II. SHAPING THE AMERICAN RAILROAD

A. Introduction

Today, most rail transport in the United States is based in freight train shipments. The sole nationwide passenger-rail carrier is currently Amtrak, and commuter rail systems exist only in a few pockets of the country and are not usually extensively interconnected.

The most notable exception to this general rule is New York City, which boasts not only its extensive subway system but also a Metro-North rail extending into Connecticut and links through New Jersey Transit and the Southeastern Pennsylvania Transit Authority to points as far south as Wilmington, Delaware. About two-thirds of all U.S. passenger rail riders, and one in every three U.S. mass transit users, lives in New York City.

Over its 175-year history, the freight railroad industry has played a central role in U.S. economic development. Revitalized by the deregulatory reforms embodied in the Staggers Rail Act of 180, U.S. railroads today carry more freight than ever before. U.S. railways carried 427 billion ton-miles of cargo annually in 1930. This increased to 750 billion ton-miles by 1975 and had doubled to 1.5 trillion ton-miles in 2005.[1] In the 1950s, the U.S. and Europe moved roughly the same percentage of freight by rail; but, by 2000, the share of U.S. rail freight was 38% while in Europe only 8% of freight traveled by rail.[2] In 1997, while U.S. trains moved 2,165 billion ton-kilometers of freight, the 15-nation European Union moved only 238 billion ton-kilometers of freight.[3]

B. Railroad Classifications

Railroad companies in the United States are generally separated into three categories based on their annual revenues: Class I, II, and III, respectively. These classifications are set by the Association of American Railroads (AAR).

As of the end of 2005, 562 common carrier freight railroads were operating in the United States. Each of the seven Class I railroads had revenue of at least $319.3 million in 2005. Class I carriers comprise just 1 percent of freight railroads, but they account for 68 percent of the industries mileage, operated 89 percent of its employees, and 93 percent of its freight revenue. Ranging in size from 3,200 to more than 32,000 miles operated, and from 2,700 to more than 51,000 employees, Class I railroads typically operate in many states and concentrate largely (though not exclusively) on long-haul, high-density intercity traffic lanes.[4]

Regional railroads (Class II) are linehaul railroads with at least 350 route-miles and/or revenue of between $40 million and the Class I threshold. There were 30 regional railroads in 2005. Regional railroads typically operate 400 to 650 miles in two to four

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[1] U.S. Department of Transportation (US DOT), Bureau of Transportation Statistics. 2005. *The Changing Face of Transportation.*
[2] Harvard University, The Taubman Center for State and Local Government. 2005. *Nature Or Nurture:Why Do Railroads Carry Greater Freight Share In The United States Than In Europe?*
[3] FHWA. 2002. *Freight Transportation: The European Market.*
[4] Association of American Railroads. 2007. *Overview of U.S. Freight Railroads*

states. Most regional railroads have between 75 and 500 employees; a few have more than 600 employees.[5]

Local linehaul carriers (Class III) operate less than 350 miles and earn less than $40 million per year. In 2005 there were 320 local linehaul carriers. They generally perform point-to-point service over short distances. Most operate less than 75 miles of road (approximately 20 percent operate 15 or fewer miles) in a single state.[6]

As Table I shows, the vast majority of freight revenue and track miles is operated by the Class I carriers. However, the importance of the regional and local linehaul carriers cannot be minimized. Approximately 550 short line and regional freight railroads exist in North America. By succeeding where others have failed these businesses have saved thousands of miles of rail lines from abandonment, as well as countless rail, and rail-dependent, jobs in predominantly rural areas. Short lines take many forms. Some operate as privately owned companies, while others are publicly owned or grouped under holding companies. A number of short lines are controlled by the government, and yet others are subsidiaries of larger corporations. Short lines haul a vast array of commodities, including: intermodal trailers and containers, coal, farm products, primary metals, metallic ores, paper, chemicals, lumber, food, building products (including stone, clay, and glass), and minerals. In total, short lines transport 11 million cars each year. Small railroads bring efficient nationwide rail service to thousands of communities, making them a vital link in North America's rail transportation infrastructure. Together Class II and III railroads interchange 25% of rail freight traffic on Class I railroads. Today, non-Class I railroads own, maintain, and operate over 25% of the rail mileage in the United States. As the rail network nears capacity in some areas of the country, small railroads can help bypass congested areas to keep freight moving. Each year, short line and regional railroads haul enough carloads to divert 26 million trucks from the nation's highways. This reduction in highway traffic lowers pavement damage costs by an estimated $1.2 billion annually.[7]

