Railroads and Industrial Development

**Railroad Customer Considerations**: Customers want a variety of shipping options to get the best transportation service and price. Rail is generally less expensive than truck, but it is more expensive than water or pipeline movements. However, cost is only one factor that shippers consider. For many shippers, consistency and predictability are more important than overall transit times. Regardless of their reasons, there are many ways business can benefit from rail service.

- **Intermodal container or bulk transload facilities in their area**. This option is attractive to companies because they get some of the economic benefits of rail service without the costs of adding rail infrastructure to their site and with less disruption to their supply chains.

- **Direct rail service to the site**. Direct rail service is sometimes the only way to cost-effectively move goods. In these cases, business location decisions are driven by the ability to have direct rail service to their site. To maximize options, some large rail users seek out sites that are served by two Class 1 railroads. While this option appears to provide the greatest flexibility for companies, there are limitations. First, there are a limited number of industrial parks and individual sites that have direct service from both NS and CSX in Ohio. Additionally, railroads are less likely to offer incentives or invest in infrastructure because it would have to compete for future rail traffic. A short line served site can also create rail competition if the short line connects to multiple Class I railroads.

One of the biggest implements to direct rail service is the large, upfront capital cost. New customers are usually financially responsible for all railroad infrastructure needed to establish service to the site. These costs include the installation of a switch on the railroad line, the construction of new track (including grading and surface work) to the plant, and the purchase and installation of railroad unloading equipment. It is often cost effective to identify existing rail served buildings to eliminate many of these upfront costs.

Once constructed, rail infrastructure must be maintained. Care must be taken to ensure that the rate of return in shipping cost savings outweighs the initial investment and maintenance of the rail infrastructure.

**Railroad Considerations for Evaluating Potential New Customers**: A railroad requested to serve a particular plant or site has to consider many items before they can provide a quote or rate for service.

- **Local Crewing**: Does a local train crew already serve the area and does that crew have the capacity to meet the needs of the proposed new rail business? If for some reason the serving railroad has no local crew or require an additional crew to handle the new traffic, the costs of getting a new crew into the railroad operations would be primarily borne by the new rail user via the rate structure.

- **Mainline Sites**: If the plant or site is on a busy Class 1 mainline, there are two questions for the railroad to consider: 1) Can service be added without delaying overhead or through traffic using the mainline? and 2) What infrastructure will be needed to serve the new customer? Sites on mainlines may have higher capital costs because of the need to incorporate the new infrastructure into the railroad signal system or because more infrastructure is needed to keep the mainline clear for through traffic while serving the customer. (See page 4 for estimated costs of rail spurs.)
- **Branchline Sites:** For sites on secondary or branchlines, in addition to the train crew availability, the railroad will consider the length of the proposed service and the condition of the track. The costs of track repairs needed to serve a new customer are generally assigned to that new customer. The logistics of branchline operations are typically included in rate considerations.

- **Engineering Details:** The railroad must consider the physical characteristics of building the rail infrastructure. Some basic variables include:

  - **Curvature and Horizontal Constraints:** Railroads generally require any track be under 12 degrees of curvature. Any structure within 8 ft. of the center line of a track is a close clearance issue that railroads generally try to avoid for safety reasons. Railroads also avoid putting in turnouts on curved track.

  - **Utilities and Other Vertical Constraints:** Railroads have vertical design constraints. Overhead wires, pipelines or other structures that decrease vertical clearance can be an issue. Underground utilities such as gas and fiber optic lines can also be problematic. These issues can add significant cost to projects.

  - **Gradient:** Railroads generally require a grade of 2.5 percent or less for safety and operational reasons.

  - **Highway – Railroad Grade Crossings:** By state law, (ORC § 4957.30), if a new spur crosses a public roadway, the court of common pleas has to approve the new at-grade crossing. The time and cost of the court action as well as the cost of the crossing can be detrimental to the development of a site.

  - **Other considerations:** The railroad will also consider the proximity of the spur to other railroad lines, grade crossings, or other rail infrastructure which might impact the railroad signaling systems.

