Ohio's FREIGHT RAIL INDUSTRY: An Overview

On behalf of the members of Ohio's freight rail industry, thank you for the invitation today to share information on this industry that is integral to Ohio's past, current, and future economic success.

I have supplied several documents for your review that include: a slideshow on the US freight rail industry to provide you with a much broader look at national rail numbers, statistics, and priorities; a fact sheet specific to freight rail's Ohio footprint; and a 2019-2020 project map produced by the Ohio Rail Development Commission that illustrates the statewide impact and types of projects supported by that agency.

The Ohio Railroad Association (ORA) is comprised of twenty-nine freight railroads, representing over 97% of all the track miles in Ohio. Combined, ORA members employ thousands of Ohioans, serve hundreds of Ohio businesses, and invest tens of millions of dollars in maintaining and improving our infrastructure every year.

Ohio's freight rail industry is composed of three classes of railroads, as defined by the industry. Class III railroads are generally referred to as short lines, and these railroads are usually former branch lines of larger railroads that were sold due to the line's revenues not meeting the costs of maintenance. Short line operators have thrived in Ohio, in part due to the state's broad and varied business dispersion, in part due to the state's active support for maintaining the rail network, and in part due to the leaders who rescued these at-risk corridors. At the upper end of the industry are the two major Class I railroads serving the eastern half of the nation: CSX and Norfolk Southern. These two railroads each employ thousands of Ohioans, operate hundreds of miles of track, and serve as the main connections to ports and industries outside of Ohio. In between the short lines and the Class Is are regional railroads like the Wheeling & Lake Erie, the largest railroad headquartered in Ohio, and their system stretches from Maryland into far northwestern Ohio. These railroads all depend on each other for success. The short lines both feed and take rail traffic from the larger railroads, who also trade traffic when needed with each other. It is a complicated system that depends upon one important fact: railroads, as privately owned and operated businesses, must recover both their fixed costs and variable costs through the pricing of their services, or they cannot sustain their operations. Operating a freight railroad is capital-intensive, more so than almost any other industry in America. And despite the de-regulation of the industry in the early 1980s, there is still a great deal of federal regulation and oversight of the industry.

What is freight rail?

Rail freight is the transportation of cargo, as opposed to people, by fixed rail using locomotives and railcars assembled into different kinds of freight trains (intermodal, unit, and mixed freight, for example).

A freight train is a group of freight cars hauled by one or more locomotives on a railway, transporting cargo all or some of the way between the shipper and the intended destination as part of the logistics chain. Trains may haul bulk material, intermodal containers, general freight or specialized freight in purpose-designed cars.

When considered in terms of ton-miles hauled per unit of energy consumed, freight rail can be more efficient than other means of transportation. **A modern locomotive can move one ton of goods over 470 miles on one gallon of fuel, a number greater than the distance between Cleveland and New York City, or Cincinnati and Atlanta.** Maximum economies are typically realized with bulk commodities (for example, grain), especially when hauled over long distances. However, shipment by rail is not as flexible as by the highway. In view of this, the rail freight business has expanded options for shippers.

Traditionally, large shippers build factories and warehouses near rail lines and have a section of track on their property called a siding where goods are loaded onto or unloaded from rail cars. Other shippers have their goods hauled (drayed) by truck for the 'last mile' to or from a rail-served facility, using either bulk or intermodal containers. For those customers who have facilities to handle direct delivery of railcars, the railroad picks up the outbound or inbound cars from or to the sidings to a classification yard, where each car is coupled to one of several long-distance trains being assembled there, depending on that car's destination.

Each long-distance train is then dispatched to another classification yard. At the next classification yard, cars are resorted. Those that are destined for customers or facilities served by that yard are assigned to local trains for delivery. Others are reassembled into trains heading to classification yards closer to their destination. A single car might be reclassified or switched in several yards along the way, possibly operated by different railroads depending on the origination and destination. To reduce the time and costs associated with switching in classification yards, the largest railroad companies have applied techniques such as unit trains and containerization. These steps have made shipping by rail more efficient and, in inflation adjusted terms, less expensive today. **Average rail rates today are 43% lower than in 1981, meaning the average rail shipper can move almost twice as much freight for about the same price it paid 40 years ago.**

Moving goods by rail is very energy efficient. **A train of 100 rail cars may replace as many as 400 80,000 lb. commercial trucks on the highway.** Beyond overall lower energy costs, the public benefits also include fewer emissions, less highway congestion, and less wear and tear on publicly maintained roads and bridges. Shippers who use rail also benefit from the lower cost of moving freight by rail.

Freight rail transportation is an interstate business and is therefore broadly regulated and controlled by both federal statutes and authorities. The Federal Railroad Administration is the leading voice on most rail-related matters.