In 1939 there were 132 Class I railroads. Today, as the result of mergers and bankruptcies, there are only seven railroads operating in the United States that meet the criteria for Class I. Although Amtrak qualifies for Class I status under the revenue criteria, it is generally not considered a Class I railroad because it is not a freight railroad.

C. The Impact of Rail in Freight Distribution

AAR determined that as of the end of 2005 U.S. railroads operated over 140,000 miles of track, earning $47.8 billion in annual revenues. Although the rail industry is composed of over 500 carriers, in 2003 the seven Class I carriers accounted for 92% of the industry's total revenue, see Table 1.

[5] Ibid
[6] Ibid
[7] American Short Line and Regional Railroad Association, 2007.

Table 1: The U.S. Freight Railroad Industry, 2005[8]

Type of Railroad	Number	Miles Operated*	Employees	Freight Revenue ($billions)	% of Total Revenue
Class I	7	95,664	162,438	44.46	92.86%
Regional	30	15,388	7,322	1.48	3.09%
Local Linehaul	320	22,519	5,744	1.12	2.34%
S&T	203	6,678	6,303	0.82	1.71%
Canadian**	2	561	n/a	n/a	n/a
Total	562	140,810	181,807	47.88	100.00%

*Exludes trackage rights

**Includes CN and CP operations that are not part of a CN- or CP-owned Class I carrier

n/a - not available

In their peak during the 1920's, railroads operated upwards of 380,000 miles of track, but over the years have consolidated their operations to just over 140,000 miles, as shown in the above table. This is due to the extremely capital intensive nature of the business. In order to improve productivity and profitability, rail companies need to buy double-stack cars, larger hopper/tank cars, and higher boxcars/auto-rack cars, which in turn require investment in high-clearance tunnels, higher weight capacity track and stronger bridges. The high cost of these improvements has limited the railroads to upgrading the highest volume and most profitable lines. Other lines have been downgraded or abandoned, and increasingly, railroads are looking to the public sector to help fund service improvements. In spite of these challenges, freight railroading continues through the challenges.

According to AASHTO's 2003 "Freight-Rail Bottom Line Report", the freight-rail system carries 16% of the nation's freight by tonnage, accounting for about 28% of the ton-miles, 40% of the intercity ton-miles, and 6% of freight value. If all freight-rail were shifted to trucks tomorrow, it would add approximately 92 billion truck vehicle-miles of travel (VMT) to the highway system, and cost federal, state and local transportation agencies an additional $64 billion for highway improvements over the next 20 years. Existing national rail tons and value from the Federal Highway Authority (FHWA) Freight Analysis Framework (FAF) are shown in the following graphs.

[8] Association of American Railroads. 2007. *Overview of U.S. Freight Railroads.*

Figure 1: Value of Freight Flows by Rail[9]

