

BIRMINGHAM DISTRICT RAILROADS
Birmingham District National Heritage
Corridor-Birmingham Industrial District
Birmingham vic.
Jefferson County
Alabama

HAER No. AL-11

HAER
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37-BIRM.V,
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Location: Throughout Walker, Jefferson, Shelby, Bibb, and Tuscaloosa Counties, Alabama

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The field work, measured drawings, historical reports and photographs were prepared under the direction of Eric DeLony, Chief of HAER and Project Leader; Robbyn Jackson, HAER Architect and Project Manager; Jack R. Bergstresser, Sr., Project Historian; and Craig Strong, Project Architect. The recording team consisted of Mark M. Brown, Supervisor; and Scott C. Brown, Historian. Nichole Duren served as team Architect. Formal photography was done by David Diesing. Additional consultation was provided by Richard K. Anderson, Jr.

Historians: Scott C. Brown and Mark M. Brown, 1992

Introduction

Railroads have forever altered the landscape of the Birmingham District. Their arrival opened this once remote Appalachian region to industrial development. Their transport of coal and iron ore to District mills and to markets outside the District underpinned regional economic growth. As their smooth, uniform, gentle grades extended through natural and mountain barriers, spanned rivers and extended across valleys, they linked mineral resources to production facilities, and to markets. Along the resulting railroad corridors, mines, mills, company towns and real estate developments proliferated in the once wilderness landscape. By the turn of the century, an extensive railroad system linked together complexes of mines, factories, and industrial centers into a coherent industrial region, known as the Birmingham District. At the core of the District, in Jones Valley, site of the principal industrial facilities, lies the City of Birmingham.¹

The first railroads to arrive after the Civil War were the South & North Alabama (later the Louisville & Nashville, now CSX) and the Alabama & Chattanooga (later the Southern, now Norfolk Southern). Their crossing led to the founding of Birmingham in 1871 and the establishment of large scale industry in the Jones Valley by the 1880s. By 1910, seven or eight trunk lines (the figure depending upon the counting of complicated ownership patterns in the large railroad systems) converged at Birmingham. In addition to the trunk lines, at least seven short line railroads operated within the city and the Birmingham District.

This report provides a preliminary context to begin evaluation of the vast cultural resources associated with the development of these railroads. Four topics are suggested for additional research and documentation: Civil War and antebellum mineral short lines², railroad engineering overcoming natural barriers, servicing of Jones Valley mining and manufacturing, and vertically integrated production. The research has also developed several intriguing historical issues raised by Southern Railroads. Were the railroads of the South hindered by lack of a preexisting industrial base? Were these railroads hindered by a lack of capital? Why is it that the Louisville and Nashville

¹See John R. Stilgoe, *Metropolitan Corridor: Railroads and the American Scene* (New Haven and London: Yale University Press, 1983) for a discussion of railroad landscapes.

²The theme of antebellum and early railroads has not been extensively developed within this report. A rough draft of a section discussing antebellum railroads, however, has been deposited with the Birmingham Historical Society.

Railroad came to dominate the exploitation of the mineral resources of the Birmingham District and not the Alabama Great Southern and its successors? While the present report is not able to address the larger questions, recent currents in scholarship suggests that the traditional answers to some of these issues may no longer be adequate.

The trunk railroads serving the Birmingham District are significant for several reasons. By their very nature, they extended beyond the district, and perforce took part in the broad currents that shaped American railroads. Birmingham's railroads expanded and contracted with the national economy. In addition, the Birmingham District exemplifies the power of American railroads to create new urban areas. Finally, the trunk railroads were essential to the real estate speculation that became Birmingham and to the delivery of the products of the region's mineral wealth to outside markets.

The trunk lines did not commonly ship Birmingham's raw materials to other, pre-existing industrial centers, such as Pittsburgh, Chicago, or Cleveland. Rather, short railroads were constructed to exploit the close proximity and quantity of iron ore, coking coal, and fluxing minerals that are distinctive features of the Birmingham District. These shortlines, whether they were controlled by private industries or by trunk lines, greatly reduced transportation costs associated with the production of pig iron and helped transform Birmingham from a mining district into a manufacturing center. The private industrial railroads of the Woodward Iron Company and the Tennessee Coal, Iron and Railroad Company, exemplified this "straight-line" production model by directly connecting iron and coal mines with the blast furnaces — a situation found nowhere else in the United States.

The report is organized into two sections. The first section, "Trunk Lines Entering the Birmingham District after the Civil War" was prepared by Scott C. Brown. The second section, "Industrial Railroads in the Birmingham District" was prepared by Mark M. Brown. Nichole Duren prepared maps to illustrate each section.

The authors would like to take this opportunity to thank the following individuals and groups whose assistance have made this possible: Alexander Sartwell, Alabama Geological Survey; Thomas Dorsey, American Short Line Association; William R. Foisy, Birmingham Regional Planning Commission; Elliot Hughes, III, Tom Mathews, John Troulais, Birmingham Southern; a corporate officer who wishes to remain anonymous; William Boone, Heart of Dixie Railroad Club; Claude Cotten; Bob Crowder; Lyle Key, CSX Transportation; Garry Dobbs; David Jardini; Gene Kelsor, Jefferson County Historical Commission; Thomas Lawson, Jr., Locomotive Marketing, Inc.; Lynn Burshtan, National Railway Historical Society; Warren Reed; Francie Robb; Ken Penhale, Shelby County Historical Society; Garith McDonald, The Short

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TRUNK LINES ENTERING THE BIRMINGHAM DISTRICT AFTER THE CIVIL WAR

Scott C. Brown

Introduction

In the early days of the industry, railroads were viewed by promoters as a means of commercial competition between rival cities. From this provincial or territorial viewpoint, a railroad "drained" the territory it served — just as rivers drain a watershed. Cities promoted railroads according to a territorial strategy to generate long-term investment returns, to concentrate traffic at the main terminus, and to develop economic potential of a territory served by the railroad.³

The railroads, promoted by a group of Montgomery plantation owners lead by Charles T. Pollard, provide examples of how these three factors shaped railroads in antebellum Alabama. Pollard and his associates, known as the Broad River Group, made \$5.25 million in railroad investments to compliment diversified holdings in textiles, utilities, and insurance. Pollard sought to create a trading network of railroads converging on Montgomery that ignored and circumvented the existing river and steamboat trade patterns. [See map: Location of Alabama railroads, 1861 from Thornton] Thus the Alabama and Florida railroad was established to reduce Montgomery's dependence on a river trade dominated by merchants in Mobile. Connections with railroads in Atlanta and Columbus, Georgia, gave Montgomery access to eastern markets and to Atlantic ports. A line was planned to connect the state capital with Selma and with the Mobile & Ohio Railroad at Jackson, Mississippi, both to the west. Finally, and most importantly to the present study, Pollard sought to connect Montgomery with the east-west railroads projected to serve the Tennessee River Valley, and with the Louisville & Nashville at Nashville. Known as the North & South Alabama (later a division of the Louisville and Nashville), this last railroad was also planned to pass through and facilitate the development of the mineral districts centered around Jefferson County.

The strategic role of railroads in interurban rivalries can be seen in the response of Columbia, Georgia to Pollard's plans for a statewide rail network centered on Montgomery. Columbus merchants foresaw the decline of their Chattahoochee River based trade with the arrival of the Central of Georgia Railroad. A situation that could only further deteriorate with the completion of the link between Columbus and Montgomery. Columbus responded to these threats by seeking to siphon off a portion of Montgomery's trade by attempting to construct a Columbus - Mobile

³Klein, Maury. "The Strategy of Southern Railroads," *American Historical Review* 78 (April 1968): 1054-5.

route. Interests in Mobile supported Columbus' effort at least to the extent of refusing Pollard's Alabama & Florida entrance into Mobile. Pollard was thereby forced to use the port at Pensacola.⁴

Birmingham's numerous trunk or through railroads, like those of Montgomery or any other American city, were constructed to fulfill similar economic ambitions. That there was no substantial pre-railroad era urbanization in the mineral district means that, at least initially, the ambitions that drove the construction of Birmingham's trunk lines were those of outside interests.

After the Civil War, southern railroads were confronted with extensive destruction to their infrastructure as well as shortages of the capital and labor needed to repair the damage. By the end of the century, however, Southern railroads had at least tripled their mileage and welded the scattered antebellum railroads into a interconnected web dominated by a few massive systems. [See map: Stover, "Growth of RR in US before C War."]⁵

This post Civil War boom occurred in two distinct phases that noted business historians Maury Klein and Alfred Chandler, Jr. have called the Territorial and Interterritorial eras. The Territorial era, from the beginning of railroad construction in the United States until the Panic of 1873, saw the development of a nationwide network of railroads serving regional markets and territories. While creation of the national network required extensive cooperation between railroads, the limitations of cooperation to prevent cut-rate competition ushered in a second period marked by fierce competition and large scale consolidations. On the national scene, the Interterritorial era lasted from the 1870s until the turn-of-the-century. It is important to remember, however, that the transition between periods is often uneven and while the early 1900s were part of an era of intense interterritorial competition, in 1909 six railroads nevertheless constructed a new Birmingham Terminal Station.⁶

In the Birmingham District, the Territorial era can be considered to be the 1860s and 1870s, because trunk lines did not become a significant factor until after the Civil War. Likewise, the Interterritorial era can be said to end in 1910 with the completion of the last trunk line to enter Birmingham. The

⁴Thornton, J. Mills. *Politics and Power in a Slave Society: Alabama, 1800-1860* (Baton Rouge and London: Louisiana State University Press, 1978), 271-77.

⁵Klein, Maury. "The Strategy of Southern Railroads," 1052.

⁶Klein, "The Strategy of Southern Railroads," 1053; Chandler, *The Visible Hand*, 88.

Alabama & Chattanooga and the South & North Alabama were constructed during of territorial expansion of the 1860s and 1870s. The Central of Georgia, the Georgia Pacific, the Kansas City, Fort Scott & Memphis, the Mobile & Ohio, the Illinois Central, the Seaboard Air Line, the Atlantic Coast Line, the Atlanta, Birmingham, & Atlantic, and the Atlanta & West Point Railroads entered Birmingham as part of the interterritorial expansion of the 1880s, 1890s, and early 1900s.

This section on trunk railroads in the Birmingham District consists of two parts. The first is an Overview of the national context divided into Territorial and Interterritorial eras. Developments in the Birmingham District are used to illustrate the broad trends under discussion. A brief afterword following the discussion of the Territorial and Interterritorial periods summarizes a few of the most important twentieth-century developments. The Overview is followed by Case Studies of individual corporate histories of the trunk lines that entered the Birmingham District. Occasional references are made to national trends so as to tie both parts together. The Case Histories are also divided into Territorial and Interterritorial periods and then further arranged by the order of arrival of each individual railroad into Birmingham.

While using this report, readers may find it helpful to make frequent reference to the map entitled "Trunk Railroads: Birmingham District 1910" made especially for this report.

OVERVIEW

I. Cooperation and Territorial Expansion: 1860s-1870s⁷

For the most part American railroad development in the 1860s and 1870s was an era of expansion, standardization, and cooperation. It was also a era during which railroads sought to solidify their positions within the region or territory they were constructed to serve — hence the term Territorial era. These trends, well established before the disruptions of the Civil War, set the stage for the eventual transformation of myriad independent regional railroads into a few large national systems in the 1880s and 1890s.

Many important changes that American railroads witnessed in the last half of the nineteenth century were driven by the consequences of the huge scale of railroad operations and by the high costs of a railroad's physical assets. The need to manage extensive traffic, to maintain rights-of-way and rolling stock, and to finance often watered securities, produced innovative responses to organizational and competitive challenges.

⁷The following paragraphs are largely based on Chandler, *The Visible Hand*, 87, 120-1, 122-44 (chapter 4).

Railroads developed large administrative systems to ensure safe, timely, and efficient movement of traffic and to monitor employee performance over increasingly larger areas. Management and ownership became separate groups as railroad management became an increasingly specialized occupation, and as the capital requirements grew beyond the means of any individual or closed group.

A second force for change was the high fixed charges needed to maintain the extensive physical plant. Since these costs had to be paid even if the trains did not run, they placed a constant pressure on management to make the maximum use of equipment. The crushing burden that these costs represented can be appreciated when it is realized that in the 1880s fixed costs averaged two-thirds of all costs. During the Territorial era, management sought to address this problem by increasing volume, primarily in the form of through traffic. Technology, such as larger locomotives, air brakes, and signaling systems, permitted larger and faster trains. Forwarding through traffic between railroads was increased in numerous ways including building physical connections between companies and by developing uniform operational procedures. Jointly built and maintained bridges obviously facilitated traffic interchange. Local railroads interconnecting the various trunk lines and their yards within a city served a similar function. In the mid-1880s, a little later perhaps than elsewhere, the Elyton Land Company built the Birmingham Belt Railroad around the city center. The resulting improvements in the interchange of freight was intended to encourage railroads to build new lines into Birmingham.⁸ Cooperation in the development of uniform procedures for such things as ticketing, scheduling, rate structures, fast-freight express pools, and uniform through bills of lading facilitated the management of expanded rail traffic. Railways cooperated in setting standard track gauge and time, in the 1860s and 1870s.

⁸According to *Birmingham Yearbook 1920* (Birmingham Civic Association, page 8) "there are 60 points of physical connections where interchange of cars between the various roads can be effected." The publication goes on to say that:

The switching of loaded cars by carriers for each other on a reasonable reciprocal plan has resulted in a well balanced industrial development; this coupled with the level territory affording a multitude of selective locations, relieving industries of a heavy grading expense and consequently cheapening the construction costs as to building and railroad sidings.

For additional information of the Birmingham Beltway, see the separate entry in the Industrial Railroads section of the present report.

Thus paving the way for national acceptance in the 1880s.⁹ All of these developments resulted in a national network of regional railroads that was stimulated by the need to offset the constant pressure of operating costs.

Fixed-costs presented a constant and fiscally dangerous temptation to reduce rates. Any rate greater than the variable costs incurred by handling a shipment would help keep the company solvent by defraying fixed costs. As a cut rate would attract traffic from a parallel or competing railroad, the competing railroad would be forced to cut its rates in self-defence. To both managers and investors, mutual bankruptcy seemed the only possible result of such strategies.

Railroad managers during the Territorial era sought to control the threat of cut-rate competition with further cooperation. At first railroads established informal alliances for the interchange of through traffic. The Pennsylvania Railroad, for example, contributed to the construction of three separate routes west of Pittsburgh in order to ensure their through traffic would use the Pennsylvania's Mainline. When traffic declined after the Panic of 1873, formal agreements replaced informal arrangements, or traffic pools. The most important of these pools (the Southern Railway and Steamship Association and the Eastern Trunk Line Association) were established under the guidance of Albert Fink, a noted railroad and bridge engineer who rose to Vice-President of the Louisville & Nashville.¹⁰ But, as Fink would suggest, for all the efforts of the pools to allocate traffic and profits, and for all the efforts to detect and penalize violations, the success of the pools required either the force of law or the good faith of the member railroads. Neither would happen and pools failed to solve the problem of competition. Efforts to get legislative sanction for the railroad pools failed, due to a general public outcry against monopoly -- particularly by farmer organizations such as the National Grange. In 1887, Congress responded to the public outcry by establishing the Interstate Commerce Commission, but the legislation and court decisions left the Commission with no

⁹See Stover, *American Railroads*, 155-6, for a brief description of the conversion from broad to standard gauge in the South; for a more detailed account from the national perspective see John F. Stover, "One Gauge: How Hundreds of Incompatible Railroads became a National System," *American Heritage of Invention and Technology*, 8, no. 3 (Winter 1993), 54-61.

