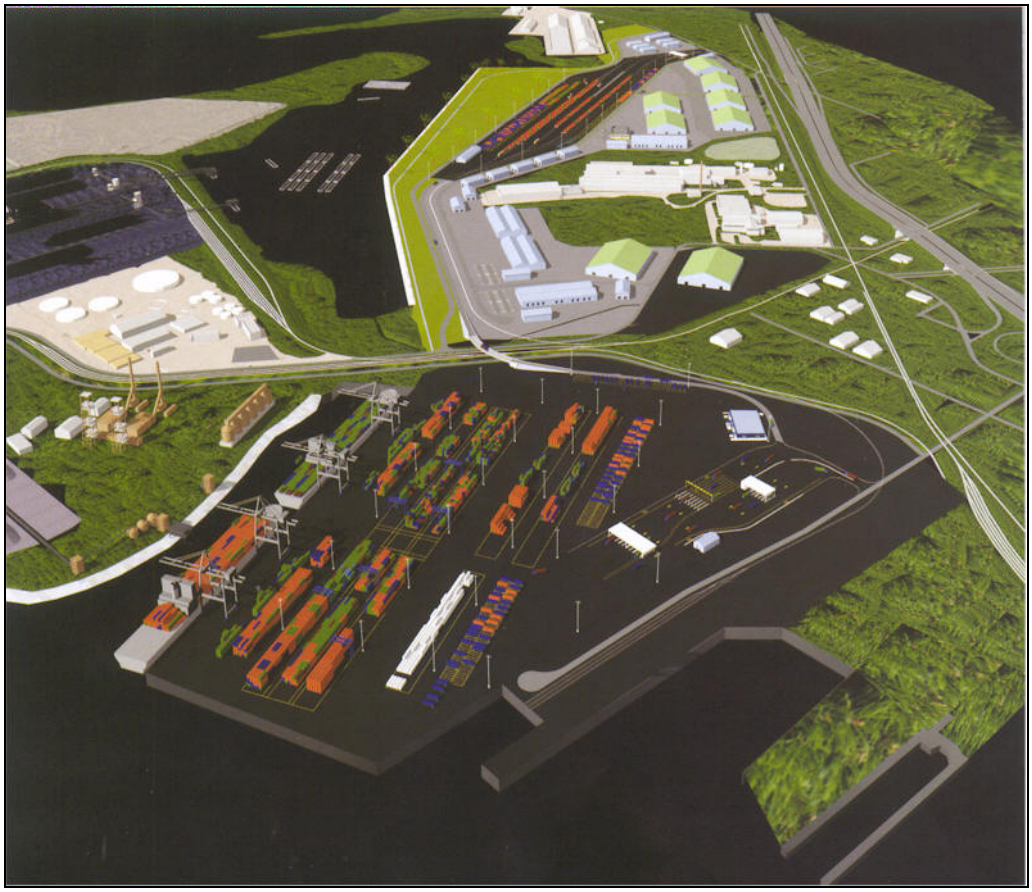
Although there are no plans to expand the terminal in its current location at Berth 2, it will continue to be utilized by some of the existing carriers such as Altanticargo, and marketed to other smaller niche market liner services.

New Container Terminal: The Choctaw Point Complex

In response to regional growth in manufactured products and the upward market trend toward container trade, the port developed a 20 year master plan to improve container handling capacity. According to a market analysis by Mofatt & Nichol Engineers, Mobile is considered to have a number of geographical and logistical advantages over other regional ports as a container entry point for the Midwest and Southeast corridors, as well as the growing industries within the state. As a result, the Alabama State Port Authority (ASPA) is developing a container handling center to be serviced by five Class I railroads. The new Choctaw Point complex will consist of the Mobile Container Terminal, the Garrows Bend Intermodal Container Transfer Facility (ICTF), and a value-added distribution area (VAD) adjacent to the ICTF. The total development will cover approximately 350 acres of land and sub-tidal area.

ASPA began construction on the 135-acre Mobile Container Terminal in early 2005, with the overall development consisting of two phases. Phase I is scheduled to be opened in September of 2008.

Figure 5-2
Choctaw Point Container Terminal and Garrows Bend ICTF



Source: www.asdd.com, October, 2008.

The Garrows Bend ICTF is currently under construction and will encompass approximately 76 acres. The 21-acre VAD will be located adjacent to the container terminal and transfer facility and be divided into three zones, with access via surface roads that connect to Interstate 10.

Figure 5-3
Garrows Bend ICTF and the Value Added Distribution Area

Source: www.asdd.com October, 2008.

The Choctaw Point Complex is located approximately 1.5 miles from downtown Mobile, AL on the west side of the Mobile River downstream from the Bankhead and George C. Wallace tunnel crossings. The distance to the container terminal from the Gulf of Mexico Sea Buoy via the Mobile River is 30 miles and the access channel depth will be 45 feet.

Phase 1 is consists of 95 acres with two cranes designed to handle a projected demand through year 2010 of 350,000 TEU. The second phase will add 40 acres and two cranes to the terminal to enable it to accommodate the projected demand of 800,000-plus TEU through 2015. The berth will be 2,000 feet in length and able to accommodate up to six ship-to-shore gantry cranes.

Current container traffic is generated on the Central and South American, North European, and Asian trade lanes. The markets supplied are primarily in the lumber and paper, chemicals, auto

manufacturing, and aerospace sectors located in Mississippi, Alabama and Georgia. It is envisioned that the new terminal container volumes will grow by a minimum of 500% from the current volumes. This projected growth is forecasted as the result of various factors, including growth in the auto manufacturing and aerospace industries, expansion of Asian services via the Gulf of Mexico, and promotion of the port as a rail gateway to the Lower and Upper Midwest markets.

The terminal is an 80/20 joint venture between APM Terminals North America and Terminal Link, a subsidiary of CGM-CMA. Under a 30-year lease agreement, APM Terminals will operate the terminal and the port authority will receive a combination of fixed and variable payments based on the volume of containers handled. This revenue flow will be used to support bonds issued by the port authority to fund the project. Private partners are investing $100 million in Phase 1 of the terminal, and will provide an additional investment of $150 million as the terminal expands. This agreement is the most recent and largest of a number of public-private partnerships at the Port of Mobile. Previous partnerships have expanded the port's grain elevator and allowed for construction of a freezer facility and a liquid bulk terminal.

Garrows Bend ICTF

The Garrows Bend ICTF will be sited to the west of the Mobile container terminal and is envisioned to be connected by an 865 foot vehicular bridge on the north side. This facility can be classified as a large near-dock adjacent yard. In terms of operation, it is on-dock, since there is no need to transit the terminal gate in order to reach the yard. The planned facility will have an entry gate on the south side and a grade-separated structure will be constructed to connect the Mobile Container Terminal to Interstate 10. The entry gate will ultimately have eight covered lanes and one out-of-gauge lane and a projected capacity of 350,000 TEU.

The current design within the transfer envisions five working tracks of 8,100 feet each, five storage tracks, two arrival/departure tracks and a runaround track. ASPA has phased the project based on demand levels. The first phase will include three working tracks and chassis storage, considered sufficient to begin operations.

According to HDR Inc., the project's engineers, the overall design is intended to minimize conflicts between new and existing traffic and optimize the efficiency of operations. The configuration will allow access to the ICTF by CN and KCS without disrupting coal trains servicing McDuffie Island via the CSXT line. The port plans to add a third track to the McDuffie Coal Terminal to meet the forecasted growth in coal export volumes as well as new business from coal-fueled power plants in the Southeast. This additional track will allow coal and intermodal traffic to grow simultaneously. The terminal will be operated by Mobile Container Terminal LLC, a joint venture between APM Terminals North America (a subsidiary of Maersk, Inc.) and Terminal Link (a division of CMA-CGM).

<u>The Huntsville International Airport International Intermodal Center (IIC)</u>

The International Intermodal Center is owned and operated by the Huntsville Madison County Airport Authority (HMCAA) and provides intermodal and multi-modal services and facilities at one central hub location. The IIC supports a range of services for receiving, transferring, storing, and distributing air, rail, and highway cargo and features U.S. Customs and Border Protection Port of Entry with Customs Officials, U.S. Department of Agriculture Inspectors, and Customs Brokers on site.

The IIC is capable of handling trailer-on-flat car and container-on-flat car (TOFC/COFC) and double-stack service. The center is located in Foreign Trade Zone No. 83, enhancing trade and economic development. The Intermodal Center serves as a regional distribution hub for rail customers within a 200-mile radius and a 600-mile radius for air cargo customers.

Due to rapid rail volume growth and depot activity, further expansion of facilities at the Intermodal Center was necessary. The second phase of an expansion of the Intermodal Center was completed at the end of 2003. In this project, 4,000 feet of siding track was installed parallel to the existing mainline from Short Pike to the old Cheeseborough-Pond building. Track #4 was extended south off the mainline to add 2,000 feet for additional lift capacity. This additional 2,000 feet will provide 50% more additional loading and unloading capacity. In addition, the outbound building and inbound/outbound truck lanes were expanded. The entire 36-acre expansion area was lighted and fenced.

A 45-ton overhead Mi-Jack gantry crane was added to the equipment lineup. The Mi-Jack is rubber tire-mounted, thus it can traverse the entire rail yard while being operated with a radio control by a single individual on the ground. The new crane will increase lift capacity and efficiency on the yard while providing complete backup for the original crane. The original rail-mounted Paceco gantry crane received upgrades and refurbishments resulting in a near doubling of lift capacity for that crane. This expansion has doubled the size of the existing terminal and quadrupled rail lift capacity from 26,000 containers to 114,000 containers.

Currently, the container volume at the Intermodal Center is 90% international and 10% domestic. Domestic intermodal volume was expected to increase significantly after Norfolk Southern acquired over 50% of Conrail in 1998. A 1999 study by the Kingsley Group, which was commissioned by the Intermodal Center, indicated domestic rail volume between Huntsville and the Northeast U.S. would grow substantially between 2000 and 2025. One growth scenario in the Kingsley study projected as many 55,000 domestic containers moving between Huntsville and the Northeast U.S. by 2025. While there has been some growth in the Northeast corridor from Huntsville, the rapid growth projected has not materialized to date. To address this lack of domestic intermodal growth, in June 2007 Norfolk Southern announced a $2.3 billion rail expansion called “The I-81 Crescent Corridor.”

The corridor stretches from New Orleans to the South and Memphis to the West – across Alabama – and then to the Northeast U.S. running parallel to Interstate 81. This new corridor expansion should allow for the realization of substantial increases in domestic intermodal traffic at the Intermodal

Center. Norfolk Southern projects the Corridor may take as many as one million trucks per year off the highway. New and improved service additions to the corridor will begin in 2009, and the corridor network is scheduled to be complete by 2013.

The Intermodal Center currently serves 12 major steamship lines, which also utilize the Center as a container yard depot to store and manage their equipment in Huntsville. Current system users and projected increases in rail traffic, coupled with the recent expansion of the Center, place the region in a strategic position to accommodate anticipated cargo growth.

The Huntsville International Airport is noted for its major intermodal cargo facility called the International Intermodal Center (IIC). It is an inland port which provides a single hub location. The center offers a broad range of services which includes receiving, transferring, storing, and distributing cargo by air, rail and highway. This can be done both domestically and internationally. The center is an established global air cargo hub that receives cargo internationally. The port is also served by a spur off the Norfolk Southern rail line. The intermodal rail yard is approximately 45 acres and has 6 miles of track. Interstate 565 is the major roadway that connects with the center. A local project has begun to connect I-565 to U.S. Highway 31 to better connect Decatur to the interstate, thus providing a more efficient route to the airport.

Chapter 6: Passenger Rail

6. Passenger Rail

Overview of Passenger Rail Service in the U.S.

There is a wide variety of rail passenger systems in service across the United States, ranging from short light rail lines to cross-continental passenger train services. The U.S. Department of Transportation separates them into two categories based on the use of the system for passenger service as compared to other traffic. The two categories are:

- Primary Service – where the rail line exists because of the passenger service provided.
- Ancillary Service – where other traffic predominates, at least on a revenue basis.

The following briefly describes these various rail-based systems, Mass Transit, Heavy Rail transit, Commuter Railroads, and Intercity Services.

Mass Transit (Light Rail)

Light Rail Mass Transit continues to be the highest growth segment of rail transit – with new systems coming online each year. For the decade from 1990 to 2000, total passenger-miles by light rail transit increased by 134.5%.[1] The growth of light-rail has far outpaced motor bus as well as rapid rail and commuter rail.

The light rail category sometimes includes the original "Streetcar" or "Trolley" systems seen in older urban areas across the country, many of which were decommissioned in the 1950s as automobile use increased. When implementing new light rail systems, some cities choose to use historic or replica cars, rather than modern Light Rail Vehicles.

Transit-Oriented Development (TOD) is a modern term for a land use concept that often parallels new Light Rail systems coming online. The term refers to the compact, mixed use development that occurs near transit which intends to encourage residents to walk and ride transit more frequently, rather than drive.

Heavy Rail Transit (Urban and Commuter)

Heavy Rail Transit is completely independent from other traffic with high capacity and frequent service. It is most typically located in large, dense urban areas in the U.S., such as New York City, Boston, Washington D.C., Chicago and San Francisco. Heavy Rail (or Urban Rapid Rail) passenger-miles grew more slowly than light rail or commuter rail from 1990 to 2000, at a rate of approximately 20.6%.[2]

---

1 American Public Transit Association, 2003. Available through http://www.lightrailnow.org/facts/fa_lrt013.htm. Accessed August 11, 2008.

2 American Public Transit Association, 2003. Available through http://www.lightrailnow.org/facts/fa_lrt013.htm. Accessed August 11, 2008.

Commuter Railroad (Primary and Ancillary)

Commuter Railroad services (or Regional Rail) provide services from central cities to commuter towns, and may share ROW with non-passenger operations. They typically operate on a peak/off-peak schedule. After bottoming out in the early 1970's, commuter rail has been making a comeback in recent decades, with passenger-miles increasing by 32.8% from 1990 to 2000.[3]

Intercity Services

Nation-wide, Intercity and Long Haul train service is provided by the National Railroad Passenger Corporation (AMTRAK). AMTRAK was created by an Act of Congress effective May 1, 1971 to operate nationwide passenger service over a skeleton network of routes. In return for contributions of rolling stock, facilities, and cash related to the amount of deficits they had been incurring in operating intercity passenger service, the railroads joining AMTRAK were allowed to terminate operation of their existing passenger services. By 1983, all inter-city service in the U.S. was operated by AMTRAK.

During Fiscal Year 2007, 2.8 million passengers rode AMTRAK, with an average of 70,000 passengers on 300 trains each day. AMTRAK operates on 21,000 miles of route network, of which they own approximately 30% or just under 700 miles.[4] Refer to Figure 6-1.

[3] American Public Transit Association, 2003. Available through <http://www.lightrailnow.org/facts/fa_lrt013.htm> August 11, 2008.

[4] AMTRAK National Facts, <http://www.amtrak.com/servlet/ContentServer?pagename=Amtrak/am2Copy/Title_Image_Copy_Page&c=am2Copy&cid=1081442674300&ssid=542> August 11, 2008.

Figure 6-1
Nationwide AMTRAK Service

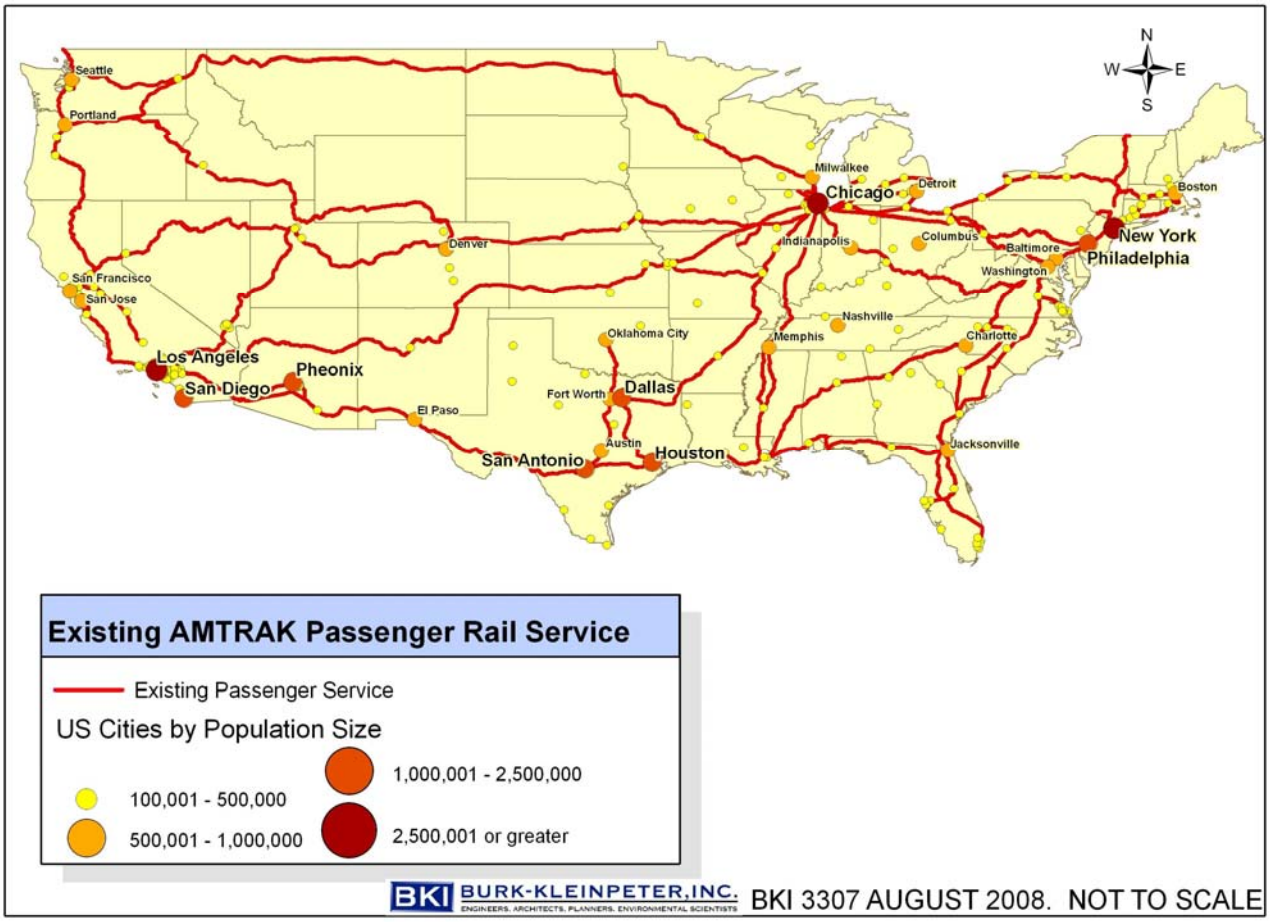


Table 6-1
Mass Transit – Light Rail Characteristics

Typical Train Consist	Single or Two-car Articulated "Light Rail Vehicles"
Typical Passenger Accommodations:[5]	Single-Deck Limited Seating + Standees
Fare Structure, Sale and Collection:	Flat or Zone, Single Trip Farebox or Machine Ticket and Random Inspection
SCHEDULES	
Trips/Day (each way per line)**:**	50 to 50
Minimum Headway(rush hour per track)**:**	5 minutes
Hours of Service:	Day, Evening, Limited Weekend
Miles between stops:	.2
Typical Length of Route (miles)**:**	10
Average Speed (including stops)**:**	15
Maximum Speed:	50
RIGHT OF WAY	
Principle Locations, Exclusivity:	Surface Street or Private ROW (With Grade Crossings)
Other Non-passenger Rail:	None, or Limited Freight
Number of Tracks:	2
Signaling/Control:[6]	ABS (on private ROW)
Station Platforms:	Low
TRAIN CHARACTERISTICS	
Propulsion/Power Distribution/ Voltage:[7]	Electric, Overhead Trolley Wire, Low Voltage DC
Cars per Train:	1 to 4
Train Weight/Passenger (lb):	300 (with standees)
Acceleration (mph/sec @ medium speed)**:**	4.5
Acceleration Control:	Operator
Braking:	Dynamic/Air/Magnetic

Source: John H. Armstrong, The Railroad: What It Is, What It Does, 1999.

[5] Limited Seating + Standees = 125-200 passengers/car. Low Density = 40 passengers/car Medium Density = 70 passenger/car. Single Deck Commuter = 100 passengers/car. Double Deck = 160 passengers/car.
[6] ABS = Automatic Block Signals. ATC = Automatic Train Control. CTC = Centralized Traffic Control
[7] Low Voltage = 600 to 750 volts. High Voltage = 11-25 kilovolts

Table 6-2
Mass Transit – Heavy Rail Transit – Urban Characteristics

Typical Train Consist	Self Propelled, Multiple Unit Passenger Cars
Typical Passenger Accommodations:[8]	Single-Deck Limited Seating + Standees
Fare Structure, Sale and Collection:	Flat or Zone, Single Fare Trip, Machine Issued, Turnstile, Collection
SCHEDULES	
Trips/Day (each way per line)**:**	100-200
Minimum Headway(rush hour per track)**:**	1.5 minutes
Hours of Service:	Day, Evening, Weekend
Miles between stops:	0.5 Local/1.5 Express
Typical Length of Route:	15 miles
Average Speed (including stops)**:**	25
Maximum Speed:	55
RIGHT OF WAY	
Principle Locations, Exclusivity:	Tunnel, Elevated Surface (No Grade Crossings)
Other Non-passenger Rail:	None
Number of Tracks:	2 to 4
Signaling/Control:[9]	ABS/ATC
Station Platforms:	High
TRAIN CHARACTERISTICS	
Propulsion/Power Distribution/ Voltage:[10]	Electric – Third Rail, Low Voltage DC
Cars per Train:	2 to 12
Train Weight/Passenger (lb):	450 (with standees)
Acceleration (mph/sec @ medium speed)**:**	3.5
Acceleration Control:	Automatic
Braking:	Electro-pneumatic

Source: John H. Armstrong, The Railroad: What It Is, What It Does, 1999.

[8] Limited Seating + Standees = 125-200 passengers/car. Low Density = 40 passengers/car Medium Density = 70 passenger/car. Single Deck = 100 passengers/car. Double Deck = 160 passengers/car.
[9] ABS = Automatic Block Signals. ATC = Automatic Train Control. CTC = Centralized Traffic Control
[10] Low Voltage = 600 to 750 volts. High Voltage = 11-25 kilovolts

Table 6-3
Mass Transit – Heavy Rail Transit - Commuter

Typical Train Consist	Self Propelled Multiple Unit Passenger Cars
Typical Passenger Accommodations:[11]	Single-Decking, Full Seating + Limited Standees
Fare Structure, Sale and Collection:	Graduated Single Trip Fare Machine Issued, Fare Gate Collection
SCHEDULES	
Trips/Day (each way per line)**:**	25-150
Minimum Headway(rush hour per track)**:**	3 minutes
Hours of Service:	Weekday, Evening, Weekend, Limited Night Owl
Miles between stops:	1.5
Typical Length of Route (miles)**:**	25
Average Speed (including stops)**:**	35
Maximum Speed:	75
RIGHT OF WAY	
Principle Locations, Exclusivity:	Elevated Tunnel, Surface (No Grade Crossings)
Other Non-passenger Rail:	None
Number of Tracks:	2
Signaling/Control:[12]	ABS/ATC
Station Platforms:	High
TRAIN CHARACTERISTICS	
Propulsion/Power Distribution/ Voltage:[13]	Electric – Third Rail, Low Voltage DC
Cars per Train:	4 to 12
Train Weight/Passenger (lb):	700
Acceleration (mph/sec @ medium speed)**:**	3.0
Acceleration Control:	Computer
Braking:	Dynamic/Electro-pneumatic

Source: John H. Armstrong, The Railroad: What It Is, What It Does, 1999.