**Rail Traffic Issues:** The nature of the potential rail traffic to be carried is critical to a railroad’s evaluation of establishing new service. The railroad will need to determine which major inbound and outbound products can be moved cost-effectively by rail. It is a mistake to assume railroads never move anything short distances. Rail traffic issues considered include:

- **Origins and Destinations of Product to be Handled for Large Class I Railroads (NS and CSX):** The origins of rail movements are sometimes critical to a Class I railroad’s analysis. The railroad needs to determine the length of its haul and whether it can carry the traffic itself or if it needs to connect or “interchange” with another railroad(s) to reach the destination. For example, NS and CSX, two railroads that compete directly with each other, will look at whether the major supplier or customer for the new business opportunity is located on their railroad, on their competitor’s line, or on a friendly connecting railroad (e.g. western railroad or shortline) with whom they do not compete. These considerations could affect both the cost and timeliness of shipments.
- **Origins and Destinations for Short Line and Regional Railroads:** Due to the limited lengths of their systems, short lines generally need to interchange with a Class I partner to handle rail traffic. Many short line and regional railroads have connections to multiple Class Is as well as other shortlines. Shortlines with multiple connections are often neutral as to where the originating or terminating traffic is interchanged. In these situations the short line might be able to help the new customer seek the best rail costs by “shopping” the rail traffic across multiple competing connections.

- **Product Substitution:** While businesses typically have specific preferences for suppliers and customers, sometimes the railroad serving the new customer may also provide information on alternative suppliers or customers in order to originate and terminate the shipment on its own railroad and possibly save the new customer money due to lower overall rail costs.

**Railroad Incentives:** The most important “incentive” a railroad can provide is a competitive rate and good service. Railroads may also offer financial incentives or investment in infrastructure to attract business. Railroad incentives might take one or more of the forms below:

- **Take or Pay/Guaranteed Usage:** Often called “Take or Pay Agreements,” guaranteed usage agreements are commitments by the shipper to generate a designated number of carloads within a designated timeframe in return for the railroad investing in needed rail infrastructure such as a turn out or passing track. Failure to generate the designated number of cars results in the shipper paying a penalty to the railroad.

- **Rate Rebates:** A more common form of incentive is rebate or discount of a specific amount of money per carload generated by the customer. Rebates are easier for the railroad to offer because the customer assumes the risk of investing the capital up front and the railroad only pays the rebate if the rail traffic moves.

**Rail Served Site Considerations:** There are many variables that can make a site attractive or challenging for either the business desiring rail service or the railroad serving the site. Taking into consideration both the shipper and railroad perspectives, below are examples of attractive as well as challenging sites:

- **Attractive Sites**
  - On a signaled mainline with local crews serving a large rail user in the area, but located on an existing passing siding or industrial lead so local crews do not block the mainline to provide service.
  - On a short line with good track, excess capacity, frequent service, two or more connections to Class I operations, and near major Class I yards.

- **Challenging Sites**
  - On a signaled mainline with no industrial leads, no passing sidings, and no local crews serving the area.
  - On a short line with excess capacity, but with poor track, frequent derailments and poor connections to the Class I systems.
Rail Infrastructure Costs: While there are many variables that affect individual project costs, below are typical or “ballpark” cost estimates for rail infrastructure.

- **Track:** $175 per foot “ungraded” i.e. not including any earthwork, crossings, culverts, drainage, etc.

- **At Grade Crossing:** $60 to $120/ft. for new crossing surface; $200,000 and up per crossing. The cost increases when there are other railroad signals involved, e.g. nearby interlockings, other grade crossing signals, or interconnected highway signals.

- **Turnout on Mainline with Wayside Signals:** $200,000 minimum with added costs for culvert, drainage, earthwork, nearby grade crossing signals, or other nearby signal issues (e.g. near interlockings with side tracks or other tracks in the area).

- **Turnout on Branchline with No Wayside Signals:**
  - NS: $125,000 & up
  - CSX: $75,000 & up
  - Short Lines: $40,000 to $60,000 & up, depending on the railroad
Ohio’s Railroads

Ohio has approximately 5,300 route miles of freight railroad lines and several thousand more miles of double tracks, sidings, and rail yards. While Ohio has 39 different railroad companies operating in the State, the majority of Ohio’s rail route miles are served by two Class I Railroads. In addition, many of the smaller Class II and Class III regional and short line railroads have varying degrees of consolidated management and operations. Below is a list of the railroads serving Ohio.