¹⁰For more on Albert Fink see E. Dale Odom's biographical sketch in Frey, Robert L. ed. Encyclopedia of American Business History and Biography: Railroads in the Nineteenth Century, 120-1.

power to regulate rates.¹¹ Individuals like Jay Gould, Russell Sage, or the Stanton Brothers were not individuals of "good faith," but rather capitalists who sought to profit from financial manipulation.

In Reconstruction South, the costs of rebuilding raised operating costs above those of other regions. Additional pressures came from the limited amount of local traffic generated by the depressed condition of the agriculture based economy. Thus the merging of the Northeast & Southwest Alabama Railroad with the Wills Valley Railroad to create a through route between Chattanooga Tennessee and Meridian, Mississippi, reflects the shift from an emphasis on local traffic to one on through traffic. Likewise the acquisition of the South & North Alabama by the Louisville & Nashville can be seen as an attempt to obtain access to the high volume non-agricultural traffic of the mineral district.¹²

II. Consolidation and Interterritorial Expansion: 1880s-1910s¹³

Efforts to restrain competition through territorial monopolies and cooperative agreements failed. The depression of 1873, in part caused by the over expansion of the railroads also tended to reduce traffic on the railroads. Railroads cut rates and issued rebates to attract available traffic. But there were signs of the collapse of the Territorial era even before 1873. In 1868, after successfully defending the Erie Railroad from a takeover attempt by Cornelius Vanderbilt's New York Central, Jay Gould sought control of several of the Pennsylvania Railroad's western allies — railroads that provided vital through traffic from Chicago. While the Pennsylvania was successful in securing direct control of its western feeder lines, the suddenness of Gould's attack demonstrated the vulnerability of a territorial based railroad. To forestall future threats, the Pennsylvania began a vast acquisition and construction program to secure access to all commercial centers and natural resources in the wide corridor between the Mississippi and New York City.

By the early 1880s, railroad ownership throughout the

¹¹See Stover, *American Railroads*, 126-142 for a summary of the impact of the Granger movement on railroads and of governmental efforts to regulate railroads. See Drury, *The Historical Guide to North American Railroads*, 164-6, for a brief history of the Interstate Commerce Commission.

¹²Klein, "The Strategy of Southern Railroads," 1055-8.

¹³This section is based on Chandler, *The Visible Hand*, 145-187 (Chapter 5) and Klein, "The Strategy of Southern Railroads," 1052-1068.

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nation, spurred by renewed speculative ventures by Jay Gould, began to reassess attitudes towards a strategy of territorial monopoly and inter-road cooperation. Owners came to agree with their professional managers, that to avoid financial ruin, the only alternatives were to assemble self-contained, defensible, interterritorial systems like that of the Pennsylvania. These vast and expensive systems were constructed for three main reasons: to reach new territories and markets, to obtain new through connections with other systems, and to create parallel lines that would break an existing route's monopoly.

During the Interterritorial era, numerous railroads constructed routes or obtained entrance into the Birmingham District including: the Georgia Pacific; the Central of Georgia; the Kansas City, Fort Scot & Memphis; the Seaboard Air Line, the Mobile & Ohio; the Illinois Central; and the Atlanta, Birmingham & Atlantic. For most railroads, excluding the Louisville & Nashville and the Alabama Great Southern, Birmingham was an almost neutral area between railroad territories. Furthermore, Birmingham's iron boom of the 1880s and 1890s made the "Magic City" an essential part of any ambitious southern railroad system.

The expansion program begun by the Louisville & Nashville in the late 1870s suggests the benefits of system building. In 1879, the Nashville, Chattanooga & St. Louis threatened to obtain access to Atlanta, connecting St. Louis and Atlanta and cutting off the Louisville and Nashville from the rest of the South. This was the first real threat within the "natural" territory of the Louisville & Nashville. To protect its existing business, the Louisville & Nashville had to buy the Nashville, Chattanooga & St. Louis from its president, and to do so at a premium price. Despite this expense, the Louisville & Nashville fail to gain access to Atlanta, but did encourage advantageous arrangements for through traffic with the Central of Georgia and the Georgia Railroad, until 1880. About the same time, the Louisville & Nashville acquired important outlets for its traffic by purchasing connections between Birmingham, Pensacola, Mobile, and New Orleans.

American railroads expanded dramatically during the early part of the Interterritorial period. Between 1878 and 1883, the Louisville & Nashville grew from 966 to 3,231 miles, and by the early 1880s (see table), a number of consolidated systems dominated southern railroads, including: the Danville; the roads being assembled by Henry B. Plant; the East Tennessee; the Norfolk & Western; the Louisville & Nashville; the Central of Georgia; the Chicago, St. Louis & New Orleans (a subsidiary of the Illinois Central) and the Erlanger roads (including the Alabama Great Southern). As systems grew larger and larger, they came into contact with other large systems. This contact created new competitors, thereby making the problem of competition, and

the stakes, even larger.¹⁴

¹⁴Klein, *History of the Louisville & Nashville Railroad*, 153-63; Klein, "The Strategy of Southern Railroads," 1063.

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Major Railroad Systems Serving Birmingham, 1893, 1906 and 1917

Railroad	Mileage			Rank (mileage)			Capitalization (millions)		
	1893	1906	1917	1893	1906	1917	1893	1906	1917
Atchison, Topeka & Santa Fe (for comparison)	9328			1			647		
Richmond Terminal, incl. E. Tenn., VA & GA and Central of GA	8697			2			329		
Louisville & Nashville	4732			12			218		
Chicago, Rock Island & Pacific (for comparison)		14816			1			842	
Atlantic Coast Line (incl. Louis. & Nashville)		11634	12090		2	3		470	756
Southern		10700			4			609	
Seaboard Air Line		3031	3461		20	19		141	221
New York Central (for comparison)			12413			1			1786
Southern including Mobile & Ohio			6983			13			716
Illinois Central incl. Central of GA			4766			17			221

Source: Alfred D. Chandler, The Visible Hand, pp. 168, 169, 513.

The vast amounts of capital required to assemble systems had profound implications for the structure of American railroads. Control of American railroads gradually passed to financiers and large banking houses in New York and Europe. Local syndicates, such as the Broad River Group, or the citizens of Louisville, could not raise the necessary resources. Financiers such as J.P. Morgan, had no interest in advancing one area over another, unlike the citizens of Louisville or Montgomery, who put up the initial capital for the railroads that formed the cores of the new mega-railroads. Given that railroads do not appear to have been particularly profitable investments, many financiers seemed to have been less interested in the fiscal health of their railroads than in the profits to be made from exploiting their own positions on the boards of directors. For these board members, the real profits from railroad investments were in real estate, mining, construction contracts, and securities manipulation.¹⁵

The rise, collapse, and rebirth of the Richmond Terminal system is a spectacular example of the excesses of the Interterritorial era.¹⁶ In 1880, the W.P. Clyde syndicate, comprising largely northern financiers, purchased control the Richmond & Danville from the Pennsylvania Railroad. The syndicate began an aggressive acquisition and expansion program. In conjunction with the purchase of the Richmond & Danville, the syndicate created the Richmond & West Point Terminal Railway & Warehouse Company, as the holding company commonly called the Richmond Terminal was legally named. The Richmond Terminal began investing in railroads primarily located on the southern Atlantic seaboard. Major subsidiaries included: the Central of Georgia, the East Tennessee, Virginia & Georgia, and the Richmond & Danville. These subsidiaries in turn owned or controlled the Alabama & Tennessee Rivers, the Erlanger system, and the Georgia Pacific, which passed through the Birmingham District. By 1892, the Richmond Terminal system was capitalized in excess of \$300 million and controlled at least 8400 miles of tracks — nearly one third of the South's trackage. The Richmond Terminal was second in the nation only to the Atchison, Topeka & Santa Fe in terms of

¹⁵Klein, Maury and Kozo Yamamura, "The Growth Strategies of Southern Railroads, 1865-1893," *Business History Review* 61, Winter 1967, 374-5; and Klein, "The Strategy of Southern Railroads," 1065-6.

¹⁶The following discussion on the Richmond Terminal is based on John F. Stover summary in "Southern Railway," in Frey, ed., 372-373; a more detailed accounts are in Stover, *Railroads of the South*, 233-53 (chapter 11); and Edward G. Campbell in *The Reorganization of the American Railroad System, 1893-1900*, 92-106 who discusses the scandal that drove the Richmond Terminal into insolvency as well as its reorganization as the Southern.

milage.

Owners lacked interest in operational matters: at the Richmond Terminal subsidiaries were often at odds with each other: the cost of expansion raised operating costs as high as 75 percent of revenues; the physical plant was severely deteriorated; and the accounts were manipulated to conceal both the condition of the physical plant and the extent of the company's liabilities. Finally, several members of the board of directors, under the leadership of President John H. Inman, owner of the Tennessee Coal, Iron and Railroad Company, acquired 40,000 shares of worthless Georgia Central stock for about \$4,000,000 and proceeded to sell it to the Richmond Terminal for \$7,500,000. The transaction forced the already teetering Richmond Terminal into receivership in mid-1892 — a few months before the Depression of 1893 devastated the entire nation.

J.P. Morgan of the New York investment banking company of Drexel, Morgan & Company undertook the reorganization of the Richmond Terminal system. Eliminating weaker railroads in the system, the House of Morgan also provided much needed capital for equipment and repairs. The Southern Railway emerged from the ruins of the Richmond Terminal in 1894. This reorganization was an important event in southern railroad development, because it set the pattern for the reorganization of many southern railroad systems that suffered from the excesses of the expansion of the 1880s.

The case of the Richmond Terminal also demonstrates how northern capital transformed southern railroads. As banks increased their influence on railroad boards during the reorganizations of the 1890s, they instituted a division of responsibilities between the financiers, who oversaw fiscal policy, and the professional managers with railroading backgrounds, who were responsible for operations. This arrangement proved convenient for the directors because railroads were frequently only a part-time responsibility. While reducing the layers of management found in other organizational schemes (and the attending overhead), this corporate structure tended to isolate ownership from operations. One consequence was an ad-hoc approach to capital appropriation and to strategic planning. With these changes railroads became increasingly less flexible in responding to unexpected developments in the following decades.

III. Afterword: 1910 -¹⁷

Throughout the twentieth century, railroads have been confronted with many difficult challenges including competition from new forms of transportation, safety issues surrounding grade crossings, two World Wars, new technologies, and industry-wide

¹⁷This section is largely based on Drury, George H, *The Historical Guide to North American Railroads*, 9-13.

consolidations.

In the early 1900s, electric trolleys, or interurbans, developed an extensive network of local passenger traffic service.¹⁸ By the 1930s, the interurban yielded to the paved highway, the automobile, and to the truck, and also the rise of the airline industry made substantial inroads into the rail service. The extent of the decline of passenger service can be seen in Amtrak's elimination of almost two-thirds of what service remained when it was formed in 1971 to run the nation's passenger service.

In the 1920s and 1930s, the increased automobile traffic was causing problems at grade crossings and ultimately required extensive relocation of tracks, or the engineering of grade separation. In Birmingham, the seven or more rail lines of the Railroad Reservation (the land set aside for railroads and manufacturing adjacent to the city center) presented a formidable barrier and safety problem for automobile traffic. Between 1919 and 1931 resolution of these problems required the construction of numerous reinforced concrete viaducts and underpasses.¹⁹

The railroads were extremely busy during the World Wars. President Wilson seized control of the nation's railroads in 1917 when an industry committee proved unable to respond to the crisis. Having learned their lesson, the railroads managed their own affairs during World War II: freight shipment went up 200 percent, while passenger shot up 400 percent.²⁰ But the war did not last long enough for the railroads to make up for the losses and the receiverships of the Great Depression.

While the 1930s weakened all but the strongest roads, the decade also saw the development of diesel locomotive. Commercial-scale production of diesel locomotives began in 1939. Because the new technology was much more flexible and less expensive to maintain, diesel completely replaced steam power by

¹⁸For a popular discussion of the interurban see George W. Hilton, "The Wrong Track," *American Heritage of Invention & Technology* 8, no. 4 (Spring 1993), 46-54.

¹⁹"Downtown Birmingham Railroad Reservation," Birmingham District Project files, Birmingham Historical Society; for a discussion of the politics behind the grade crossing in Birmingham see Carl Vernon Harris, *Political Power in Birmingham, 1871-1921* (Knoxville, Tennessee: University of Tennessee Press, 1977) 231-237; see Stilgoe, 163-88 (Chapter 6), for a discussion of the role of the railroad crossing in the railroad landscape.

²⁰See Stover, *American Railroads*, 181-209 (chapter 7), for a detailed discussion of the railroads during the World Wars.

the mid-1950s.²¹ The industry improved market share with innovations such as piggy-back flat cars that shipped trailers and containers, rack cars for automobile parts, larger grain hopper cars, and unit (single commodity) trains. Perhaps more importantly, such innovations improved efficiency such that national ton-miles for 1980 were double that for 1930. The railroads of the 1980s essentially doubled production using about half the amount of rolling stock used in the 1930s.

The post-War era brought a new period of industry wide reorganization highlighted by a host of remarkable mergers. Two prominent examples include the acquisition of the Baltimore & Ohio by the Chesapeake & Ohio and the creation of the Penn Central out of the Pennsylvania and the New York Central. The trend continued with the deregulation of the railroads under the 1980 Staggers Rail Act. Railroad mergers now serving the Birmingham District include the Norfolk Southern, CSX Corporation, and the Burlington Northern.

CASE HISTORIES RAILROADS ARRIVING IN THE TERRITORIAL ERA: 1865-1880²²

Alabama & Chattanooga Railroad

Begun in the 1850s, the Northeast and Southwest Alabama Railroad provided a route from Chattanooga, Tennessee to Meridian, Mississippi. After the Civil War, John C. and Daniel M. Stanton, two brothers from Boston, Massachusetts, formed the Alabama & Chattanooga. The Alabama & Chattanooga took over the struggling Northeast and Southwest Alabama and merged it with the Wills Valley Railroad in Tennessee connecting Chattanooga, Tennessee with Meridian, Mississippi. Considered by even the most detached historians as the quintessential carpetbaggers of the Reconstruction Era, the Stantons diverted funds from privately issued and fraudulently endorsed state guaranteed bonds, for an opera house and other real estate developments in Chattanooga.²³

²¹For a general outline of the industry's conversion to diesel see Maury Klein, "The Diesel Revolution," *American Heritage of Invention and Technology*, 6, no. 3 (Winter 1991), 16-22.

²²Many of descriptions of extant sites in the case studies below are based on the files of the Birmingham Historical Society's *Birmingham District Project*, the Birmingham Historical Society-Auburn University School of Architecture's *Railroad Reservation Study*, and the files of Jefferson County Historical Commission.

²³Moore, A.B.. "Railroad Building in Alabama During the Reconstruction Period," 427-431; Stover, John F., *The Railroads of the South, 1865-1900*, 89-93; Adler, Dorothy R., *British Investment in American Railways: 1834-1898*, 126-128.

