

5.0 The Role of Ohio's Freight Rail System in Multimodal Transportation

Ohio's robust freight transportation assets and geographic location provide the state with the means to utilize multimodal and intermodal systems to move freight into, out of, and through the state. The terms multimodal and intermodal are in some cases used interchangeably, and can have several meanings depending on the context.

Multimodal transportation generally refers to a system whereby more than one modal option is available. The state's maritime, air freight, highway, and rail systems provide various multimodal options for the movement of both bulk and containerized commodities.

Intermodal transportation focuses on connecting different modes into a seamless transportation system through use of efficient transfer terminals. Intermodal freight transportation is usually associated with moving freight in intermodal containers or trailers by a combination of truck and rail, and depending on whether the movement is international or domestic, an ocean-going linkage. However, intermodal movements can also include non-containerized materials. To help distinguish these movements from the more common containerized intermodal movements, these will be referred to as transload operations and facilities.

5.1 Ohio's Role in US Freight Transportation Logistics

Freight logistics refers to the management and control of the flow of goods. Logistics activities include the organizing and planning of both the transport and warehousing of goods. The goal of freight logistics is to optimize the flow of goods through a network of transportation links and storage points. Objectives include minimizing transportation costs, travel times, and the time and amount of storage.

Ohio benefits from a large number of important intermodal linkages between rail, truck, and maritime modes of transportation. By virtue of its geographic location, proximity to markets and availability of transportation resources, the state is naturally an important intermodal hub. These three factors play a significant role in distribution center and modal transfer facility location decisions.

Ohio is not only one of the more populous states with a large economy, but it is also centrally located with proximity to large economic centers. **Exhibit 5-1** displays the level of GDP for each state as provided by the U.S. Bureau of Economic Analysis.

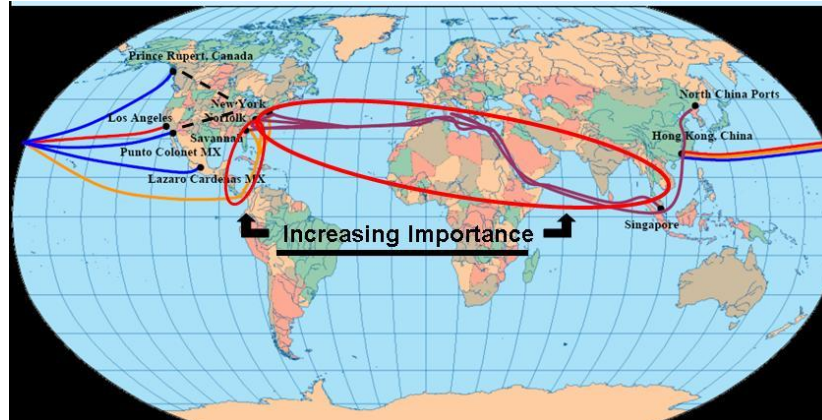
West Coast transportation congestion: First, port congestion on the West Coast and bottlenecks on the rail network connecting those ports to East Coast and Midwest markets had been driving ocean carriers to use alternative routes, such as the Suez Canal. Although less evident in 2008 and 2009 because of the decrease in container traffic through the Southern California ports, the Ports of Long Beach and Los Angeles face capacity constraints. During the last decade, both ports have made significant investments in terminal capacity expansion including on-dock rail facilities. In addition, improvements were made to road and rail infrastructure at the ports. Notwithstanding the investment in new or expanded facilities, both ports have recently suffered from significant congestion

Along with the ports, the railroads serving southern California have also experienced capacity problems. Although both BNSF and Union Pacific railroads have invested heavily in expanding capacity in its congested corridors connecting the Ports of Long Beach and Los Angeles to markets in the east, bottlenecks are still expected to occur in the future.

Increasing intermodal freight rates from West Coast ports: The movement of international containers from West Coast ports across the US to Midwest and Eastern markets via rail is commonly referred to as the intermodal land bridge. The increased demand for these railroad intermodal services, as well as high fuel costs, intermodal-related rail infrastructure investments, and increased port container fees related to the construction of the Alameda Corridor to address congestion, had resulted in significant increases in rail rates in recent years. Rail intermodal rates from the West Coast ports increased by 25 percent between July 2007 and July 2008 with increases up to 40 percent in some traffic lanes. The significant growth in intermodal prices has caused ocean carriers to divert Asia-originated traffic destined for the East Coast and Midwest from the intermodal land bridge to the Suez Canal all-water route.

Panama Canal Expansion: Historically the Panama Canal provided an all-water route for trans-Pacific traffic to reach the North American East Coast. However, as container ships increased in size and could not traverse the canal, it lost its importance in the container trades. To accommodate the larger ships and return the canal route to its former competitive status, the canal is undergoing reconstruction. Upon completion in 2014, the canal will be able to accommodate the large 12,000 TEU container ships. In addition, the capacity of the canal will be expanded permitting significantly more daily transits. Rather than containers relying on rail land bridge service across the US, the canal will provide an all water route.