Freight Rail in Ohio

Except for a few specific instances, **every train and every set of railroad tracks you see in Ohio is operated and maintained by a privately-owned and operated freight railroad.**

At 5,187 miles, Ohio's network of active rail lines is the fourth most extensive in the nation, behind that of Texas, Illinois, and California. Because **Ohio is geographically much smaller than either Texas or California, its rail network is more concentrated**. Rail infrastructure (unlike highway infrastructure) is often sold or abandoned if its use does not justify the significant fixed costs to maintain and operate. **If Ohio businesses did not use the rail network, it would not be as extensive.** The high mileage of rail lines in Ohio reflects the close integration of rail with Ohio's economy. Including the impact of employee spending and spending across industries, the freight rail industry contributes $2.8 billion to Ohio's economy annually.

Prominent within Ohio's economy are industries that rely on rail. For example, manufacturing's total share of employment within Ohio is 46 percent higher than in other parts of the country. Within manufacturing, top sectors are 1) steel manufacturing; 2) chemical manufacturing; 3) food and beverage manufacturing; and 4) motor vehicle manufacturing. Each of these sectors is a heavy user of rail. Ohio ranks eighth in the nation for corn production and ninth in the nation for soybean production. Ohio is eleventh in coal production.

The Association of American Railroads ranks states by originating and terminating rail tonnages by commodity. Ohio is ranked among the top 10 states in originating tonnage of coal; farm products; crushed stone, sand, and gravel; intermodal; food products; metallic ores; primary metal products; and waste/scrap. Ohio is also ranked among the top 10 in terminating tonnage of coal; chemicals; intermodal; crushed stone, sand, and gravel; food products; metallic ores; and waste and scrap.

Rail service in Ohio competes more closely with trucking than in other parts of the country. Nationwide, railroads have focused on markets where economics of railroad transportation are more favorable than that of trucking. Rail transportation costs less than trucks for delivering large shipments and shipping long distances.

However, whereas the average rail shipment distance nationwide is 1,033 miles, the average shipment distance to or from Ohio is estimated to be 619 miles. Less than 25 percent of the ton-miles originating or terminating in Ohio (compared to 55 percent nationwide) are in shipments of over 60 carloads. Because the average length of haul is shorter and the average number of carloads per shipment is fewer, railroads shipping to and from Ohio compete more closely with trucking than elsewhere, all else being equal.

Two freight railroad companies—CSX Transportation and Norfolk Southern Railway—operate 59 percent of the Ohio rail network. Most of the remaining rail network is operated by local and regional freight railroads (railroads with annual revenues less than $447.6 million). These railroads are referred to as 'short lines', but the term shouldn't be understood to minimize their importance to the functioning of the national or state rail network, the service they provide to customers, or the critical economic

development asset they are to the many Ohio communities whose economy depends on the continuing service they provide to a major local employer.

Technology and Safety

Like other industries, freight rail is also applying technology for safety benefits. In the past decade, railroads have invested billions of dollars nationwide in Positive Train Control (PTC). And beyond that, modern railroading is deeply invested in high-tech operations, resulting in the best safety record the industry has ever posted. Railroads' annual investments are central to this safety mission, but the ability to more broadly deploy technology targeting the underlying causes of accidents is critical to ushering in the next era of safety gains.

In fact, **U.S. freight railroads have lower employee injury rates than most other major industries**, including trucking, airlines, agriculture, manufacturing and construction — even lower than grocery stores. Thanks to multibillion dollar investments to upgrade and modernize the network, America's rail industry achieved significant safety improvement across every recorded category over the last 20 years. Since 2000, train accident and hazmat accident rates are down 30% and 64%, respectively, while rail employee fatalities in 2019 matched an all-time low with numbers in the single digits for the first time in history.

Advanced dispatch-planning software, similar to air traffic control systems, helps optimize train movement across the network. The software analyzes factors such as system wide train schedules, speed restrictions and crew schedules to help train dispatchers determine the best operating plan for their portion of the rail system. Today, this advanced software can reassess a train management plan every two minutes, giving dispatchers the flexibility to respond in near real-time to changing conditions, such as train delays and unplanned maintenance work.

Smart sensors along tracks alert railroads to the location of a specific car and some also track various component parts of the car in order to evaluate its condition, such as a steel wheel's interaction with the steel rail or a brake's operation. **Analyzing the health of equipment in real-time** enables railroads to schedule maintenance at optimal times and places, avoiding equipment failures so our employees are safer, and shipments stay as close to schedule as possible. Data analysis on failing components also helps improve the design of these components. This further reduces shipment delays and improves the flow of traffic across the rail network. And it **adds to the overall safety of our employees.**

Thanks in part to investments in technology, railroads are more productive than ever while keeping rates low. These competitive freight rates allow businesses to produce affordable goods, so consumers see the benefits, too. They are also the reason many firms located far inland can successfully export the goods they produce to markets around the world.