[11] Limited Seating + Standees = 125-200 passengers/car. Low Density = 40 passengers/car Medium Density = 70 passenger/car. Single Deck = 100 passengers/car. Double Deck = 160 passengers/car.
[12] ABS = Automatic Block Signals. ATC = Automatic Train Control. CTC = Centralized Traffic Control
[13] Low Voltage = 600 to 750 volts. High Voltage = 11-25 kilovolts

Table 6-4
Railroad – Commuter - Primary

Typical Train Consist	Self Propelled Multiple Unit Passenger Cars
Typical Passenger Accommodations:[14]	Single or Double Deck, + Limited Standees
Fare Structure, Sale and Collection:	Multi-ride, Zone Fare, Agent Sold, Flash Ticket
SCHEDULES	
Trips/Day (each way per line)**:**	25-75
Minimum Headway(rush hour per track)**:**	3 minutes
Hours of Service:	Rush Hour, Limited Off-Peak, Evening
Miles between stops:	2.5 Local, up to 20 express
Typical Length of Route (miles)**:**	35
Average Speed (including stops)**:**	30 Local, 45 express
Maximum Speed:	79 (ABS); 100 (Cab Signals)
RIGHT OF WAY	
Principle Locations, Exclusivity:	Surface, Tunnel (No Grade Crossings)
Other Non-passenger Rail:	Limited Freight
Number of Tracks:	2 to 6
Signaling/Control:[15]	ABS/ATC
Station Platforms:	High
TRAIN CHARACTERISTICS	
Propulsion/Power Distribution/ Voltage:[16]	Electric-Overhead Catenary/High Voltage AC, Third Rail/Low Voltage DC
Cars per Train:	2 to 12
Train Weight/Passenger (lb):	800
Acceleration (mph/sec @ medium speed)**:**	3.0
Acceleration Control:	Automatic
Braking:	Electro-pneumatic

Source: John H. Armstrong, The Railroad: What It Is, What It Does, 1999.

[14] Limited Seating + Standees = 125-200 passengers/car. Low Density = 40 passengers/car Medium Density = 70 passengers/car. Single Deck = 100 passengers/car. Double Deck = 160 passengers/car.
[15] ABS = Automatic Block Signals. ATC = Automatic Train Control. CTC = Centralized Traffic Control
[16] Low Voltage = 600 to 750 volts. High Voltage = 11-25 kilovolts

Table 6-5
Railroad – Commuter - Ancillary

Typical Train Consist	Locomotive-Hauled or Self Propelled (Multiple Unit or Fixed Consist) Passenger and Snack Cars
Typical Passenger Accommodations:[17]	Single or Double Deck, + Limited Standees
Fare Structure, Sale and Collection:	Multi-ride, Zone Fare, Agent Sold, Flash Ticket
SCHEDULES	
Trips/Day (each way per line)**:**	1-25
Minimum Headway(rush hour per track)**:**	10 minutes
Hours of Service:	Rush Hour Weekday
Miles between stops:	3.0
Typical Length of Route (miles)**:**	50
Average Speed (including stops)**:**	35
Maximum Speed:	79
RIGHT OF WAY	
Principle Locations, Exclusivity:	Surface (Some Grade Crossings)
Other Non-passenger Rail:	Freight
Number of Tracks:	2
Signaling/Control:[18]	ABS
Station Platforms:	Low
TRAIN CHARACTERISTICS	
Propulsion/Power Distribution/ Voltage:[19]	Diesel-Electric and Diesel-Hydraulic
Cars per Train:	3 to 18
Train Weight/Passenger (lb):	1,000
Acceleration (mph/sec @ medium speed)**:**	1.0
Acceleration Control:	Operator
Braking:	Automatic Air

Source: John H. Armstrong, The Railroad: What It Is, What It Does, 1999.

[17] Limited Seating + Standees = 125-200 passengers/car. Low Density = 40 passengers/car Medium Density = 70 passengers/car. Single Deck = 100 passengers/car. Double Deck = 160 passengers/car.
[18] ABS = Automatic Block Signals. ATC = Automatic Train Control. CTC = Centralized Traffic Control
[19] Low Voltage = 600 to 750 volts. High Voltage = 11-25 kilovolts

Table 6-6
Railroad – Intercity - Corridor

Typical Train Consist	Locomotive-Hauled or Self Propelled (Multiple Unit or Fixed Consist) Passenger and Snack Cars
Typical Passenger Accommodations:[20]	Medium Density Coach/Snack + Limited 1st Class (Low Density)
Fare Structure, Sale and Collection:	Single Trip, Agent Sold, Unreserved Accommodations, On-Train Collection
SCHEDULES	
Trips/Day (each way per line)**:**	4 to 40
Minimum Headway(rush hour per track)**:**	12 minutes
Hours of Service:	Daily, Day, & Evening
Miles between stops:	35, 200 (Express)
Typical Length of Route (miles)**:**	85 to 300
Average Speed (including stops)**:**	75
Maximum Speed:	79 (ABS), 110 – 125 (Cab Signal/ATC)
RIGHT OF WAY	
Principle Locations, Exclusivity:	Surface (Few Grade Crossings)
Other Non-passenger Rail:	Freight
Number of Tracks:	1 to 4
Signaling/Control:[21]	ABS/ATC
Station Platforms:	High & Low
TRAIN CHARACTERISTICS	
Propulsion/Power Distribution/ Voltage:[22]	Electric Overhead Catenary, High Voltage AC, Gas Turbine, Diesel-Electric
Cars per Train:	4 to 12
Train Weight/Passenger (lb):	2,000
Acceleration (mph/sec @ medium speed)**:**	1.5
Acceleration Control:	Operator
Braking:	Dynamic/Electric Pneumatic

Source: John H. Armstrong, The Railroad: What It Is, What It Does, 1999.

[20] Limited Seating + Standees = 125-200 passengers/car. Low Density = 40 passengers/car Medium Density = 70 passengers/car. Single Deck = 100 passengers/car. Double Deck = 160 passengers/car.
[21] ABS = Automatic Block Signals. ATC = Automatic Train Control. CTC = Centralized Traffic Control
[22] Low Voltage = 600 to 750 volts. High Voltage = 11-25 kilovolts

Table 6-7
Railroad – Intercity – Long Haul

Typical Train Consist	Locomotive-Hauled Baggage, Passenger & Non-revenue cars
Typical Passenger Accommodations:[23]	Single or Double Deck Low Density Coach, Lounge, Sleeping, Dining
Fare Structure, Sale and Collection:	Single Trip, Agent Sold, Unreserved Accommodations, On-Train Collection
SCHEDULES	
Trips/Day (each way per line)**:**	1 to 4
Minimum Headway(rush hour per track)**:**	N/A
Hours of Service:	Daily, or Tri-Weekly, Overnights
Miles between stops:	80
Typical Length of Route (miles)**:**	300 – 2,500
Average Speed (including stops)**:**	50
Maximum Speed:	79 (ABS), 90 (Cab Signal/ATC)
RIGHT OF WAY	
Principle Locations, Exclusivity:	Surface (Many Grade Crossings)
Other Non-passenger Rail:	Freight
Number of Tracks:	1 to 2
Signaling/Control:[24]	CTC/ABS
Station Platforms:	Low
TRAIN CHARACTERISTICS	
Propulsion/Power Distribution/ Voltage:[25]	Diesel-Electric
Cars per Train:	4 to 18
Train Weight/Passenger (lb):	5,500
Acceleration (mph/sec @ medium speed)**:**	0.3
Acceleration Control:	Operator
Braking:	Automatic Air

Source: John H. Armstrong, The Railroad: What It Is, What It Does, 1999.

[23] Limited Seating + Standees = 125-200 passengers/car. Low Density = 40 passengers/car Medium Density = 70 passengers/car. Single Deck = 100 passengers/car. Double Deck = 160 passengers/car.
[24] ABS = Automatic Block Signals. ATC = Automatic Train Control. CTC = Centralized Traffic Control
[25] Low Voltage = 600 to 750 volts. High Voltage = 11-25 kilovolts

Passenger Rail Service in Alabama

Mass Transit (Light Rail) in Alabama

As light rail systems have gained increasing popularity in urban areas across the U.S. over the past 30 years, so too has the concept been explored in Alabama. The Birmingham Area Regional Transit Authority (BARTA), initiated the first light rail study as part of their Region 2020 Plan in 1998. However, the initial preliminary plans for a 13.5 mile line linking downtown Birmingham to Birmingham International Airport (BIA) along I-20/I-59 were not funded due to a lack of political support.

The Birmingham Regional Planning Commission continued to study the feasibility of light rail in the region, developing concepts for the following four lines:

- 12-mile line along U.S. 280 ($177 million to construct)
- 15-miles along U.S. 31/I-65 ($181 to construct)
- 18-miles along I-59 with extension to BIA ($233 million to construct)
- 17- mile line from downtown to Bessemer (($171 million)

Ultimately, local support could not be garnered for the local match money and most of the plans have since been shelved.

One element of the light rail studies which did survive and which continues to have some momentum is a streetcar to serve downtown and the University of Alabama at Birmingham (UAB). The Birmingham Metropolitan Planning Organization commissioned a study, *the Birmingham Regional Transportation Alternatives Analysis (BRTAA)*, which included a proposal for a streetcar along 19th Street North, 5th Avenue South, and 7th Avenue South.[26]

Although the location and length of the route has gone through several changes since that study, the concept continues to be refined by the City of Birmingham, which was pursuing the line as of this writing, despite the absence of available federal funds. Requests for Proposals to build the systems were submitted to the City in the summer of 2008.[27] The most current conceptual plan is depicted in Figure 6-2.

Heavy Rail Transit and Commuter Railroad

There are currently no mass transit heavy rail or commuter rail services operating anywhere in Alabama, nor are there plans for any.

---

[26] Birmingham Light Rail. http://www.bhamwiki.com/w/Light_rail. Accessed: August 12, 2008

[27] Oberholzer, K. (2008 May 20). Transit Authority shows plans for Birmingham streetcar system to prospective contractors. *The Birmingham News, online edition.*

Figure 6-2
Proposed Birmingham Streetcar System

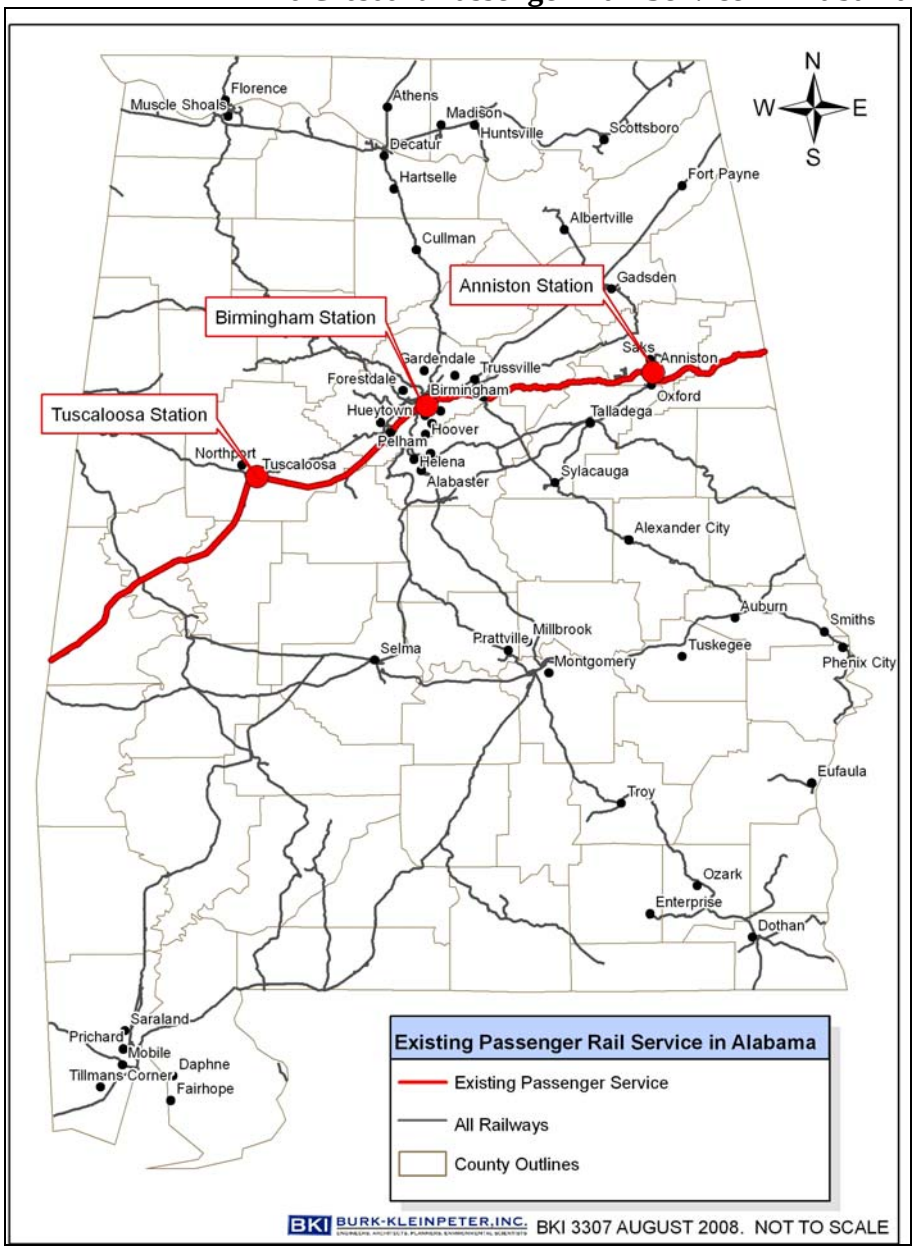
Intercity Service

Alabama has, like other states, a long history of passenger rail service throughout the state. However, with the advent of the automobile and the interstate highway system, intercity rail service became less popular. With the creation of Amtrak, there have been only four routes that have operated in Alabama: (1) the long-distance *Crescent*, (2) the long distance *Sunset Limited*, (3) the *Gulf Breeze*, and (4) the *Gulf Coast Limited*.

The Crescent Passenger Service

Amtrak's *Crescent* passenger rail service traverses Alabama on Norfolk Southern rail line as it travels between New York and New Orleans twice daily (once in each direction). *The Crescent* serves three stations located in Alabama, in the Cities of Anniston, Birmingham and Tuscaloosa. Refer to Figure 6-3.

Figure 6-3
***The Crescent* Passenger Rail Service in Alabama**



Anniston Station

The Anniston Station is located at 126 West 4th Street. According to Amtrak, there were 4,652 boardings and alightings at the station in 2007, an increase of 16% over the previous year.

This 1926 Classical Revival style structure has recently undergone a rehabilitation funded through the ISTEA and TEA-21 Transportation Enhancement Program. This updated facility will serve as a multi-modal transportation center for Amtrak, Greyhound Bus Service, local transit and taxi service, and is the southern terminus of the Chief Ladiga Rails-to-Trails project.

Figure 6-4
Anniston Station

Source: http://picasaweb.google.com/lh/photo/c21iSX3oljnKXpGGiVhxEw

Tuscaloosa Station

The Crescent also stops at the station in Tuscaloosa, located at 2105 Greensboro Avenue. This station had 8,091 boardings and alightings in 2007, an increase of 12% over the previous year.

Figure 6-5
Tuscaloosa Station

Source: www.wikipedia.org

Birmingham Station

The busiest Amtrak station in Alabama is the Birmingham Station, located at 1819 Morrison Avenue. In 2007, there were 27,325 boardings and alightings, an increase of 13% over the previous year. In 2008, the City of Birmingham received $23 million in federal funding to improve this station. Called the *Central Station*, it is planned as a multi-modal transportation center for trains, local and intracity buses and taxis, as well as their planned downtown streetcar.

Figure 6-6
Birmingham Station

Source: www.railpictures.net

Total boardings and alightings for *The Crescent* in Alabama from 2004 to 2007 are shown in Table 6-8, below.

Table 6-8
Amtrak Ridership by Station

	2004	2005	2006	2007
Anniston	4,751	4,935	4,014	4,652
Atmore	292	255		
Birmingham	32,535	32,853	24,376	27,325
Mobile	1,597	1,215		
Tuscaloosa	9,291	9,436	7,222	8,091
Total Ridership	50,470	50,699	31,118	42,075

Prepared by Burk-Kleinpeter, Inc., 2008.

The services offered at the three stations in Alabama are shown below in Table 6-9.

Table 6-9
Services Offered at Alabama Stations

	Anniston 126 W. 4th Street	Birmingham 2105 Greensboro Avenue	Tuscaloosa 1819 Morrison Avenue
Staffed		✓	✓
Enclosed Waiting Area	✓	✓	✓
Restrooms/Payphones	✓	✓	✓
Help with Baggage		✓	✓
Checked Baggage Service	✓	✓	✓
Free short and long term parking	✓		✓
Paid short and long term parking		✓	
Local transportation – taxis on call	✓	✓	✓
Partially Accessible to persons using wheelchairs			✓

Prepared by Burk-Kleinpeter, Inc., 2008.

Sunset Limited Passenger Rail Service

The Sunset Limited was a cross-continental train that ran on CSX track from Jacksonville, FL to New Orleans, LA and on a Union Pacific/BNSF track from New Orleans to Los Angeles, CA. The CSX track from Pensacola to New Orleans was completed destroyed by Hurricane Katrina on August 29, 2005. Despite that, CSX rebuilt the line and reinstated freight service within six months of the storm.

Passenger service, however, was not reinstated between New Orleans and Florida due to the historically low ridership on this segment. Ridership rates at the Mobile and Atmore stations in 2004, at 1,597 and 292, respectively. Amtrak has not declared whether this service will be reinstated or not, but it has not been officially abandoned.

The Gulf Breeze Passenger Service

From 1989 to 1995, Amtrak operated the Gulf Breeze passenger service from Birmingham to Mobile. In 1994, its last full year of service, annual ridership was 7,737. This 275-mile corridor served the following Alabama stations: (1) Birmingham, (2) Montgomery, (3) Greenville, (4) Evergreen, (5) Brewton, (6) Atmore, (7) Bay Minette, and (8) Mobile.

The Gulf Coast Limited Passenger Service

In conjunction with the New Orleans World's Fair, *the Gulf Coast Limited* began operation by Amtrak in April 1984. The train originated in Mobile, AL, made four stops in Mississippi, one in New Orleans East and terminated at the Union Passenger Terminal (UPT) in New Orleans. The service ended in January 1985.

In June 1996, an experimental 90 trial run for reinstatement of service occurred. The location of stops throughout Louisiana and Mississippi were altered slightly, but the terminal points of Mobile and New Orleans remained in tact. The train proved successful and service continued for 9 months, terminating in March 1997.

Historic Train Depots

Since the passage of ISTEA and TEA-21, the Transportation Enhancement (TE) program has enabled a funding source for the preservation, restoration and conversion of historic Train Depots for civic purposes. Since 1993, the program has funded approximately 40 such projects in Alabama. Refer to Table 6-10 on the following page.

Table 6-10
Rail Station Transportation Enhancement Projects

Project Name	Year	County	Total	Federal Share	Local Share
Restoration of Foley RR Depot	1997	Baldwin	$200,000	$160,000	$40,000
Restoration of Foley RR Depot	1993	Baldwin	$142,000	$113,600	$28,400
Restoration of Clayton RR Depot	1996	Barbour	$235,000	$188,000	$47,000
Restoration of Eufaula RR Depot, Phase II	1999	Barbour	$250,000	$200,000	$50,000
Restoration of Eufaula RR Depot, Phase III	2002	Barbour	$260,000	$208,000	$52,000
Restoration of Oneonta L&N RR Depot	1998	Blount	$245,000	$196,000	$49,000
Restoration of Greenville RR Depot	1993	Butler	$297,370	$59,474	$237,896
Restoration of RR Depot at blue Mountain	1997	Calhoun	$25,000	$20,000	$5,000
Restoration of Norfolk Southern Depot, Anniston	1997	Calhoun	$250,000	$200,000	$50,000
Restoration of Norfolk Southern Depot, Anniston	2005	Calhoun	$557,000	$445,600	$111,400
Restoration of RR Depot at Lafayetta	1996	Chambers	$56,400	$45,120	$11,280
Restoration of RR Depot, Maplesville	2002	Chilton	$76,835	$61,486	$15,349
Maplesville Train Station Restoration, Phase II	2007	Chilton	$123,365	$98,692	$24,673
Historic Tuscumbia Train Depot Project	2003	Colbert	$609,000	$487,200	$121,800
Restoration of Evergreen RR Depot	1997	Conecuh	$227,000	$181,600	$45,400
Restoration of L&N RR Depot, Florala	1994	Covington	$46,794	$37,435	$9,359
Restoration of Cullman RR Depot	1993	Cullman	$129,404	$103,523	$25,881
Train Depot Restoration & Relocation, Ozark	2007	Dale	$367,400	$293,920	$73,480
Fort Payne Depot Restoration	2005	Dekalb	$258,540	$206,832	$51,708
Fayette Depot Courtyard Restoration	2002	Fayette	$124,500	$98,600	$25,900
Restoration of Fayette Train Depot	1998	Fayette	$250,000	$200,000	$50,000
Restoration of Ashford RR Depot	2003	Houston	$500,000	$440,000	$60,000
Restoration of Bridgeport RR Depot	1994	Jackson	$275,000	$220,000	$55,000
Restoration of Scottsboro Freight Depot	2001	Jackson	$49,900	$39,920	$9,980
Restoration of Bessemer Freight Depot	2002	Jefferson	$95,000	$76,000	$19,000
Restoration of Bessemer Freight Depot	1993	Jefferson	$125,000	$100,000	$25,000
Restoration of Kennedy RR Depot	1997	Lamar	$93,750	$75,000	$18,750
Opelika Railroad Depot Restoration	2001	Lee	$20,000	$16,000	$4,000
Restoration of Norfolk Southern Depot, Opelika	1998	Lee	$62,500	$50,000	$12,500
Restoration of Opelika Depot	1993	Lee	$481,250	$385,000	$96,250
Brilliant Train Depot Restoration	2002	Marion	$71,400	$57,120	$14,280
Acquisition of historic G, M&O Building, Mobile	1997	Mobile	$424,550	$339,640	$84,910
Union Station Rehabilitation	2001	Montgomery	$499,950	$399,860	$100,090
Restoration of union Station, Montgomery	1999	Montgomery	$500,000	$500,000	$0
Union Station Portico Restoration	2002	Montgomery	$150,000	$120,000	$30,000
Restoration of Hartselle RR Depot	2004	Morgon	$75,000	$60,000	$15,000
Restoration of Marion RR Depot	1994	Perry	$187,500	$150,000	$37,500
Restoration of Livingston RR Depot	1999	Sumter	$250,000	$200,000	$50,000
Restoration of Northport Depot	1993	Tuscaloosa	$80,000	$64,000	$16,000
Restoration of Pine Hill Depot	1996	Wilcox	$131,500	$105,200	$26,300

Source: Alabama Department of Transportation

High Speed Passenger Rail Overview

Since the early 1990's, the nation has become increasingly interested in furthering the development of high-speed ground transportation or high-speed rail. High-speed rail in the United States is generally meant to include passenger rail service operating at a "cruising speed" of 125 mph (200kmph) or higher between station pairs, where resulting downtown to downtown journey times are competitive with airplanes for business travel.