Ohio’s Major Class I Railroads

CSX Transportation (CSXT)  Norfolk Southern Railroad (NS)
Canadian National (CN)

Ohio’s Class II and III Railroads

Genesee & Wyoming (Includes Former RailAmerica Railroads)
- Chicago, Ft. Wayne and Eastern (CFE)
- Central Railroad of Indiana (CIND)
- Columbus & Ohio River Railroad (CUOH)
- Indiana & Ohio Railway (IORY)
- Mahoning Valley Railway (MVRY)
- Ohio Central Railroad (OCHR)
- Ohio & Pennsylvania Railroad (OHPA)
- Ohio Southern Railroad (OSRR)
- Warren & Trumbull Railroad (WTRM)
- Youngstown and Austintown Railroad (YARR)

Wheeling & Lake Erie Railway
- Wheeling & Lake Erie Railway (WE)
- Akron, Barberton, Cluster Railway (AB)

RJ Corman Railroad
- RJ Corman Railroad (Cleveland) (RJCL)
- RJ Corman Railroad (Western) (RJCW)

OmniTRAX
- Newburgh & South Shore Railway (NSR)
- Northern Ohio & Western Railway (NOW)

Carload Express Family of Ohio Railroads
- Camp Chase Industrial Railroad (CCRA)
- Ohio Terminal Railway (OHIO)

Cleveland Commercial Railroad
- Cleveland Commercial Railroad (CCRL)
- Cleveland Harbor Belt Railroad (CHB)

Ann Arbor Railroad
- Ann Arbor Railroad (AA)
- Temperance Yard Corporation (TYC)

Indiana Eastern Railroad
- Indiana Eastern Railroad (IERR)
- Ohio South Central Railroad (OSCR)

Individual Ohio Railroads
- Akron Metro (AMETRO)
- Ashtabula, Carson, Jefferson Railroad (ACJR)
- Ashland Railway (ASRY)
- Arcelormittal Cleveland Works Railway (CWRO)
- Flats Industrial Railroad (FIRR)
- Indiana Eastern Railroad (IERR)
- Indiana Northeastern Railway (IN)
- Lake Terminal Railroad (LT)
- Napoleon, Defiance, & Western (ND&W)
- Nimishillan & Tuscarawas Railway (NTRY)
- Ohi-Rail Corporation (OHIC)
- Youngstown & Southeastern (YSRR)
Introduction to the Ohio Rail Development Commission

The Ohio Rail Development Commission (ORDC) was formed in 1994 by combining the Ohio Department of Transportation (ODOT) Division of Rail with the Ohio High Speed Rail Authority. By statute, ORDC is an independent commission within ODOT created to develop, promote, and support safe, adequate, and efficient rail service throughout the state. The board consists of Commissioners appointed by the Governor and General Assembly that represent a cross-section of citizens from business, railroads, and the public sector.

Grade Crossing Safety: ORDC uses Federal Highway Administration funds to improve at-grade highway-rail crossings throughout the state.

Railroad – Highway Coordination: ORDC has staff to assist ODOT in coordinating highway projects with railroads.

ORDC Economic Development Duties and Contacts: ORDC has two functions that can be useful to economic development professionals working on rail-related development projects.

1. ORDC will provide technical assistance in evaluating particular projects from a variety of perspectives such as:
   - partnering with a serving railroad;
   - reviewing the rail traffic flows and their probable value to the serving railroad;
   - researching intermodal or transloading options;
   - identifying any grade crossing safety issues that might be involved;
   - sharing information on how similar projects were addressed;
   - finding possible funding partners; and
   - helping with other rail related issues.

2. ORDC has a grant and loan fund that it uses to advance branchline rehabilitation and economic development projects. ORDC Staff will gladly discuss loan and grant funding for any rail related development project. Information Needs & Overview of Decision Factors for the Ohio Rail Development Commission (ORDC) Economic Development/Rail Spur Program, attached to the end of this document on page 8, describes the information ORDC needs to evaluate a proposed spur project as well as a matrix of the factors ORDC considers for making funding decisions.

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