Ohio Rail Development Commission

Established in 1994, the Ohio Rail Development Commission (ORDC) has become the focal point between the State of Ohio and the freight railroad industry. It is generally regarde d by the industry as **one of the most competent, flexible, and innovative state rail agencies in the nation.** Since its inception, the ORDC has been directly involved with both rail-related economic development and grade crossing safety. As an example, I have attached the ORDC's most recent freight projects map showing the location and details of the thirty-nine investments made through the ORDC over the calendar years 2019-2020. The **ORDC's programs are currently included in both House Bill 74 and House Bill 110**, and the Ohio Railroad Association, our members, and local economic development agencies have submitted testimony in support of that budget allocation. In 1994, the ORDC was allocated approximately $6.5 million dollars per year for its economic development programs, but that has been substantially reduced over the years. The $2 million dollars per year in GRF that it receives today, if simply maintained at a level equal to the cost of living in 1994, would be roughly $10 million, or roughly half of what is dedicated to other modes. That would allow the ORDC to not only participate in larger, more meaningful projects, but also to recognize the increased costs of the materials like steel and stone that are used in rail-related construction. The effect on local jobs, to take one ite m shown on the project map, that the ORDC has had with a budget that is roughly 80% less than it was in 1994 is remarkable, and a tribute to the staff and its resourcefulness and knowledge.

PUCO

The Public Utilities Commission of Ohio (PUCO) is involved in the oversight of the freight rail industry's operations, employee safety, and grade crossing safety. In concert with the ORDC, the PUCO tracks and identifies the most important locations for grade crossing warning device improvements. This process has been reviewed and improved over the years, and both agencies deserve a large share of the credit for the approximately **80% reduction in Ohio grade crossing crashes since the 1990s**. However, driver behavior continues to pose a troubling outcome. For almost a decade, 70% or more of the crashes are occurring where the state has funded the installation of active warning devices. That is, where a motorist is receiving a signal that a train is approaching, those are the same locations where as many as 85% of the crashes (56 out of 68) occurred in 2019. Ohio is not an outlier. The ORDC and PUCO, along with their partners like Ohio Operation Lifesaver, the state branch of the national grade crossing safety program, and the Federal Railroad Administration are all exploring reasons for these results and looking at ways to encourage motorists to exercise more caution as they approach grade crossings.

How Freight Rail Has Made Ohio "The Heart of It All"

Ohio has long been a crossroads of the national freight rail network. Due to Ohio's location, the intersection of major rail and highway corridors, and the institution of containerized freight, **major intermodal infrastructure investments have been made over the past two decades**, creating state of the art intermodal facilities where containers are moved by rail to locations where they can be offloaded and moved to the customer via special trailer pulled by a truck (and similarly for outbound shipments). Intermodal facilities connect Ohio to both coasts using major rail carriers. Intermodal is a growing and important part of the freight railroad business, serving both international as well as domestic customers, and it often involves more than one major railroad. In Ohio, both CSX and Norfolk Southern operate several intermodal facilities.

COVID and Rail

As the nation navigated the pandemic and its stresses on the economy, railroads continued to provide the necessary freight transportation to brings raw materials to factories and finished products to market.

Although the COVID-19 pandemic changed daily life on a global scale, **railroads still supplied uninterrupted service** to move the raw materials and finished goods they have always moved 24/7 across the country. As part of their business continuity plans, some railroads temporarily relocated crews and employees to locations of need, adjusting trip plans and transportation schedules, repositioning equipment and transitioning to backup facilities to continue business-critical operations. One of their main goals was to be ready for the pivot to recovery.

That **reliability of the freight rail industry** writ large was on display during the pandemic — and it most certainly will be front and center as the nation enters the recovery phase. As the economy recovers, freight railroads are playing a vital role serving customers large and small and that cut across almost all industrial sectors. One ORA member says its customers "are the drivers of every aspect of the American economy. From power to our homes, to chicken soup to cleaning supplies. More than ever, our customers and our country need us to deliver." Railroads play an especially important role in keeping supply chains flowing and keeping people in jobs. Our purpose, among other things, is to make a meaningful contribution to the economic growth and prosperity of the nations and communities we serve.