Daniel Stanton served as the construction supervisor. Among the difficulties he overcame was finding sufficient workers for the project. Northern workers left after experiencing the southern heat. Eventually Chinese workers with experience in building railroads in the West were hired to augment the work of African-Americans. In March of 1871 the route was completed through Birmingham from Chattanooga to Tuscaloosa and by May of that year a silver spike ceremony marked the completion of the entire route.²⁴

Celebration was, however, short-lived. Later that year the company defaulted on construction bond interest payments and Alabama took possession of the route within the state. The English banking company of Emile Erlanger & Company purchased the railroad in 1877 after years of litigation. Erlanger renamed the railroad the Alabama Great Southern (AGS). This transaction made the AGS the most thoroughly British owned and managed of all American railroads.²⁵ Under Erlanger control, the AGS was the middle link of the famed Queen & Crescent Route between Cincinnati and New Orleans.²⁶

The Erlanger interests sold control of the AGS to subsidiaries of the Richmond Terminal system in 1890. In 1895, AGS came out from under the Richmond Terminal collapse as a wholly owned subsidiary (but separate corporate identity) of the Southern Railroad. Under Southern control the AGS established several shop complexes in Birmingham, the most extensive of which was the Finley Yard. After Norris Yard (named after Southern president Ernest Norris) was established in Irondale in 1952, much of Finley Yard was sold off and most of the tracks were removed. Two shop buildings and a roundhouse, remain on the site today. Part was retained by Southern and is used today by Norfolk Southern. When Norris Yard was constructed it was considered to be one of the first fully-automated switching yards in the South.²⁷

The depot at Bessemer is an example of innovation in

²⁴Scudder, Jr, John Ralph. "The Alabama & Chattanooga Railroad Company, 1868-71," 36-48.

²⁵Owen, Marie Bankhead, The Story of Alabama: A History of the State, 228; Adler, 131. Further research may shed light on the possibility that the absentee control of the AGS may have detached management from making the most of the railroad's early position in the Birmingham District. For it was the L&N, based in Nashville, and not the AGS that dominated the development and transportation of Birmingham's mineral resources.

²⁶Davis, Burke, *The Southern Railway*, 182-187.

²⁷White, Marjorie. The Birmingham District: A History and Guide, 229-30.

construction by the Alabama Great Southern. Constructed in 1916 by the railroad's own design and construction department after a visit to depots in the West, it was built with one of the first vapor steam heating systems in the South.²⁸ It remains one of the most outstanding depots in the Birmingham District. Its elaborate Craftsman style is a testimony to Bessemer's economic importance in the early years of this century.

As a result of decades of competition from other transportation modes, the Southern Railway merged with Norfolk & Western in 1982, creating the Norfolk Southern Corporation. Norfolk Southern continues to operate the routes and facilities previously operated by the Southern including the Norris Yard.

Louisville & Nashville Railroad

Immediately after the Civil War, the Louisville & Nashville (L&N) began an expansion program to connect its line to the newly emerging national railroad networks, particularly those in the South.²⁹ The post-war South had economic potential (with its seaports of New Orleans, Mobile, and Pensacola) and the L&N had the financial resources to tap these markets. With the purchase of the struggling Nashville & Decatur and South & North Alabama railroads, the L&N extended its influence into the Birmingham District.

The origins of the South & North Alabama Railroad, commonly known as the South & North, date to the early 1850s when the Tennessee & Alabama Central, the Tennessee & Alabama, and the Central Southern railroad companies were organized. All three railroads — completed by 1860 — were separate entities, but together created a direct route from Nashville to Decatur. After the Civil War economic conditions necessitated their consolidation into the Nashville & Decatur.

The South & North was formed in the early 1850s to link Decatur to Montgomery, thereby making a through route from Nashville to Montgomery. The mineral rich mountains in Shelby and Jefferson Counties, that were to form the heart of the Birmingham District, were the biggest obstacles to the construction and completion of the South & North. On the eve of the Civil War, the South & North consisted of two unconnected sections. The first connected Decatur with the Tennessee/Alabama state line, while the second line extended north from Montgomery and spanned the Cahaba River south of Birmingham where it stopped

²⁸National Register of Historic Places Inventory Nomination Form - "Southern Railway Terminal Station."

²⁹Herr, Kincaid A. History of the Louisville & Nashville Railroad: 1850-1963, 45-52.

at Brock's Gap.³⁰

In 1869, the South & North regrouped, contracting to build the Calera to Decatur section and to rebuild the heavily damaged Calera to Montgomery section. Construction funds were limited, thus tunnels and cuts were avoided in favor of more tracks and steeper grades. John T. Milner, chief engineer for the contractor, is reported to have said; "More curves, more curves, stiff grade."³¹ An important exception to this avoidance of tunnels and cuts was the completion of a 70' cut for a single track through Brock's Gap. Overcoming this natural obstacle made it possible for the South & North to enter the mineral rich areas in and around Jones Valley.

In early 1870, the South & North reached agreement with the Alabama & Chattanooga as to where the two right-of-ways would cross. This discussion led to the formation of the Elyton Land Company, its purchase of 4,000 acres of land adjacent to the crossing, and the beginning of Birmingham. The new name (after the great center of British industry) reveals the ambition and hopes of the railroad's and the city's promoters. The following year the Elyton Land Company created the Railroad Reservation. A section of land was set aside where both railroads ran parallel through the town "...forever as a perpetual right-of-way for all railroad companies doing business in and through the city."³² To this day, the Reservation cuts through and shapes Birmingham like a river of steel. The layout of the street grid and structures around the rail lines resembles the layout of a harbor city and a city with a river. The meeting of the South & North with the Alabama & Chattanooga illustrates a distinguishing feature of American railroads. Unlike their European counterparts which tended to link existing cities, American railroads often created new urban areas such as Birmingham or the numerous railroad towns of the Great Plains.³³

³⁰For further information on the Cahaba River bridge, see Lewis Shannon, "Billy Gould Coal Mine and Coke Oven Site," *Historic American Engineering Record*, 1992.

³¹Herr, John Leeds. The Story of a Southern Carrier: The Louisville & Nashville Railroad: An Outline History, 48.

³²Powell, James R. "To the Stockholders of the Elyton Land Company." as cited in Harris, Carl, V. Political Power in Birmingham, 1871-1921, 231.

³³For more on the maneuvering behind the selection of the crossing site and the formation of the Elyton Land Company and the Railroad Reservation see Armes, Ethel. *The Story of Iron and Coal in Alabama*, 218-22; Mitchell, Carolyn, "Birmingham: Biography of a City of the New South", Ph.D. dissertation, University of Chicago, Chicago, Illinois, August 1946, 17; and the Minute Books

The Montgomery to Calera section was completed in 1870, at the same time the South & North experienced financial problems. The construction bonds were acquired by New York investors including Russell Sage and V.K. Stevenson, the latter a former president of the Nashville & Chattanooga. In 1871 the South & North was not able to meet interest payments on its construction bonds. Russell Sage interests gave the South & North the choice of either paying off the bonds with interest or South & North would be taken over by the Nashville & Chattanooga. The possibility loomed that Chattanooga, rather than Birmingham, would be the major industrial center of the new South. Nashville & Decatur Railroad President Col. James W. Sloss offered to lease the Nashville & Decatur for thirty years to the Louisville & Nashville (which parties he must have known would be interested in his proposal), if the latter paid off the South & North's bonds and completed construction the Nashville & Decatur. Albert Fink and other L&N directors approved this plan and in the spring of 1871 contracts were drawn up between Sam Tate and Associates, the South & North, the Nashville & Decatur and L&N.³⁴ Construction was completed later the same year on the section from just south of Birmingham to a point twenty miles south of Decatur. As promised this section was leased to the L&N. The route crossed the Alabama & Chattanooga at 14th Street, ran parallel to it, then diverged to the north near 27th Street. The railroads experienced temporary financial problems, due to the depression of 1873, reduced traffic, and the excessive cost of completing the South & North across difficult terrain. However, the railroad soon rebounded and prospered.

The new settlement at Birmingham needed a depot, so by 1873 a small frame structure was constructed on the north side of the tracks between 19th and 20th Streets. It was replaced shortly by the Relay House, a combination depot and hotel, an arrangement fairly common for the time. In the 1880s a boom in iron manufacturing brought tremendous growth to Birmingham and this facility was quickly outgrown. The L&N constructed a Romanesque style stone station with a massive train shed on the site of the Relay House. Although built by the L&N, Union Station was used by other railroads as well. This cooperation lasted until 1906 when the new Terminal Station was built. Thereafter the Union Station served only the L&N and Atlanta, Birmingham & Atlantic.

As more and more railroads entered Birmingham through the Railroad Reservation, grade crossings became an escalating problem. In the late 1920s, increasing automobile and trolley traffic was causing problems particularly at the 19th and 20th

of the Elyton Land Company in the archives of its successor firm the Birmingham Realty Company.

³⁴Herr, 51.

Street crossings where trains waiting at the Union Station halted traffic for long periods. In 1933, after much hesitation on the part of the L&N (as well as the Southern Railroad which also contributed to the cost), the City of Birmingham constructed underpasses at 14th, 18th, and 20th Streets, and reconstructed existing overpasses at 21st and 24th Streets. In order to accommodate the new underpasses the train shed was demolished and replaced by two existing long, narrow reinforced-concrete sheds supported by steel beams. Increased real estate speculation after World War II led to Union Station's eventual demolition in 1960 to make room for the Bank of Savings Building — Birmingham's first modern, International Style skyscraper. The canopies remained and a new, smaller station was built one block to the west.

As Birmingham established itself as an industrial city in the 1880s and 1890s, shop facilities were constructed on the north side of the Railroad Reservation between 14th Street and 16th Street, conveniently west of Union Station. The railroad shops included a roundhouse with a turntable, blacksmith shop, machine shop, pattern shop and erecting shop.³⁵ They became less important after the construction of the shops at Boyles Yard in the early 1900s.

By the early part of the twentieth century the single-track route from Montgomery to Birmingham was insufficient to handle increasing traffic. Thus, in 1908, the route was double tracked. A decision was made not to widen the cut at Brock's Gap but rather to construct a double-track tunnel through the Shadow Mountain. The resulting Parkwood Tunnel was completed in that same year and the route through the cut was abandoned.

In 1915 a new route from New Castle, just north of Birmingham, to Blount Springs, was constructed to the east.³⁶ This route continues in use today. Part of the original grade between Morris and Warrior has been incorporated into a branch line.

The mainline intersected with its most important branch, the Birmingham Mineral Railroad,³⁷ just northeast of Birmingham's central business district. It was here at Boyles Junction (named after South & North engineer Bartholomew Boyles)³⁸ that the Boyles Yard was established. At first a small facility, it later

³⁵Sanborn Map Company, Birmingham, Alabama, 1885.

³⁶Map of State of Alabama, Government Land Office, 1915.

³⁷The Mineral Railroad is extensively discussed in the Industrial Railroad section of the present report.

³⁸For an alternate explanation of the name, see the narrative on the Mary Lee Railroad in the Industrial Railroad section of this report.

became a regional facility. Completed in 1911, Boyles boasted a large roundhouse and turntable.³⁹ The roundhouse and turntable remain today but have been abandoned. Only a portion of the original roundhouse, once forming almost a complete circle, remains. The adjacent communities of Boyles, Tarrant, and Inglenook developed as residential districts for railroad workers, and other nearby industrial concerns.

By the 1950s, the Boyles Yard was not able to meet the needs of the L&N. A major yard expansion and improvement program was planned for Birmingham as well as Atlanta and Nashville. Just north of the original Boyles Yard, a new facility was constructed with electronically controlled car classification and train assembly systems. Built to be used jointly with the Atlantic Coast Line and to accommodate 3,500 cars daily, it could also handle as many as 4,200 cars at peak times.⁴⁰ Boyles Yard, now owned by CSX Transportation remains a major classification yard. In 1982 the L&N was merged with the Seaboard Coast Line creating the Seaboard System.

CASE HISTORIES OF RAILROADS ARRIVING IN THE INTERTERRITORIAL ERA: 1880-1910

Georgia Pacific Railway

The first railroad to build a line into the Birmingham District during the interterritorial era was the Georgia Pacific Railway. The Richmond & Danville system in the form of the Richmond Terminal Company, a railroad holding company, was interested in westward expansion during this period. In order to build routes the Richmond & Danville system acquired two small regional territorial railroads in Alabama and their franchises. These regional lines were the Georgia Pacific Railroad, which was planning an Atlanta to Birmingham route, and the Elyton & Aberdeen Railroad, which was planning a route from Birmingham to Columbus, Mississippi. These two railroads were merged as the Georgia Pacific Railway and were acquired by the Richmond & Danville system before construction began. The route from Atlanta to Birmingham was completed in 1883 and from Birmingham to Columbus, Mississippi four years later.⁴¹

During the 1880s, several branch lines were constructed to access the Cahaba and Warrior coal fields located to the east and

³⁹Herr, 167.

⁴⁰Klein, Maury. History of the Louisville & Nashville Railroad, 467.

⁴¹Owen, 228-9; but see also Davis, 191-192. For more on the construction of the Georgia Pacific see W. David Lewis' forthcoming book *Sloss Furnaces: Technology, Business Enterprise and Organization in the New South*.

west of Birmingham. As construction progressed, the first town the Georgia Pacific reached in the Birmingham District was Leeds. It was here in 1884 that a depot was completed, along with section houses, by the Richmond & Danville Extension Company of the "adopted standard pattern."⁴² The depot has been recently renovated for use by the Leeds Chamber of Commerce. To the west of the City, the Georgia Pacific opened coal mines that were principally used by the Sloss Furnace Company. Civil Engineer E.M. Tutwiller routed the Georgia Pacific through the Birmingham District.

As previously mentioned, the Richmond & Danville became bankrupt due to over extension, the effects of the 1893 Panic, and other factors — a fate it shared with many large railroads systems in the 1890s. After reorganization, it emerged as the Southern Railway in 1894. Norfolk Southern presently owns and operates the Georgia Pacific route across the Birmingham District.

Central of Georgia Railroad

The Central of Georgia Railroad was established in 1833 as the Central Railroad & Canal Company.⁴³ The Central of Georgia reached Montgomery in 1879 after acquiring a controlling interest in the Montgomery & Eufala. In 1881 the Central of Georgia's president, William Wadley, acquired a lease of the Georgia Railroad (which controlled the Atlanta & West Point). He assigned part of the lease to the Louisville & Nashville. In 1883 the Central of Georgia's Columbus & Western Railway completed the Columbus Division, the route from Columbus, Georgia to Birmingham. A more topographically challenging route than that of the Georgia Pacific's to the north, the route enters the Birmingham District from the southeast spanning the Coosa River with a four-span steel Pratt truss bridge constructed in 1906 by the Pennsylvania Steel Company of Steelton, Pennsylvania.⁴⁴ The Central of Georgia route then rises in elevation to pierce the rugged terrain south of Leeds through the 2,431' Coosa Mountain and the 1,198' Oak Mountain Tunnels. In Leeds it crosses over the Georgia Pacific on a 665' timber trestle. The branch to Birmingham would later be used in a Birmingham - Albany (Georgia) - Florida route.

The Central of Georgia was acquired by the Richmond Terminal in 1888 and in turn was leased to the Georgia Pacific (see

⁴²"Superintendent's Report." The Georgia Pacific Railway Company Office of General Superintendent, Birmingham, Alabama, November 20, 1884.

⁴³Drury, 53-56.

⁴⁴Bridge plaque.

above), a subsidiary of the Richmond & Danville. Recovering from receivership in 1892 as the Central of Georgia Railway, the line was acquired fifteen years later by system builder Edward Harriman. Harriman's railroad empire, which included the Union Pacific, the Southern Pacific, and the Illinois Central, lacked a connection to the South. In response, he established a connection from Fulton, Kentucky to Birmingham through a combination of new track construction and trackage rights acquisitions. In the process, the Illinois Central acquired access to an Atlantic deep water seaport at Savannah and both railroads profited from Florida - Chicago traffic.