High-speed rail technology in the United States has taken three distinctive routes: (1) Magnetic Levitation, (2) Steel Wheels, and (3) Tilting Trains. These three technologies are discussed briefly below.

Magnetic Levitation

Magnetic Levitation (Mag-Lev) is divided between those systems using the attraction properties of magnetism and those using the repulsion properties. Both have serious trade-offs. The attraction system requires an extremely precise guideway while the repulsion based alternative is less demanding geometrically but has formidable power and control challenges. Both systems can push trains to speeds approaching 300 mph.

TEA-21 identified two corridors for studies to determine the possibility of constructing Mag-Lev systems. These corridors were Baltimore-Washington and Pittsburg, PA. Both projects have completed their Environmental Impact Statements, but funding for construction has not been obtained.

Steel Wheel Technology

Steel wheel technology was initially thought to have its limits at around 100 mph, but continued experimentation in the field has produced results expanding this technology's horizons. Using a combination of light axle loads, intensive smoothing of the track and modern suspension design; trains in service have reached speeds of 185 mph or greater.
Given a scenario where a relatively "straight" route can be followed, this technology can be very economical. In fact, this technology has been selected as appropriate for the essentially curve-free, high speed rail system link of Miami-Orlando-Tampa.

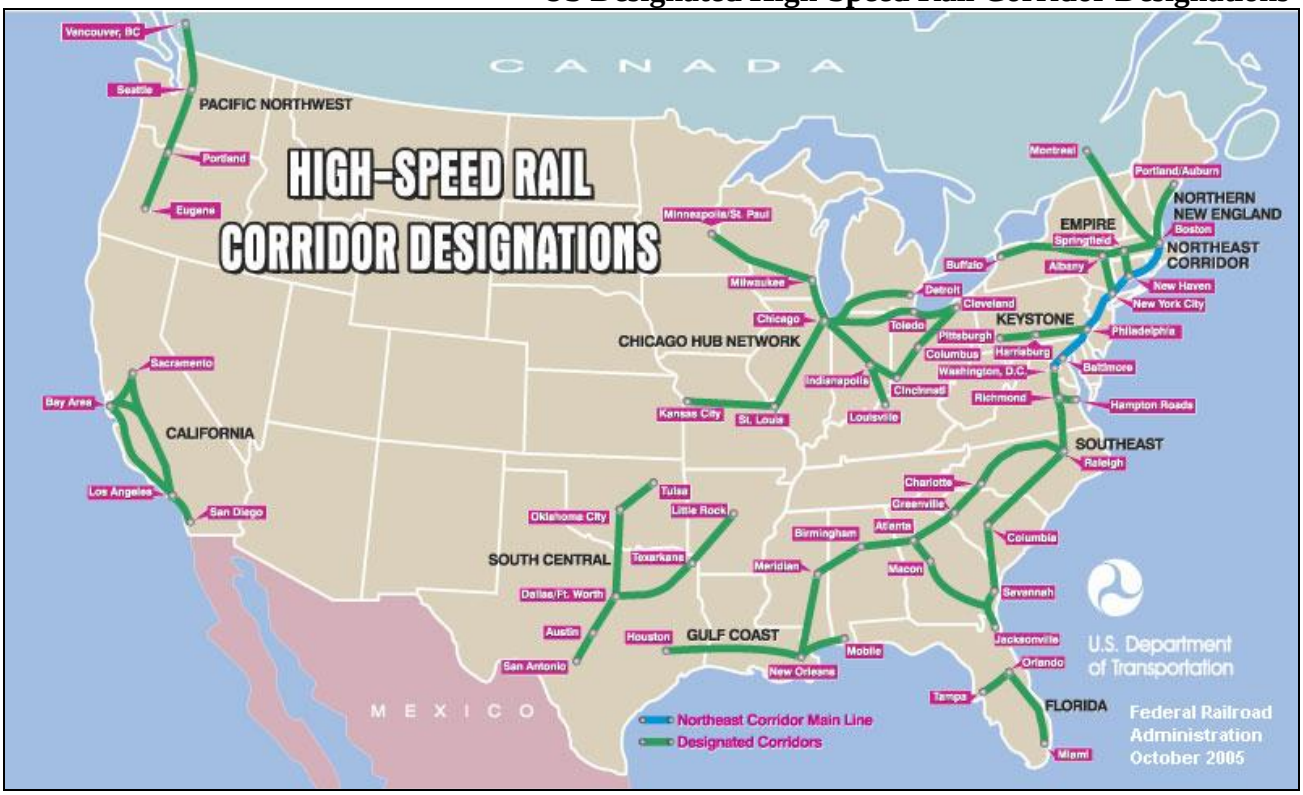
Tilting Trains

This is an old technology that has been brought back in order to increase speeds on high-speed corridors without having to make major investments in upgrading the track. Tilting the car body keeps the passenger firmly in his seat but does not alter the direction or magnitude of the wheel rail forces down below, which must remain within the limits of track and car suspension stability. Tilting trains are now in routine service at top speeds above 125 mph in several European countries. Amtrak introduced tilt train service in its New York-Boston corridor in 2000, with the introduction of its Acela Express Trains.

Designated High Speed Rail Corridor

As of January 2002, there are eleven high speed rail corridors designated by the FRA under ISTEA and TEA-21. One of these, the Gulf Coast Corridor, has two segments located in Alabama.

Figure 6-7
US Designated High-Speed Rail Corridor Designations



Source: Federal Railroad Administration

The Gulf Coast Corridor is comprised of three segments:

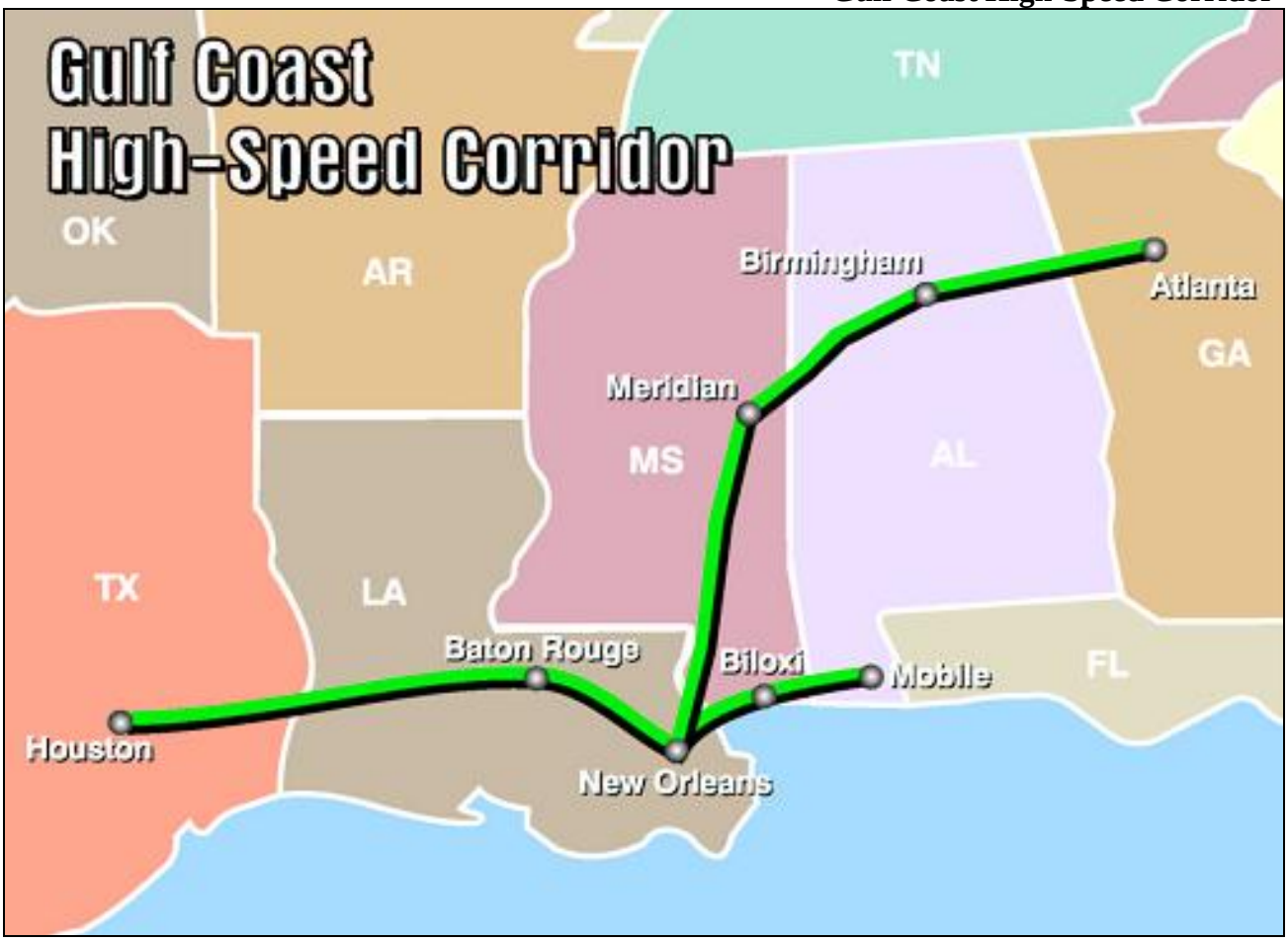
- Houston, TX to New Orleans, LA (362 miles)
- New Orleans, LA to Mobile, AL (145 miles)
- New Orleans, LA to Atlanta, GA (518 miles)

The original corridor was conceived to include only the existing *Sunset Limited* route across Louisiana, Mississippi, and Alabama, terminating in Houston, Texas and Pensacola, Florida. It was subsequently modified to include a second link from New Orleans to Atlanta.

The existing freight routes in these corridors are among the highest density in Alabama for CSX and NS, respectively. The CSX line segment between Mobile and Pascagoula, MS, is primarily single

track with a Traffic Control System. The NS line segment between Austell, GA and Meridian, MS, via Birmingham and Tuscaloosa is also primarily single track with a Traffic Control System. Corridor planning under FRA guidance has been completed for the New Orleans to Mobile segment and between Lake Charles, LA and Meridian, MS. Corridor planning from Meridian to Anniston, AL is pending allocation of matching funds from the state of Alabama.

Figure 6-8
Gulf Coast High-Speed Corridor



Source: Federal Railroad Administration

Southern Rapid Rail Transit Commission

Alabama is a member of the Southern Rapid Rail Transit Commission (SRRTC). The SRRTC is a bipartisan coalition of state and local elected officials and public and private rail interests through the tri-state area of Louisiana, Mississippi, and Alabama. The SRRTC has spearheaded efforts to bring high-speed rail to the Deep South. ISTEA originally identified just five emerging high speed rail corridors in addition to the existing Northeast Corridor. SRRTC was instrumental in the designation of a high speed rail corridor in the Deep South when the bill was reauthorized in 1998.

As one of the 11 federally designated rail corridors, the TEA-21 legislation made available dedicated federal funds for corridor analysis.

SRRTC has led a number of efforts to study the high speed rail concept for the Gulf Coast Corridor, using those funds made available by TEA-21, including:

- *Deep South High Speed Rail Corridor Feasibility Study, 1995.* This conceptual feasibility study focused on planning for the corridor extending from Atmore, AL to Lake Charles, LA.
- *The Gulf Coast High Speed Rail Corridor Feasibility Study, Phase II, 1999*. This study examined six operating scenarios for three proposed routes: Houston to New Orleans, New Orleans to Birmingham, and New Orleans to Pensacola. This study identified several important findings, including:
  - The Corridor is capacity constrained. All of the freight railroad operators have expressed concern about how their operations would be affected by increasing the level of passenger service
  - Increasing the frequency of service will actually contribute more to generating ridership than will increase average speeds.
  - Connecting the corridors to Houston and Atlanta will be critical to its success
- *Phase I: Improvement Implementation Plan – Meridian to New Orleans.* The findings of this study prompted the SRRTC to undertake a more detailed study of the Norfolk Southern corridor from New Orleans to Meridian to identify projected capacity deficiencies on the line. This study looked at the projected impacts of adding more and faster trains, adding more freight trains, and investing in additional infrastructure to add capacity to the line.
- *New Orleans to Mobile Corridor Development Plan, 2006.* The purpose of this plan was to identify the engineering and financial requirements to introduce high-speed intercity passenger rail between New Orleans and Mobile to determine the feasibility of implementing the proposed service.
- *Lake Charles to Meridian Corridor Development Plan, 2007.* This plans overall goal was to determine the impact of introducing high-speed passenger service to freight operations and then determine the level of infrastructure improvements necessary to implement high speed passenger service without negatively impacting freight operations.

In 2008, SRRTC developed a Strategic Plan to guide their efforts from 2008-2013. This plan affirms the overarching mission of the SRRTC, and then outlines a series of goals, objectives, strategies and actions toward achieving those goals. These actions are further refined with assigned responsible parties and deadlines by which to complete the actions. SRRTC's determination is clearly articulated in their mission statement:

> *The mission of Southern Rapid Rail Transit Commission (SRRTC) is to facilitate the development of higher speed passenger rail services on the Gulf Coast High Speed Rail (HSR) Corridor and to establish connectivity to the national rapid passenger rail system.*

The Commission's goals include:

1. Lead the effort to establish/increase intercity passenger rail service between key cities and towns

2. Identify the type of equipment, optimum train consists, and least cost for the Baton-Rouge-New Orleans and the New Orleans-Mobile service as well as other future corridor services in the Gulf South

3. Support multi-year federal funding for AMTRAK and work closely with AMTRAK to improve and expand existing intercity rail passenger operations in the Gulf South

4. Facilitate connectivity for passengers at rail stations to all modes of transportation (bus transit, streetcar, taxi, bicycle routes and pedestrian sidewalks) and improve the understanding of the positive impact this will have on economic development

5. SRRTC will work to establish itself as the body that speaks for the Gulf South and is a resource for local, state and federal government on passenger rail issues.

6. SRRTC will eliminate impediments and create opportunities for financing of intercity passenger rail

7. Improve the safety and performance of passenger rail operations

In combination with this plan, SRRTC is outlining an action plan which will track the progress of these efforts to achieve their desired outcomes for passenger rail systems throughout the Gulf South.

Passenger Rail Related Projects

In response to a request for projects, the Alabama representative committee to the SRRTC lobbied for the inclusion of state passenger rail corridor development projects into a second economic stimulus package. These include improvements to a total of six crossings on Amtrak passenger corridors and total $1.6 million. The proposed stimulus package is currently pending approval in Congress. A list of Alabama projects may be seen below.

Proposed Crossing Improvements[28]

1. Floyd Hill Road at CSXT DOT #351-346V in Flomaton, Escambia County.
   Install gates, bells, signals for at-grade crossing safety improvements. ($190,000)

2. Old Atmore Road (CR-2) at CSXT DOT #351-347C near Flomaton, Escambia County.
   Install gates, bells, signals for at-grade crossing safety improvements. ($238,000)

[28] All projects are to be obligated within 90 days.

3. Swift Mill Road at CSXT DOT #351-374Y in Atmore, Escambia County.
   Install gates, bells, signals for at-grade crossing safety improvements. ($168,000)

4. Sam Jones Road at CSXT DOT #351-349R in Wawbeek, Escambia County.
   Install gates, bells, signals for at-grade crossing safety improvements. ($498,000)

5. Paul Warden Road at CSXT DOT #351-473W near Grand Bay, Mobile County.
   Install gates, bells, signals for at-grade crossing safety improvements. ($183,000)

6. Hand Avenue at CSXT DOT #351-390H in Bay Minette, Baldwin County.
   Install gates, bells, signals for at-grade crossing safety improvements. ($313,000)

Appendices

OVERVIEW:

Abandonments
&
Alternatives to Abandonments

Office of Public Services
Surface Transportation Board
Washington, D.C. 20423
(202) 565-1592

April, 1997

- P R E F A C E -

This handout was prepared by the Surface Transportation Board's (STB) Office of Public Services (OPS). OPS was created to help the public participate meaningfully in STB proceedings.

As part of that effort, this paper explains the standards and procedures governing abandonments. It also discusses alternative means of preserving service, including the subsidy and purchases of lines that might otherwise be abandoned.

This paper is not an agency statement approved by the STB, but OPS believes it provides a good overview of these subjects. For readers who want to explore these issues in more detail, OPS has also prepared an information bulletin entitled "So You Want to Start a Small Railroad, Surface Transportation Board Small Railroad Application Procedures"

If you want copies of these publications or have questions, please contact OPS at (202) 565-1592. One of our staff attorneys will be glad to help you.

TABLE OF CONTENTS

I. OVERVIEW

By the mid-1970's, our nation's rail transportation system was in dire financial condition. Rail carriers were faced with increased competition from other modes of transportation (especially trucking), rising labor, fuel and maintenance expenses, and pervasive regulation that made it difficult for rail carriers to get rid of unprofitable lines. These conditions had contributed to the bankruptcy of several prominent rail carriers.

Against this background, Congress enacted a series of new laws, most notably the Staggers Rail Act of 1980 (Staggers Act). Together with the implementing regulations issued by the Interstate Commerce Commission, the STB's predecessor, this legislation sought to increase the role of the marketplace, rather than government regulation, in shaping rail transportation. In essence, the Staggers Act gave railroads more flexibility to set prices and adjust service as the market requires and thus enabled them to act more competitively. At the same time, the necessity for some regulatory protection was recognized because rail carriers still have significant market power in particular situations and because rail transportation is sometimes vital to the public. The current regulatory scheme governing abandonments and acquisitions to preserve service seeks to balance these competing considerations.

Where the market has spoken clearly and regulation is found to be unnecessary, a rail carrier may usually abandon a line, subject to appropriate labor protection and environmental conditions. Indeed, lines over which no local traffic has moved for two years without any formal complaint have been exempted from traditional regulatory scrutiny and can be abandoned simply by filing a notice with the STB.

Under the more detailed abandonment application process for active lines, the Board balances the economic burden of continued operation against the public's need for the service. Permission usually will be given to abandon lines on which there are significant operating losses. On the other hand, the carrier's ability to earn more money by disinvesting from a line and reinvesting its assets elsewhere usually is not sufficient to allow abandonment in the face of a strong public need for service.

Although it may be easier for carriers to abandon unprofitable rail lines, it is also now much easier for States and private parties to preserve rail service. The Feeder Railroad Development

Program enables any financially responsible person to force a rail carrier to sell a line that has been designated for possible abandonment, even though no abandonment application has been filed. Similarly, once an abandonment application is filed for a line, financially responsible parties can offer to subsidize the carrier's service or force the railroad to sell them the line for continued rail service. To encourage entrepreneurs and the States to operate these lines, the Board has frequently exempted them from many regulatory requirements. Also, they can often avoid expensive labor protective conditions.

With this general background, we will first set out the standards and procedures that govern formal applications to abandon a line (Part II). We will then discuss exemptions, a widely used alternative to the more detailed abandonment application process (Part III). Several alternative ways of preserving rail service will be reviewed (Part IV), including the purchase or subsidy of lines slated for abandonment. The role labor plays in these cases will be examined (Part V). Finally, we explore alternative means of preserving rail rights-of-way through rail banking (Part VI).

In 1995, Congress enacted the "ICC Termination Act" which abolished the Interstate Commerce Commission and established the Surface Transportation Board to handle rail abandonments, *inter alia.* The new statutory reference is 49 U.S.C. 10903. The new rules are codified at 49 CFR Parts 1105 and 1152. A quick summary of the changes to 49 CFR 1152, which became effective on January 23, 1997, is included at Appendix I. The full text of the new rule is at Appendix IV.

II. ABANDONMENTS

Under the ICC Termination Act of 1995 (Act), a railroad may abandon a line only with the STB's permission. The Board must determine whether the "present or future public convenience and necessity require or permit" the abandonment. In making this determination, the Board balances two competing factors. The first is the need of local communities and shippers for continued service. That need is balanced against the broader public interest in freeing railroads from financial burdens that are a drain on their overall financial health and lessen their ability to operate economically elsewhere.

The railroad first must show how continued operation of the line would be a burden to it. If it cannot establish this, the abandonment will be denied. However, the railroad does not have to show an actual operating loss. It may also calculate its "opportunity costs" for the line. These are the costs of tying up the railroad's assets in the line when those assets could earn more money elsewhere.

If the railroad does demonstrate a burden, then evidence of the public's need for continued service is examined. The effect on local businesses, surrounding communities, the local economy, and the environment may be considered. Parties opposing abandonment should present that evidence and should also challenge the railroad's financial data.

With this general introduction, we will now address in more detail the steps in the abandonment process and the kinds of factors and evidence the Board considers in deciding these cases.

A. Steps In The Abandonment Process

The Act establishes strict filing and procedural requirements for abandonment applications. (49 U.S.C. 10904). The STB has adopted regulations to implement these requirements. These regulations are found at 49 CFR 1152.

Once an abandonment application is filed, interested parties have only 45 days to file protests. Yet, an effective opposition to abandonment requires substantial preparation. The Act, therefore, also gives communities and shippers advance notice of a railroad's abandonment plans.

1. System Diagram Map

The earliest indication that a railroad intends to abandon a line comes from the carrier's system diagram map. The Act requires a rail carrier to maintain a map of all its rail lines. A Class III carrier may choose to prepare a narrative description of its lines instead of a map. On this system diagram map or in its narrative report, the carrier must identify separately (1) any line for which it expects to file an abandonment application within the next three years and (2) any line that it considers to be a potential candidate for abandonment. The Board will reject an abandonment application if any part includes a line that has not been identified as a category 1 line (abandonment application planned within 3 years) for at least 60 days before the carrier filed the abandonment application. A carrier must publish its system diagram map or narrative in a newspaper of general circulation in each county containing a rail line in category 1, and publish all subsequent changes to its system diagram map. (The system diagram map rules are found at 49 U.S.C. 10903(c)(2) and 49 CFR 1152.10-13.)