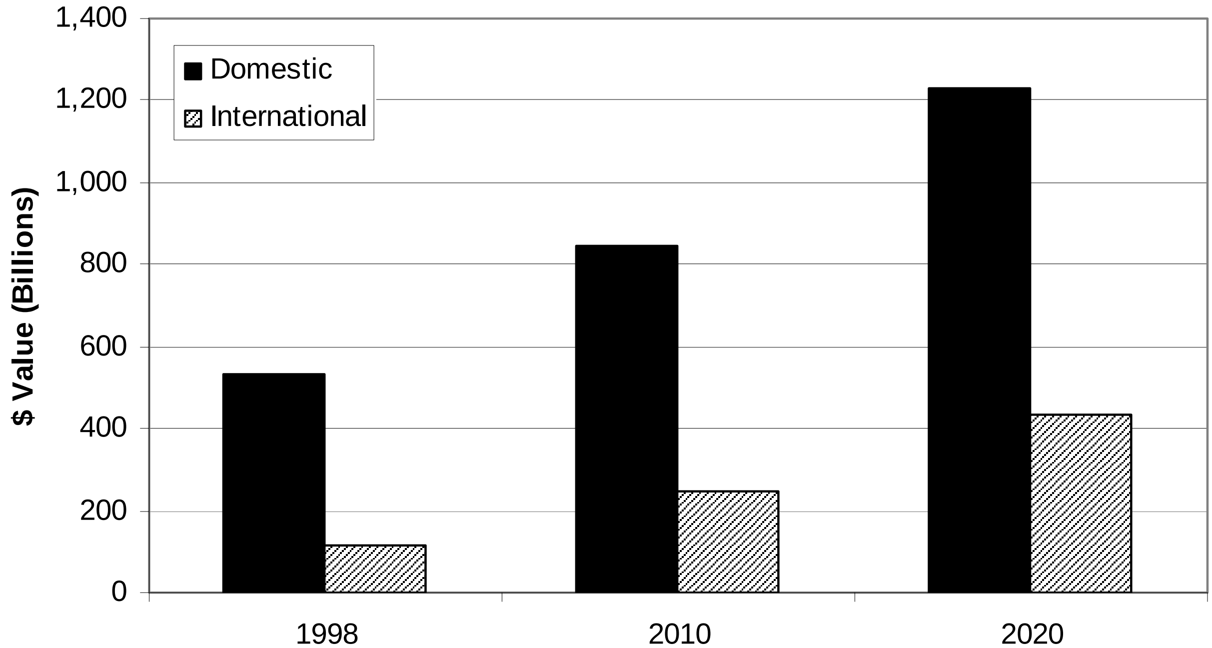
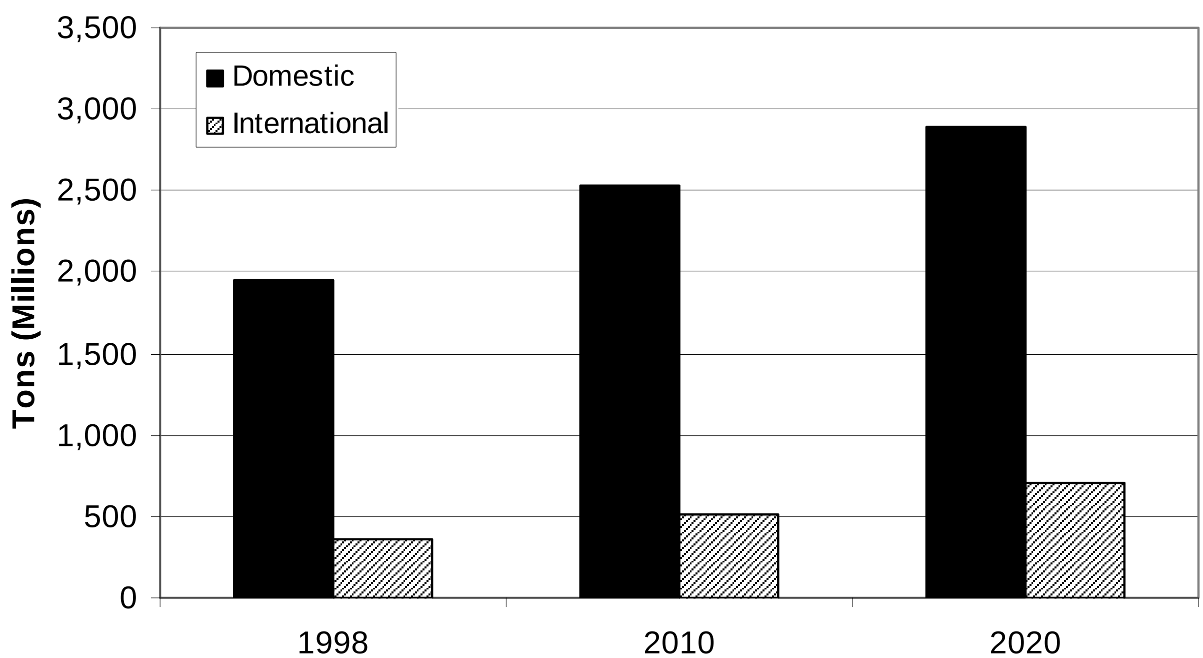