After the turn of the century, the Margaret Branch of the Central of Georgia was constructed on the east side of Birmingham with several spurs to the Cahaba coal fields. The Winburn Yard was established to handle that traffic. The East Thomas Yard was established in 1909 and jointly managed by the Illinois Central and the Frisco (see below). Central of Georgia locomotives were serviced in the Illinois Central roundhouse at the East Thomas Yards and had trackage rights out of the yard on the Frisco's Birmingham Belt Railroad. The Central of Georgia had access to the Birmingham Terminal Station over the tracks of the Southern Railroad.⁴⁵

In 1932, the general economic decline of the Great Depression and a relocation of the textile industry from New England to the South vastly reduced long-distance hauling of cotton from the plantations to the port at Savannah and sent the Central of Georgia into receivership. Reemerging from reorganization without Illinois Central control after World War II in 1948, the Central of Georgia began using the Birmingham Southern Freight Depot on 14th Street jointly with the Illinois Central.⁴⁶ Acquired for a brief period in the 1960s by the Frisco, the Central of Georgia became a subsidiary of the Southern Railroad in 1963. The Norfolk Southern currently uses the Central of Georgia route.

Kansas City, Fort Scott, & Memphis Railroad

The Kansas City, Fort Scott & Memphis Railroad, with origins in southern Missouri, built a line into Birmingham in 1887 from Memphis.⁴⁷ At Cordova, Walker County a two-span wrought iron Pratt truss bridge was built to cross the Warrior River. A noteworthy engineering accomplishment for its time in the South,

⁴⁵Prince, R.E., Central of Georgia Railway and Connecting Lines, 116-7; Beckum and Langley, Central of Georgia Railway Album, 5-7.

⁴⁶Birmingham City Directory (1944), 46.

⁴⁷Drury, 286-288.

the main span was almost 300' long.⁴⁸ This bridge was replaced in 1981 by the present through Pratt truss combined with several plate-girder spans. This was due to the increasing weight of locomotives. The original ashlar stone abutments and at least one ashlar stone pier were retained for the replacement. The St. Louis-San Francisco Railroad (Frisco) began leasing the route into Birmingham from the Kansas City, Fort Scott & Memphis and continued to do so until 1928 when the Frisco absorbed the former railroad.

Around the turn-of-the-century railroad magnate Benjamin F. Yoakum acquired the Frisco to be part of his railroad empire (which included, among others, the Rock Island.) Financial difficulties led to his system's collapse in 1913 and three years later the Frisco was reorganized as a regional railroad and was renamed the St. Louis-San Francisco Railway.

Prior to the construction of the East Thomas Yard in 1909, the Frisco leased shop facilities elsewhere in Birmingham. About this time, the Frisco assumed control of the Birmingham Belt Railroad.⁴⁹ The yard, reached by the Belt Railroad, was built and used jointly with the Illinois Central.

The Frisco owned the Central of Georgia for several years in the late 1950s until the Interstate Commerce Commission dissolved this merger. The Burlington Northern acquired a large percentage of the Frisco's stock in the late 1970s. In 1980 the Burlington Northern completed the purchase of the Frisco. The East Thomas Yard is now the Burlington Northern Intermodal Service Dixie Hub Center.

Seaboard Air Line Railway

The Seaboard Air Line Railway's (SAL) arrival in Birmingham in the 1890s is an example of the national trend at the time of established large railroads to complete their systems. The Seaboard Air Line began in 1875 in Virginia and North Carolina, when several local railroads organized to become the Seaboard Air-Line System.⁵⁰ In 1896 John Skelton Williams of Richmond, Virginia and associates acquired railroads in North Carolina, South Carolina, Georgia, and Florida as well as the railroads of the Seaboard Air-Line System. Included among these small regional railroads was the Georgia & Alabama Railroad which completed a route from Lyons, Georgia to Montgomery in 1891. Construction to the north of Montgomery on a route from Atlanta

⁴⁸The Railroad Gazette, June 29, 1888.

⁴⁹Alvin W. Hudson and Harold E. Cox, *Street Railways of Birmingham* (Forty Fort, Pennsylvania: Harold E. Cox, 1976), 16; for more on the Birmingham Belt Railroad, see the entry in the Industrial Railroad section of this report.

⁵⁰Drury, 298-300.

to Birmingham was then begun as part of Williams' expansion efforts in the 1890s. This route was completed through acquisition of the East & West Railroad as well as new construction into the Birmingham District. The Roper Tunnel to the east of Birmingham was constructed to pierce through the mountainous terrain.

A shop complex and freight depot were built in Birmingham. The brick freight depot at 20th Street, constructed in 1905, was recently converted to offices by Alagasco.³¹ A concrete cavern/subway unique to the district was constructed (which connected the freight house with the SAL's 32nd Street yard and shops) when the new 22nd and 24th Street overpasses were built.

The combined effects of over expansion (primarily in Florida) and the Depression led to receivership for the Seaboard Air Line in 1930. Reorganized after World War II as the Seaboard Air Line Railway (with assistance from government loans for modernization), the railroad prospered as a result of overall post-war industrial prosperity in the South. Running parallel and competing with the Seaboard along the Atlantic, was the Atlantic Coast Line.³² Poor economic conditions led to the merger and consolidation of lines and terminals in 1967. The Seaboard Coast Line merged thirteen years later with the Chessie System (a result of the merger of several railroads including the Baltimore & Ohio) creating the CSX Corporation.

Mobile & Ohio Railroad

The Mobile & Ohio (M&O) was incorporated in 1848 to divert the lucrative the Mississippi, Missouri, and Ohio River trade to Mobile.³³ In 1898 a route from Columbus, Mississippi to Montgomery was completed through Tuscaloosa with branch lines into the Cahaba and Warrior coal fields. A truss bridge was constructed between 1896 and 1899 to span the Warrior River between Northport and Tuscaloosa with an approach spanning the low flood plain through Northport. It is possibly one of the longest timber trestle approaches in the state. The river span of the bridge was replaced in 1924 with the present two-span cantilever truss manufactured by the American Bridge Company.³⁴ The original plan was to establish shops in Montgomery but they

³¹Architectural and Historical Resources Survey. Birmingham, Jefferson County, Alabama. "Seaboard Freight Office and Depot."

³²The Atlantic Coast Line Railroad acquired control of the Louisville & Nashville in 1902.

³³Drury, 197-198.

³⁴Bridge plaque.

were instead built in Tuscaloosa.⁵⁵ In addition, a section house, a depot and a tower (at the crossing of the Alabama Great Southern on the southside of town) were built. The section house has been restored into a restaurant while the freight house, shop building, and tower remain in abandoned and deteriorated condition.

After struggling with competition from the Illinois Central and the Louisville & Nashville (1920s) and the subsequent Depression, the Mobile & Ohio entered receivership in 1932; six years later it prepared to merge with the Gulf, Mobile & Northern. The M&O had been in receivership so long that its trackage had severely deteriorated. The main reason for consolidation was to combine the parallel and competing lines to increase profits. According to an executive of the Gulf, Mobile & Northern:

The two lines really supplement each other especially in that they together assemble at Jackson, Tennessee, the traffic that they will both receive at the Gulf Ports and at Montgomery, Birmingham and Memphis and carry it over the one line to East St. Louis and as to the southbound traffic they will bring it over one line to Jackson, Tennessee, thence over one or both lines to points of destination or for delivery to connecting carriers.⁵⁶

At the end of 1938, the Gulf, Mobile & Northern applied to the Interstate Commerce Commission (ICC) to merge with the M&O. In the spring of the following year, the Illinois Central and small group of M&O stockholders opposed the plan. In contrast, the majority stockholder, Southern Railway, was eager to sell its stock in the M&O. The Illinois Central's opposition was that it would severely reduce revenue. The ICC ruled in favor of the merger and the Gulf, Mobile, & Ohio was created in 1940.

Following the merger, the Gulf, Mobile & Ohio became interested in a cheaper and closer access route into Birmingham. The M&O had a perpetual trackage rights contract with the Illinois Central from Corinth, Mississippi to Haleysville, Alabama and a less binding contract with the Southern for the route from Haleysville into Birmingham. During merger negotiations, the Gulf, Mobile, & Ohio was silent on its desire for a new route and continued using both the old routes into Birmingham. Building a new route from Tuscaloosa to Birmingham was contemplated, but acquiring trackage rights over the existing 55-mile Louisville & Nashville line between the cities (originally a portion of the Louisville & Nashville's Mineral

⁵⁵Tuscaloosa Gazette, n.d. See M&O Railroad Bridge, Tuscaloosa, file at the Birmingham Historical Society.

⁵⁶Lemly, James Hutton. The Gulf, Mobile and Ohio: A Railroad That Had to Expand or Expire, 157.

Railroad extended into Tuscaloosa in 1910⁵⁷) was deemed suitable.

The plan for a new route into Birmingham began to take shape in 1950 when the Gulf, Mobile, & Northern proposed that the ICC break its inherited trackage rights agreement with the Illinois Central and Southern.⁵⁸ The Southern contract was dissolved over the Illinois Central's protests that, had the M&O not agreed to perpetual trackage rights over the route, the new route would not have been built.⁵⁹ This seemed like a desperate plea to enforce the contract, since the Illinois Central no doubt gained revenue from the route even without trackage rights revenue from the M&O. After two years the ICC ruled in favor of the Gulf, Mobile & Northern changing its route into Birmingham using the L&N Tuscaloosa freight line. Ironically, in 1972 the Gulf, Mobile & Ohio, merged with the Illinois Central and became the Illinois Central Gulf Railroad. MidSouth Corporation presently owns and operates the route through the Birmingham District including the Tuscaloosa Yard and Bridge.

Illinois Central Railroad

The arrival of the Illinois Central (IC) into the Birmingham District is a testimony to the South's strategic importance in system building. Chartered in 1851 to build a line between the Illinois towns of Cairo and Galena, the Illinois Central's first route was completed in 1856.⁶⁰ Steamships on the Mississippi connected with the route at Cairo. The addition of Edward Harriman to the board of directors in the 1880s marked the beginning of the railroad's expansion program. As previously stated, Harriman wanted to connect his system with his newly acquired Central of Georgia and the rest of the South. In 1908 a route from Fulton, Kentucky to Birmingham was completed through the securing of trackage rights as well as new track construction. From Fulton, Kentucky to Haleysville, Alabama the Illinois Central built its own route, from Haleysville to Jasper it secured trackage rights over the Southern, and from Jasper to Birmingham, from the Frisco.

The Illinois Central built shops at the East Thomas Yard jointly with the Frisco. The establishment of a joint yard is an example of the prevailing national trend of cooperation and consolidation, largely as result of the limited space to established a new yard for the IC. Thus IC shops serviced

⁵⁷Portions of this route have been abandoned, but the handsome Beaux Arts station the Louisville & Nashville built on this extension has been rehabilitated as a restaurant.

⁵⁸Ibid, 214.

⁵⁹Ibid, 218.

⁶⁰Drury, 156-59.

Central of Georgia locomotives as well. By 1943 the Illinois Central was jointly using the Birmingham Southern's Freight Depot on 14th Street.⁶¹

Reemerging from bankruptcy in 1948 without control of the Central of Georgia, the Illinois Central merged with the Gulf, Mobile, & Ohio (a parallel and competing line) becoming the Illinois Central Gulf. The Birmingham connection was ceased in favor of a primarily Chicago-to-Gulf-of-Mexico route.

Atlanta, Birmingham, & Atlantic Railroad

The Atlanta, Birmingham & Atlantic Railroad (AB&A) was the last to build a its own route into the Birmingham District. It absorbed the Atlantic & Birmingham Railway in 1906, which had a connection into Birmingham over the Central of Georgia tracks.⁶² In pursuing the merger, the AB&A sought to develop the mineral lands of the AB&A's newly acquired Birmingham Coal & Iron Company.

In 1907, the AB&A completed its route from Atlanta to Pelham, where trackage rights were secured into Birmingham over the Louisville & Nashville. Two years later, the route was extended to Bessemer. Because of the rather late date, the railroad had to build a roundabout route to the south of Birmingham (spanning both the Louisville & Nashville and Bucks Creek with a multiple-span, plate-girder bridge) north through Brock's Gap (parallel with the Louisville & Nashville) and then west to Bessemer. The railroad built an elevated grade through Bessemer with numerous concrete overpasses as well as a multiple-span, plate-girder viaduct with steel bents over the Southern Railroad's Alabama Great Southern route. Before 1910, the AB&A used the Louisville & Nashville to enter Birmingham from Bessemer. By 1910 the AB&A had completed construction of their own line to the north of the Alabama Great Southern, and built the Elyton Yard on the west side of Birmingham.

The AB&A went bankrupt about this time largely as a result of the excessive costs of the Brunswick, Georgia seaport terminal. Six years later, reorganized as the Atlanta, Birmingham, & Atlantic Railway, it was only to reenter receivership again, in 1921. In 1926, the company was reorganized again, as the Atlanta, Birmingham & Coast in the firm control of the Atlantic Coast Line. The Atlantic Coast Line acquired full control in 1945 and the Birmingham route became their Western Division. As previously stated, the Atlantic Coast Line merged with the Seaboard Air Line in 1967 creating the Seaboard Coast Line. In 1980 CSX Corporation was formed merging the Seaboard Coast Line with the Chessie System.

⁶¹Birmingham City Directory (1941), 43.

⁶²Drury, 23-24 and Prince, R.E. Atlantic Coast Line Railroad, 71-73.

The last new route constructed into the Birmingham District ironically was the first to be abandoned. While many of its bridges are intact and visible from Highway 150, the rails and sleepers were removed after summer 1992⁶³.

Atlanta & West Point Railroad

The Atlanta & West Point Railroad (A&WP) gained access to Birmingham through a trackage rights agreement with the Atlanta, Birmingham, & Atlantic. Along with the Western Railway of Alabama, which formed the West Point Route, the A&WP was part of the Georgia Railroad.⁶⁴ The Georgia Railroad was organized in 1833, and 1845 a route from Atlanta to Augusta was surveyed and completed by J. Edgar Thomson, an engineer who later gained national prominence as engineer and subsequently as President of the Pennsylvania Railroad. The A&WP was chartered in 1847 as The Atlanta & La Grange railroad. The Western Railway of Alabama was organized in 1834 to build a route from Montgomery to West Point, Georgia. In 1875 the Georgia Railroad bought stock in the Atlanta & West Point. In 1881 William Wadley assigned the lease in Georgia Railroad's holdings in the West Point route to Central of Georgia and Louisville & Nashville. The Central of Georgia's lease was passed on to the Louisville & Nashville but was then assigned to the Atlantic Coast Line. By the turn of the twentieth century, the A&WP was controlled by the Louisville & Nashville and Atlantic Coast Line. The Georgia Railroad was in firm control of its parent banking and holding company until 1983. It was then bought out by the Seaboard System, now part of CSX Corporation.

Atlantic Coast Line

The Atlantic Coast Line (ACL) was formed after the Civil War when an alliance of five railroads in Virginia, North Carolina, and South Carolina was created by William T. Walters of Baltimore.⁶⁵ In 1889 Walters reorganized his holdings under a railroad holding company and four years later he named it the ACL. Many mergers and acquisition followed. The ACL became comprised of several systems owned, leased, or controlled by the ACL. In 1902 the ACL acquired control of both the Plant System (comprised of railroads in Georgia and Florida) and the Louisville & Nashville.

The newly reorganized Atlanta, Birmingham & Coast was acquired by the ACL in 1926. As a result the ACL gained another

⁶³Robert Yuill, General Forman, Steam Division, Norfolk Southern, interviewed July 26, 1993.

⁶⁴Drury, 21-22.

⁶⁵Drury, 28-30.

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entrance to Birmingham and a connection with the L&N. The ACL completely bought out the AB&C in 1945. With its main lines double-tracked and fully signalled early on, the ACL considered itself the standard railroad, a railroad whose practice is held up as the standard by which to judge other railroads, of the South (just as the Pennsylvania Railroad was for the North).