Thus, the first indication that a railroad intends to abandon a line comes at least 60 days before the carrier's application is filed. <u>This time should not be wasted.</u> It gives shippers, local and State governments, and interested citizens an opportunity to meet to weigh possible opposition to abandonment, and to consider alternative means of continuing rail operations by the current railroad or another operator. For example, rate and service changes which might permit the railroad to operate more efficiently or profitably may be negotiated.

A line need not have been listed in category 2 (potentially subject to abandonment) prior to abandonment, so no weight should be attached to the fact that a line was or was not listed in category 2.

2. Notice of Intent

In addition to the system diagram map requirement, the STB requires the railroad to file a "Notice of Intent" to abandon. The railroad must publish this notice once a week for three consecutive weeks in general circulation newspapers in each country where the line is located, send it to each of the significant shippers on the line, send it to the State agency responsible for rail transportation planning, and post it at each agency station and terminal on the line. All these notice requirements must be fulfilled 15-30 days before the application is filed at the STB.

The complete form and all the information this notice must contain are set out in Section 1152.21 of the regulations. The notice describes when and how to file a protest to the proposed abandonment. It also explains how to obtain information on possible subsidy or purchase of the line. Once the Notice of Intent to abandon is received, shippers, communities, and interested citizens should organize their activities concerning the abandonment and prepare to present their position to the STB and the railroad. For help in preparing a Notice of Intent or preparing an opposition to an abandonment, please contact OPS at (202) 565-1592.

3. Abandonment Application

The abandonment application must contain detailed information about the costs and revenues on the line to be abandoned and the overall financial condition of the carrier. (A complete recitation of what must be in the application is found at 49 CFR 1152.22.) Any interested person may request a copy of the application from the carrier, and persons planning to participate should obtain a copy as soon as the application is filed and immediately begin to examine the information carefully.

Abandonment applications may contain pages of figures, tables, charts, and graphs, some of which may be less important than other parts. Opponents should make an effort to verify and, if appropriate, recalculate and reconcile key figures and totals. Shippers and small communities often lack the expertise to sort out rail financial data or the money to hire experts to do it for them. State

rail officials can help in this area and should be contacted for assistance.

A railroad may ask the Board to waive certain informational requirements. For example, a railroad is normally allowed to exclude data concerning overhead or bridge traffic (shipments not actually originated or terminated on the line sought to be abandoned) if it would retain that traffic by rerouting it over other routes. However, an opponent who believes relevant information has been left out, should appeal the waiver explaining why the information is necessary. If the Board agrees, it will rescind the waiver and require the information.

4. Protests or Comments To The Proposed Abandonment

Once an application is filed, protestants have only 45 days to submit protests.[1] Protests should attempt to quantify the harm to shippers and the community and explain each protestant's interest in continued service. If possible, they should also try to critically evaluate the railroad's financial evidence. Section 1151.25(a) of the regulations lists all the information that should be in the protest.

All larger shippers and every community on the line should submit statements describing in detail their use of the line and the impact a loss of rail service will have on their operations and area. Opposition from elected officials from both the local and national level is also very helpful.

Shippers should submit car loading data and estimates of future use -- the best are showings of projected increased traffic. They should also point out any defects in the carrier's cost data. Communities and shippers should make every effort to quantify the harm from abandonment.

Protestants should describe their interest in the proceeding in as much detail as possible. For instance, if the line sought to be abandoned is used for grain shipments and the protestant is a grain producer, the statement should at least specify the number of years in farming, the farm's size, the amount of grain produced and shipped by rail, the number of people employed directly on the farm, the availability of alternative (whether rail, truck or barge) transportation, the cost of alternative transportation compared to the cost of using this line, and any other factors believed to be relevant. In addition, protestants should present any evidence they may have developed that contradicts the revenue and cost evidence the railroad has submitted. Always use specific numbers, facts and

---

[1] **NOTE:** *Oral Hearing* requests must be filed within *10 days* of receipt of the application. The Board must act on those requests within *15 days* of the filing of the application. See time line in Appendix I.

figures when possible, and explain where the information comes from or how it was developed. Cost and revenue information is usually critical. Remember: If it is shown that the line is not a financial burden to the railroad, abandonment will be denied.

Again, protests and comments to the proposed abandonment must be received at the STB within 45 days after the filing of the application. An original and 10 copies of each comment or protest must be filed with the Board. A copy must be mailed to the applicant railroad, and each copy must contain a "Certificate of Service" (a statement that the railroad was mailed a copy of the comment or protest). No set "form" exists for a protest and many letter protests are received. However, the more detailed a protest is, the more weight it will receive.

5. Modified Procedure And Oral Hearings

The Board will either set the proceeding for an oral hearing or, more often, what is called "modified procedure". (In the years 1990 and 1991, 8 of the 27 abandonment applications filed resulted in an oral hearing. During its first year in existence the STB held no oral hearings.) Modified procedure means that no oral hearing is held, and all evidence is filed in writing. Oral hearings are for the primary purpose of cross examining witnesses who have filed verified statements in the proceeding. See 49 CFR 1152.25(a). With this in mind, requests for oral hearing should specify any factual matters which are likely to be disputed and require cross-examination.

Regardless of whether modified procedure or oral hearing is used, the core of both the railroad's and protestant's case will come in the form of written evidence.

After receiving the protests and the carrier's reply, the Board must issue its decision within 110 days after the application is filed.

6. Appeals

If a party is dissatisfied with a Director's decision, it may ask the STB to reconsider the matter. Director's decisions are made during certain stages of the proceeding. For example, the Director of the Office of Proceedings makes the determination whether or not an Offer of Financial Assistance is *bona fide.* See 49 CFR 1152.25(e) for other decisions made by the Director.

A party that is dissatisfied with a decision of the full Board may seek judicial review of the STB's decision by filing a petition for review in the appropriate United States Court of Appeals.

In situations where the abandonment application was protested a dissatisfied party may ask the STB to reopen the case if it can show material error, new evidence, or substantially changed circumstances. In an unprotested case, the only recourse for a dissatisfied party is if it can show that the carrier's abandonment application was defective (for failure to provide the required notices, for example) in which case it can ask the Board to vacate the abandonment certificate.

B. Issues In Abandonments

We will now discuss the important issues in rail abandonments and the factors the Board weighs in deciding these cases.

As explained earlier, the standard used in deciding abandonment cases is whether the railroad's burden of continued service outweighs the public's current and future need for the service.

The railroad first must establish that it is indeed suffering a loss or burden from the line. If it fails to prove this, the abandonment will be denied. However, the railroad does not have to demonstrate an "operating" loss. The Board also considers the annual "opportunity costs" of owning and operating the line. This is the cost of tying up the railroad's assets in track, land, and materials on the line, rather than putting those assets to other, more profitable uses. It is calculated by multiplying the carrier's investment in the line (including the net liquidation value of the track and land) by an appropriate annual rate of return. Where there is evidence of public need, the Board may refuse to grant abandonment based only on opportunity cost losses. If the railroad does show a loss or burden, then the protestants' evidence of public need is examined.

The statute specifically directs the STB to consider whether the abandonment "will have a serious, adverse impact on rural and community development." 49 U.S.C. 10903(d). Protestants can address this factor through evidence showing the economic impact abandonment would have on the area. This can be done by computing (1) markets that would be lost without rail service, (2) the number of business failures or relocations and lost jobs that would result from abandonment, and (3) the number of current or future ventures (such as industrial parks) that depend upon continued rail service. Likely sponsors of this type of testimony would be shippers (using data from their own business, industry, or farm), development experts from local or state governments, elected or appointed officials, and Chamber of Commerce representatives. In sparsely populated areas, for example, discontinuance of rail service may cause a significant loss of jobs and reduce the tax base upon which the community depends to support its local school system and other important public services.

A critical factor in assessing the impact of abandonment on a rail shipper's farm or business is the possible transportation alternatives available after abandonment. If shippers have already switched to truck transportation for part of their traffic, then truck transportation may be a suitable alternative for all their traffic. Yet, truck rates may be higher than rail rates, bringing into question whether the business can survive with higher transportation costs. Also, sufficient trucks may not be available in the area to handle the increased traffic, or the local road system may not be capable of handling the increased wear and tear of truck transportation. These issues need to be fully explored and developed by protestants. This is another area where State transportation specialists can provide shippers and local communities with invaluable assistance.

Local shippers also should be able to present testimony concerning past and future use of the rail line. Reasons for the low levels of past rail shipments, such as sporadic business fluctuations, drought or other local disaster, should be explained. If shippers are expecting increased rail shipments, based on sound and defensible business forecasts, this should be documented.

Besides the economic impact of the proposed abandonment, protestants may also point out any effect that the abandonment would have on the environment. For example, increased use of alternative modes of transportation, such as trucks, might adversely affect noise levels in congested areas or pose safety problems. The environmental consequences of abandonment are assessed by the STB's Section of Energy and Environment (SEE). For more information about environmental issues

you can contact SEE at (202) 565-1538. Also see the STB's regulations at 49 CFR 1105.

. The balancing test the Board employs to decide abandonments has factors on both sides of the equation. To be successful, protestants should not only present the harm that they will suffer from abandonment, but they should also attempt to discredit the railroad's evidence of losses or burden from operating the line.

C. Evaluating Railroad Financial Data

Nobody opposing an abandonment can afford to ignore the railroad's financial data. The railroad must show it is incurring a loss or a burden. The railroad will attempt to show that (1) it is not receiving, and cannot reasonably expect in the future to earn, sufficient revenues from the line; and/or (2) it expects to face significant costs on the line in the future that it will not be able to recover. Normally, the past revenue generated by the line can be determined fairly accurately based on carrier and shipper records. Other data are subject to interpretation by the parties, however. These include: (1) projecting the revenues for the line; (2) isolating the historical expenses of operating and maintaining the line, and projecting future operating, maintenance and rehabilitation expenses; and (3) calculating the opportunity costs of operating the line.

Protestants who can critically evaluate this data will have a better chance of success. The assistance of a CPA or rail cost analyst is useful and can be critical. Even if there is insufficient time or money to analyze the financial data thoroughly, there are a number of key issues that should be examined.

Railroads are required to include in their abandonment applications projections of their revenues and costs on the line for a "forecast year" --the 12-month period beginning the first day of the month the application is filed. To project future revenues and costs, the railroad must necessarily make assumptions. Those assumptions should be evaluated critically. Nobody can predict the future with certainty, and in many instances the protestants may be in as good or better position than the railroad to make accurate predictions. For example, a substantial component of revenues usually consists of the number of shipments originating or terminating on the line. Shippers on the line presumably know their own businesses and future transportation needs and may be able to dispute the railroad's projections of future traffic. Wherever possible, protestants should provide specific facts and figures to support their own projections.

Of course, projections as to the future usually are based upon prior experience. Thus, the railroad's historical data should also be examined. Again, there are some issues that can be explored even if a rail cost analyst or other expert is not available.

First, confirm that all the data are from the relevant periods. Historical cost and revenue data must be submitted for a so-called "base year." The base year is the most recent 12 month period for which data have been collected at the branch level, ending no earlier than 6 months prior to the filing of the application.

Second, be alert to circumstances that may make the historical data unrepresentative. For example, was the carrier's ability to meet requests for service impaired by a shortage of rail cars? Or was there a recession or drought that resulted in lower, unrepresentative traffic volumes and revenues?

Third, confirm that actual costs and revenues are used where required by the regulations. Maintenance-of-way expenses usually cannot be estimated by prorating expenses from a larger section of track; actual expenses incurred on the line sought to be abandoned are normally required. Similarly, depreciation of equipment, the return on investment for locomotives, and fuel costs must be based upon the type of locomotive and freight cars actually used on the line. The use of summary data based upon "Road" and "Yard" categories is generally unacceptable, because it tends to overstate costs when, as is often the case, a local or way train serves the branch line.

Fourth, if there are high rehabilitation or deferred maintenance costs, a qualified individual should examine the railroad's work papers and physically inspect the properties. It may be possible to further defer maintenance-of-way expenses for yet another year, taking those costs out of the forecast year. Usually only those rehabilitation costs necessary to meet Federal Railroad Administration minimum class I standards are allowed. As a rule of thumb, rehabilitation costs and maintenance-of-way expenses vary inversely. That is, if rehabilitation costs are high, then maintenance-of-way costs should be low.

Fifth, as with the actual and projected revenue and cost information, the railroad's claimed opportunity costs should also be examined thoroughly by an analyst. Even if this is not possible, several key components of opportunity costs can be examined.

For example, land values are usually an important factor in calculating opportunity costs. Protestants should check with the Register of Deeds to make sure the land included in the railroad's

calculations is and would still be owned by the railroad in the event of an abandonment. In some cases, ownership of the land reverts automatically to adjoining landholders. In addition, local bankers and real estate agents can supply accurate information on land values that may contradict the railroad's estimate of the value of its land holdings. Protestants should also (1) verify the tons of track material that will result from salvaging the line; (2) obtain an estimate of the scrap value in dollars per ton, and (3) see whether the cost of dismantling the track was deducted from the railroad's estimated sales proceeds.

It should be noted that a carrier may either calculate its own (pre-tax) cost of capital or use the industry-wide (pre-tax) cost of capital figure that is determined annually by the STB. To obtain the Board's latest cost of capital determination call the STB's Section of Costing and Financial Information at (202)565-1533.

Finally, the railroad's projected gains or losses on its rail assets should be examined. Local real estate agents or brokers can check projections of changes in value for land, and the railroad's projections can also be compared to the index price series for historical sales of rail assets maintained by the Board. The railroad must justify departures from these trends.

III. EXCEPTIONS TO THE ABANDONMENT PROCESS UNDER 49 CFR 1152.50

The STB's power to exempt rail lines from the normal abandonment procedures is found in the ICC Termination Act, 49 U.S.C. 10502. Section 10502 gives the Board a broad grant of authority to exempt carriers, services and transactions from almost any and all kinds of STB regulation. The Board must exempt a carrier, service or transaction from regulation if it finds (1) that continued regulation is unnecessary to carry out the national rail transportation policy of 49 U.S.C. 10101, and (2) that either the transaction or service is of limited scope or application of the regulatory scheme is unnecessary to protect shippers from an abuse of market power. Congress clearly contemplated that the STB would use this general exemption power broadly. The legislative history reflects Congress' desire that the Board actively exempt railroads from unnecessary regulation, particularly regulations restricting changes in rates and services. But Congress also provided the Board with authority to revoke exemptions that it has issued if and when the Board finds that its regulation is indeed necessary.

The STB and the ICC before it have both used broad exemption authority to facilitate the abandonment of lines where it believes that closer regulatory scrutiny is unnecessary, through both class exemptions and individual line exemptions. As a class, the Board has exempted the abandonment of lines over which no local traffic has moved for at least 2 years without formal complaint about a lack of service. Where a line has generated traffic within the last 2 years, the railroad may seek to persuade the STB that an exemption is nevertheless appropriate for that individual line.

These exemptions are widely used.

A. Class Exemption: Out-of-Service Lines

To invoke the class exemption for out-of-service lines, a carrier must file a notice at the Board certifying that (1) no local traffic has moved on the line for the past 2 years; (2) any overhead traffic that has moved over the line can be rerouted over other lines; and (3) no formal complaint about a lack of service is pending or has been decided in favor of the shipper.

Unlike the traditional application process, no Notice of Intent to abandon or system diagram map or narrative notice is required. However, 10 days before filing the exemption notice with the Board, the railroad must notify the affected State's Public Service Board or equivalent agency of its intention to do so. The railroad must also send an advance environmental notice to the State, in accordance with STB regulation 49 CFR 1105.11.

The STB will publish the exemption notice in the Federal Register within 20 days after it is filed. Thirty (30) days after the Federal Register notice, the railroad may abandon the line, unless the Board stays the exemption.

Stay requests that raise transportation concerns must be filed within 10 days after the exemption notice is published in the Federal Register. Stay requests based on environmental or historic preservation concerns may be filed at any time but must be file sufficiently in advance of the effective date for the Board to consider and act on the petition before the notice becomes effective. Offers to subsidize or purchase the line must be filed within 30 days after the Federal Register publication.

In addition, parties may ask the Board to reject the notice or reconsider the exemption as it applies to a particular line. Petitions to reject or reconsider may be filed within 20 days after the Federal Register notice. After the exemption takes effect, parties may ask the STB to revoke the exemption. Petitions to revoke may be filed at any time.

The STB will reject the notice if the information contained in the request is false or misleading. Therefore, if local traffic has moved on the line within the last 2 years, the exemption will be rejected.

Although environmental concerns, public need for continued service, and other issues can be raised in a petition to reconsider or revoke, the Board will disallow the exemption only in

extraordinary cases.

If use of the class exemption is disallowed for a line, the railroad is still free to apply for abandonment of the line under the regular application procedures discussed above (or seek an individual exemption under the procedures discussed below). The complete regulations applying to this class exemption are found at 49 CFR 1152.50. Also see the attached STB Timetable for class exemption proceedings at Appendix II..

B. Individual Exemptions under 49 CFR 1152.60

As with the out-of-service lines exemption, no Notice of Intent to abandon or system diagram map or narrative notice is required when a request for an individual exemption is filed. The only notice a railroad must give before filing an individual exemption request is an environmental notice to the designated State agency in each state where abandonment is proposed. To obtain the name and address of the designated agency in your State call the Board's Section of Energy and Environment at (202) 565-1538.

The Board must publish notice of the proposed exemption in the Federal Register 20 days after it is filed. No further public notice is given even if the petition is denied. Carriers frequently will serve a copy of their petition on any shippers on the line but are not required to give notice when the petition is granted or denied. Interested persons can be notified individually by the Board, if they ask that their names be placed on the Board's service list in a particular case. Parties of record (applicants and protestants) are placed on the service list automatically, but other interested persons should notify the Board's Office of the Secretary, 1925 K Street, N.W., Washington, D.C. 20423 of their desire to be served with copies of all decisions in a particular case.

A petition for an exemption generally will include only a brief description of the relevant facts. It need not be, and typically is not, accompanied by detailed financial or other information.

Persons opposing an exemption must file an opposition within 20 days after publication of the Federal Register notice. Offers to purchase or subsidize the line must be filed 120 days after the filing of the petition or exemption or 10 days after the service of the Board's decision granting the exemption, whichever occurs sooner. To receive a copy of that decision, you must have notified the Office of the Secretary of your interest in the case and have asked to be put on the service list as instructed, *supra.*

Petitions to stay the effective date of the decision may be filed in either "Petition" (Individual exemption) or "Notice" (class exemption cases). It should be noted that administrative agencies, like the Courts, have developed firm criteria for staying administrative action. To justify a stay, a petitioner must demonstrate that:

(1) there is a **strong**, and the emphasis is on **strong**, likelihood that it will prevail on the merits;

(2) it will suffer irreparable harm in the absence of a stay;

(3) other interested parties will not be substantially harmed by the issuance of a stay; and

(4) the public interest supports the granting of the stay.

The Board, as do the Courts, gives very careful consideration to each of the above criteria and has required a strong substantive showing on all of the four factors. While the showing of irreparable injury may vary from case to case, the key consideration is irreparable, and injuries that can be corrected later (however substantial in terms of money, time and energy) may not be enough to justify a stay. Similarly, in determining the public interest factor, the interests of private litigants must give way to the realization of public purposes. The burden of making a strong showing on all four of the above factors rests with the petitioner to convince the Courts or the Board that such extraordinary relief is warranted.

Where possible, parties opposed to the exemption should file an opposition or a protest with the Board before it acts on the exemption request. Even in the absence of a formal notice requirement, community leaders and shippers often are aware of a railroad's plan to seek an exemption before the carrier files its petition.

Protests and petitions for reconsideration of individual exemptions should include essentially the same kind of facts that would be included in a regular abandonment case. For instance, shippers should explain their business operations, quantify their use of the involved rail line, discuss the

availability and any additional cost of alternative transportation services, and explain the impact loss of the rail service would have on their businesses and the community. To the extent possible, protestants also should try to critically evaluate any financial information and traffic projections submitted by the railroad.

If the Board denies a carrier's request for an exemption, the carrier is free to file for authority to abandon under the regular application procedures discussed earlier.

IV. ALTERNATIVES TO ABANDONMENT

Users and interested parties should consider alternatives to abandonment at the first sign a carrier may be contemplating abandonment. The fact that the existing railroad believes the line is no longer economically viable does not necessarily mean the line cannot continue operations under other arrangements. There are many examples of small "short line" railroads operating on lines that the main line railroad sought to abandon. Congress and the STB have made it easier to preserve rail service by acquiring or subsidizing rail lines. These options will be briefly outlined below.

A. Forced Sales and Subsidies

To encourage continued service, Congress and the STB have adopted procedures that make it possible to force the sale or subsidy of lines slated for abandonment where the parties cannot agree on the price or terms of a subsidy.

1. Lines Approved For Abandonment

Under the offer of financial assistance (OFA) procedures, any financially responsible party seeking to continue service on a line approved for abandonment (or exempted) may compel the railroad to sell or conduct subsidized operations over the line. The statutory requirements and STB regulations concerning offers of financial assistance are contained at 49 U.S.C. 10904 and 49 CFR 1152.27, respectively.

Parties may request data on subsidy and acquisition costs from applicants in abandonment proceedings as soon as the Notice of Intent to abandon is filed. This includes (1) an estimate of the minimum purchase price or annual subsidy needed to keep the line in operation, (2) reports on the physical condition of the line, and (3) traffic and other data necessary to determine the amount of annual financial assistance needed to continue service. Any one who believes subsidy or acquisition is a possibility should request this information immediately and begin a thorough feasibility study.

Often the State will assist the railroad by providing substantial money for rehabilitation of the line.

In class exemption cases, where the railroad files a Notice of Exemption, Offers of Financial Assistance must be filed within 10 days of the publication of the Notice of Exemption in the Federal Register. In individual exemption cases where the carrier files a Petition for Exemption and in cases where the carrier files a full abandonment application and OFA must be filed within 10 days of the service date of the Board's order granting the exemption or abandonment application or within 120 days after the application or petition for exemption is filed, whichever is sooner. It is very important for a potential offeror to be aware of both the filing date and the date of the Board's decision. To do this, the potential offeror should ask to be placed on the Board's service list[2] for the relevant abandonment proceeding, so that the offeror will be advised as soon as any decision is in the case is served.

Each OFA is reviewed by the Board to determine whether the offeror is financially responsible and whether the offer itself is reasonable. A copy of the offeror's annual report or other financial statements should be submitted with the offer to show its financial responsibility. The STB assumes a State or local government entity to be financially responsible.

As to the reasonableness of the offer, a subsidy should cover the railroad's avoidable operating losses on the line, plus a reasonable return on the value of the line. An offer to purchase should equal the acquisition cost of the line (the net liquidation or going concern value of the line, whichever is higher). The offeror should explain how its offer was calculated and explain any disparity between its offer and the carrier's estimate.[3] If the Board finds that the offeror is financially

---

[2]Write to the Office of the Secretary, Surface Transportation Board, 1925 K Street, N.W., Washington, D.C. 20423 and identify the docket number of the proceeding .