Figure 2: Volume of Freight Flows by Rail (Million-Tons)[10]



[9] FAF National Summary: 1998, 2010, 2020
[10] Ibid

D. Railroad Legislation Overview

When the federal government took control of the rail industry during World War I, the 1,500 or so U.S. railroads operated around 254,000 miles and employed 1.8 million people – far more than any other industry.[11] Following World War I, growing competition from other transportation modes and increasingly-stringent federal regulation started a process of railroad decline that would continue for decades.

On the eve of World War II, most railroads were in deep financial trouble. A surge in war-related traffic brought a temporary reprieve, but by 1949 rail ton-miles had fallen 28 percent from their 1944 level.[12] The post-war drop in passenger revenue was even larger. Railroads were losing large amounts of money on passenger service, but regulatory agencies often refused to allow railroads to discontinue passenger service.

Throughout the 1950s and 1960s, the rapid growth of the truck and barge competition and huge losses in passenger operations led to more railroad bankruptcies, service abandonments, and deferred maintenance. Trucking had usurped so much of the freight transportation business that many railroads merged or went under in the 1960s and 1970s. The eastern railroads were hit additionally with the collapse of coal traffic during the 1960s, as emphasis shifted to oil as an energy source. Between 1967 and 1972, six significant northeastern railroads went bankrupt: Central Railroad of New Jersey; Penn Central Transportation Company – created from the 1968 merger of Pennsylvania Railroad and New York Central Railroad; Lehigh Valley Railroad Company; Reading Company; Lehigh & Hudson River Railway Company; and Erie Lackawanna Railway Company. The roots of these companies stretched back as far as 1826.

By the early 1970s, railroads had lost so much business to the trucking industry – which could offer door-to-door service and was not subject to the same price restrictions -- that railroads handled only 36% of the nation's freight. As a result, bankruptcies and mergers left the country with only six major freight railroads. The government reacted with the Regional Rail Reorganization Act, which in turn gave birth to the United States Railway Association (USRA). A plan was devised by USRA for the consolidation of the six bankrupt lines into a single system, with the backing of federal funds. The initial investment was $2.1 billion.

Regional Rail Reorganization Act of 1973[13]

The Regional Rail Reorganization Act of 1973, also known as the 3R Act, provided for the establishment of the Consolidated Rail Corporation (Conrail) and USRA to fund and oversee Conrail's operations. The purpose of the 3R Act was to identify a rail system that would provide adequate and efficient rail service in the Northeast and Midwest and to reorganize the numerous bankrupt railroads in the region into an economically viable system that could provide that service.

Conrail began operations on April 1, 1976, as a private, for-profit railroad company. Formed from the remnants of seven bankrupt rail carriers in the Northeast and Midwest, Conrail was created to maintain essential transportation services in the industrial

[11] Association of American Railroads. 2007. *Freight Railroads: A Historical Perspective*
[12] Association of American Railroads. 2007. *Freight Railroads: A Historical Perspectiv*
[13] "Economic Viability of Congress", Congressional Budget Office, 1986

heartland of the country. Though established as a private concern, Conrail received government financing from its inception. These funds were used to compensate the estates of the bankrupt carriers, to rebuild the track and equipment transferred to it, and to cover operating losses during the rebuilding period. As compensation for its investment, the federal government acquired nearly complete ownership of the corporation.