Industrial Railroads in the Birmingham District

Mark M. Brown

Introduction

In the first section of this report, Scott Brown discussed the arrival of the railroads in Birmingham, the growth and expansion and consolidation of these railroads, and the corporate histories of each of the great trunk lines that served the Birmingham District. The current section deals with numerous local railroads in the Birmingham District that were not covered in Scott Brown's report.

In his introduction to the *American Shortline Railroad Guide*, Edward A. Lewis points out that in the early days of railroading all railroads were local in that they connected one point with another. In Alabama this can be seen in the South & North Alabama Railroad connecting Montgomery with Decatur or the Decatur & Nashville Railroad connecting the cities of the same names. Both of these railroads were at least initially planned and constructed by separate companies, this was done in the expectation of cooperation between the two railroads to provide through service. This broad pattern changed, however, as the nature of competition between railroads increased and changed. Railroads began to grow larger by means of a wide variety of legal and financial mechanisms. This general trend continued in the United States until the 1970s. At that time with the bankruptcy of numerous railroads, most prominently the Penn Central and the Milwaukee railroads, a second trend developed: numerous marginal or unprofitable branches were spun off as independent shortline railroads.⁶⁶ While this section of the report is largely about shortlines in the Birmingham District, it is not about ones created by such recent developments.

Certain railroads have existed outside the trend toward increasing consolidation. These were railroads which always maintained their local character. Lewis suggests that there are four reasons for this. Some were sufficiently profitable to keep out of bankruptcy. Others were not sufficiently profitable to attract the attention of a larger railroad. The customers of many of shortlines were happy and content with local control.

⁶⁶ Edward A. Lewis, *American Shortline Railway Guide* (Milwaukee, Wisconsin: Kalmbach Books, 1986), 2-3. Examples of the trend toward increasing numbers of short line railroads can be seen in Harvey A. Levine and Craig F. Rockey, "Face-lift of U.S. Rail System is Far More Than Merely Cosmetic," *Traffic World* (February 15, 1988): 15-18; Sandra D. Atchison, "The Little Engineers That Could," *Business Week*, July 27, 1992; Daniel Machalaba, "Chugging Along: The Kaimichi Shows How Small Railroads Can Serve Rural Areas," *The Wall Street Journal*, January 8, 1992. Special thanks to Tom Dorsey of The American Short Line Railroad Association, Washington, D.C., for providing copies of these articles.

Finally, some small railroads maintained their independence because their single outside connection was with a larger railroad, which was thereby guaranteed all of the smaller railroad's traffic. In such cases, the larger railroad did not need to buy the smaller one in order to protect its business.

Like many other industrial cities, Birmingham had a number of smaller railroads that served the particular needs of industrial production. This suggests a fifth reason to add to Lewis' list: some railroads remained local because they were owned by industrial concerns that had the resources to establish and maintain their own railroads. With the exception of logging railroads, the shortlines in the Birmingham District represented solutions to the problem of transporting materials for the coal, iron, and steel industry. The sheer tonnage required to economically produce iron and steel makes the cost of assembling raw materials a critical part of the profitability of any iron or steel operation. Railroads made it possible to exploit the close proximity of the red ore on Red Mountain and the metallurgical coal of the Warrior Coal Field to produce a low cost of assembly in the Birmingham District. The placement of these two critical raw materials along roughly parallel lines separated by the Jones and Opossum Valleys contributed to three patterns of shortline railroad construction: 1) railroads transporting coal from mine to blast furnace that were more often than not constructed along the edge of the coal field,⁶⁷ 2) one railroad which dominated the shipping of ore from Red Mountain to the blast furnaces, and 3) two private railroads which transported both coal and ore to the blast furnaces of their parent company.

The use of the term "industrial railroads" is somewhat of a misnomer and somewhat incorrect. In general, the term refers to railroads owned by industries for their own uses, i.e. railroads which are operating divisions of an industrial concern. As we shall see, examples of this in the Birmingham District include Republic Iron and Steel's Railroad, the railroad of the Tennessee Coal, Iron, and Railroad Company (TCI), and Woodward Iron Company's Railroad. (The term industrial railroad is also used in the literature to refer to railroads used by the logging industry and this branch of industrial shortline railroads have been entirely excluded from this report for reasons of time and resources, though there can be no question that the logging industry plays an important role in Alabama.) To avoid confusion, throughout the rest of this report the term "private" will be used instead of "industrial." Such private railroads can be contrasted with common carriers. This latter class of railroad, such as the Birmingham Mineral Railroad, are legally

⁶⁷See David Jardini's summer 1992 HAER report on the Monongahela Railway Company, Fayette County, Pennsylvania, for a detailed study of the operations of a metallurgical coal hauling railroad.

obligated to offer their services to the public. Large trunk railroads, like the Louisville & Nashville (L&N), connect point with point. This is in contrast to the terminal or connecting railroad such as the Birmingham Southern, which currently provides switching for common carriers and private railroads. That is to say, the terminal and connecting railroad will transfer freight from a private railroad to a trunk railroad or between trunk railroads that do not have interchanges.⁶⁸

This report will discuss the small common carriers that served the Birmingham District, the coal and coke carriers, and finally the vertically integrated railroads. Readers are reminded that a fully developed national context for shortline railroads is yet to be written. This section is but a first look at small railroads in the Birmingham District and is intended to stimulate further thought and research into this topic. Finally, readers may wish to consult the map entitled "Industrial Railroads: Birmingham District 1930" prepared in conjunction with this report.

⁶⁸Lewis, *American Short Line Railway Guide*, 235-36.

Common Carriers

Shelby Iron Company's Railroad

The Shelby Iron Company's railroad is an example of an early use of rail transportation for industrial purposes by a private company in Northern Alabama. The company was noted for the quality of its charcoal-iron rail car wheels and for supplying armor plate and pig iron to the Confederate Armory at Selma.⁶⁹ According to a report submitted to the Alabama Railroad Commission in 1890, the railroad was constructed in 1865 under a state charter granted in 1858. The railroad was used exclusively by the company until 1885, when it was opened to the public and ran between Shelby and Columbiana for a total of 6.68 miles.

Traffic statistics published in the report show that the railroad was almost entirely transporting heavy freight for the company. Charcoal generated 42 percent of revenue; iron, pig, and blooms 37 percent; and coal and coke 8.5 percent. Just under 10 percent of the railroad's revenue was derived from 7,900 passengers who took an average ride of just under six miles. The report does not indicate how many of these riders were employees. In 1889 the rolling stock of the Shelby Iron Company's Railroad included two locomotives and thirty-eight freight cars.⁷⁰

In 1890, a little over 5 miles of the railroad was purchased by the L&N and was incorporated into L&N's Alabama Mineral Railroad. The latter railroad was similar to the Birmingham Mineral Railroad in that it catered to mine and furnace operators.⁷¹

Birmingham Mineral Railroad

It is very difficult to underestimate the impact of the Birmingham Mineral Railroad on the industrial development of the

⁶⁹Ethel Armes, *The Story of Coal and Iron in Alabama* (Birmingham, Alabama: Chamber of Commerce, 1910; reprint, Birmingham, Alabama: Book-Keepers Press, 1972), 145-146.

⁷⁰Alabama Public Service Commission, *Ninth Annual Report of the Railroad Commissioners of Alabama for the Year Ending June 30, 1889* (Montgomery, Alabama: Office of the Rail Road Commission of Alabama, 1890), 388-95.

⁷¹Marie Bankhead Owen, *The Story of Alabama: A History of the State*, vol. II (New York: Louis Historical Publishing Company, Inc., 1949) 206; Maury Klein, *The History of the Louisville and Nashville Railroad* (New York: McMillian Company, 1972), 271-72. The Alabama Mineral Railroad played an important role in transporting brown ore from Talladega, Calhoun, Etowah, and Blount counties. Worthy of further study, the Alabama railroad has been excluded from this report due to the limitations of time and resources.

Birmingham district. The Railroad was built by the L&N in stages from 1884 to about 1917 and consists of multiple branches totaling 156 miles and built at a cost of \$6,063,890. [See map, Key, Lyle. Birmingham Mineral Railroad's Red Mountain Routes.] According to a 1959 condensed profile diagram the Birmingham Mineral Railroad may have had as many as 30 branches,⁷² but the most important divisions were those in and around Jones Valley. The latter included a large loop around Jones Valley that connected Red Mountain with the blast furnaces located along the edge of the Warrior Coal Fields. A smaller loop located around Red Mountain between Reader's Gap and Grace's Gap. Additional spurs extended outward from Birmingham along Red Mountain to Trussville and into the Warrior Coal Fields. The Red Mountain trackage alone accounted for 55.7 miles of the Birmingham Mineral Railroad.⁷³

The complexity of railroad operations and their high fixed charges, forced railways to encourage regular freight traffic to best utilize their physical plant. This was, of course, the case with the L&N. The Birmingham Mineral Railroad was developed by Milton Smith, President of the L&N, to encourage industrial development in the Birmingham District. In his more than fifty year career with the L&N, Smith dominated the L&N as had Albert Fink in earlier years. Smith encouraged industrial facilities to ship and receive raw materials and products to market by rail. Examples of this policy include the low freight rates given to the first smelters using Alabama coke at Oxmoor in the 1870s. The railroad also contributed capital to the formation of the Sloss Furnace Company. (James Sloss secured the completion of the South & North Alabama Railroad by the L&N.) By such means Smith sought to increase the pace of industrial investment and therefore the amount of freight carried by the L&N, and to bind his company closer with the industrialists as a hedge against

⁷²Louisville and Nashville Railroad, *Birmingham Mineral Division Condensed Profile Diagram* (Louisville, Kentucky: Louisville and Nashville Historical Society, 1917, last revised 1959).

⁷³Klein, *The History of the Louisville and Nashville Railroad*, 270; Lyle Key, Jr. "Birmingham Mineral Railroad's Red Mountain Route," unpublished paper presented at the 1988 annual convention of the L&N Railroad Historical Society, p. 7. Mr. Key graciously provided a copy of the manuscript which has been deposited with the Birmingham Historical Society. The manuscript is not paginated and all page references in this report to the manuscript were arbitrarily made by the present author.

competition from other lines.⁷⁴

Before proceeding with construction history of the Birmingham Mineral Railroad, it is important to consider the context in which the development took place. In 1878, the Pratt coal seam was opened and the access to this coal facilitated the iron boom of the 1880s. The boom saw numerous furnaces go into blast: the Alice Furnace in 1880, Sloss Furnace in 1881, Woodward and Mary Pratt in 1883. Construction at Bessemer started in 1887. The Pioneer Furnaces at Thomas were begun in 1888 and construction of Ensley began in 1889. These developments had a multiplying effect: increased demand for raw materials led to the expansion of the Birmingham Mineral Railroad, and increased availability of raw materials fed further expansion of iron capacities.

The L&N obtained a charter for its subsidiary on March 19, 1884 and began construction of the North and the South Branches of the Mineral Railroad. The first phase of the construction of the North Branch ran from the main line of the South & North Alabama Railroad, at what later became known as Magella, along the northwest face of Red Mountain 9 miles to the Sloss Mine. The second, known as the South Branch, ran 2.71 miles from Grace's Gap to Redding along on the southeast side face of Red Mountain. The Redding Mine appears to have been opened to supply the Mary Pratt Furnaces.⁷⁵ These branches were successful enough that the L&N began plans to expand the Mineral Railroad. Into this environment stepped John H. Inman, President of the Richmond Terminal railroad system, a Director of the L&N between 1885 and 1895, and owner of the Tennessee Coal, Iron and Railroad Company (TCI). In 1886, Inman bought the Pratt Coal and Iron Company. The arrival of TCI in the middle of Birmingham's iron boom was to substantially alter the course of the Mineral Railroad.⁷⁶

Inman proposed that the Mineral Railroad be expanded so as to encircle all of Red Mountain. In return for this expansion, Inman offered an exclusive contract to handle all of TCI's freight. The expansion extended the South Branch all the way to and through Reader's Gap and back along the northwest face of Red Mountain where it joined with the North Branch at Sloss. The South Branch continued, however, beyond the Sloss Mines to what is now known as Brickyard Junction located in Bessemer. The

⁷⁴Klein, *The History of the Louisville and Nashville Railroad*, 266, 270; Jean E. Keith, "The Role of the Louisville and Nashville Railroad in the Early Development of Alabama Coal and Iron," *Bulletin of the Business Historical Society* 26 (September 1952): 168-173.

⁷⁵Key, 1; Armes, 307.

⁷⁶Klein, *The History of the Louisville and Nashville Railroad*, 266-68.

combination the exclusive contract with TCI and the girdling of the richest most heavily mined section of Red Mountain gave the Mineral Railroad such a commanding position that in 1894 the Alabama Great Southern Railroad abandoned a spur which it had constructed, to what was known as the Fossil (now Wenonah) group of mines.⁷⁷

Although it is not clear when it was done, the Mineral Railroad constructed a branch from Brickyard Junction through Bessemer, across Village Creek to Woodward, Ensley, and Thomas and linking up with the main line at Boyles. Presumably this was done in conjunction with, or shortly after, the completion of the Red Mountain loop. Known as the Huntsville Number One Branch, it linked the new blast furnaces that were being constructed with the ore mines around Red Mountain. The L&N also secured contracts for exclusive hauling rights for ore and flux for all but Woodward.

Between 1887 and 1889, an extension known as the Gate City Extension or Branch, was built from Boyles to Gate City at Red Gap and then northeast along the Red Mountain again to the mines at Ruffner terminating at Trussville.

The final link of the Red Mountain section of the Mineral Railroad was to connect Red Gap and Gate City to the main line at Grace's. Known as the Red Gap Branch, this extension was built between 1889 and 1890 and ran along the southwest face of Red Mountain, except for a short distance between what is now Red Mountain Cut and Green Springs. There it ran along the northwest slope and serviced mines at Valley View, Green Springs, and Lone Pine. The Red Gap Branch added 10.22 miles to the Mineral Railroad.⁷⁸

Generally the trackage was located for the convenience of the mines. As the outcrop of the red ore was largely on the Jones Valley side, trackage and mines were almost always located on the northeast section and northwest slope of Red Mountain. There are a couple of notable exceptions. Several of the Ishkooda grouping of mines located near Grace's Gap were serviced by the South Branch. Also, there are a few vertical shaft mines located along the South Branch.

Throughout this entire construction period, a complicated series of extensions were built from the North Branch higher up onto the outcropping in the general area of the Wenonah group. These branches which included Fossil, Spring Gap, Ishkooda, and Muscoda essentially formed a line of trackage that ran almost the entire distance between Reader's and Grace's Gap while remaining between the North and the South Branches.

⁷⁷Klein, *History of the Louisville and Nashville Railroad*, 269; Key, 3.

⁷⁸Klein, *History of the Louisville and Nashville Railroad*, 269; Key, 5-6.

The twentieth century saw a series of alterations and changes in the Mineral Railroad. A 1904 reorganization saw the absorption of the Mineral Railroad into the L&N for reasons which are unknown. The transaction might be related to the recent acquisition of the L&N by the Atlantic Coastline Railroad. More importantly, on June 30, 1917, TCI acquired 8.7 miles of track located between the North and South Branches, that served its mines as well as the mines of other companies, most notably Woodward Iron's Songo Mines. This purchase gave TCI improved control over its ore transportation. It was not until the mid-1920s, with the construction of the High-Line, that TCI achieved complete control. While this transaction happened in 1917, a map produced for the Birmingham Southern in April 1911, shows that the transaction had been contemplated for several years. The timing of the sale may be tied to the formal entry of the United States into World War I several months earlier. Thus, at least in Key's assessment, June 30, 1917 represents the peak of the Mineral Railroad.