[3]Any carrier seeking abandonment authority from the Board must provide certain information to a party considering making an offer of financial assistance, including an estimate of the annual subsidy and minimum

responsible and the offer is reasonable, it will postpone the abandonment and give the parties an opportunity to negotiate.

If negotiations are successful and the parties voluntarily enter into a purchase (or subsidy) agreement which will result in continued rail service, the Board is required to approve the transaction and dismiss the abandonment application.

Should the parties fail to agree on the amount or terms of subsidy or purchase, either party may ask the STB (within 30 days after the offer is filed) to establish terms and conditions. The Board must issue a decision setting the terms and conditions, within 30 days after the request is made. The offeror then has 10 days to accept or reject the STB's terms and conditions. If the offeror chooses to accept them, then the railroad by law is forced to comply with them.

When a railroad receives more than one OFA, it can select the offeror with whom it wishes to transact business. Moreover, if the STB establishes terms and conditions at the request of an offeror who subsequently withdraws, then any other qualified offeror may take its place, forcing the railroad to go through with the subsidy or sale under those terms and conditions.

Certain conditions apply to sales under Section 10904(f)(4)(A). A purchaser may not transfer the line or discontinue service over the line for at least 2 years after consummation. After that time period, the purchaser may transfer the line back to the selling carrier, but it must wait at least 5 years before it can sell the line to others.

The financial assistance provisions of Section 10904 also apply where the Board exempts an abandonment from the formal application process. There are some differences however, particularly as to timing. For example, in exemption proceedings, persons interested in purchasing or

---

purchase price required to keep the line or a portion of the line in operation. See 49 U.S.C. 10904(b)(1) and OPS's information bulletin entitled "So You Want to Start a Small Railroad" which provides a more detailed discussion of the OFA process.

subsidizing the line must first submit to the STB and the railroad a written expression of their intent to make such an offer. This expression of intent must be received within 10 days after notice of the exemption is published in the Federal Register. Once the expression of intent is received, the exemption will be automatically stayed for 40 days. The offer itself is due 30 days after the Federal Register notice. For more information on these procedures see the STB's regulations at 49 CFR 1152.27.

2. Purchase of Lines Potentially Subject to Abandonment

The feeder railroad development program was designed as an alternative to abandonment. Congress envisioned it as a method of allowing shippers, communities, or other interested parties to acquire rail lines before an abandonment application is filed. If a rail line has been listed on a carrier's system diagram map as potentially subject to abandonment, a financially responsible person can compel the Board to require a railroad to sell it the line[4]. The price for such a sale is either agreed to by the parties or set by the Board. The statutory procedures for this program are found at 49 U.S.C. 10907 and the STB's regulations are detailed at 49 CFR 1151.

In short, a proceeding commences upon the filing of a feeder line application with the Board. The applicant must show, among other things, that it can (1) pay the net liquidation value of the line or its going concern value, whichever is higher, and (2) provide adequate service for at least 3 years. The Board has 15 days to reject the application if it does not contain the prescribed information or to accept it by filing a Notice in the Federal Register no later than 30 days after the application is filed. Within 30 days after the application is accepted, any other interested party may file a competing

[4]Even if a line is not shown on the carrier's system diagram map as a candidate for potential abandonment, shippers and communities may seek to compel the Board to require a railroad to sell the line by proving that the "public convenience and necessity" requires or permits the sale. This test, however, is more difficult to satisfy.

application to acquire all or any portion of the same line. The owning railroad and other interested parties may submit verified statements containing their evidence and arguments within 60 days after the initial application is accepted. Within 80 days after the initial application is accepted, offerors may file verified replies. The STB must publish its decision in the Federal Register. Within 10 days of the service date of the decision, the offeror must file a notice with the STB and the owning railroad either accepting or rejecting the Board's terms. If two or more offerors accept the STB's terms, the owning railroad has 15 days from the service date of the Board's decision to select the offeror with whom it wishes to transact business and to notify the STB and offerors. If the parties agree on a price then that price will be the final sale price.

In theory, this program has two major advantages. It allows the parties to save the time and expense involved in the abandonment process, and it allows the new owners to take over operation of a line before further downgrading occurs. The program however, has not lived up to its potential, in part because it places the railroad and new short line owner in an adversarial relationship from the outset. It forces the railroad to sell at a price it may not agree upon and requires the newly created shortline to then develop a relationship with the railroad (with whom it must interchange traffic to reach the main line) in order to function in its new venture.

B. Voluntary Sales and Operations

Parties interested in preserving rail service need not wait until abandonment is approved to negotiate a voluntary purchase of a line proposed for abandonment or for that matter any active rail line. To make purchases of lines that might otherwise be abandoned more attractive to potential buyers, the STB has exempted these purchases from regulation. Special provisions have also been adopted to encourage continued service on abandoned lines acquired by States.

1. Class Exemptions

The statutory standards for voluntary acquisitions are found in 49 U.S.C. 10901, 10902, and 11323. Section 10901 applies only when (1) a non-carrier acquires a rail line, and (2) an existing carrier acquires an inactive line (a line that is already lawfully abandoned). Acquisitions of active rail lines by existing carriers fall under Section 10902 or 11323. These formal application procedures are seldom used to preserve rail service on lines threatened with abandonment. Instead, voluntary purchases of lines subject to abandonment are almost always consummated under exemptions to the formal acquisition procedures. These exemptions are discussed below.

a. Section 10901 Acquisitions

Following the Staggers Act and deregulation of the railroads, large Class 1 carriers began to sell or abandon unprofitable or marginally profitable lines. Requests to acquire and continue service over these lines were usually unopposed and were almost always approved because they were in the public interest. This led the ICC to promulgate broad class exemption procedures in 1986.[5] The current rules are found in 49 CFR 1150 Subpart D. Most non-carrier acquisitions and operations are now exempt from formal regulation under Section 10901, as are all carrier acquisitions of abandoned lines. When a Class II or Class III carrier acquires a line, it is governed by 49 U.S.C. 10902.

To invoke the class exemption, the acquiring party must file a verified notice including general information about the transaction, and a caption summary which will be used to provide public notice of the transaction. The exemption procedures differ depending on the carrier's size (in terms of gross revenue). If the transaction will create a Class III (smallest size) railroad, the

---

[5] The STB has modified these rules by decision served November 18, 1996 at Ex parte 529, Class Exemption for Acquisition or Operation of Rail Lines by Class III Rail Carriers under 49 U.S.C. 10902.

exemption will be effective 7 days after the notice is filed.

b. Section 11323 Transactions

Class exemptions have also been established for seven kinds of transactions that would otherwise require approval under 49 U.S.C. 11323 -- the statute applicable to carrier acquisitions of active rail lines. The most important for our discussion here are (1) acquisition of a line which has already been approved for abandonment and would not constitute a major market extension, (2) acquisition of nonconnecting lines, and (3) acquisition of trackage rights. (The last two categories do have some qualifications not relevant here.) See 49 CFR 1180.2(d).

To invoke these exemptions, the carrier must file a verified notice, at least one week before the transaction is to be consummated, containing the information listed in the Board's regulations at 49 CFR 1180.4(g)(1). To qualify for an exemption for acquisition or renewal of trackage rights agreements, a caption summary must be filed as well. See 49 CFR 1180.4(g)(2)(i).

2. Individual Exemptions

Where no class exemption applies, an individual exemption may be sought for almost any small rail acquisition or operation, under the Board's general exemption authority at 49 U.S.C. 10502. Such requests for individual exemptions should be tailored to the particular situation involved.

The statute itself exempts some types of rail operations and transactions from STB regulation. The acquisition or use of spur, industrial, team, switching or side tracks is exempt under 49 U.S.C. 10906. These statutory exemptions are defined narrowly and the facts of each situation must be carefully examined to determine if the exemption applies.

V. LABOR ISSUES

No discussion of the acquisition and abandonment of rail lines would be complete without recognizing the increased importance rail labor plays in many of these cases. Labor witnesses often take an active role in opposing abandonment applications and other proceedings. In addition, the ICC Termination Act provides certain protection for employees of railroads engaging in some major changes in operations. It requires railroads to protect their employees from financial loss for a period of up to 6 years and to provide other protection relating to benefits and seniority.

Labor issues may arise in any rail transaction. The STB imposes labor protective conditions (LPC's) in most abandonments.

The conditions have been crafted differently for each situation. Generally there are the Oregon Short Line conditions imposed in abandonment cases, the Mendocino Coast conditions imposed in lease transactions, and the New York Dock conditions imposed in line sales to existing carriers[6]. When imposed, these conditions obligate the selling or abandoning railroad and, in some cases, can also be imposed on the acquiring railroad. When the acquiring entity is an established railroad or is a wholly owned subsidiary that is not independent from its rail parent, conditions may be imposed on both the acquiring and selling carriers. But where there is an acquisition of a line by a non-carrier or a Class III carrier, the employees are not entitled to any labor protection. Moreover, LPC's are not imposed for forced sales under the offer of financial assistance provisions of Section

---

[6]These conditions are set forth in Oregon Short Line R. Co.-- Abandonment -- Goshen, 360 ICC 91 (1979); Mendocino Coast Ry., Inc. -- Lease and Operate, 354 ICC 732 (1978) and 360 ICC 653 (1980), as clarified in Wilmington Terminal RR, Inc. -- Pur. and Lease -- CSX Transp., Inc., 6 ICC 2d 799 (1990), aff'd sub nom, Railway Labor Executives' Ass'n v. ICC, 930 F2d 511 (6th Cir. 1991) (Wilmington Terminal); and New York Dock Ry. -- Control -- Brooklyn Eastern Dist., 360 ICC 60 (1979), as clarified in Wilmington Terminal, supra. They are all variations of the original LPC agreement hammered out between labor and management in 1936, the Washington Job Protection Agreement.

10904 and are imposed only on the seller when there is a forced sale under the Feeder Railroad Development Program. [7]

The Board is not allowed to use its exemption powers under 49 U.S.C. 10502 to excuse carriers from providing employees with the LPC's they are due.

It is important at the beginning of any abandonment or acquisition proceeding to determine what position, if any, rail labor intends to take. There are some abandonments which will have minimal or no effect on rail jobs. In those cases, rail labor often decides not to participate. There are other situations in which labor witnesses play an active role, challenging railroad costing testimony and providing conflicting data in such areas as labor costs, track maintenance, and the current condition of the track and rolling stock.

---

[7]Feeder line purchasers are required to use the existing employees on the line to the extent possible. See 49 U.S.C. 10910 (e) and (j).

VI. ALTERNATIVE USES FOR RAIL RIGHTS-OF-WAY

The ICC Termination Act and the National Rails to Trails Act, along with the STB's regulations give interested parties the opportunity to negotiate *voluntary* agreements to use a railroad right-of-way that otherwise would be abandoned for recreational or other public use, such as a commuter rail service or a highway. These methods of preserving a railroad corridor are known as "rail banking" meaning that the right-of-way is preserved for potential future use as a railroad. Many railroads do not own the land on which their tracks lie. Rather, they have easements over the land of adjoining property owners. Unless those easements are "rail-banked" by converting them to a trail or other public use, they are extinguished.[8] Some rights-of-way which were "banked" have been reactivated. The rules for filing a request for a public use condition are slightly different from those which apply to the filing of a trails use request. The sample request which appears in this bulletin as Appendix III is a request for both types of conditions. Proponents often ask for both conditions in the same request in order to take advantage of the benefits of each type of condition. This disadvantage of this approach is that the request for a trails use condition has a filing fee, while a request for public use condition does not.

Since filing fees for all types of cases change at least once a year, it is advisable to contact the Board's Office of Public Services at (202) 565-1592 to determine the current fee, if any, before filing any pleading.

---

[8] Because real estate law and practice differs from state to state, we refer to landowners along the rail line as "adjoining" property owners. Sometimes adjoining property owners may have what is commonly called a "reversionary" interest in the land, meaning that upon the termination of the easement, the land is then available for the full, unencumbered use of the landowner or fee holder. In some states, when a rail use terminates, the land on which the rail line sits passes, as a matter of state law, to the adjoining landowners even when those landowners had no title to the land prior to its use as rail property. In some cases, railroads do own the land on which the track sits in fee simple and can dispose of it as they wish.

A. Public Use Conditions

Under the terms of the ICC Termination Act at 49 U.S.C. 10905, when the Board approves or exempts an abandonment it must determine whether the rail line is suitable for alternative public use, such as highways, other forms of mass transit, conservation, energy production or transmission, or recreation. If it is, the Board may prohibit the railroad from selling or otherwise disposing of the rail corridor for up to 180 days after the effective date of the decision or notice authorizing abandonment. During the 180 day period, interested persons may negotiate with the railroad to acquire the property for public use. The railroad's consent is unnecessary for the imposition of this negotiating period. If the parties fail to reach an agreement within the 180 day period[9], the Board must allow the railroad to fully abandon the line and dispose of its property. It cannot *require* the railroad to sell its property for public use.

The Board will only impose a public use condition when it has received a request to do so pursuant to 49 CFR 1152.28. The request must:

1. state the condition sought;
2. explain the public importance of the condition;
3. state the period of time for the condition (which cannot exceed 180 days); and
4. provide justification for the requested period of time.
5. A "Certificate of Service" indicating that a copy of the public use request has been served on the carrier seeking abandonment at its address of record.

A sample request for Public Use Condition is provided in Appendix III. An original and 10 copies must be submitted to the Board.

Timing is important. In an application for abandonment, the public use proponent must file the request within 45 days of the filing of the application, i.e. 25 days after the notice of the application appears in the Federal Register. In exemption cases, whether the exemption is a class exemption (notice) or an individually sought exemption (petition), the public use condition request must be filed within 20 days after the Federal Register publication appears.

---

[9]Unlike trails use conditions, public use conditions cannot be extended beyond the statutorily imposed 180 day limit, even if the parties' consent.

B. Request for Trail Use Conditions

To begin the trail use process, a trail proponent must file a trail use request in the proceeding initiated by the railroad to abandon the line. A trail use request has no effect on the Board's decision whether to give a railroad permission to abandon. It is considered only after the Board has decided to permit the abandonment.

Under 49 CFR 1152.29, the trail use request must include:

1. A map which clearly identifies the rail corridor (including mileposts) which is proposed for trail use,
2. A statement of willingness to accept financial responsibility which indicates the proponent's willingness to manage the trail, pay property taxes on the trail and accept responsibility for any liability arising from the use of the rail corridor as a trail, and.
3. An acknowledgment that trail use is subject to the user's continuing to meet the above obligations, and the possibility of future reactivation of rail service on the corridor.
4. A "Certificate of Service" indicating that a copy of the trails use request has been served on the carrier seeking abandonment at its address of record.

A sample public use condition/trails use request appears at Appendix III. An original and 10 copies of the request must be filed with the Board and a copy served on the railroad.

Unlike the public use condition, the trail use condition will only be imposed if the railroad consents. If the railroad does agree, then a condition is imposed which prohibits the rail carrier from otherwise disposing of the rail corridor for 180 days while the parties negotiate an agreement. The Board has granted an extension of that 180 day period in cases where the parties jointly request it indicating that they are close to agreement.

As with the public use condition request, timing in very important. In an abandonment application, trail use requests must be filed within 45 days of the filing of the application i.e., 25 days after the publication of the application in the Federal Register. The rail carrier seeking abandonment authority then has 15 days to notify the Board whether and with whom (if more than one proponent has submitted a request) it intends to negotiate a trail use agreement. In class

exemption cases, a trails use request must be filed within *10* days of the appearance of the notice in the Federal Register. Note that this is 10 days earlier than a public use condition request is due. In an individual exemption case (petition), a trails use request must be filed with 20 days of the appearance of the Federal Register notice. In both types of exemption cases the carrier has 10 after the trails use request is received to notify the Board whether and with whom if intends to negotiate a trails use agreement.

Appendix I

SYNOPSIS OF NEW ABANDONMENT REGULATIONS

1. Effective Date: Regulations effective on 1/23/97

2. New Uniform Schedule:

Day -60	Deadline for identifying line as category 1 on SDM.
Day -30 To Day -15	Opportunity to file Notice of Intent.
Day -20	Due date for railroad to file environmental and/or historic reports on required agencies
Day 0	**Application filed, including applicant's case in chief.**
Day +10	Due date for oral hearing requests.
Day +15	Due date for Board decision on oral hearing requests.
Day +20	Due date for Notice of Application to be published in the Federal Register.
Day +45	Due date for protests and comments, including opposition case in chief, and for public use and trail use requests.
Day +60	Due date for applicant's reply to opposition case and for applicant's response to trail use requests.
Day +110	Due date for service of decision on the merits.
Day +120	Due date for offers of financial assistance, except that if an application has been granted by decision issued sooner than Day 110, the offer of financial assistance shall be due 10 days after service of the decision granting the application.

3. Important Changes from the Old Regulations:

a. The Board will publish a notice of an abandonment application or a petition for an individual exemption in the Federal Register 20 days after the application or petition is filed.

The notice will: 1) Describe the proposal; and 2) Advise the public regarding due dates for OFAs and requests for public use and trail use conditions, and explain how to participate in the proceeding.

The railroad must file a draft notice on a disk.

Appendix II

STB TIMETABLE FOR CLASS EXEMPTION PROCEEDINGS

Abandonments and Discontinuances of Service and Trackage Rights

F-10 days	Notice of exemption procedure filed with State and other agencies.
F	Notice of exemption filed with STB. (Filing Date + F)
P (F+20 days or fewer)	Notice of exemption proceeding published in Federal Register.
P+10 days	Petition to stay effective date of exemption due. Request for Trails Use Condition Due
P+20 days	Petitions for reconsideration due. Comments due. Requests for Public Use Condition Due.
P+30 days	Exemption effective/abandonment or discontinuance may occur (unless stayed for reconsideration).

SOURCE: 49 CFR, Section 1152.50

APPENDIX III

1. Sample Public Use Condition and

Trail Use Request

Below is a sample of a request for both a Public Use Condition and a Trail Use Condition. The blank spaces and items in italics are to be completed by the prospective trail agency or group to reflect the specific circumstances. Remember that the requests should be mailed to both the STB and the railroad simultaneously.

[Date]

Secretary

Surface Transportation Board

Washington, DC 20423-0001

Re: [*Name of Railroad Company*] Abandonment in [*Name of County and State*], [*STB Docket Number*]

Dear Secretary:

This request is filed on behalf of [*Agency Name*], which is a [*political subdivision or government agency interested in transportation and/or natural resources, private/public interest organization interested in conservation and/or recreation, etc.*], hereinafter referred to as "proponent."

Proponent requests issuance of a Public Use Condition as well as an Interim Trail Use Condition rather than an outright abandonment authorization between [*endpoint a*] and [*endpoint b*].

A. Request For Public Use Condition

Proponent asks the STB to find that this property is suitable for other public use, specifically trail use, and to place the following conditions on the abandonment:

1. An order prohibiting the carrier from disposing of the corridor, other than the tracks, ties and signal equipment, except for public use on reasonable terms. Justification for this condition is: [example: *the rail corridor in question is along a scenic river and will connect a public park to a major residential area. The corridor would make an excellent recreational trail and conversion of the property to trail use is in accordance with local plans. In addition, the corridor provides important wildlife habitat and open space and its preservation as a recreational trail is consistent with those purposes*]. The time period sought is 180 days from the effective date of the abandonment authorization. Proponent needs this much time: [example: *to assemble or to review*

title information, complete a trail plan, or begin negotiations with the carrier].

2. An order barring removal or destruction of potential trail-related structures such as bridges, trestles, culverts and tunnels. The justification for this condition is that these structures have considerable value for recreational trail purposes. The time period requested is 180 days from the effective date of the abandonment authorization for the same reason as indicated above.

B. Request For Interim Trail Use

The railroad right-of-way in this proceeding is suitable for railbanking. In addition to the public use conditions sought above, proponent also makes the following request:

STATEMENT OF WILLINGNESS TO ASSUME

FINANCIAL RESPONSIBILITY

In order to establish interim trail use and railbanking under section 8(d) of the National Trails System Act, 16 U.S.C.

§1247(d), and 49 CFR §1152.29, is willing to assume full responsibility for management of, for any legal liability arising out of the transfer or use of (unless the user is immune from liability, in which case it need only indemnify the railroad against any potential liability], and for the payment of any and all taxes that may be levied or assessed against the right-of-way owned by and operated by .

The property, known as the , extends from railroad milepost near to railroad milepost near , a distance of miles in County, . The right-of-way is part of a line of railroad proposed for abandonment in STB Docket No. AB- (Sub-No.).

A map depicting the right-of-way is attached.

acknowledges that use of the right-of-way is subject to the user's continuing to meet its responsibilities described above and subject to possible future reconstruction and reactivation of the right-of-way for rail service.

By my signature below, I certify service upon [*Railroad Company and address*], by U.S. Mail, postage pre-paid, first class, this day of , 20 .

Respectfully submitted,

Name

on behalf of:

Glossary

Glossary of Terms

A

3R Act Acronym for the Regional Rail Reorganization Act of 1973.

4R Act Acronym for the Railroad Revitalization and Regulatory Reform Act of 1976.

A-95 Review OMB Circular No. A-95 provides State and local agency evaluation, guidelines for review and coordination of federal assistance programs and projects. Replaced by Executive Order 12372 issued July 14, 1982.

AAR or A.A.R. (Association of American Railroads) An industry association whose responsibilities include safety standards (including design standards and approval), maintenance, operations, service and repair standards car service rules research, etc.

AAR Manual Of Standards And Recommended Practices (MSRP) Publication containing the technical specifications and quality assurance requirements for interchange freight cars and components. Considered mandatory when specifically referenced in MR Interchange Rules.

Abandoned Rail line or rail facility no longer being served by a common carrier railroad (tracks or other rail facilities may still be in place). The STB has granted the railroad authority to terminate service and remove the track.

Abandonment The relinquishment of interrest (public of private) in right-of-way or activity thereon with no intention to reclaim or use again for highway or rail purposes. Line or facility where termination of rail service is being considered. Also, the legal proceeding wherein railroads must formally apply to the STB, follow federal regulations, and receive authority to abandon service before it can do so.

ABS (Automatic Block Signals) On a specific section or length of track, an arrangement of automatic signals governing each block.

ACI Automatic Car Identification System used to provide for automated identification of cars in a train by owner, number and equipment classification, etc. when read by a wayside scanner. See *AEI*

ADO Acronym for the Alabama Development Office.

Adhesion A measure of the ability of locomotive driving wheels to generate tractive force, usually expressed as a percent of the total weight on the drivers.

AEI (Automatic Equipment Identification) An automatic car scanning system to assist railroads in tracking and tracing cars. The system requires a transponder mounted on

diagonally opposite corners of each railcar or other equipment to respond to radio frequency interrogation.

Air Brake The general term used to describe the braking system used on most railways operating in North America.