Highway-Rail Grade Crossings

Despite the critical role freight rail played moving needed products during the pandemic, most people only directly encounter the railroad industry when they are stopped by a train at a grade crossing. That is not the way we wish it were, but that is a fact. In Ohio, there are almost 5,800 public grade crossings over approximately 5,200 miles of railroad track. **That is more than one public crossing per mile of track**. As communities, vehicles, and freight rail traffic grow across Ohio, the activity around these intersections also grows. Trains cannot stop or start quickly and could not operate efficiently or affordably if they had to stop at crossings. Laws require motorists to stop, and motorists are encouraged to always exercise caution when approaching a grade crossing. Ohio, and the nation, has spent hundreds of millions of dollars supporting improvements at crossings where the factors recommend the installation of appropriate warning devices, either active or passive. **Railroads in Ohio annually commit millions maintaining these devices once they are installed.** It is a partnership that has seen a decrease in crossing crashes from almost 900 in the 1990s to 68 in 2019. As we look to the future projections of a 40% growth in rail freight, and as states look to the future investments needed for their transportation systems, **some states are beginning to implement permanent strategies** for building more bridges over or tunnels under railroad tracks. There is also hope that technology can help reduce wait times at grade crossings, and DriveOhio is leading a pilot program in Lima on this subject.

Looking Ahead

As the projections for freight transportation demand indicate significant growth ahead, this freight will need to move via a surface transportation mode at some point. Given Ohio's crossroads location and industrial economy, freight rail will be directly involved. Ohio continues to be an intermodal hub, and the intermodal network continues to change. Rail maintains an important role for economic development in Ohio. Demand exists for more access to the Ohio rail network, as well as more connections within the rail network. Due to unique characteristics of rail service in Ohio, rail usage within the state is particularly sensitive to changes in the freight marketplace, including those caused by legislative action. Local railroads in Ohio continue to face challenges, too, as the cost of maintaining rail infrastructure, like highway infrastructure, continues to grow. The support provided by the ORDC is a critical element for not only certain short line railroads' infrastructure improvements but also for the expansion of rail access to numerous Ohio businesses, as demonstrated by the ORDC project maps. Railroads will continue to partner with state and local economic development offices in support of growing the local economies where the railroads have made their investment, one that is neither easily made nor easily relocated. **Railroads are committed to Ohio's long-term economic success** through their own infrastructure investments. And like other businesses, **stability in our government actions is a critical component to that long-term success.**

In recent years, legislatures in many states, including Ohio, have seen **attempts to impose certain restrictions on the ability of railroads to utilize technology**, such as PTC, **to operate more safely and efficiently.** These attempts have generally been defeated. Federal agencies have also investigated and supported freight rail's position in these same subject areas, coming down on the side of allowing the further implementation of evidence-based technologies that deliver safety or efficiency improvements. Federal and state courts have upheld the federal pre-emption of state efforts to restrain rail operations or impose burdensome regulations that would interfere with interstate commerce.

Another subject of concern are challenges to railroads' private property rights. For example, last year in Ohio, two bills included language to eliminate railroads' ability to control the process by which other businesses obtain permission to access railroad property. **Railroad track infrastructure is carefully regulated by federal law**, and there are too many examples where catastrophe resulted because an excavator did not observe the railroads' rules for such activity. Such behavior puts at risk both the public safety, the safety of rail employees, and railroad infrastructure investments. Railroads have very publicly presented their processes for obtaining permission to access their property, and **we remain committed to meeting on a reasonable and timely basis the needs of such permits.**

Other issues of concern include the growing costs of maintaining grade crossing surfaces, exacerbated in some cases as previous General Assemblies have expanded overweight truck operations. Heavy vehicle impacts degrade crossing surfaces rapidly, and we have seen this effect in numerous locations. According to a recent Ohio Department of Transportation report commissioned by the previous General Assembly, overweight trucks operating under special ODOT permits are underpaying their damaging impacts on roads and bridges by approximately $50 million per year, nearly the same level of estimated underpayment contained in a 2009 ODOT review. That is a roughly half-billion-dollar subsidy to these most damaging vehicles over the past decade.

Railroads, as stated earlier, are like many businesses. We establish a business plan, make investments based on the needs of that plan, and depend on the stability of the decisions of governmental authorities and the service provided to customers to obtain a return on that investment. Costs associated with improvements to rail infrastructure can exceed the private benefits available to the railroad, and that is where other partners, including the public, can become involved. **Ohio's ability to participate in such projects is more limited than in some other states.** That is an opportunity for Ohio to consider in future budgets.

A long-term and ongoing program to build grade separations and reduce grade crossings is also a recommendation, recognizing the growth in freight, people, and vehicles will likely continue. ODOT is aware of this subject, and other states have created programs to address this concern.

Finally, the actions Ohio takes to support a thriving business climate are important to all Ohioans. The **investments made by railroads**, as stated earlier, **are long-term investments** and their eventual return is a bet on Ohio's success. Railroads have for many years bet on Ohio. We look forward to continuing our successful relationship with the many elements of Ohio's economy we serve and depend upon.

For further information on rail in Ohio, here is a link to the 2019 Ohio State Rail Plan –

https://rail.ohio.gov/wps/portal/gov/ordc/rail-in-ohio/resources/state-rail-plan

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