The Great Depression saw a series of abandonments along the Red Mountain area due to the closing of mines and quarries and the resulting lack of traffic. Abandonments ceased during World War II, but resumed in the 1950s — possibly reflecting the increase of importation of foreign ores. While as late as 1988, three trains of empty hopper cars per day traveled over the North Branch of the Mineral Railroad, it was essentially shutdown.⁷⁹

The above discussion emphasizes the importance of the Red Mountain branches of the Mineral Railroad at the expense of the branches serving the coal fields. At this point, we simply do not understand the relationship between coal mining, the Birmingham Mineral Railroad, and iron companies (both those with and those without private coal hauling railroads). While this is unfortunate, for it has long been recognized that coal is the true basis of north Alabama industry, it only brings the need for research on this topic into sharper focus.

⁷⁹"Location of Tracks to the Birmingham Southern Railroad Company and other Corporations in the Vicinity of Birmingham, Alabama", Birmingham Southern drawing no. X-14, April 1911, Collection of Robert Yuill; Key, 7-16; Lewis Shannon, HAER Historian, interviewed August 9, 1993; Robert Yuill, General Foreman Steam, Norfolk Southern, interviewed August 17, 1993. See also Lewis Shannon, "Red Mountain Ore Mining Industry, HAER, 1993.

Birmingham Southern Railroad

The Birmingham Southern Railroad is the largest and most important privately owned railroad constructed in the Birmingham District. It is also the oldest. Furthermore, as one historian of the Birmingham Southern has shown, its position as an industry-owned railroad, that put itself forward as a common carrier, placed it in a role that helped shape the legal status of private railroads.⁸⁰

When the Pratt Coal and Coke Company was organized in 1878 to exploit the Pratt coal seam, it followed standard practice and constructed a railroad to haul coal and coke to market at Birmingham. Listed as the Pratt Mines Railroad in the 1883-1884 Birmingham City Directory, the railroad supplied the Alice Furnace, which was constructed in 1880, with coke as well as providing coal to the trunk lines which serviced Birmingham. In 1886, when the Tennessee Iron and Coal Company (TCI) acquired the reorganized Pratt Coal and Iron Company, it also acquired the Pratt Mines Railroad. TCI extended the railroad when it began construction of the Ensley Furnaces. In addition, any trackage constructed for intraplant use at the Bessemer or Oxmoor blast furnaces ultimately became part of the Birmingham Southern. The name was changed to Birmingham Southern when the railroad was issued a state charter of incorporation on February 17, 1899. In July 11, 1899 all the railroad properties of the Tennessee Iron and Coal Company in the State of Alabama were transferred to the Birmingham Southern Railroad. These included, as mentioned above, branches and spurs at mines or blast furnaces that were discontinuous with other rail properties belonging to TCI.⁸¹

⁸⁰John L. Yerby, Jr, "History of Birmingham Southern Railroad." MS. submitted for membership in American Society of Traffic and Transportation, Inc., 1966, copy on deposit with Tutwiler Collection of Southern History and Literature, Linn-Henly Research Library, Birmingham, AL. Yerby was a traffic manager for the Birmingham Southern, and quite understandably takes only that point of view. While he was not a trained historian, Yerby lifted long passages verbatim from his sources, his choice of sources has heavily influenced this section. Unless otherwise noted, the information for this section is based on: Interstate Commerce Commission, *Joint Rates with the Birmingham Southern Railroad Company* (Vol. 32), 110-128.

⁸¹Owen, 22; C.M Gardener and Co., *First City Directory of Birmingham for 1883-1884*, (Atlanta, Georgia: C.M. Gardner and Co., 1883), 279; Interstate Commerce Commission Reports, vol. 32, 114; Tennessee Iron and Coal Division, United States Corporation, *Biography of a Business* (Birmingham, Alabama: Tennessee Coal and Iron Division, United States Steel Corporation, 1960), 20-22. In

Based on subsequent events, it seems reasonable to suggest that the railroad was incorporated at this time so that TCI could put forth the Birmingham Southern as a common carrier, so that it could file reports with the Alabama Railroad Commission, and so that it could seek to receive divisions or portions of through rates issued to common carriers. Subsequent investigations by the Interstate Commerce Commission show that many iron and steel companies, particularly in the Pittsburgh area, had established railroads for that purpose. The largest of these was the Union Railroad of the Carnegie Steel Company, which boasted that its tonnage exceeded the combined tonnage of the Union Pacific and the Missouri Pacific.⁸² Such high tonnages gave industrial railroads such as the Birmingham Southern strong leverage to negotiate rates with common carriers.

That the Tennessee Coal and Iron Company was also seeking these concessions, is reinforced by the findings of the Commission that TCI had tried unsuccessfully on several occasions to obtain joint freight rates with trunk line carriers. At about the time that the Birmingham Southern was incorporated, TCI made an agreement with the Mobile and Ohio Railroad Company (M&O) that would have given the Birmingham Southern part of certain joint rates. In return for this concession the Birmingham Southern agreed to construct a short extension to an existing branch that ran between the Alabama Great Southern (AGS) at Woodstock and Blocton, Alabama. This extension would have connected the M&O with trunk lines such as the AGS and the L&N (in the form of the Birmingham Mineral Railroad). In this matter the M&O would have gained access to Birmingham. Because the Birmingham Southern would have been carrying legitimate traffic for the M&O, it would have received clear rights to a division of the rates. To prevent this from happening the L&N and the Southern Railway (owners of the AGS) purchased the Birmingham Southern from TCI for the sum of \$1,200,000. The agreement also called for the Birmingham Southern to perform certain intraplant work for TCI at cost. The transaction took place on July 1, 1899 and lasted under this arrangement until July 1, 1906. The transaction represented about 70 miles of trackage distributed throughout the Birmingham District, including the connection between Birmingham, Pratt City and Ensley, a line to the Stockton Mines from Pratt City between Woodstock and Blocton. It also includes the spurs and plant tracks within the Bessemer, Ensley, Blocton, and Oxmoor

1852 one of the predecessor firms of TCI built a railroad to ship its coal to market (page 6).

⁸²Interstate Commerce Commission, *Industrial Railways Case: In the Matter of Allowances to Short Lines of Railroads Serving Industries* (No. 4181, vol. 29), 252.

installations.⁸³

In 1906, just a year before TCI was purchased by the United States Steel, TCI repurchased the Birmingham Southern from the joint operators. Apparently, the L&N and the Southern Railroad did not reinvest and maintain the physical plant of the Birmingham Southern. In addition TCI planned to expand its railroad, but did not want to make those expansions without control. Thus on July 1, 1906 the Birmingham Southern was transferred back to TCI for the original 1899 sale price. The joint operators, however, did not sell back the trackage between Woodstock and Blocton, but rather formed the Woodstock and Blocton Rail Company for what appears to be a paper transaction of \$240,000. In retaining the Woodstock-Blocton Branch, the joint operators insured that TCI would not be able to play the M&O card again in its search for joint rates. With the purchase of the Birmingham Southern, TCI proceeded with its expansion and rebuilding program. By 1914 the Birmingham Southern owned about 41 miles of main line, 63 miles of sidings, which along with trackage leased from other railroads totaled 228 miles. Part of this expansion included about 8 or 10 miles of trackage connecting Ensley with the Atlanta, Birmingham & Atlantic (AB&A) at Bessemer. Not long after the expansion program the company obtained trackage rights into the rolling mills and furnaces at Bessemer. This construction to Bessemer probably represents the last major construction of main line trackage by the Birmingham Southern. Subsequent additions to the railroad proved to be strictly for hauling raw materials. This included expansions to new coal mines at Bayview, Sharron Hill, and possibly Stockton, for a total of less than 20 miles. During this period the company also made substantial improvements to its rolling stock.⁸⁴

The junction with the AB&A, however, also gave the AB&A access to the various points on the Birmingham Southern's line. As a result, in 1911 the AB&A filed rates with the Interstate Commerce Commission for points on the Birmingham Southern. Once again, the Birmingham Southern was seeking recognition as a common carrier. The L&N, and other carriers, filed protests. The issue in the case was whether or not the Birmingham Southern and other similar railroads were true common carriers. Also in question was the manner in which they should be compensated for their services and whether these joint rates were actually rebates in disguise. The Commission delayed its decision pending

⁸³Interstate Commerce Commission Reports, vol. 32, 114-115; Owen, 229.

⁸⁴Interstate Commerce Commission Reports, vol. 32, 115-116; Owen, 182-183; "Locations of Tracks of Birmingham Southern Railroad Company," Birmingham Southern(?) drawing, April 1911. Copy courtesy of Robert Yuill.

the resolution of two cases. The first known as the *Industrial Railways Case* was before the Interstate Commerce Commission. The second were the *Tap Line Cases* which went before the Supreme Court.⁸⁵ Under the *Industrial Railways Case* the Commission judged that the proposed rates were unlawful rebates. After the Supreme Court's decision on the *Tap Line Case*, however, the Interstate Commerce Commission decided that the Birmingham Southern was a common carrier and set forth certain rates and procedures. As a result the Commission did limit the circumstances in which the Birmingham Southern could charge for through services to certain locations on its main line, but not for any traffic to or from TCI installations. An important issue in the case was the fact that while about 93 percent of the Birmingham Southern's traffic was for the TCI, the Birmingham Southern also provided switching services for other firms on its route. The Commission judged that "the mere fact of ownership should make no difference in the status of a common carrier, as such," and in spite of the fact that it was owned by the steel company, the Commission felt that the Birmingham Southern was entitled to common carrier status. Its status, the Commission argued, was different from the other private railroads in the Birmingham District, which are discussed elsewhere in this report. Thus, neither the Woodward Iron Company's Railroad, nor Republic Iron and Steel Company's Railroad, nor Alabama Consolidated Coal and Iron's railroad (the Mary Lee) was incorporated as a separate entity. None offered its services to the public. Because these railroads did not submit to the authority of the Interstate Commerce Act and had not taken on the responsibilities and burdens of common carriers, they were not eligible for joint rate privileges. In a dissenting opinion, Commissioner Harlan, author of the *Industrial Railways Case*, argued that industrial railroads are a necessary part of running a large industry, and that to grant common carrier status to such a railroad would be to place a burden on the public by forcing the trunk lines to subsidize the operations of the plant facilities.⁸⁶

The Commission's report reveals additional information of interest. The Birmingham Southern had 940 freight cars, forty-two locomotives, six passenger cars (for employees and officers), and employed 591 persons. It served thirty-four independent industries on its route. Most of its traffic was within individual plants, and a mere 8,000 tons of steel billets per month, mainly from Ensley to Bessemer, were interplant shipments. Finally the report indicates that the Birmingham Southern planned

⁸⁵Interstate Commerce Commission, vol. 29, 212-373; United States Supreme Court, *Tap Line cases*, (vol. 234), 1+.

⁸⁶Interstate Commerce Commission Reports, vol. 32, 124-125; quote: page 120.

to build a railroad to the Warrior River through the coal fields and to Red Mountain in order to ship its own ore.⁸⁷

The Birmingham Southern realized neither its plans for the Warrior River Road, nor its plans to build a road to Red Mountain. Rather, both of these projects were completed by others. As noted elsewhere in this report, on July 30, 1917, TCI acquired from the L&N all the branches of the Mineral Railroad that had served the TCI mines on Red Mountain. This transaction had been anticipated by TCI as early as 1911. In August of 1918, TCI separated the Birmingham Southern from all its plant operations. As a result, the mine trackage purchased the previous year from the L&N, all the trackage within its industrial facilities, and the various coal-hauling branches were reorganized as a separate operating division of TCI. The Birmingham Southern retained all the common carrier facilities and all the main lines of trackage that went between plants and other industrial firms. The timing of this change is not clear, but may be related to the fact that the objection raised by the Commission's 1914 dissenting opinion concerning subsidy and rebate was rendered largely irrelevant. This sale and reorganization left the Birmingham Southern with 26 miles of main line serving approximately 45 industries with the majority of its traffic being for TCI and U.S. Steel's American Steel Wire Company. According to records filed with the ICC in the year ending 1919, the Birmingham Southern handled 600,000 tons of traffic or a little over 21 percent of its total freight for outside industries.⁸⁸

The separation that TCI affected between its plant trackage and the Birmingham Southern in 1918 has continued, though in a different form, to this day. In 1984, the steel company reorganized the Transportation Department as a wholly owned subsidiary of the Birmingham Southern. Known as the Fairfield Southern Company, it was established to ensure that the plant railroad is kept physically and financially separate from the Birmingham Southern's own rail operations. This separation was carried through on at numerous levels in order to protect the Birmingham Southern's common carrier status. While the Fairfield Southern leases locomotives from its parent corporation, it has separate personnel and specific interchange points. The tracks within the plant are owned by the steel company.⁸⁹

⁸⁷Interstate Commerce Commission Reports, vol. 32, 113-114.

⁸⁸Key, 7; Interstate Commerce Commission Reports, vol. 61, 552.

⁸⁹Elliott M. Hughes, III, General Superintendent, Birmingham Southern Railroad Company, interviewed June 1992; John Troulias, Maintenance and Engineering Department Clerk for Tom Matthews, Manager, Engineering Services, Birmingham Southern, interviewed September 30, 1992.

It is interesting to note, that a Birmingham Southern memo claims that the Birmingham Southern was the first railroad in the country to entirely convert to diesel operation. While this claim might be a bit overdrawn, the dates of the conversion to diesel (started in 1937 and completed by 1939) place the Birmingham Southern firmly in the ranks of pioneering efforts.⁹⁰

In 1966, the Birmingham Southern acquired the Federal Barge Line. The latter railroad line has an interesting history of its own but is, in effect, the railroad to the Warrior River that TCI planned to build in 1914. In 1915 the Army Corps of Engineers completed the canalization of the Warrior-Tombigbee River System. The U.S. Government began operation of a barge company on the river system in 1920. Birmingham capital built terminal facilities on the Warrior River at what is now called Birminghamport. At that time the U.S. Government acquired a branch of the Southern Railroad known as the Ensley Southern. The Ensley Southern appears to have been constructed to the exploit coal resources beyond the Warrior River.⁹¹ At some point Herman Potts, a St. Louis barge builder, bought both the Federal Barge Line and the Ensley Southern and found a way to make it profitable. Presumably, the Federal Government built the river system and acquired the railroad in the first place because there was no private enterprise that could raise the required capital. Various maps indicate that this rail line has had numerous names throughout its history. In addition to Federal Barge Line and Ensley Southern it has also been called the Warrior River Terminal Railroad. The Federal Barge Line had at least two diesel locomotives which were maintained by the Birmingham Southern.⁹²

In 1988 the U.S. Steel reorganized all of its company railroads under a holding company called TRANSTAR, Inc. and spun off the majority ownership to a private group of investors known as Blackstone Capital Partners. In 1989, the Birmingham Southern was classified as a Class III terminal and switching carrier. By 1991, due to growth and/or inflation, the Birmingham Southern is now considered a Class II railroad, meaning its annual gross revenues in 1978 dollars were between \$10 and \$50 million a year. In 1992 the Birmingham Southern owned thirty-five locomotives, 85

⁹⁰*Birmingham Southern Railroad History, Internal Memo, (Revised March 9, 1989).*

⁹¹G. Warren Reed, local railroad historian, interviewed September 2, 1992. This view is reinforced by the presence of a bridge over the Warrior River at Birminghamport and at least one railroad tunnel beyond Birminghamport on the right bank.