Alignment (or Alinement) The horizontal location of a railroad as described by curves and tangents.

Alternating Current An electric current that serves its direction at regular intervals.

Alternator A device that generates alternating current electricity, or, an electrical machine on a locomotive unit and driven by the diesel engine. When rotated, the alternator generates alternating electrical current subsequently adapted for use by the traction motors.

Ammeter An instrument for measuring electric current in a circuit.

Amperage A unit of measure of electrical current.

Amtrak The National Railroad Passenger Corporation (Amtrak) was created by act of Congress effective May 1, 1971, to operate a nationwide passenger service over a reduced network of routes.

Angle Cock Manually operated valve at ends of car or locomotive opening or closing air brake train line.

Anti Creeper See *RailAnchor.*

APB (Absolute Permissive Block) On a specific section or length of track, an arrangement of signals and circuits automatically providing absolute protection from control point to control point against opposing train movements while permitting following movements under block signal protection.

Approach Locking A time sensitive electrical locking system to prevent the movement of track switches in a given route after a train is committed to that route, while at the same time protecting that route from opposing or conflicting movements.

APSC Acronym for the Alabama Public Service Commission.

AREA (American Railway Engineering Association) Professional organization whose membership is comprised of Railroad maintenance-of-way officials. The AREA develops and establishes material specifications and track construction standards. See *AREMA.*

AREMA (American Railway Engineering and Maintenance-of-Way Association) Organization formed in 1998 encompassing the AREA, Roadmasters and Bridge and

Building Associations and the MR Communications & Signals Division in establishing and maintaining standards and recommended practices across the board.
Armature The rotating part of a direct current motor or generator. It consists of a laminated iron cylinder or core keyed to a shaft, in the slots of which are wound the armature coils of insulated copper wire or bars. In alternating current machinery the armature is frequently the stationary element.

Articulated Cars Two or more car bodies permanently coupled by slackless connections over shared trucks.

Automatic Block Signals (ABS) A means of protecting a section or block of track against conflicting usage. ABS utilizes automatic signals that are actuated by a train or other usage of the track.

Automatic Brake The air brake system used on a train. The automatic brake is controlled by a pressurized air pipe or brake pipe which runs the length of the train. A reduction or drop in the pressure in this train line, called a brake pipe reduction (BPR), causes air brakes to apply on each car.

Automatic Coupler *See Coupler.*

Automatic Interlocking *See Interlocking Automatic.*

Automatic Train Control An electric or mechanically operated device attached to the locomotive and acting in conjunction with current in rail, magnets, ramps or trips attached to the tracks, which permits the control of, or the automatic stopping of trains in case of dangerous speeds or other unsafe operating conditions.

Automatic Train Control System (ATC) 1) A track-side system working in conjunction with equipment installed on the locomotive, so arranged that its operation will automatically result in the application of the air brakes to stop or control a train's speed at designated restrictions, should the engineman not respond.
2) When operating under a speed restriction, an application of the brakes when the speed of `2the train exceeds the predetermined rate and which will continue until the speed is reduced to that rate. ATC usually works in conjunction with cab signals.

Automatic Train Operation (ATO) A system by which speed and other control signals from the wayside are automatically received and translated into train response, with appropriate ATC supervision to assure operating safety.

Automatic Train Stop System (ATS) A track side system working in conjunction with equipment installed on the locomotive, so arranged that its operation will result in the automatic application of the air brakes should the engineman not acknowledge a restrictive signal within 20 seconds of passing the signal. If the restrictive signal is acknowledged, ATS will be suppressed.

Axle The steel shaft on which the car wheels are mounted. The axle holds the wheels to gauge and transmits the load from the journal bearing to the wheels.

B

"B" End of Car The end on which the hand brake is located. If the car has two hand brakes, the "B" end is the end toward which the body-mounted brake cylinder piston moves in the application of brakes or the end on which the retaining valve is located (if such a valve is used). If none of the above definitions are applicable, the car owner shall arbitrarily designate the "B" end.

"B" Unit A diesel unit without a cab and without complete operating controls. “B” units are usually equipped with hostler controls for independent operation at terminals and engine houses.

Back Haul A return trip.

Bad Order A car which is in need of mechanical attention.

Balance Speed A speed at which the tractive effort of the locomotive exactly balances or equals the sum of all the train, grade and curve drag forces. At balance speed, there is neither acceleration nor deceleration.

Ballast Heavy material such as slag or crushed stone used to support and hold cross ties in alignment and elevation after rails have been spiked to them. Should be a material which is stable, easily tamped, permeable, and resistant to plant growth.

Ballast Car A car for carrying and distributing ballast for repair and construction work, usually of the flat, gondola, or hopper type.

Ballast Regulator A track-mounted machine for moving ballast to provide the desired cross-section, usually including brooms to clear ballast from the ties.

Ballast Undercutter Cleaner A production machine that removes the ballast from the track, cleans it, and returns it back to the track in one continuous operation.

Ball of the Rail This is the top of the rail on which the wheels roll.

Benefit/Cost Analysis (or Cost/Benefit Analysis) A form of economic evaluation in which input is measured in terms of dollar costs and output is measured in terms of economic benefit of a project as compared to the incurrred cost of the project. Calculation of this ratio is made by dividing all quantified benefits by the total cost of a project.

Benefit-Cost Ratio (B/C Ratio) The economic value of the reduction in fatalities, injuries, and property damage divided by the cost of the accident-reducing measure.

Bessemer Process A steelmaking process whereby liquid pig iron is converted to steel by forcing air at atmospheric temperature through the metallic bath in a converter in which no extraneous fuel is burned, resulting in the oxidation or reduction of the carbon, manganese and silicon to the extent desired and their removal in the form of slag.

Bill of Lading A carrier's contract and receipt for goods specifying that the carrier has received certain goods which it agrees to transport from one place to another, and to deliver to a designated person or assignee for such compensation and upon such conditions are specified therein.

Block 1) A length of track of defined limits, the use of which by trains is governed by signals. 2) A group of cars, assembled in the process of classification for movement to a specified common destination.

Block Signal A fixed signal at the entrance of a block to govern trains and engines entering and using that block. (Standard Code)

Block System A series of consecutive blocks within ABS, ATC, CTC and Interlocking.

Body Center Plate A circular cast or forged steel plate on body bolster at the car center line, the function of which is to mate with the truck center plate and transmit the body bolster load to the truck.

Body Side Bearing Flat steel bearing pads fastened to the body bolster, a standard distance outboard from the center pin hole, the function of which is to support the car or the mating truck side bearing when variations in track cross level or other train dynamics cause the car to rock transversely on the center plates.

Bolster *See Container Bolster, Truck Bolster.*

Bolster Anchor Rods One at each end of the bolster of passenger car trucks, the ends of which are mounted in rubber, one on an arm integral with the truck frame and the other on the end of the bolster so as to guide the lateral and vertical movement of the bolster and position that it is always free from contact with the truck transoms.

Bolster Gibs Small projections at each end of a truck bolster that engage the side frame column guides and provide vertical guidance for the bolster and lateral restraint to the side frames when assembled as a truck.

Bolster Pad In a tank car, a plate welded directly to the exterior of the tank at each body bolster location to which the remaining body bolster structure is attached.

Bolster Springing The secondary suspension element in a car truck, supporting the truck bolster, on which the weight of the car rests, on the truck frame or swing hangers.

Boom barrier A barrier at level (rail) crossings.

Boxcar A closed car having a floor, sides, ends and a roof with doors in the sides, or sides and ends. Used for general service and especially for lading which must be protected from the weather, subsequent damage.

Brake Beam The immediate supporting structure for the two brake heads and two brake shoes acting upon any given pair of wheels. In freight service the virtually universal type is of truss construction consisting primarily of tension and compression members fastened at the ends and separated at the middle by a strut or fulcrum to which the truck brake lever is attached. Brake beams are said to be inside hung or outside hung, according to whether they are in the space between the axles or outside the axles.

Brakeman One who brakes a train, keeps a lookout for potential problems on moving trains, and uncouples cars that are to be dropped off between the train's termini.

Brake Pipe A term properly used, applied to describe the continuous line of brake pipe extending from the locomotive to the last car in a train, with all cars and air hoses coupled.
It acts as a supply pipe for the reservoirs and also is usually the means by which the car brakes are controlled by the engineman. When a train is made up and all brake pipes on the cars are joined, the entire pipe line comprises what is commonly called the train line. The term is often used to refer to the brake pipe on a single car.

Brake Pipe Reduction (BPR) A reduction in air pressure in the train brake pipe. This pressure reduction causes air to flow from the air reservoir on each car to the brake cylinder, thus causing the brake to apply and produce a retarding force on the train.

Branch Line A secondary line of a railway, as distinguished from the main line sometimes defined as a line carrying from 1.0 to 5.0 million gross tons per year.

Bridge Plate A hinged device affixed to a TOFC flatcar at the BR and AL corners used to span the gap between coupled cars to enable circus loading of trailers. Flatcars with 15" end of car cushioning require auxiliary bridge plates at the BL and AR corners to provide the additional spanning length necessary when coupled to standard draft gear cars.

Broad Gauge A rail track gauge that is greater than 1.435 m (4 ft. 8.5 in.).

Buff A term used to describe compressive coupler forces. The opposite of draft.

C

Cab Car A passenger-train car equipped with train-line connected controls such that it can serve as the lead unit in a train being pushed by a locomotive at the rear of the consist.

Caboose A car usually placed at the rear of a train which provides an office and quarters for the conductor and/or trainmen while in transit, and for carrying the various supplies, tools, etc., used in freight train operations. From the caboose, the crew is also able to observe the condition of the train and initiate measures to stop the train if unfavorable conditions arise. Sometimes called "Cabin Car," "Way Car," or "Van."

Cab Signal A signal located in engineman's compartment or cab, indicating a condition affecting the movement of a train or engine and used in conjunction with interlocking signals and in conjunction with or in lieu of block signals.

Cant (of a Rail) A rail's inward inclination effected by using inclined surface tie plates, expressed as a height-to-width ratio: e.g.1:20.

Capacity Consists of two different types: line (or route) capacity and terminal capacity. Line capacity is a function of: number and condition of tracks; characteristics of grades and curves; and other restrictions. Terminal capacity is a function of: size of facility, (e.g., number and length of tracks); quantity and type of equipment; degree of automation; and other factors.

Car Body The main or principal part in or on which the load is placed.

Car Days An expression referring to the number of days a car owned by one railroad is on the line of another railroad.

Car Float A flat-bottomed craft without power and equipped with tracks upon which cars are run from the land by means of a float bridge, to be transported across water.

Car Mile An operating term defined as one car, moved over one mile of track.

Car Retarder A braking device built into a railway track to reduce the speed of cars being switched over a hump. Power activated shoes press against the lower portions of the wheels and slow the car to a safe coupling speed.

Car Service A term applicable to the general services of railroads with respect to car supply, distribution and handling; involving such matters as demurrage, interchange, per diem charges and settlements, private car line mileage statements and allowances.

Car Service Rules Rules established by agreement between railroads governing interchange of cars. *See Interchange Rules.*

Category I Lines Rail lines likely to be the subject of an ICC abandonment or discontinuance application within three years.

Category II Lines Rail lines which are under study and may be the subject of a future ICC abandonment or discontinuance application within 3 to 5 years.

Category III Lines Rail lines for which abandonment or discontinuance of service applications are pending before the ICC.

Category IV Lines Rail lines operated under rail service continuation assistance.

Category V Lines. All other rail lines, owned and operated.
Catenary On electric railroads, the term describing the overhead conductor that is contacted by the pantograph or trolley, and its support structure that supplies electricity to propel railroad trains.

Center Pin The large steel pin which passes through the center of both body and truck center plates and assists in keeping the two plates in proper alignment as the car is being placed on its trucks. In passenger train cars, also locks truck to car.

Center Plate *See Body Center Plate and Truck Center Plate.*

Center Sill The center longitudinal structural member of a car underframe, which forms the backbone of the underframe, and transmits most of the buffing shocks from one end of the car to the other.

Centralized Traffic Control (CTC) A method of operation whereby the movement of trains over routes and through blocks on a designated section of track or tracks is directed by signals controlled from a designated point without requirement of train order authority and without regard to superiority of trains.

Centrifugal Force The force which seems to push a rotating object or its parts outward from a pivotal point.

CFR Acronym for Code of Federal Regulation. Contains federal laws and regulations.

Circus Loading A term used to describe an older method of loading highway trailers on TOFC (piggyback) flatcars, whereby a tractor backs the trailer up a ramp placed at one end of a cut of cars, and along the decks of the cars to the point of securement. Circus loading requires bridge plates at each end of all cars to enable the trailer and tractor to pass from car to car. *See Side Loading, Overhead Loading.*

Classification Yard A system of tracks used for storing cars, making up trains and other purposes.

Class I Railroad A railroad whose operating revenues are more than an annually designated amount - in 2001, $261 million.

Class II Railroad A railroad whose operating revenues are between $20.4 million and the Class I threshold.

Class III Railroads These have annual operating revenues of less than $20 million.
Class of Track FRA has established six categories of track based on specified criteria for maintaining track. *See FRA Track Safety Classification Table at end.*

Clearance Diagram An outline or cross section drawing representing the maximum limiting dimensions to which rail equipment can be built. Specific limiting dimensions have been established and are shown on standard clearance diagrams known as "plates."
Clearance Envelope The cross sectional shape required to provide specified horizontal and vertical clearances for rail vehicle in motion.

Clearance Point The point where the minimum distance between converging/diverging tracks is sufficient to meet clearance envelope reguirements when vehicles are on both tracks.

COFC An acronym for "Container On Flat Car." A type of rail-freight service involving the movement of closed containers on special flat cars equipped for rapidilt and positively securing containers using special pedestals or bolsters.

COG Acronym for Council of Governments. A consortium of local Government representatives from contiguous committees which make recommendations for solutions to regional problems. COGs may represent either a single county or several counties in a region.

Cog Railroad A tourist railroad climbing steep grades (e.g. 25+%) with the aid of a locomotive cog wheel engaging a rack rail.

Coil Spring A spring made by winding round wire or rods in a helical pattern around a circular core, used extensively in rail car suspension systems.

Coke Rack A slatted frame or box, applied above the sides and ends of gondola or hopper cars, to increase the cubic capacity for the purpose of carrying coke or other freight, the bulk of which is large relative to its weight.

Commodity A general term used to describe the contents of a car. Other terms such as "lading," or "product" mean the same thing and are often used interchangeably.
Common Carrier One who holds himself out to the general public to transport property and passengers in intrastate, interstate or in foreign commerce, for compensation. Common carriers must operate from one point to another over routes or in territory prescribed by the Surface Transportation Board (U.S. interstate) and by a Public Service or Public Utilities Commission (intrastate).

Compromise Joint (Bar) Joint bars designed to connect rails having a different height and cross-section, or rails of the same type but of different joint drilling.

Compromise Joint (Rail) A joint for uniting the abutting ends of contiguous rails of different section, or of rails of the same section but of different joint drillings.

Consist The makeup of a train, i.e., number and type or class of power units.

Container Bolster A container securement device generally used on raised center sill COFC cars. Container bolsters are arranged to mount transversely on a flatcar, and support the container at each end.

Continuous Action Tamper (CAT) A production machine equipped with a small internal tamper unit that starts and stops while the rest of the machine moves constantly.

Continuous Welded Rail (CWR) Sections of rail welded together to form a single rail which measures up to 1440 feet. It provides a much smoother ride, with less equipment and track damage, and rail wear.

Conventional Rail (CR) Track having bolted joints rather than welded rail joints (as in CWR).

Corridor A major tranaportation route through a populated area.

Coupler A device located at both ends of all cars and locomotives in a standard location to provide a means for connecting locomotive units together, for coupling to cars, and for coupling cars together to make up a train. The standard AAR coupler uses a pivoting knuckle and an internal mechanism that automatically locks when the knuckle is pushed closed, either manually or by a mating coupler. A manual operation is necessary to uncouple two cars whose couplers are locked together. *See E Coupler, and Sheif Coupler Interchange Rule.*

Coupler Shank That part of a coupler behind the head and containing either a slot or a pinhole at the rear portion for connection to the yoke and draft system.

Coupler Yoke A cast steel component of the draft system that functions as the connecting link between the coupler and the draft gear.

Covered Gondola A gondola car which has been equipped with some form of removable cover which can be placed over the lading to protect it from weather exposure in transit.

Covered Hopper Car A hopper car with a permanent roof, roof hatches and bottom openings for unloading. Used for carrying cement, grain or other bulk commodities requiring protection from weather.

Creep Lengthwise movement of the rail as a result of wheel friction and temperature expansion and contraction.

Creosote Used in wood preserving, creosote is a distillate of coal tar produced by high temperature carbonization of bituminuous coal.

Crib The space between the ties.
Cropped Rail The cutting off of each end of a damaged rail, resulting in a reuseable rail with a minimum length of 27 feet.

Cross Bar A bar with locking devices at each end that fit and lock to belt rails in DF ("Damage Free") boxcars to provide longitudinal restraint for lading.
Crossing In trackwork, an arrangement of four frogs allowing one line to cross another.

Cross Level The distance one rail is above or below the intended level of the other - not to be confused with superelevation on curves.

Crossover A track connection between two adjacent tracks.

Crossover Platform A drop step located on the engine front and rear permitting movement of personnel between units.

Cross Tie Intermediate transverse structural members of a freight car underframe extending from the center sill to the side sill.

Cruise Velocity The forward speed that a vehicle normally maintains when it is not accelerating or decelerating.

CTC (Centralized Traffic Control) A term applied to a system of railroad operation by means of which the movement of trains over routes and through blocks on a designated section of track or tracks is directed by signals controlled from a designated central point. Also called TCS (Traffic Control System).

Curve (of a Railroad Line) In the United States, it is customary to express track curvature as the number of degrees of central angle suspended by a cord of 100 feet. The degree of curvature is equal to 5,730 divided by the radius in feet.

Cushioning A term referring to the energy-absorbing capabilities of a car underframe or draft system. Although standard draft gears do have energy-absorbing capabilities, the term "cushioning" or "hydraulic cushioning" is generally understood to mean systems with a minimum travel of ten inches.

Cushion Underframe A term generally used to describe a freight car designed so that a hydraulically cushioned inner sill, free to slide with respect to a rigid outer sill, isolates the car body from a major portion of the end impact loads experienced in switching. Not to be confused with end-of-car cushioning devices, which are independent longtravel units installed in the draft gear pockets behind each coupler.

D

Dampener Any material or device used to reduce vibration by absorbing energy.

Dead Head An operating term used to describe off-duty travel of a train crew member from some point back to his or her home terminal. Sometimes the term is used to identify any railroad employee traveling on a pass.

Deferred Maintenance The accrued expenses chargeable to current operations for the estimated cost of repairs which cannot be made during the year due to priorities for materials and supplies or shortage of labor.
Demurrage The detention of a freight car beyond the time allocated for loading or unloading. An added charge for the shipper (loader) or receiver (unloader).

Depot A railway station.

Depreciated Value The reproduction value of a freight car adjusted for depreciation up to the date of damage.

Depressed Center Flatcar A flatcar having that portion of the deck between the trucks lower or closer to the rail to accommodate loads with excessive vertical dimensions.

Derail A track safety device designed to guide a rail car off the rails at a selected spot in order to prevent collisions or other accidents; commonly used on spurs or sidings to prevent unattended rolling cars from fouling the main line. To run off the track.

DF A term used to describe an interior lading restraint system for boxcars, using transverse bars (cross bars) engaging special belt rails mounted to the car sides. The initials DF stand for "damage free." *See Cross Bar*.

Diesel An internal combustion engine invented by Dr. Rudolph Diesel differing from other internal combustion engines because its compression is high enough to cause combustion to be spontaneous.

Diesel-Electric Locomotive A locomotive in which power developed by one or more diesel engines is converted to electrical energy and delivered to the traction motors for propulsion.

Diesel-Hydraulic Locomotive A locomotive in which power developed by one or more diesel engines is delivered through a hydraulic transmission to the driving axles by means of shafts and gears. This type of drive is also used for self-propelled cars.

Dispatcher A person who directs the action of trains of a certain division by the use of radio and/or remote controlled switches, and cooperates with other dispatchers in train movements between divisions.

Ditch The part of the right-of-way that is lower than the ballast section which drains the water from the track into a stream or drainage facility.

Double-Slip Switch A combination of a shallow-angle crossing and two other tracks, located within the limits of the crossing, each connecting a right-hand switch from one crossing track and a left-hand switch from the other, to provide routes between the crossing tracks without additional frogs.

Double Track (DT) Two main tracks, on one of which the current traffic is in a specified direction and on the other in the opposite direction.

Draft A term used to describe forces resulting in tension in the coupler shank. The term "draft" means the opposite of the term "buff."

Draft Gear A term used to describe the energy-absorbing component of the draft system. The draft gear is installed in a yoke which is connected to the coupler shank and is fitted with follower blocks which contact the draft lugs on the car center sill. So-called "standard" draft gear use rubber and/or friction components to provide energy absorption, while "hydraulic" draft gear use a closed hydraulic system consisting of small ports and a piston to achieve a greater energy-absorbing capability. Hydraulic draft gear assemblies are generally called "cushioning units." *See Cushioning.*

Draft System The arrangement on a car for transmitting coupler forces to the center sill. On standard draft gear cars, the draft system includes the coupler, yoke, draft gear, follower, draft key, draft lugs and draft sill. On cushioned cars, either hydraulic end-of-car cushion units and their attachments replace the draft gear and yoke at each end; or a hydraulically controlled sliding center sill is installed as an integral part of the car underframe supplementing the draft gears.

Dragging Equipment Detector (DED) A sensor between and along side the rails to detect dragging equipment.

Drawbar Pull A tensile coupler force. Locomotive pulling power is sometimes expressed in terms of "pounds of drawbar pull."

Drawbridge Another term to describe a movable bridge.

Draw Head The head of an automatic coupler.

Dump Car A car from which the load is discharged either through doors or by tipping the car body.

Dynamic Braking A means of braking a locomotive or car having electric motors by using the motors as generators and dissipating this power through resistors. It may be used to control train speed and to brake a train to a low speed after which air brakes bring it to a full stop.

Dynamic Track Stabilizer A track machine that consolidates ballast by subjecting the track to high vibratory forces. A compactor applies forces through the rails themselves, simulating the stabilizing effects of accumulated train traffic and thus reducing or eliminating post trackwork slow orders.
Dynamometer A device for determining the power of an engine.

Dynamometer Car A car equipped with apparatus for measuring and recording drawbar pull, horsepower, brake pipe pressure, and other data connected with locomotive performance and train haul conditions.

E

"E" Coupler A standard AAR automatic coupler. Type "E" couplers are cast in several grades of steel, and have several shank configurations to meet varying service requirements.

Economic Analysis Determination of the cost-effectiveness of a project by comparing the benefits derived and costs incurred in a project.
Effective Velocity The speeds that a vehicle travels, including dwell times at stations and acceleration and deceleration. (Calculated by dividing trip distance by total elapsed time to complete trip).