Railroad Revitalization and Regulatory Reform Act of 1976[14]

Railroad Revitalization and Regulatory Reform Act of 1976, or the 4R Act, was the final plan recommended by the USRA related to the final structural, operational, and financial system designed for Conrail. The 4R Act also initiated the first significant reduction in federal regulation of railroads since the enactment of the Interstate Commerce Act in 1887. Because regulatory restrictions had contributed to the bankruptcy of Conrail's predecessors, the Congress began the process of regulatory reform in the 4R Act to prevent additional bankruptcies in the industry, and to improve the opportunities for all railroads, including Conrail, to survive as private companies.

Staggers Rail Act of 1980[15]

Prior to 1980, economic regulation prevented railroads from any flexibility in pricing needed to meet both intra- as well as intermodal competition. Regulation also prohibited carriers from restructuring their systems, including abandoning redundant and light density lines, a necessity for controlling cost. Added to these problems was the industry’s inability to cover inflation due to the regulatory time lag in rate adjustments. As a consequence, nine carriers were bankrupt, the industry had low return on investment, was unable to raise capital, and faced a steady decline in market share.

With the passage of the Staggers Rail Act of 1980 and its implementation by the Interstate Commerce Commission (ICC), many regulatory restraints on the railroad industry were removed, providing the industry with increased flexibility to adjust their rates and tailor services to meet shipper needs and their own revenue requirements. Immediately following deregulation, the railroad industry’s financial health improved significantly and service to rail customers improved, while overall rates decreased.

Northeast Rail Service Act[16]

Although the major programs to rebuild track were essentially completed by 1980, Conrail continued to produce operating losses and require federal subsidies. The possibility that Conrail might continue to impact federal resources negatively led the Congress to enact the Northeast Rail Service Act of 1981 (NERSA). NERSA enabled rail carriers to more easily abandon marginal rail lines.

NERSA provided Conrail with the opportunity to make the operating changes necessary for it to become a profitable railroad including exempting Conrail from state taxes and providing for the transfer of Conrail's commuter service to local authorities. The

[14] Ibid
[15] “Impacts of the Staggers Rail Act of 1980”, Federal Railroad Administration
[16] “Economic Viability of Congress”, Congressional Budget Office, 1986

company then had its first operating profit in 1981 and generated a total net income for 1981-1985 of nearly $1.5 billion.

One of the more significant impacts of this act was the expedited permitting for Conrail, enabling expedited abandonment of unprofitable lines. This act, along with Conrail's aggressive efforts to become financially self-sustaining, has resulted in the partial or complete abandonment of 4 central Ohio rail lines since 1982.

While NERSA provided Conrail with the opportunity to become a profitable railroad, it also directed the U.S. Department of Transportation (USDOT) to examine ways of returning Conrail to private ownership. The act required the USDOT to initiate a sale of Conrail as a corporate entity if it became profitable. The department solicited proposals for the purchase of the government's interest in Conrail in 1983, and selected a proposal by NS to purchase Conrail in a private sale. At that time the USDOT also considered a public stock sale of the company, but was hesitant because of concern with ensuring continued service in the Conrail region and its doubt that Conrail could remain viable as an independent railroad company.

After much review of Conrail's financial projections, and with Conrail continuing to succeed in providing high quality service for its freight customers and improving its financial outlook, the federal government sold its ownership interest in Conrail through what at the time was the largest initial public stock offering in the nation's history. This March 26, 1987 transaction, with added cash payments from Conrail to the U.S. Treasury, produced about $1.9 billion for the taxpayers and returned the Northeast-Midwest rail freight system to the private sector as a for-profit corporation, as Congress had envisioned when it created the rail carrier[17].

Abolishment of the Interstate Commerce Commission (ICC)

The ICC, an independent agency of the U.S. government, was established in 1887 and was responsible for regulating the economics and services of specified carriers engaged in transportation between states. The agency's establishment came as a result of mounting public criticism in the 1980's against railroad malpractices and abuses that eventually resulted in the establishment of maximum railroad rates. Initially, the ICC provided this oversight for railroads, but shortly thereafter began to regulate trucking companies, bus lines, freight forwarders, water carriers, oil pipelines, transportation brokers, and express agencies.