⁹²Claude Cotten, former President, Birmingham Southern Railroad, interviewed August 6, 1992.

track miles and about 200 miles of sidings.⁹³

Birmingham Belt Railroad

In 1887, in the midst of the iron boom of the 1880s, the Elyton Land Company became concerned that the high price of real estate in Birmingham might prevent additional trunk railroads from purchasing land for their terminals.⁹⁴ If the real estate costs for a terminal were prohibitive, the Land Company reasoned, then additional railroads would not go to the expense of entering Jones Valley. The land company resolved to make it practical for warehouse and light manufacturing to locate outside the central business district by providing freight services. This would reduce the pressure on the price of real estate where railroads would want and need, to place their terminals. The Elyton Land Company constructed approximately 12 miles of main line railroad through the streets of Birmingham that formed a belt, with a number of branches, around the central business district. At its peak, the main line of what became the Birmingham Belt Railroad, went down Avenue E, now known as 5th Avenue South, turned onto 32nd Street, and crossed over the railroad reservation near Sloss City Furnaces. The line continued along 32nd Street and at 9th Street North turned towards the 9th Avenue Yard and Freight Depot of the St. Louis & San Francisco Railroad (Frisco) as well as working its way towards and onto 10th Avenue North. The Belt continued along 10th Avenue to about 15th Street where it returned to 9th Street North and connected with the main line of the Frisco. The belt thus formed a large U-shape around the central business district. A branch from 10th Avenue paralleled the part of Southern Railroad constructed by the Georgia Pacific and continued until it branched to both the East Thomas and to

⁹³*Birmingham Southern Railroad History; Alabama Rail Plan, 7-8; John Troulias, Maintenance and Engineering Department Clerk for Tom Matthews, Manager, Engineering Services, Birmingham Southern, interviewed September 30, 1992.*

⁹⁴This section is based on Lyn Johns, "Early Highlands in the Magic City, 1884 - 1893; Including Willis J. Milner's 'History of Highland Avenue,'" *The Journal of the Birmingham Historical Society* 6, no. 2 (July 1979): 37, 42-43. John's article includes a transcription of Milner manuscript on deposit in the Department of Archives and Manuscripts in the Birmingham Public Library. See also Alvin W. Hudson and Harold E. Cox, *Street Railways of Birmingham* (Forty Fort, Pennsylvania: Harold E. Cox, 1976), 16; G. Warren Reed "Taking to the Streets with the Frisco", *Model Railroader* 58, no. 10 (October 1991): 92-93. *A Right of Way Atlas, plats of the Birmingham Belt, ca. 1915* is in the Agee Map Collection, Tutwiler Collection of Southern History, Birmingham Public Library.

the Finley Yards. Numerous spurs provided access to individual customers through out the entire length of the Belt.

In arranging for the execution of this project, the Elyton Land Company combined it with the construction of a street car railroad that served undeveloped land it owned in what is now the Highland Avenue area. Both railroads were operated under the name Highland Avenue and Belt Railroad Company. Willis J. Milner, engineer who laid out and designed both railroads wrote in his memoirs that

during the period of depression following the collapse of the boom of the Eighties, culminating in the panic of 1893, the income of the railroad was insufficient to meet expenses, repairs and renewals, and as the parent [Elyton Land] company had committed financial suicide and was therefore unable to render assistance to its offspring, the Company met disaster, went into the hands of the receiver, died and was buried.⁹⁵

The bankruptcy of the Highland Avenue and Belt Railroad happened in 1899; it was then purchased by a certain E. E. Whitaker. The Highland Avenue Street Car was sold to the Birmingham Traction Company and the Birmingham Belt Railroad was reorganized as a separate enterprise. In 1902, Whitaker sold the Birmingham Belt Railroad to the Frisco. While expressing some personal regret over this twist of Fate, Milner comments also reveals the extent of the ambitions the Elyton Land Company had for its railroads:

The belt road, it was hoped, would continue in hands of strong, local interests and would forge equal terminal facilities for all of the railroads entering Birmingham, as well as shipping facilities to the mines and manufacturing industries of the district, and would eventually, as its charter provides, be extended to the tide water, thus filling the intentions and expectations of its designer.⁹⁶

The Elyton Land Company had planned to expand the Belt Railroad into the heavy freight business throughout the Birmingham District. Such belt railroads serving major urban industrial areas were not uncommon in the late nineteenth century.⁹⁷

Obviously, by its acquisition by the Frisco Railroad in 1902, The Birmingham Belt no longer played a role in encouraging

⁹⁵Johns, "Early Highlands in the Magic City," 43.

⁹⁶Johns, "Early Highlands in the Magic City," 43.

⁹⁷G. Warren Reed, local railroad historian, interviewed September, 1992.

other railroads to come to Birmingham, although, as Scott Brown has shown, several trunk lines did enter Birmingham after 1902. More importantly the Belt created a striking feature of the Birmingham urban landscape: the wide zone of low lying warehouses and light industrial buildings that completely surrounds the central business district and still isolates residential areas.⁹⁸

The Belt declined in importance as the trucking industry became the dominate mode of transportation for light industrial shipping — the Belt contracted as the twentieth century progressed. In 1975 the tracks along 5th Avenue South were removed and in the early 1980s all of that appears to have remained of the Belt was a small section around 15th and 14th Streets between 5th Avenue South and the railroad reservation.

Coal and Coke Carriers

Republic Iron and Steel Company Railroad

Very little is known about the railroad that transported coal from mines at Sayreton to the blast furnaces at Thomas, Alabama for a total distance of three miles. It is clear that the Pioneer Mining and Manufacturing Company, which was established by Samuel Thomas of Pennsylvania's anthracite region, constructed the furnaces between 1888 and 1890. The firm presumably constructed the railroad at the same time. In addition to coal transport, the railroad would have delivered pig iron to the rail interchange with common carriers for shipment to the company's customers. Subsequently purchased by the Republic Iron and Steel Company, the Pioneer Company did not own any other railroads and thus would have been largely dependent on the Birmingham Mineral Railroad for iron ore shipments.⁹⁹

⁹⁸ See John R. Stilgoe, *Metropolitan Corridor: Railroads and the American Scene* (New Haven and London: Yale University Press, 1983) for a discussion of railroads and industrial zones.

⁹⁹ Interstate Commerce Commission Reports, vol. 32, 118. Additional information on Republic Iron and Steel's operation at Thomas can be found in the forthcoming report on the by-product coke oven works being prepared by Jack R. Bergstresser, Sr. for the *Historic American Engineering Record*. Additional material might come to light as the processing of the Republic Steel Collection in the Department of Archives and Manuscripts, Birmingham Public Library is completed. In 1965 the Republic Steel, which purchased the Thomas Works in 1899, donated a steam locomotive to the Heart of Dixie Railroad Club. See James Michels, "Old Locomotive Given to Railroad Club Here," *Birmingham Post-Herald*, April 20, 1965.

Mary Lee Railroad

For over 100 years, the Mary Lee Railroad, its predecessors and successors, served as a coal carrying railroad for a variety of owners, most notably the Sloss-Sheffield Iron and Steel Company. The railroad, a coal mine, and a coal seam was named for Mary Lee Boyle Averett, the daughter of pioneering coal developer Bartholemew Boyle. (The Boyles Yard of the L&N was named for the nearby Boyle farm.) Several intriguing hints of the early history of the Mary Lee have surfaced. A Mary Lee Coal and Railway Company was operating in 1888 with a length of 7.5 miles. A Mary Lee Coal and Iron Company of Birmingham was mentioned in several 1889 issues of the *Railroad Gazette*. Another source found evidence that a Mary Lee Coal and Railway Company operated from fiscal year 1890 to April 1896. At that time it was reorganized in some manner and operated as the Jefferson Coal and Railway Company through fiscal year 1902. In 1902 a 5.75 mile Mary Lee Railroad was incorporated and at some point became part of the Alabama Consolidated Coal and Iron Company.¹⁰⁰ It seems reasonable, to assume that all these transactions and reorganizations dealt with the Mary Lee mine at Lewisburg on Five Mile Creek and the railroad that connected it with Birmingham.

The Alabama Consolidated Iron and Coal Company was formed in 1899 and held numerous coal, ore and furnace properties in the region. In 1913 the Alabama Company was organized and included many of the properties of the Alabama Consolidated Coal and Iron Company. This transaction probably included the assets associated with the Mary Lee Railroad.¹⁰¹

In October 1924, the Sloss-Sheffield Iron and Steel Company acquired the Alabama Company¹⁰² and, probably, with it the Mary Lee Railroad. Without actually naming the railroad, the January 1931 issue the Sloss company newsletter speaks of the benefits of a company owned transportation system that insures "a uniform

¹⁰⁰Lucia Geiddens, "Know who the Mary Lee Railroad was named for? She lives on 12th-Ave S," *Birmingham Post*, July 15, 1938; Special thanks to Garrith M. McDonald, Editor, *The Short Line*, for researching the Mary Lee in his personal library. McDonald's sources include *Railroad Gazette*, (1895); Joseph Gross, *Railroads of North America*, privately published (1986); and William Edson, *Railroad Names*, privately published, (1984).

¹⁰¹Interstate Commerce Commission Reports, vol. 32, 118. A letter, a copy of which is in the collection of Robert Yuil, from Milton H. Smith, President of the Louisville & Nashville to H. Walters, Chairman of the Board of the Louisville & Nashville dated December 26, 1903 refers to the "so-called Mary lee [sic] Railroad (Alabama Consolidated Coal & Iron Co.)" in passing.

¹⁰²W. David Lewis, 504.

quality fresh coal for producing a uniform quality of coke."¹⁰³ This not only demonstrates that Sloss-Sheffield had an interplant railroad, but also reveals that control over raw material delivery can affect product quality. While a Birmingham Southern trackage map of April 1911 does show the Alabama Consolidated Iron and Coal Railroad going from the Mary Lee seam down to Boyles, it does not clearly show where it goes from Boyles Yard. The situation is much clearer on the November 1935 Birmingham-Bessemer Terminal Area Coordinating Committee Map. This map shows the Mary Lee Railroad connecting the Mary Lee Mines with the City Furnaces by paralleling the main line of the L&N until branching off to the Sloss-Sheffield By-product Plant in North Birmingham. Departing the coke plant, the railroad also continued along the L&N, then cut across the main line near the Vanderbilt Furnaces of the Woodward Iron Company, crossed the Woodland-Bessemer Branch of the Southern Railway, and continued on through the warehouse district to the Sloss City Furnaces. Some of the tracks that the Mary Lee used belonged to the Central of Georgia over which the Mary Lee had trackage rights. In other sections the Mary Lee Railroad owned the tracks and the Central of Georgia had trackage rights.

According to the 1938 newspaper article, the Mary Lee Railroad had two engines, twenty-seven cars and made a run of about 30 miles from the Sloss-Sheffield By-Product Plant to the Flat Top coal mine. Access to Flat Top as well as the Bessie mine would have been over the Cain Creek Branch of the L&N that went west to service the northwest corner of Jefferson County. The trains of both the L&N and the Mary Lee had traffic rights over this branch. One company's trains would travel during the day while the other would use the tracks during the night. By this time, the trains were labeled with Sloss-Sheffield's initials and not with "Mary Lee."¹⁰⁴

In 1942, Sloss-Sheffield was purchased by U.S. Pipe, who used pig iron production to integrate its cast iron pipe operations from raw materials to finished product. U.S. Pipe was purchased by Jim Walters Resources in 1969. Apparently, Jim Walters re-organized the Mary Lee railroad as the Jefferson Warrior Railroad Company in January 1986. At that time the railroad had 25 route miles and 55 miles of trackage and still maintained connections between Birmingham and the Bessie Coal Mine. As of 1991 the Jefferson Warrior owned 44 miles of track connecting Birmingham with the Millers Ferry Steam Plant. CSX

¹⁰³"Sloss Mines Its Ores...", *Pig Iron Rough Notes* (January 20-21, 1931): n.p.

¹⁰⁴Thomas Lawson, Jr., President, Locomotive Marketing, Inc., interviewed August, 1992; G. Warren Reed, local railroad historian, interviewed September, 1992; Robert Yuill, General Foreman Steam, Norfolk Southern, interviewed September 16, 1992.

Transportation leases 7 miles of the track at the steam plant.¹⁰⁵

Vertically Integrated Railroads

Woodward Iron Company's Railroad

The history of the Woodward Iron Company and its railroad is remarkable. It is significant because the Woodward Iron Company was the first iron company in the region to own and operate a railroad that shipped both iron ore and coal. This gave it a control over its raw material assembly unrivalled throughout the Birmingham District until the completion of TCI's High-Line in 1925. It was not until the mid-1890s that Carnegie Steel, the organization most scholars look to as the model of a vertically integrated company, acquired complete control over its raw material transportation. Even more remarkable is that until the acquisition of the Mulga coal mine, it was possible to stand from the top of Woodward's blast furnaces and see both red ore and coal mines. Woodward's iron ore was self-fluxing, so while the company owned limestone reserves, it did not need them. This close proximity of its operations, made possible by judicious and early acquisitions, gave Woodward one of the lowest raw material assembly costs in the nation. While the Woodward Iron Company did not fully integrate producing finished products, such as iron castings, until the twentieth century, it did have full control over that which the Woodwards chose to produce.

In 1869 S. H. Woodward, head of an iron producing family from Wheeling, West Virginia, purchased ore and coal properties in and around the Jones Valley. The Woodwards did not begin developing their Alabama lands until after the Alice Furnace went into blast in 1880. In the fall of 1881, the Woodward Iron Company was organized and the company built the first of three blast furnaces on a site located between its coal mines at Dolomite and its red ore mines at Woodward on Red Mountain. At that time it constructed about 8 miles of railroads. The enterprise was sufficiently successful; February 27, 1886 the Board of Directors authorized "purchase or contract with the Baldwin Locomotive Works for a new locomotive about the size of Number H."¹⁰⁶ The Board's action suggests that the railroad was

¹⁰⁵W. David Lewis, *Sloss Furnaces: Technology Business Enterprise, and Organization in the New South* (draft of book forthcoming from the University of Alabama Press), 586, 615; Edward A. Lewis, *American Short Line Railway Guide* (Milwaukee, Wisconsin: Kalmbach Books, 1986), 108; Alabama Bureau of State Planning, 22.

¹⁰⁶Woodward Iron Company, *Minutes of the Board of Directors of Woodward Iron Company of Alabama, 1886 - 1916*, Woodward Iron Papers, W. S. Hoole Special Collections, University of Alabama,

busy enough to need a ninth locomotive.

In 1913 Woodward Iron purchased the Birmingham Coal and Iron Company. This acquisition included the two Vanderbilt furnaces located in East Birmingham as well as the Songo ore mine located in the Ishkooda group on Red Mountain. These acquisitions were not served by the Woodward railroad. Consequently the firm, by the strictest of definitions, no longer maintained complete control over delivery of its raw materials.¹⁰⁷ The transaction brought Woodward important reserves. At least one historian has suggested that Sloss-Sheffield's intent of acquisition of the Alabama Company in 1924 was to keep it out of Woodward's hands as much as it was for the benefit of Sloss.¹⁰⁸

In 1913 the Woodward also acquired rights to operate over the 14 mile Bessemer to Mulga Branch of the Atlanta, Birmingham & Atlantic Railroad (AB&A).¹⁰⁹ Woodward acquired the Mulga branch sometime between 1924 and 1930. A 1914 ICC report indicates that the Woodward Iron Company Railroad was 6 miles long but an article published in *Blast Furnaces and Steel Plant* in May of 1924 indicates that the Woodward Iron Company comprised 45 miles of trackage (a figure which presumably included route miles as well as sidings), twelve modern locomotives, and 232 standard gauge cars. By November of 1935 there can be no question that the Mulga Branch was wholly controlled by Woodward Iron Company, and at that time the system consisted of 13.5 miles of main line railroad including 41.5 miles of sidings and yard trackage with

Tuscaloosa, drawer 16, page 8.