Electronically-Controlled Freight Brake Braking system using the communication capability of digital electronics over a two-wire trainline to provide instantaneous control and monitoring of all air braking functions throughout trains of any length, initially applied in special service pending standardization in the late 1990's.

Electro-Pneumatic Combination of electrical and compressed air devices and equipment used in controlling and operating such devices as power track switches and car retarders.

Electro-Pneumatic Brake A braking system used on multiple-unit (MU) electric passenger trains. Brakes are applied and released on each car through the action of electro-pneumatic valves energized by current taken from contacts on the engineman's brake valve and continuous train wires. Brakes can be applied instantaneously and simultaneously, eliminating undesirable slack action and providing more positive control of train speed.

Elevation (or Superelevation) The vertical distance that the outer rail is above the inner rail in curves.

Elliptic Spring A spring whose shape resembles an ellipse. Made of two sets of parallel steel plates called "leaves," of constantly decreasing length. Because of the damping provided by friction between the leaves, such springs have been widely used for bolster springs for passenger cars.

Embargoed Interruption of rail service for a particular line. Usually a temporary action taken because of the physical condition of a line.

Empties Freight cars not carrying revenue--generating loads.

Empty-and-Load Brake A freight car air brake incorporating gear to increase braking power automatically when the car is loaded.

Empty Weight *See Light Weight*

E.M.U *See Multiple-Unit Cars*
End-of-Car Cushioning Device A unit installed at the ends of a car that develops energy-absorbing capacity through a hydraulic piston arrangement supplemented by springs to assure positive repositioning of the unit. These devices replace the standard draft gear, and provide up to 15 inches of travel.

End-of-Train Device Device that monitors air brake system and train integrity on trains being operated without a caboose. Includes flashing marker light (night) and rear-of-train emergency brake application capability.

Energy The ability to do work. *See Work.*

Engineer A person trained to operate a locomotive.

Equalizer In six-wheel and some four-wheel truck arrangements, a system of bars, rods, levers and springs that serves to equalize the loads on the axles and provide improved riding qualities for the truck.

Equilibrium Superelevation When the centrifugal (outward) force is totally resisted by the component of the weight of vehicle parallel to the plane of superelevation.

Exclusive Right of Way Land area or other space devoted to the exclusive use of a rail system or other transportation system where the right of way is not used by more than one mode.

Extra Train A train not represented on and authorized to move by the timetable.

F

Fail Safe A term used to designate a design principle of any system the objective of which is to eliminate the hazardous effects of a failure of the system by having the failure result in nonhazardous consequences.

False Proceed (Railway Signal Indication) A clear or green signal displayed because of a system failure when a more restrictive indication should be displayed. Sometimes called "False Clear."

Fare Box Recovery Ratio Measure of the proportion of operating expenses covered by passenger fares; found by dividing fare box revenue by total operating expenses for each mode and/or systemwide.

FAST An acronym for The Facility for Accelerated Service Testing located at the Transportation Technical Center near Pueblo, Colorado.

Fastenings Joint bars, bolts and spikes.

Feeder Lines Light-density lines, usually branch lines, that connect with and feed traffic onto a higher density or main line. Also, short line railroads that interchange freight with a major railroad.

Field Weld A weld joining two rails together after rails are installed in track.

Flag a Block. To go ahead or behind a train to signal a warning for other trains.

Flange Any projecting surface or area, generally small with respect to the main component of which it is a part, included to serve some special purpose.

Flange of a Wheel The vertical projection along the inner rim of a wheel that serves, in conjunction with the flange of the mating wheel, to keep the wheel set on the track, and provides the lateral guidance system for the mounted pair.

Flangeway The open way through a track structure which provides a passageway for wheel flanges.

Flatcar A freight car having a flat floor or deck laid on the underframe, with no sides, ends or roof, designed for handling commodities not requiring protection from weather.

Flat Spot Loss of roundness of the tread of a railroad wheel, caused by wheelsliding. This causes the wheel to bump and must be corrected when the flat spot exceeds a certain size.

Flat Switching Switching movements in a yard where cars are moved by a locomotive on relatively level tracks as opposed to over a hump.

Float Bridge A structure with an adjustable apron to connect tracks on land with those on a car float, thus permitting cars to be transferred between the land and the car float at varying water levels.

Foreign Car Any car not belonging to the particular railway on which it is running.

Four Quadrant Gates A type of boom barrier see above.

FRA (Federal Railroad Administration) An agency of the U.S. Department of Transportation with jurisdiction over matters of railroad safety and research.

Freight Car A general term used to designate all kinds of cars which carry goods, merchandise, produce, minerals, etc.

Frog A track structure used at the intersection of two running rails to provide support for wheels and passageways for their flanges, thus permitting wheels on either rail to cross the other.

Frog Number The length in units along the frog point at which it is one unit wide - a measure of the sharpness of its angle.

G

Gallery Car A passenger car normally employed in commuter service which contains a main seating level and an upper deck level with an open aisleway through the center which gives a "gallery" appearance to the car interior.

Gate Sometimes used to describe the bottom door assembly that serves as a discharge opening on covered hopper cars, usually called the "discharge gate."

Gauge (or Gage) The distance between the gauge line, measured at right angles thereto (standard gage is 4 ft., 8-1/2 in.).

Gauge Line 1) The spot on the side of the railhead 5/8 inch below the rail tread, where track gauge is established. Gauge lines other than 5/8 inch are found on light rail transit. 2) The side of the railhead of a third rail where the third rail gauge is measured.

Gibs The vertical ridges on each end of a truck bolster which engage the column guide surfaces of the side frame when the truck is assembled.

Girder Rail A special rail cross-section for use on light-rail trackage in paved streets incorporating an integral flangeway on the gauge side of the railhead.

Gondola Car A freight car with low sides and ends, a solid floor, and no roof. It is used mainly for transportation of coal, iron and steel products and other lading not requiring protection from the weather. Special types of gondola cars are built with high sides (for coal), removable covers, load-scouring devices, drop-ends (for long loads) etc., for specialized service.

Grade The rise or fall in elevation of railroad track. A rise of 1 foot in elevation in 100' of track
is a 1% ascending grade. Similarly, a decrease of 0.75' or 9' in elevation in 100' of track is a 0.75% descending grade.

Grade Crossing An intersection of a highway with a railroad at the same level. Also, an intersection of two or more railroad tracks at the same elevation.
Grade Resistance The resistance to motion of a train on a gradient due to the pull of gravity. Grade resistance is always 20 pounds for each ton of train weight for each percent of grade. Thus, a train on a 0.75 per cent grade (.75 feet or nine inches change in elevation per 100 feet of length of track) would have 15 pounds grade resistance for each ton of train weight. If the track rises, the grade drag is positive; if the track decreases in elevation, the grade drag is negative.

Grain Door A temporary arrangement for sealing the openings around boxcar sliding doors so that the car may be used for bulk handling of grain. One common type consists of heavy reinforced paper nailed to strips of wood which are fastened to the door posts one either side of the car door opening.
Gravity Switch Move A switching maneuver whereby gravity causes a stationary car to roll when the handbrake is released rather than being propelled by an engine.

Gross Ton Combined weight of the rail vehicle (or train) and its contents expressed in tons (i.e., 2000 gross pounds equal one gross ton).

Gross Ton Mile A volume measure of rail traffic calculated by multiplying the weight in gross tons times the distance in miles.

Gross Weight The total combined weight of a rail car and its contents. Also, the total combined weight of a train (locomotives, revenue cars, empties and caboose).

Guard Rail 1) A short, heavily braced rail opposite a frog to prevent wheels from striking the frog point or taking the wrong route. 2) Auxiliary rails between the running rails on bridges, in tunnels or near other obstacles or hazards to keep derailed cars from leaving the road bed before exiting the danger area.

H

Hand Brake 1) A device mounted on railway cars and locomotives to provide a means for applying brakes manually without air pressure. Common types include vertical wheel, horizontal wheel and lever type, so named because of the configuration or orientation of their operating handles. 2) The brake apparatus used to manually apply or release the brakes on a car or locomotive.

Hazardous Material 1) When used with respect to lading in transportation vehicles, a term identifying the lading as subject to specific safety requirements set forth by the Department of Transportation and/or the Interstate Commerce Commission. Examples of hazardous materials are explosives, poisons, flammable liquids, corrosive substances, and oxidizing or radioactive materials. 2) A substance or material which is capable of posing an unreasonable risk to health, safety, and the environment.

Head-End Power (HEP) A system of furnishing electric power for a complete railway train from a single generating plant, located either on the locomotive or on a power car.

Headway Time required for successive vehicles traveling at the same speed and direction to pass the same point.

Heavy Rail Heavy-weight transit vehicle using an existing freight line or third rail power source and operating on exclusive right of way, usually having high-level platform stations.

Heavy Rail Transit An electric railway constructed on an exclusive right-of-way to transport passengers in an urban environment. Operations generally consist of trains with several passenger cars coupled together operating on a subway, elevated, or grade-separated surface right of way, usually with power via third rail.
Heavy Repairs As reported to the Association of American Railroads, repairs to revenue freight cars requiring over 20 man-hours.

Held for Orders Cars in repair facilities waiting on authorization to proceed with repairs.

Helper A manned locomotive usually placed toward the rear of a train, to assist in the movement of the train. For instance, a helper may be used on a heavy ascending grade.

Helper Locomotive A locomotive usually placed towards the rear of a train, to assist in the movement of the train over heavy grades. Helper locomotives can be either manned, or remotely controlled from the lead unit in the train.

Highrailer A highway-type vehicle equipped with secondary flanged wheels for running on rails. Usually used as an inspection vehicle.

High Side Gondola Car A gondola car, with sides and ends over 36 inches high, for carrying coal or minerals.

High Speed Rail Passenger rail transportation system in densely-traveled corridor over exclusive right-of-way at speeds of 125 mph (200 Kmph) or greater.

High & Wide A term referring to outside dimensions of a car or open top load that exceed the normal clearances on the route to be traveled.

Horsepower A unit of power equivalent to 33,000 foot-pounds per minute or 746 watts.

Horsepower Limited Speed The maximum speed obtainable from the horsepower developed by the locomotive.

Hotbox An overheated journal caused by excessive friction between bearing and journal, due to lack of lubricant or foreign matter.

Hot Box Detector A heat sensitive device installed along railroad mainline track at strategic locations for measuring the relative temperatures of passing journal bearings. Bearing temperatures may be transmitted to wayside stations and monitored by personnel who can act to stop a train if an overheated journal is discovered. Most detectors report any bearing temperatures above a threshold value by radio directly to the train crew for appropriate action.

Hump Yard A railroad classification yard in which the classification of cars is accomplished by pushing them over a summit, known as a "hump," beyond which they run by gravity into their assigned track.

I

I.C.C. Abbreviation for Interstate Commerce Commission, superseded by the Surface Transportation Board in 1996.

Idler Car Usually a flatcar used in the transportation of a long article or shipment, which extends beyond the limits of the car carrying the shipment; the "idler" being a car on which the shipment or article does not rest, but overhangs. Also, a car used to move cars into or out of trackage (e.g., car float) where locomotive may not go.

IDT Initials that stand for"ln-Date-Test," periodic test of the air brake equipment on every car to assure its continued proper operation. The month, day and year of the most recent IDT must be stenciled on every car.

Independent Brake The air brake control valve on a locomotive unit that controls the brakes on that locomotive (or multiple unit consist) independently from the train brakes.

Industry Track A track which services an industry, usually a spur.

Insulated Joint A rail joint designed to arrest the flow of electric current from rail to rail by means of insulation so placed as to separate rail ends and other metal parts connecting them.

Insulated Rail Joint A joint in which electrical insulation is provided between adjoining rails.

Interchange A process by which rolling stock is delivered or received between two separate railroads.

Interchange Rules Rules established and maintained by committees made up of representatives of railroad and car owners. If offered in interchange, a car complying with all interchange requirements must be accepted by an operating railroad, to another at a common junction point.

Interface Transfer activity and the facilities required for transfers between transportation modes (e.g., bus to rail, etc.).
Interline Rail shipment involving at least two different railroads between its origin and destination.

Interlocking An arrangement of switch, lock, and signal devices that is located where rail routes cross and that is interconnected in such a way that their movements must succeed each other in a predetermined order, thereby preventing opposing or conflicting train movements.

Interlocking, Automatic An arrangement of signals, with or without other signal appliances, which functions automatically upon the approach of a train, as distinguished from those functions are controlled manually.

Intermodal Of or relating to the connection between rail service and other modes of transportation, including all parts of facilities at which such connection is made.
Intermodal Traffic Transportation of goods in containers or trailers involving more than one mode-rail, water, highway.

Intermodal Freight Goods or materials moving by more than one mode of transportation (e.g., TOFC, COFC).

Intermodal Freight Facilities Yard or terminal where freight is transferred from one mode to another using cranes, ramps and other means.

Intermodal Passenger Facilities Station or terminal where several modes meet, allowing direct transfers of passengers from one mode to another.

Invert The inverted arch in the lower portion of the cross-section of a tunnel supporting the track, walls and roof.

J

Joint The junction of members or the edges of members that are to be joined or have been joined.

Journal Bearing The general term used to describe the load bearing arrangement at the ends of each axle of a railcar truck. So called plain journal bearings are blocks of metal, usually brass or bronze, shaped to fit the curved surface of the axle journal, and resting directly upon it with lubrication provided by oil supplied by spring-loaded wick-fed lubricator pads beneath the axle in the journal box. Journal roller bearings are sealed assemblies of rollers, races, cups and cones pressed onto axle journals and generally lubricated with grease. Vertical loads are transferred from the journal bearing to the truck side frame through the journal bearing wedge (in plain bearing designs), or through the roller bearing adapter in roller bearing trucks.

Journal Box The metal housing on a plain bearing truck which encloses the journal of a car axle, the journal bearing and wedge, and which holds the oil and lubricating device.

K

Kilowatt Hour A unit of energy measured equal to the continuous flow of one kilowatt (1000 watts) for one hour.

Knuckle 1) The pivoting casting that fits into the head of a coupler to engage a mating coupler. 2) The pivoting hook-like casting that fits into the head of a coupler and rotates about a vertical pin to either the open position (to engage a mating coupler) or to the closed position (when fully engaged). Coupler knuckles must conform to a standard dimensional contour specified by the Association of American Railroads.

L

LCL (Less-Than-Carload) A term applicable to a quantity of freight which is less than the amount necessary to constitute a carload.

Lead (or Ladder) A track which has numerous tracks branching off it.

Leased Line A rail line that is leased to another railroad which operates and maintains said line.

Light Engine A locomotive or locomotive consist running as a train without cars.

Light Rail An urban/suburban passenger system employing manned vehicles ("LRV's"- usually articulated) operating singly or in short trains over routes including some in-street running on overhead catenary or trolley wire power.

Light Weight Empty or tare weight of a railroad car, new or as determined by reweighing after any repairs, stenciled on car in conjunction with the load limit abbreviated LT.WT.

Line Haul The movement over the tracks of a carrier from one city to another, not including switching service.

Link and Pin Coupler An old type of connection between cars employing a single link attached to each drawhead by a vertical pin manually inserted when coupling.

Load Factor Ratio of total passengers to number of seats.

Local Service The service rendered by a train which stops to deliver and receive freight by setting out and picking up cars at intermediate points along its route.

Locomotive A self-propelled vehicle running on rails, and generating or converting energy into motion for the purpose of hauling cars. A locomotive has no space for a revenue load.

Locomotive Unit A single carbody with power and transmission equipment, but not necessarily with controls.

LRSA Act Acronym for the Local Rail Service Assistance Act of 1978.

LRV Abbreviation for "Light Rail Vehicle."

L/V Ratio The L/V ratio is defined as the ratio of the lateral force to the vertical force of a car or locomotive wheel on a rail. An important factor affecting the tendency of the wheel to overturn or climb the rail it is often a point of discussion in evaluating the cause of a train derailment.

M

Magnetic Field A term applied to the space occupied by electric or magnetic lines of force.

Mainlines The primary tracks of a railroad, those carrying more than 5 million gross tons per year.

Main Track A track extending through yards and between stations upon which trains are operated by timetable or train order, or both, or the use of which is governed by signal indication.

Manifest A document giving the description of a single shipment or the contents of a car.

Manual Train Control Train movement completely controlled by the operator.

Mechanical Designation An alphabetic code two - to four - letter assigned by the Association of American Railroads to every freight car to designate its general design characteristics and its intended purpose. E.g., XF = food-service boxcar.

Mechanical Refrigerator A term applied to refrigerator cars equipped with a self-contained power plant and mechanical refrigeration equipment including a compressor, condenser, evaporator, and fans for distribution of cold air around the lading.

Mile Post A post indicating the distance in miles from a given point.

Modal Split The division of trips made from the various alternative types of transportation available.

Motive Power A term relating to the self-propelling equipment of a railroad, usually taken to mean locomotives.

MPH Abbreviation for "Miles Per Hour."

Multiple Unit Operation Practice of coupling two or more locomotives or electric passenger cars together with provision made to control the traction motors on all units from a single controller. Sometimes referred to as "MU-ing".

Multiple Unit Train Two or more electrically-operated passenger cars coupled with provision made to control the operation of the cars from a single controller. Sometimes referred to as "EMU".

N

Network The configuration of routes and junctions which constitute the total system.

Nonoperating Income Net income from property or operation not associated with providing transportation or transit service.

Normally Aspirated (Internal Combustion Engine) An engine that uses are at atmospheric pressure for combustion.

O

Open-Top Car Any of a group of cars with or without sides and ends, and with no roof, all being intended for transportation of commodities not requiring protection from the weather, such as steel products, coal or rough forest products. Flat, gondola and hopper cars are all classed as open top cars.

Operating Ratio The ratio of operating costs to gross revenue.

Operating Revenue The gross income from operation of the rail system, including fares, charter income, concessions, advertising, and movement of goods in the case of freight operations. Does not include interest from securities, non-recurring income from sale of capital assets, etc.

Ore Car An open top gondola or hopper car designed specifically to carry iron or some other metallic ore. Because of the high density of most ores, cars for this service are built with relatively low cubic capacities, and some are equipped with empty-and-load brake equipment.

OSHA Occupational Safety and Health Administration.

Out-Of-Service A situation in which a railroad has discontinued service on a line, but has not yet declared that line abandoned. See also "Railbanking"

Overhead Loading A method of loading highway trailers or containers on intermodal cars by the use of an overhead (usually a gantry type) crane.

Overpass (Railroad) Any grade-separated structure where the tracks pass over a street, highway, railroad, etc.

P-Q

Pantograph A device for collecting current from an over headed conductor (catenary) and consisting of a jointed frame operated by springs or compressed air, and having a suitable collector at the top.

Peak Hour That hour period during which the maximum amount of travel occurs. Generally there is a morning peak and an afternoon peak, especially for commuter operations.

Per Diem The amount or rate paid by one carrier to another or to a private car owner for each calendar day (or each hour) it uses a car belonging to the other.

Phase Motion Detector A device that senses an approaching train and activates warning devices at downstream crossings.

Pickup A term descriptive of a car or cars added to a train enroute between dispatching and receiving yards: or added at dispatching yard to train operating over two or more divisions on a continuous wheel report.

Piggyback A term referring to the practice of transporting highway trailers on railroad flatcars. *See TOFC.*

Piggyback Car Flat cars designed and equipped for the transportation of highway vehicles or containers.

Pilot A qualified employee assigned to a train or other on-track equipment when the engineer, conductor or driver is not qualified on the physical characteristics or rules of the portion of the railroad over which movement is to be made.

Pitch Rise and fall "porpoising" motion about the transverse axis of the vehicle.

Plain Journal Bearings *See Journal Bearing*

Plate B, C, E, F and H An AAR clearance diagram for unlimited interchange. *See Clearance Diagram.*

Platform An intermodal freight car unit capable of carrying 40 ft. container or trailer – term used to clarify situation since platforms permanently connected (by articulation or drawbars) are given a single car number. Also called a"slot."

Plug Door 1) A type of side door used on insulated box and refrigerator cars that fits flush with the interior car side when closed. Plug doors provide a better seal and are, therefore, more desirable than the common sliding door for insulated car applications. 2) A freight car door designed to fit into the door opening rather than sliding across it.

Pneumatic Coupler An automatic connector which links pneumatic trainlines together between rail cars.

Power Work done by a force divided by the time required to do the work. A high power locomotive can do a relatively large amount of work in a short amount of time.
Power Out indicator A wayside device that notifies an approaching train crew whether or not the active warning system at a grade crossing has appropriate power.

Preventative Maintenance Inspection to discover if something needs repairing before it fails and performing the necessary work in order to stop or slow that failure.

Principle Line Another term used to refer to a railroads main line or track.

Push-Pull Train Operation Passenger service, typically over commuter or medium-haul routes, with locomotive-powered consists train-line connected for control from either end which shuttle between terminal stations without being turned.

Puzzle Switch *See Double Slip Switch.*

R

Rack Rail A notched rail mounted between the running rails that engages the gears of a locomotive so equipped, for traction ascending and braking descending on a cog railroad.

Rail As used in car construction, any horizontal member of a car superstructure. The term is usually used in combination with some additional identifying word such as "belt rail" or "hand rail." As used in track, a rolled steel shape, commonly at-section, designed to be laid end to end in two parallel lines on crossties or other suitable support to form the supporting guideway constituting a railroad.

Rail Anchor A device attached to the base of a rail bearing against a crosstie to prevent the rail from moving longitudinally under traffic.

Railbanking A practice of preserving railroad rights-of-way for possible future use. One such means to accomplish this is by using them as multi-use trails. In the United States, the Rails-to-Trails Conservancy (RTC) is a nonprofit organization, headquartered in Washington, D.C., which promotes railbanking.

Rail Classification Weight per yard of rail length (e.g., 90-lb. rail).

Rail Creep The occasional lengthwise movement of rails in track. Rail creep is caused by the movement of trains or temperature changes. It is common practice to stop the effect of creeping by the use of rail anchors of resilient fasteners.

Rail Detector Car A small car equipped to test rails for flaws. A less sophisticated track geometry car.

Rail, Head-Hardened A rail with only the railhead heat treated to a higher hardness for reduced wear, longer life on curves.

Rail Section The shape of the end of a rail cut at right angles to its length. The rail mills identify the different shapes and types of rails by code numbers, as for example, 131-28 for the 131 RE rail section.

Rail Tread The top portion of the railhead where rail/wheel tread contact occurs. Also called Running Surface.

Rail Web The vertical member of a rail connecting head and base to form a beam.

Raised-Wheel Seat Axle Current design of axle in which wheels are pressed onto enlarged, parallel section of axle eliminating failures caused by stress concentration at the wheel-axle interface.

Rapid Transit Heavy-rail systems for urban/suburban passenger service not directly connected to the lines of commuter or freight railroads.

Rate Bureau The tariff setting and publication agency for all carriers within a certain freight classification territory in the era prior to deregulation.
Rate of Return The ratio of net operating income (also called "net railway operating income" in railway accounting) to the value of the property in common carrier use, including allowance for working capital.