However, with the passages of deregulatory measures by both the railroad and trucking communities in the 1980's and 1990's, the ICC's power over rates and routes in rail and trucking was curtailed, and effective January 1, 1996, the ICC was abolished. In its place, the Surface Transportation Board (STB) was established; an economic regulatory agency that Congress charges with the fundamental missions of resolving railroad rate and service disputes and reviewing proposed railroad mergers. The STB is administratively affiliated with the USDOT and also has jurisdiction over certain trucking company, moving van, and non-contiguous ocean shipping company rate matters; certain intercity passenger bus company structure, financial, and operational matters;

[17] A Brief History of Conrail, www.conrail.com

and rates and services of certain pipelines not regulated by the Federal Energy Regulatory Commission[18].

E. Conrail Acquisition of 1998[19]

Although railroads were initially profitable after the Staggers Rail Act was passed in 1980, much of the railroad industry slid into bankruptcy in the mid-1990's. Many mergers and reorganizations followed, and the system mileage was cut more than half, from 380,000 miles of track at its peak in 1920 to approximately 140,000 miles today.

Background

CSX and Conrail announced in October 1996, that the two railroads would merge in a proposed deal valued at about $8.4 billion. NS opposed the proposed transaction through the courts and made counteroffers to buy Conrail at a higher price. Ultimately, the lack of Conrail stockholder support of the CSX/Conrail proposal prompted NS and CSX to reach an agreement on the joint acquisition and division of Conrail. And, on April 8, 1997, NS and CSX announced they would acquire all Conrail assets. By this time, the NS/CSX bidding war for Conrail had raised the price of the acquisition to $10.2 billion, the most expensive rail merger to date. NS planned to acquire 58% of Conrail, while CSX planned to acquire 42%.

In 1996, Conrail generated more than $3.7 billion in gross revenues with a net profit of $342 million, and operated 11,000 route miles primarily in the Northeast and Midwest. At the time it was Ohio's largest railroad, operating on 1,700 of Ohio's 5,800 rail route miles. CSX operated an 18,600-mile system east of the Mississippi and was Ohio's second largest railroad with 1,460 route miles. NS, a 14,500 mile eastern railroad, was Ohio's third largest railroad with 900 miles of track.

On June 23, 1997, CSX and NS jointly filed a 15,000-page application with the STB for approval of the acquisition. The STB established a 350-day schedule to decide whether to approve the transaction. A key date for parties wishing to oppose the acquisition or seek conditions for acquisition approval was October 21, 1997, when all documentation to the effect was due to the STB. However, this schedule was modified when the STB extended the entire schedule by 45 days so that both parties could submit safety plans associated with their proposed operations plans. The STB then issued its final decision on July 23, 1998, to all parties of record.

During the entire process, the then recent merger of the Union Pacific (UP) and Southern Pacific (SP) railroads was experiencing unforeseen circumstances, causing serious problems throughout the nation's transportation system. These problems began to raise questions of whether the CSX/NS acquisition could encounter similar setbacks. Their problems centered on the three following areas:

- UP did not anticipate problems with standing labor agreements and did not have newly negotiated plans in place before the merger went forward. The disruption of the labor force during their critical fall/Christmas rush created serious delays

[18] STB website: www.stb.dot.gov
[19] Overview based on ORDC's whitepaper, "State of Ohio Analysis of the CSXT/NS Acquisition of CR" and "The Impact from - and Delayed Benefits of - Railroad Mergers" by Dr. Barton Jennings.

throughout their system which in turn translated into problems throughout the nation's freight transportation infrastructure.

- UP encountered unforeseen problems integrating the two companies' information systems.

- There existed a deep difference in corporate culture between the two companies which precluded UP's ability to effectively tap into SP's expertise after the merger. Many SP employees swore that they would never work for "Big Yellow"; effectively crippling UP's ability to recruit the needed operational talent from the company they were acquiring.