¹⁰⁷William Lawson, Jr, President of Locomotive Marketing, Inc., interviewed September 24, 1992, reports that an acquaintance who worked for Woodward in 1950 remembers that Woodward trucked ore from Songo Mine to Woodward No. 3. This was done over a private-haul road that Woodward built on top of the South Branch of the Birmingham Mineral Railroad. After processing, the Songo ore was shipped on the Woodward railroad. This discussion on the issue of integrated iron production has benefitted from a series of conversations with Jack R. Bergstresser, Sr. over a period of several years. A more definitive treatment of the topic awaits the completion of his dissertation on the Southern iron industry at Auburn University.

¹⁰⁸W. David Lewis, 504.

¹⁰⁹Richard E. Prince, *Atlantic Coast Line Railroad: Steam Locomotives, Ships and History* (Green River, Wyoming: Richard E. Prince, 1966), 72.

252 railroad cars, and ten locomotives.¹¹⁰

Following the Depression, and especially during the 1950s and 1960s, the company diversified by acquiring foundries, cast iron pipe foundries, and other types of companies allied to the iron industry. In doing so, Woodward became a truly integrated iron company in that they produced finished products. When the Mead Corporation of Ohio acquired Woodward in the late 1960s, the post World War II boom in the iron and steel industry was drawing to a close. In less than ten years after the sale to Meade, the last red ore mine closed, iron production ceased, the by-product coke plant was sold, and several firms acquired parts of the Woodward railroad. The Birmingham Southern acquired the 3 miles between AB&A junction and Bessemer over which it had trackage rights for many years. Birmingham Southern sold a mile to Koppers, the firm that purchased the by-product coke plant. Drummond, Inc. purchased the Mulga mine and removed the tracks. Most of the remaining tracks were sold to a firm that removes and sells used rails.¹¹¹

TCI's Railroad

TCI reorganized its rail operations in 1918. A new Transportation Department was established within TCI to handle all transportation within its plants and all raw material assembly.

¹¹⁰Woodward Iron Company, *Alabama Blast Furnaces* (Woodward, Alabama, Woodward Iron Company, 1940), 155-158; "Locations of Mining and Metallurgical Operations in the Vicinity of Birmingham, Alabama," map published opposite page 50 in *Tennessee Coal, Iron, and Railroad Company, Mining and Steel Making Methods in Alabama*, (Birmingham, Alabama: Tennessee Coal, Iron and Railroad Company, 1924); *Birmingham Southern Railroad and Connecting Lines in the Birmingham, Alabama District*, Drawing Number A-686, August 8, 1930, copy on deposit with the Birmingham Historical Society courtesy of Birmingham Southern Railroad; Birmingham-Bessemer Terminal Area Coordinating Committee, *Birmingham-Bessemer, Alabama*, November 5, 1985, Department of Archives and Manuscripts, Birmingham Public Library; Woodward Iron Company, *A Panoramic Picture of Woodward Iron Company*, (Woodward, Alabama: Woodward Iron Company, 1936(?), n.p.; F. J. Crolius, "Straight Line Production, Part I," *Blast Furnace and Steel Plant* 12, no. 5 (May 1924): 231.

¹¹¹Ralph Norris, "Woodward has a New Name," *Birmingham Post-Herald*, April 16, 1968, 22; Marjorie Longnecker White, *The Birmingham District: An Industrial History and Guide*, (Birmingham, Alabama: Birmingham Historical Society, 1981), 137; John Troulias, Maintenance and Engineering Department Clerk for Tom Matthews, Manager, Engineering Services, Birmingham Southern, interviewed September 30, 1992.

At least by 1920, if not at the time of the purchase of the Red Mountain trackage from the L&N, TCI considered building an overhead railroad from the ore mines to its Ensley plant.¹¹² From an industry-wide perspective, the construction of the elevated railroad commonly known as the High-Line was part of a general expansion taking place throughout the American steel industry during the 1920s. Described by *Iron Trade Review* as "unusually ambitious for a truly industrial railroad," the High-Line was constructed to eliminate delivery delays. The delays were caused by the numerous crossings and the roundabout route between Red Mountain and Ensley. The High-Line also improved control over the assembly of iron ore from Red Mountain by consolidating the output from the eleven mines spread across a 12 mile front. Construction required numerous fills, excavations, and bridges over a length of 5 miles. Of special interest is that the section between Wenonah and Valley Creek is 1.5 percent grade after which the trackage grade rises 1 percent for half a mile and then levels off to a 0.4 percent grade. This arrangement reflects not only the topography of the site but also exploits the grade to slow the momentum of the cars after they have descended from Red Mountain. The longest individual structure was bridge No. 1 immediately adjacent to what is now the Fairfield Works of USX. This 800' span is a series of plate girders which cross over five railroads, private roads, and a water course. Provision was made in the placing of the piers for the possibility of future double tracking. With the completion of the High-Line in 1925, TCI was finally able to integrate its raw materials assembly as completely as the Woodward Iron Company had in 1882. The High-Line also represents the last major railroad construction in the Birmingham District.¹¹³

In 1924, shortly before the completion of the High-Line, TCI's Transportation Department had 50 miles of main line, more than 100 miles of sidings, and 1800 freight cars serving by fifty locomotives. Combined totals for coal and ore shipments were approximately 525,000 tons per month, or well over 6 million tons annually.¹¹⁴

As discussed above, in 1984, TCI's Transportation Department was reorganized as a wholly owned subsidiary of the Birmingham Southern. Under this arrangement, the Fairfield Southern largely consists of personnel and not property. TCI's successor, the steel producing division of USX, retained the tracks within the

¹¹²"Alabama," *Engineering and Mining Journal*, 110, no. 1 (1920).

¹¹³"Completes New Industrial Road," *Iron Trade Review* 77, no. 15 (October 8, 1925): 893-894, 987.

¹¹⁴Tennessee Coal, Iron, and Railroad Company, *Mining and Steel Making Methods in Alabama*, 51.

plants.¹¹⁵

¹¹⁵John Troulias, Maintenance and Engineering Department Clerk for Tom Matthews, Manager, Engineering Services, Birmingham Southern, interviewed September 30, 1992.

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RECOMMENDATIONS FOR FURTHER RESEARCH

compiled by
Scott C. Brown

1) The William Stanley Hoole Special Collections Library at the University of Alabama.

A) Original Sanborn Maps for the five county Birmingham district showing in detail all railroad structures and changes to them over the years.

Jefferson County - Bessemer -	April 1888 June 1890 April 1895 July 1899 July 1904 August 1908 April 1913 March 1924 December 1924
- Birmingham:	January 1885 April 1888 1891 1902 1911 1928 1929 1930
- Leeds:	1930
Shelby County - Calera:	June 1889 February 1897 September 1903 September 1909 September 1923
- Columbiana:	April 1909 September 1923
- Montevallo:	September 1933
- Shelby:	August 1905 July 1910 October 1923
Tuscaloosa County - Tuscaloosa:	November 1884 June 1889 June 1894 November 1899 May 1905

BIRMINGHAM DISTRICT RAILROADS

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April 1910
1923

Walker County - Carbon Hill: October 1926
 - Cordova: June 1930
 - Jasper: May 1894
 March 1900
 October 1905
 March 1909
 April 1916
 October 1926

B) Roland Harper Collection - 1919; A4, 402, 4) - photographs of Warrior Southern Railroad (M & O) from Holt to Kellerman including four tunnels

2) Darnell, Victor C. Directory of American Bridge-Building Companies: 1840-1900. Washington, D.C.: Society for Industrial Archeology, Occasional Publication No. 4, 1984.

-This publication lists the following bridge building companies in the Birmingham District that may warrant further investigation:

A) Birmingham: Alabama Bridge and Boiler Company
 Birmingham Bridge Company
 Birmingham Bridge and Bolt Works
 Southern Bridge Company
 Southern Iron and Steel Works
 Watkins and Harda

B) Jasper: Alabama Bridge Company

-Other bridge companies which had plants in Birmingham including the Chicago Bridge Works and the Virginia Bridge & Iron Co. should be investigated further

3) Birmingham Public Library

A) Science & Technology Department:
 Industrial Arts Index under "Railroads" and its subheadings

B) Tutwiler Collection of Southern History and Literature:
 Vertical File (clippings)
 - Family Lines System
 - Atlantic Coast Line
 - Central of Georgia
 - Frisco

- Georgia Pacific
- Gulf, Mobile, and Ohio
- Illinois Central
- Louisville & Nashville
- Seaboard Air Line
- Seaboard Coast Line
- Southern Rail

C) Department of Archives and Manuscripts:

"Mobile and Ohio Railroad" - assorted correspondence, reports, and miscellaneous other documents encompassing the period 1867-1883.

Annual reports of the Railroad Commission of Alabama - data on mileage, revenue etc.

"Southern Rail Company" financial ledger of the company June 1906 to August 1916.

4) Archives

A) McMullen, Glenn L. "Manuscript Sources for Railroad History at Carol M. Newman Library, Virginia Tech." Repository for many railroads records. Blacksburg, Virginia.

B) Illinois Central Archives, Newberry Library, Chicago, IL

5) Individuals

A) Bill Johnston, Montevello - worked for Southern

B) Ken Penhale, Helena - will help w/survey in Walker Co.

C) Roberta Niesz, 1715 B. Ave., NE, Cedar Rapids, IA 52402
B&W photos of the following depots in the Birmingham District:

Bessemer (Frisco & Southern)
Brent (M&O)
Calera (L&N)
Carbon Hill (Frisco)
Centerville (M&O)
Columbiana (Southern)
Cordova (Frisco)
Dora (Frisco)
Eldridge (Frisco)
Elyton (ACL)
Holt (M&O)
Irondale (Southern)
Jasper (Frisco & Southern)
Leeds (Southern)
Montevallo (Southern)
North Birmingham (Southern)

Northport (M&O)
Oakman (Southern)
Parrish (Southern)
Pelham (SCL)
Shelby (L&N)
Tannehill (AGS)
Townley (Frisco)
Trafford (L&N)
Trussville (Southern)
Tuscaloosa (Southern)
Wilton (Southern)

Birmingham Rail & Locomotive Co. 424-7245 recently moved facilities to Liscomb in and continues operations - may have info on original site in North Birmingham

6) Contacts to access sites

A) Elliott Hughes of Birmingham Southern has spoken to Wendall Martin 320-3600 - (July 92) of Burlington Northern had clearance has been given for HAER to enter East Thomas Yard and inventory historic structures (there may be a roundhouse)

B) Access to Boyles Yard (roundhouse):

T.P. Schmidt, Vice-President Engineering
CSX Transportation
Jacksonville General Office Building
11th Floor, Room 1108
500 Water Street
Jacksonville, Florida 32202

5) Railroad Historical Societies:

Gulf, Mobile, & Ohio Historical Society
P.O. Box 24
Bedford Park, IL 60499

Illinois Central Historical Society
556 South Elizabeth Drive
Lombard, IL 60148

Louisville & Nashville Historical Society
P.O. Box 541
Glenwood, IL 60425

6) Drawings of M&O Warrior River Bridge:

Engineering Dept.

MidSouth Corp.
1100 Capital St., Suite 500
Jackson, MS

EXTANT RAILROAD STRUCTURES AND SITES IN THE BIRMINGHAM DISTRICT

compiled by
Scott C. Brown

Southern Rail:

Finley Yard & Shops (marked on Birmingham North Quad)
25th Street Yard
37th Street Yard
Paint Mill Yard
Norris Yard
Bessemer Passenger Depot
Bessemer Freight Depot
Bessemer Waiting Rooms
Wilton Depot (moved to Calera)
North Birmingham Depot (moved to 415 W. Oxmoor Rd.)
Tuscaloosa Depot (marked on Tuscaloosa Quad)
Cahaba River Truss (?) Bridge (marked on Leeds Quad)
Village Creek Bridge (marked on Adamsville Quad)
Wolf Creek Trestle, Corona
Transportation Building
Coosa River Truss Bridge

Atlanta, Birmingham, & Atlantic Railroad:

Bessemer Viaduct
Elyton Yard
Buck Creek Bridge (marked on Helena Quad)
Cahaba River Truss (?) Bridge (marked on Greenwood Quad)

Louisville & Nashville Railroad:

Parkwood Tunnel (marked on Helena Quad)
Oxmoor Section Houses (marked on Birmingham South Quad)
Boyles Yard & Shops (marked on Birmingham North Quad)
Shops on 1st Ave. N. at 14th St. (marked on Birmingham North Quad)
Freight House (1st Ave. S. & 65th St.)
Tuscaloosa Depot (marked on Tuscaloosa Depot)
Linn Crossing Trestle (marked on Brookside Quad)
Cahaba River Truss (?) Bridge (marked on Helena Quad)
Village Creek Bridge (marked on Adamsville Quad)

Mobile and Ohio Railroad

Tuscaloosa-Northport Bridge (marked on Tuscaloosa Quad)
Tuscaloosa Yard & Shops (marked on Tuscaloosa Quad)
Tuscaloosa Section House (marked on Tuscaloosa Quad)
Centerville Cahaba River Truss Bridge

Central of Georgia Railroad:

Oak Mountain Tunnel (marked on Leeds Quad)
Coosa Mountain Tunnel (marked on Vandiver Quad)
Cahaba River Truss (?) Bridge (marked on Leeds Quad)
Leeds Trestle (marked on Leeds Quad)

Coosa River Truss Bridge

Illinois Central Railroad:

East Thomas Yard & Shops (marked on Birmingham North Quad)

Georgia Pacific Rail:

Leeds Depot (marked on Leeds Quad)

29th Street Yard

Seaboard Air Line Rail:

Pelham Depot (marked on Helena Quad)

Birmingham Freight Depot (marked on Birmingham North Quad)

Roper Tunnel (marked on Leeds Quad)

32nd Street Yard & Shops

St. Louis - San Francisco Railroad:

East Thomas Yard & Shops (marked on Birmingham North Quad)

9th Avenue Yard & Freight Depot

Barney Bridge

_____ Tunnel (next to WC 81 in Dora)

_____ Tunnel (next to WC 269 in Parrish)

_____ Trestle (next to WC 269 in Parrish)

Warrior River Bridge, Cordova

Alabama & Tennessee Rivers Railroad:

Montevallo Depot

South & North Railroad:

Cahaba River Bridge piers & abutments (marked on Helena Quad)

Warrior Southern

Trestles and four tunnels between Holt & Kellerman

Birmingham Southern Railway:

Arkadelphia Road Underpass (marked on Birmingham North Quad)

Pratt City Yard & Shops (marked on Adamsville Quad)

Freight Depot (1st Ave. N. & 10th St.)

Village Creek Bridge (marked on Adamsville Quad)

Railway Express Building (marked on Birmingham North Quad)

Republic Steel:

Village Creek Truss Bridge (marked on Birmingham North Quad)

RR related manufacturing companies:

Pullman Standard (marked on Bessemer Quad)

Birmingham Rail & Locomotive Co. (marked on Birmingham North Quad)

ABEX Rail Plant, Calera

Chicago Bridge Works (marked on Birmingham North Quad)

Virginia Bridge & Iron Co.

Kilby Frog & Switch Company

Birmingham Bridge & Bolt Works (7th St. at 7th Ave. S.)

Other sites-railroad not yet known:

22nd Street Viaduct

24th Street Viaduct

Rainbow Viaduct (21st. Street)

14th Street Underpass

19th Street Underpass

20th Street Underpass

Terminal Station Underpass

Pencoyd Bridge over _____ RR (Woodstock, Bibb County)

Birmingham Mineral RR Trestle (Interlaken Ave, Gate City)

Parrish Trestle (marked on Parrish Quad)

Oakman Depot

Tower-intersection of Southern and M&O (marked on Tuscaloosa Quad)

Birminghamport Tunnel (?)

Elliott Yard

Jefferson Tunnel (marked on Brookside Quad)

Freight House (?) (14th St. at Morris Ave.)

Depot at Alabama Mining Museum, Dora (moved from _____)