Real Estate Land, including all the natural resources and permanent buildings on it.

Receiving Yard A rail yard used for receiving trains from over-the-road movements in preparation for classification.

Regenerative Braking The retardation system on electric cars or locomotives which can return power developed by traction motors acting as generators to the third rail or catenary for use by other units.

Remote Control A term denoting the control of any apparatus from a location apart from the location of the apparatus.

Repair 1) Reconstruction of a car, or a part or parts of a car to its original design. 2) Physical work performed upon a railcar in order to restore original structure because of damage, decay, injury, deterioration or partial destruction. *See also Preventative Maintenance*.

Resilient Fastener Any of a variety of proprietary designs of rail fastener other than cut spikes that provide a more positive connection between the rail and tie or a track support slab.

Revenue Cars Income-producing rail cars, carrying passengers or freight.

Reverser The handle on a locomotive control stand that selects the direction in which the locomotive will move by reversing the traction motor field connections.

Ribbon Rail *See continuous welded rail (CWR).*

Right of Way The land occupied by a railroad, especially the land traversed by the track. Track, yards and terminals are within the operating right of way.

Riprap Heavy stones or other durable material used to protect the roadbed from water erosion.

Rip Track A small car repair facility, often simply a single track in a classification yard or terminal. In larger yards, the rip track may be quite extensive with several tracks and shop buildings. Larger car repair facilities are generally known as "car shops. "The name "rip track" is derived from the initials RIP which stands for "repair, inspect and paint."

Roadbed The rock or soil surface upon which the ties, rails, and ballast of the railroad track rest.

Rock-and-Roll A slang term for the excessive lateral rocking of cars, usually at low speeds and associated with jointed rail. The speed range through which this cyclic phenomenon occurs is determined by such factors as the wheel base, height of the center of gravity of each individual car, and the spring dampening associated with each vehicle's suspension system.

Roller Bearing The general term applied to journal bearings that employ hardened steel rollers to reduce rotational friction. Roller bearings are sealed assemblies that are mechanically pressed onto an axle, and transfer the wheel loads to the truck side frames through a device known as a roller bearing adapter that fits between the bearing outer ring and the side frame pedestal.

Rolling Stock The vehicles used in a transportation system.

Rotary-Dump Car Open-top car equipped with rotary coupler at one end allowing load to be dumped by overturning without need for uncoupling.

Rotating End-Cap Roller Bearing Modern type of journal roller bearing in which the outer grease seal is between the cartridge-type bearing assembly and a cap attached to the axle.

Roundhouse A storage or maintenance building for locomotives, usually equipped with a turntable.

RSPO Acronym for the Rail Service Planning Office.
Run The train to which an employee is assigned. It is his regular route usually from one division to another.

Running Rail The rails which rolling stock and on-track equipment runs directly on as opposed to guardrail, rack rail or third rail.

Running Surface *See RailTread.*

Running Time The elapsed travel time between points along a route.

R/W (or ROW) Abbreviation for right of way.

S

Schedule That part of a timetable which prescribes class, direction, number and movement for a regular train.

Schnabel Car A specially designed car used for transportation of extremely large and heavy machinery. The car is constructed with two separate units, capable of empty movement as a single car when bolted together. The load is placed between the two carrying units, and rigidly fastened to them, thus becoming literally part of the carbody.
SDM Acronym for the System Diagram Map. A listing submitted by the railroads indicating location and data for lines placed in category I, II, and III.

Shatter Cracks A rail defect in the form of minute cracks in the interior of rail heads, seldom closer than 1/2 in. from the surface, and visible only after deep etching or at high magnification. They are caused by rapid (air) cooling, and may be prevented from forming by control cooling the rail.

Shelf Coupler A special coupler, required on some cars designed for transporting hazardous commodities, having top and bottom "shelves" cast integral with the head to prevent vertical disengagement of mating couplers in the event of an excessive impact as in a derailment. Shelf couplers are fully compatible with other standard A.A.R. couplers.

Shoofly A temporary track (detour) built around an obstacle such as a wreck, construction sites, or a flooded-out place.

Shops Structures which shelter vehicle construction and repair activities.

Shortline Railroads These typically operate between cities, are shorter than major (Class I) railroads and consist of Class II and Class III railroads. They may be either independently owned or a subsidiary of another railroad.

Shoulder That portion of the ballast between the end of the tie and the toe of the ballast slope.

Side Bearing A load bearing component arranged to absorb vertical loads arising from the rocking motion of the car. There are various types of side bearings ranging from simple flat pads to complex devices which maintain constant contact between the truck bolster and car body. *See Body Side Bearing.*

Side Frame In the conventional three-piece truck, the heavy cast steel side member which is designed to transmit vertical loads from the wheels through either journal boxes or pedestals to the truck bolster springs.

Side Loading A method of loading or unloading containers or highway trailers on or off flat cars by physically lifting the unit over the side of the car with heavy duty mobile loading equipment.

Siding A track auxiliary to the main track for meeting or passing trains.

Signal Indication The information conveyed by the aspect of a signal relative to speed and conditions on the track ahead.

Single Track Main track on which trains are operated in both directions.

Skate A metal skid or chock (wedge) placed on rail to stop the movement of rolling stock.

Slack Unrestrained free movement between the cars in a train.

Sliding Sill A term used to describe a type of hydraulic cushioning for freight car underframes. In sliding sill designs, a single hydraulic unit is installed at the center of the car and acts to control longitudinal forces received at either end of an auxiliary center sill, which is free to travel longitudinally within a fixed center sill. *See Cushion Underframes.*

Slug A cabless locomotive which has traction motors, but no means of supplying power to them by itself. Power is provided by power cables from an adjacent unit. Slugs are used where low speeds and high tractive effort are needed, such as in hump yards.

Snubbers Hydraulic or friction damping devices used in suspension systems of cars to improve lateral stability. Some snubbers are designed to replace one spring in the truck spring group, some are incorporated as part of the truck side frame or bolster design, and others require special installation. Supplemental hydraulic snubbing is used most often on cars with high centers of gravity such as 100-ton coal hoppers or gondolas and tri-level automobile rack cars.

Solid-State Inverter A sophisticated, computer-driven device used to generate, modify, or alter electrical waveforms and frequencies, an essential component used to generate and regulate alternating-current for the AC induction traction motors of modern locomotives.

Spike Killing The damage and reduction of the holding power of a tie resulting from repetitive removal and installation of spikes in changing or transposing rail.

Spiral When used with respect to track: a form of easement curve in which the change of degree of curve is uniform throughout its length in going from tangent to curve.

Spring A general term referring to a large group of mechanical devices making use of the elastic properties of materials to cushion loads or control motion. *See Coil Spring, Elliptic Spring, and Truck Springs.*

Spring Group Any combination of standardized coil springs used in each truck side frame, and selected to match car capacities and obtain desired vertical suspension characteristics. Cars are often stenciled to show the number of specific springs of various designations, e.g., 5 D5 outer 3 D5 inner, that make up the spring group standard to the car.

Spur A section of track connected at one end only to a main track.

Staggers Rail Act of 1980 An act of Congress which fundamentally altered the regulatory environment of the railroad industry by reducing regulations including the elimination of antitrust immunity in certain areas of activity.
Stake Pocket A "U"-shaped collar attached to the side or end sill of a flat car to receive the lower end of a stake used for securing open top loads.

Standard Gauge The standard distance between rails of North American railroads, or 1735 mm, being 4' 8 1/2" measured between the inside faces of the rail heads 5/8" below the rail head.

Static Load The load or weight on the roadbed applied by track material or standing rolling stock.

Station A place designated in the timetable by name. An enclosed building or covered area that acts as a collection and distribution point for passengers.

STCC Acronym for Standard Transportation Commodity Code.

Stop Gate A bar that can be lowered across the street at a level crossing which prohibites cars from crossing the track infront of an oncoming train.

Subballast Any material which is spread on the finished subgrade of the roadbed below the top ballast to provide better drainage, prevent upheaval by frost, and better distribute the load over the roadbed.

Subgrade (Track) The finished surface of the basement material below the ballast (or subballast if any).

Superelevation The vertical distance the outer rail is raised above the inner rail on curves to resist the centrifugal force of moving trains.

Surface Transportation Board (STB) Replaced the Interstate Commerce Commission.

Suspension The system of wheels and axles which supports the vehicle on the track and the springs and dampers which further isolate it from shocks and vibration.

Sway A side-to-side oscillation or fluctuation of a vehicle.

Swing Hanger Bars or links, attached at their upper ends to the frame of a swing motion truck, and carrying the spring plank at their lower ends. Also called "bolster hanger."

Swing-Nose Frogs A frog in a turnout with a movable frog point connected to a switch machine to match the switch position.

Switch A track structure with movable rails to divert rolling stock from one track to another in a turnout. By eliminating the gap across which wheels must pass, the swing nose eliminates impact and also allows the use of frogs longer than No. 24. (e.g., No. 32, allowing 80 mph operation through the diverging route of a turnout.)

Switch and Lock Movement A device, the complete operation of which performs the three functions of unlocking, operating, and locking a switch, movable point frog, or derail.

Switchback A zigzag railroad track built across a hill too steep for direct ascent.

Switching and Terminal Companies Are those that provide railroad switch service for certain towns or other facilities.

System Car A car owned by the subscriber railroad.

System Repair A repair performed by owner of the car.

T

Tangent Straight section of track.

Tariffs A set schedule of rates the railroads can (must) charge shippers, set by a regulatory agency.

Tariff Circulars (I.C.C.) Circulars issued by the Interstate Commerce Commission or its successor containing rules and regulations to be observed by the carriers in the publication, construction and filing of tariffs and other schedules.

Team Track A track which is owned by the railroad, and is used to spot cars for customers who do not have an industry track leading into their plant.

Tee Rail The typical rail shape used in track construction. The tee rail consists of a head, web and base, and is so called because of the inverted "T" shape it assumes.

Terminal An assemblage of facilities provided by a railway at a terminus or at an intermediate point for the handling of passengers or freight and the receiving, classifying, assembling and dispatching of trains.

Third-Rail A current distribution system for electric railroads consisting of an insulated rail laid parallel to one of the running rails and arranged to provide a continuous supply of power to electric locomotives.

Tie The portion of track structure generally placed perpendicular to the rail to hold track gauge, distribute the weight of the rails and rolling stock, and hold the track in surface and alignment. The majority of ties are made from wood. Other materials used in the manufacture of ties include concrete and steel. Also called Crosstie.

Tie Down Any device for securing a load to the deck of a car. Chain tie downs with ratchets are probably the most common type and are used to secure wheeled vehicles and lumber products on flat cars.

Tie Plate The metal plate which fits between the base of the rail and tie. Modern tie plates have an inside and outside shoulder and an inclined surface (also see "Cant").

Timetable The authority governing movement of trains subject to the rules. It contains classified schedules of regular trains and special instructions.

Toe (of a Frog) End of a frog nearest the switch.

TOFC An acronym for "trailer on flatcar" intermodal service or equipment.

Track An assembly of fixed location extending over distances to guide rolling stock and accept the imposed dynamic and static loads. *See Track Structure.*

Trackage Lines of railway track. A right to use the tracks of another railroad.

Trackage Rights The privilege of using the tracks of another railroad, for which the owed railroad is duly compensated.

Track Circuit An electrical circuit of which the rails of the track form a part. (I.C.C)

Track Gauge (Measurement) Measured at right angles, the distance between running rails of a track at the gauge lines.

Track Geometry Car A passenger or self-propelled car equipped with necessary instrumentation to provide quantitative track evaluations.

Track Maintenance The process of repairing a track defect or track condition.

Track Modulus A quantitative measure of the vertical deflection of track under wheel loads (pounds per inch per inch of length) used to assess the suitability of track structure and subgrade for heavy axle-loading traffic.

Track Structure A term relating to the various components that comprise a track, such as tie plates, fasteners, ties, rail anchors, guardrails, etc. See *Track.*

Trackwork The rails, switches, frogs, crossings, fastenings, pads, ties, and ballast or track support slab over which rail cars are operated. Also, maintenance or repair of the above.

Traffic Control Systems A block signal system under which train movements are authorized
by block signals whose indications supersede the superiority of trains for both opposing and following movements on the same track. See *CTC.*

Train For dispatching purposes, an engine or more than one engine coupled, with or without cars, displaying markers. (e.g., headlight and rear-end device).

Train Consist The composition of the complete train excluding the locomotive. The cars in a train.

Train Line A term properly applied to describe the continuous line of brake pipe extending from the locomotives to the last car in a train, with all cars and air hoses coupled. The term is often used to refer to the brake pipe on a single car.

Train Resistance A force which resists or opposes movement of a train. Resistance to motion along the track, attributed to bearings, wind and air resistance, flange contact with rail, grade, etc.
Transpose Rail To swap the rails of a track to extend their service life.
Tread The portion of the steel wheel that runs or bears upon the ball of the rail. Also the top surface of the head of a rail which contacts wheels.

Trestle A braced framework of short spans for carrying a train over a depression, chasm, or river.

Trimmer A signal located near the summit in a hump yard, which gives indication concerning movement from the classification tracks toward the summit.

Truck The general term covering the assembly of springs, axles, wheels, etc., comprising the structures which support a car body at each end (or in the case of articulated cars, the joint support of two, abutting rear ends).
Truck Bolster The main transverse member of a truck assembly that transmits car body loads to the side frames through the suspension system. The ends of the bolster fit loosely into the wide openings in the side frames and are retained by the gibs, which contact the side frame column guides. Truck bolster contact with the car body is through the truck center plate, which mates with the body center plate and through the side bearings.

Truck Center Plate The circular area at the center of a truck bolster, designed to accept the protruding body center plate and provide the principal bearing surface, often fitted with a horizontal wear plate and a vertical wear ring to improve wearing characteristic and extend bolster life.

Truck Center Spacing On a single car, the distance between the truck center pins as measured along the center sill from the center line of one body bolster to the center line of the other.

Truck Hunting A lateral instability of a truck, generally occurring at high speed, and characterized by one or both wheelsets shifting from side to side with the flanges striking the rail. The resulting motion of the car causes excessive wear in car and truck components, and creates potentially unsafe operating conditions. For freight vehicles, the phenomenon occurs primarily with empty or lightly loaded cars with worn wheelsets.

Truck Side Bearing A plate, block, roller or elastic unit fastened to the top surface of a truck bolster on both sides of the center plate, and functioning in conjunction with the body side bearing to support the load of a moving car when variations in track cross level cause the car body to rock transversely on the center plates.

Truck Springs A general term used to describe any of the several types of springs used in the suspension of trucks to provide a degree of vertical cushioning to the car and its load.

Turbocharger A centrifugal blower driven by an exhaust gas turbine used to supercharge an engine.

Turn-Around Time The time required to complete the cycle of loading, movement, unloading and placement for reloading of a freight car.

Turnout An arrangement of a switch and a frog with closure rails by means of which rolling stock may be diverted from one track to another. Engineering term for "track switch."

Turntable A rotating platform with a track for redirecting or turning cars and locomotives.

U

UMLER Acronym for Universal Machine Language Equipment Register. A continuously updated computerized file maintained by the Association of American Railroads. UMLER contains specific details on internal and external dimensions capacity and other information affecting the loading and use of freight cars as of UMLER includes data on intermodal (piggyback) trailers and locomotives shown in The Official Railway Equipment Register.

Unbalanced Superelevation The amount (vertical distance) that the actual superelevation is less than that required for equilibrium superelevation for vehicles traveling at maximum authorized speed.

Underpass (railroad) Any structure, regardless of type, where the tracks pass under a street, highway, railroad, etc.

Unit (locomotive) The least number of wheel bases together with superstructures capable of independent propulsion, but not necessarily equipped with independent control. The term is used in connection with diesel and electric locomotives.

Unit(s) A car, multi-unit car, articulated car, or multi-level superstructure which is identified by a unique reporting mark and number.

Unit Train A train transporting a single commodity from one source (shipper) to one destination (consignee) in accordance with an applicable tariff and with assigned cars.

V

Variable Cost A cost that varies in relation to the level of operational activity.
Voltage A unit of electromotive force which causes electrical current to flow in a conductor. One volt will cause an electrical current of one ampere to flow through a resistance of one ohm.

W

Waybill The primary written documentation of every freight shipment that forms the basis for railroad freight revenue accounts.

Wayside Control A system of electronic or mechanical devices alongside the track for controlling rail vehicles.

Well Car A flatcar with a depression or opening in the center to allow the load to extend below the normal floor level when it could not otherwise come within the overhead clearance limits.

Wheel The specially designed cast or forged steel cylindrical element that rolls on the rail, carries the weight and provides guidance for rail vehicles. Railway wheels are semipermanently mounted in pairs on steel axles, and are designed with flanges and a tapered tread to provide for operations on track of a specific gage. The wheel also serves as a brake drum on cars with on-tread brakes.

Wheel Flange The tapered projection extending completely around the inner rim of a railway
wheel, the function of which, in conjunction with the flange of a mate wheel, is to keep the wheel set on the track by limiting lateral movement of the assembly against the inside surface of either rail.

Wheel Plate The part of a railway wheel between the hub and the rim.

Wheel Report A listing of the cars in a train as it leaves a yard, made from waybills, on which the conductor posts set-offs and pickups.

Wheel Set The term used to describe a pair of wheels mounted on an axle.

Wheel Slip An operating condition where in there is driving wheel rotation on its axis with motion of the wheel at the point of contact with the rail. Wheel rotation speed during wheel slip is greater than it is during rolling, to the extent that tractive force is significantly reduced.

Wheel Tread The slightly tapered or sometimes cylindrical circumferential surface of a railway wheel that bears on the rail and serves as a brake drum on cars with conventional truck brake rigging.

Wide Gauge Track defect caused by failure of tie/rail fastening system to withstand lateral wheel forces, leading to derailment when wheel drops off railhead.

Window The time slot between scheduled trains.

Woodchip Hopper Open-top hopper or gondola car of high cubic capacity used to transport woodchips.

Work The force exerted on an object multiplied by the distance the object moved. The work a locomotive does is the tractive effort of the locomotive multiplied by the distance the train moves as a result of the tractive effort.

Wye Tracks forming the letter Y with a connector across the top, used for turning cars and engines where no turntable is available.

X-Y-Z

Yard A system of tracks defined by limits within which movements may be made without schedule, train order of other authority for the purpose of classification, etc.

Yard Engine An engine assigned to yard service and working wholly within yard limits.

Yard Plant Compressed air supply facility allowing charging of train air line and conduct of terminal air brake tests before arrival of road locomotive.

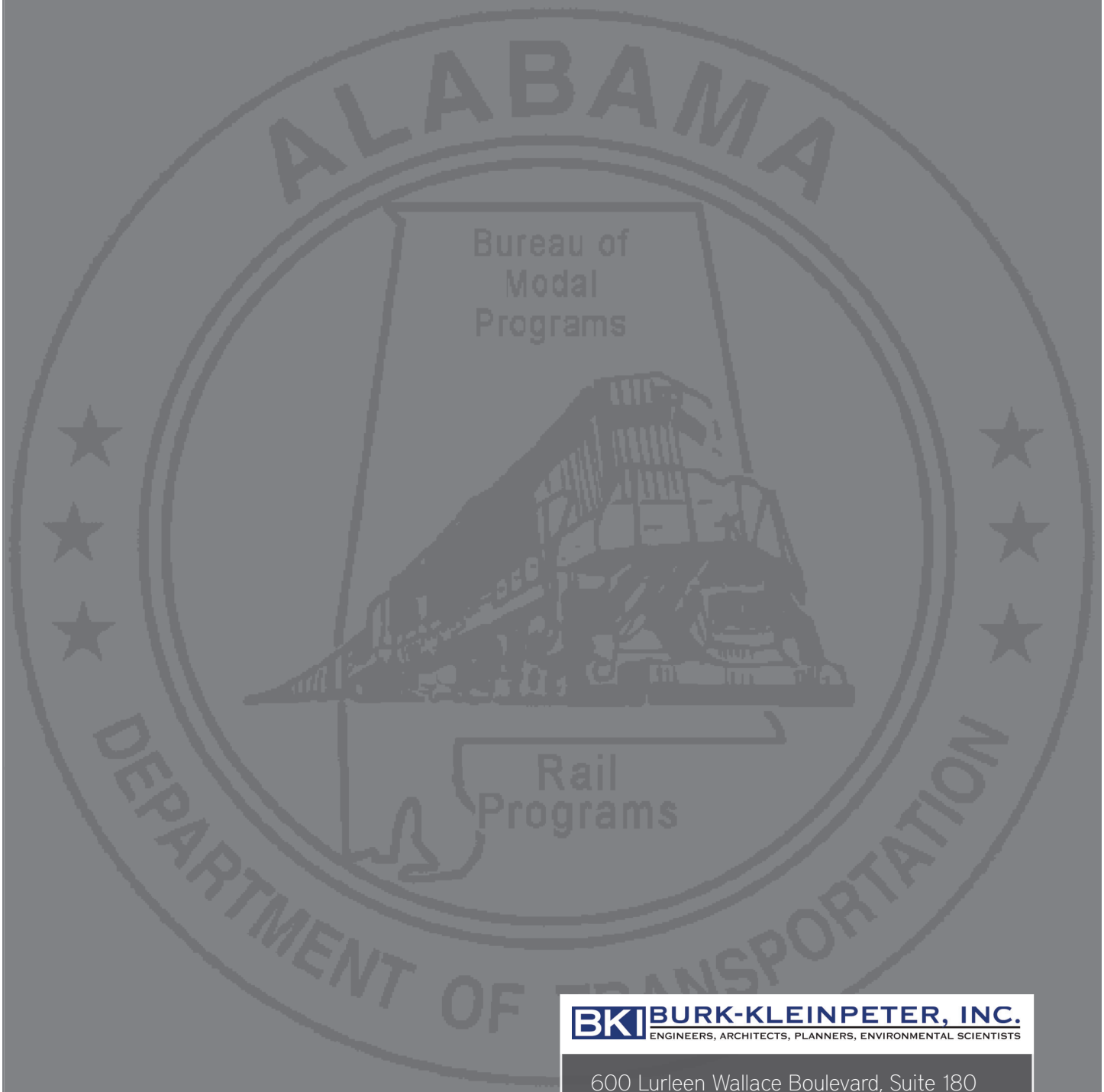
Yaw Veering motion as vehicle heading deviates from track alignment.

Yoke The component in a railroad car draft system that transmits longitudinal coupler forces to the draft gear. See *Coupler Yoke.*

FRA Track Safety Classification

Item	Criteria	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Speed Limit	Freight	10	25	40	60	80	110

Other criteria included in determination of class of track include: gage, alignment, track surface, rail condition, rail end match, number of spikes.



BKI BURK-KLEINPETER, INC.
ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS

600 Lurleen Wallace Boulevard, Suite 180
Tuscaloosa, AL 35401-1734
Phone: 205-759-3221 Fax: 205-759-9166

Job No. 3307 December 2008