CSX and NS learned from the mistakes made in the UP/SP merger and took action to mitigate the risks. The merger was completed leaving the new NS system to operate approximately 21,000 route miles in 22 states, while the new CSX was left with approximately 23,000 route miles in 23 states. In Ohio, the new NS operates 2,233 route miles, while CSX has 2,283 route miles.

F. The Relationship between Passenger Rail and Freight Rail

Prior to Amtrak's creation by the Rail Passenger Service Act of 1970, intercity passenger rail service in the United States was provided by the same companies that provided freight service. When Amtrak was formed, in return for government permission to exit the passenger rail business, freight railroads donated passenger equipment to Amtrak and helped it get started with a capital infusion of some $200 million. Today, Amtrak is the only intercity passenger railroad in the continental United States.

The vast majority of the 22,000 or so miles over which Amtrak operates are actually owned by freight railroads. (Amtrak owns approximately 750 miles of railroad, primarily from Boston to Washington, D.C.) By law, freight railroads must grant Amtrak access to their track upon request and give priority to Amtrak trains over all other trains. Amtrak pays fees to freight railroads to cover the incremental costs of Amtrak's use of freight railroad tracks.

Commuter and light rail passenger service is offered in a couple of dozen cities throughout the United States. Many commuter rail operators own all or part of the railroad right-of-way (sometimes purchased from freight railroads) on which they operate. Other commuter and light rail systems operate primarily or exclusively over tracks owned by freight railroads. Moreover, to avoid the time and expense of new right-of-way acquisition, the vast majority of proposed new commuter operations and existing commuter passenger operators who want to extend their operations typically advocate using freight railroads rights-of-way.

Before non-Amtrak passenger rail operators can begin operations on freight-owned track, they must first agreement on a wide variety of engineering, operational, and legal issues, such as liability, hours of passenger operations, access fees, number of passenger trains, and so on. Freight railroads recognize the potential public benefits of passenger service and work to accommodate passenger trains when mutually-beneficial agreements can be negotiated, as the many successful examples of passenger trains operating on freight-owned property make clear. However, passenger service should not impede freight railroads' ability to serve their freight customers.

G. Land Uses Adjacent to Rail Lines

This document includes maps showing not only the alignments and locations of central Ohio railroads, but also the land uses adjacent to these railroad lines. Municipalities often receive applications to re-zone vacant parcels of industrial land adjacent to railway yards or lines. Sometimes owners want to re-zone for residential or commercial use, and municipalities want to revitalize the area.

Potential issues that may come up may include those related to noise. This may include the noise of the trains as the make certain crossings. Federal legislation requires trains to whistle when approaching certain crossings. Train whistling protects motorists, pedestrians and train crews from collisions at crossings. However, residents often feel that train whistling for crossings, required by law, can be excessive. Additionally, noise issues can arise with properties located near railway or switching yards. The operations at railway yards and terminals require the reorganization up of trains or delivery of cars. Nearby residents are exposed to switching/shunting noises, and idling locomotives, often 24 hours a day. Thus, conflicts may arise between railyards and neighboring properties.

Finally, in busy urban areas, safety and traffic concerns are highlighted at highway/ railway crossings. Trains can move back and forth over crossings to deliver or pick up cars. Sometimes, the train traffic can cause vehicle congestion on busy roads, and impatient vehicle drivers may ignore warning signs and try to beat the train at a crossing.

Thus, railways and other nearby industries many times oppose a rezoning or any change in land use as they foresee future residents raising issues. There is pressure to accommodate new property owners but also a need to protect current/future assets.

Through the creation of the land use maps in this document, railroads and municipalities can work together to minimize future conflicts, and address existing conflicts. As municipalities and other government entities grow and propose land use changes, they should take into account the possible conflicts or issues related to land uses adjacent to rail lines. Depending on the rail activity, more compatible solutions may include additional industrial uses if there is already industrial activity in the area. If not, a preferable solution may be to dedicate land adjacent to rail lines for greenway, trail, or park space.

However these conflicts are addressed, such as setting up stakeholders groups and meeting face-to-face to discuss resolve issues, it is important that the railroads and the communities work together to resolve any issues.