Exhibit 5-2 International Trade Routes



Source: Wilbur Smith Associates generated using standard global base map, 2009

5.3 Intermodal Rail Freight Growth in Ohio

Ohio’s transportation and economic development agencies have long understood the potential for the state to take advantage of the expansion of free trade and the resulting impacts on transportation. The economic development potential of serving as a logistics and distribution hub is largely based on attracting new economy businesses. These businesses include the computer, biotech, telecommunications, medical, electronic, and other industrial businesses which are moving goods to the US from overseas manufacturing bases. These businesses favor intermodal movement of these goods because it is less expensive than trucking them over long distances.

In isolation, intermodal facilities are transfer facilities where containers are unloaded from long-haul trains to truck for delivery to their final destinations. The value of these facilities is their ability to grow into logistics and distribution hubs where major companies locate distribution facilities, or the goods contained in containers are assembled or further processed through value-added activities. According to the Ohio Department of Development, 580 major distribution-related projects were initiated in Ohio during the last six years. The projects resulted in \$3.3 billion in capital investment and 21,500 new jobs.

In 2006, the state sponsored the “Ohio Intermodal Rail Freight Growth Strategy Concept Study.” This study concluded that an intermodal rail freight growth strategy would help Ohio expand and develop its new economy industrial base, reduce the state’s dependence on trucking, and reduce Ohio’s vulnerability to transportation bottlenecks occurring in other states and regions outside of Ohio’s jurisdiction. A critical element of ensuring rail intermodal competitiveness is developing improved inland port connections to major ports, especially those located on the East Coast. This can be accomplished by improving those routes which most directly link Ohio to Atlantic ports to standards which accommodate intermodal movements most efficiently.

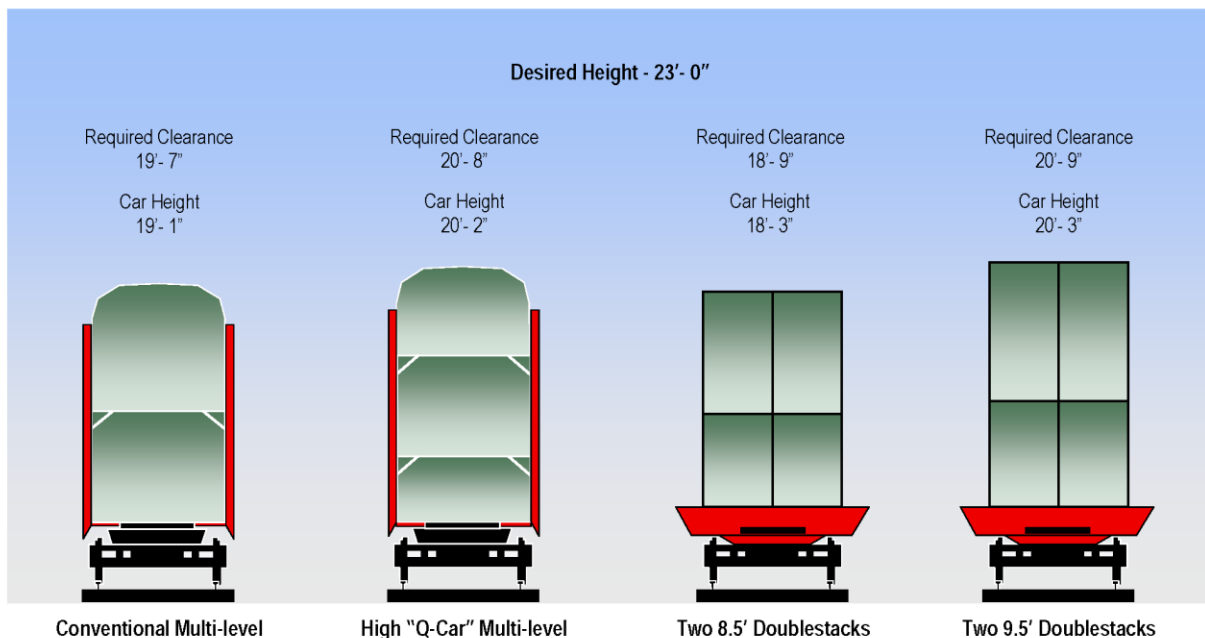
Intermodal freight transportation has been refined over the past decade to make movements efficient and reliable. State-of-the art intermodal equipment, such as double stack container cars, are essential to efficient intermodal movements. Use of this equipment requires adequate vertical clearances below bridges and through tunnels over an entire route’s length to ensure the most efficient intermodal movements possible.

5.4 Existing Rail Intermodal Clearances in Ohio

Exhibit 5-3 below shows the vertical clearances over rail lines necessary to accommodate modern double stack container and rail auto rack cars. Double stack trains require 20 feet 9 inches of vertical clearance to accommodate high-capacity containers. Certain automotive trains are also limited by current clearances on

many lines. According to information from Norfolk Southern, clearances of up to 20 feet 9 inches above the rail are necessary to safely meet the height requirements of modern intermodal cars together with an additional safety factor to allow for car sway and clearance changes due to track maintenance.

Exhibit 5-3 Clearance Requirements for Rail Intermodal Equipment

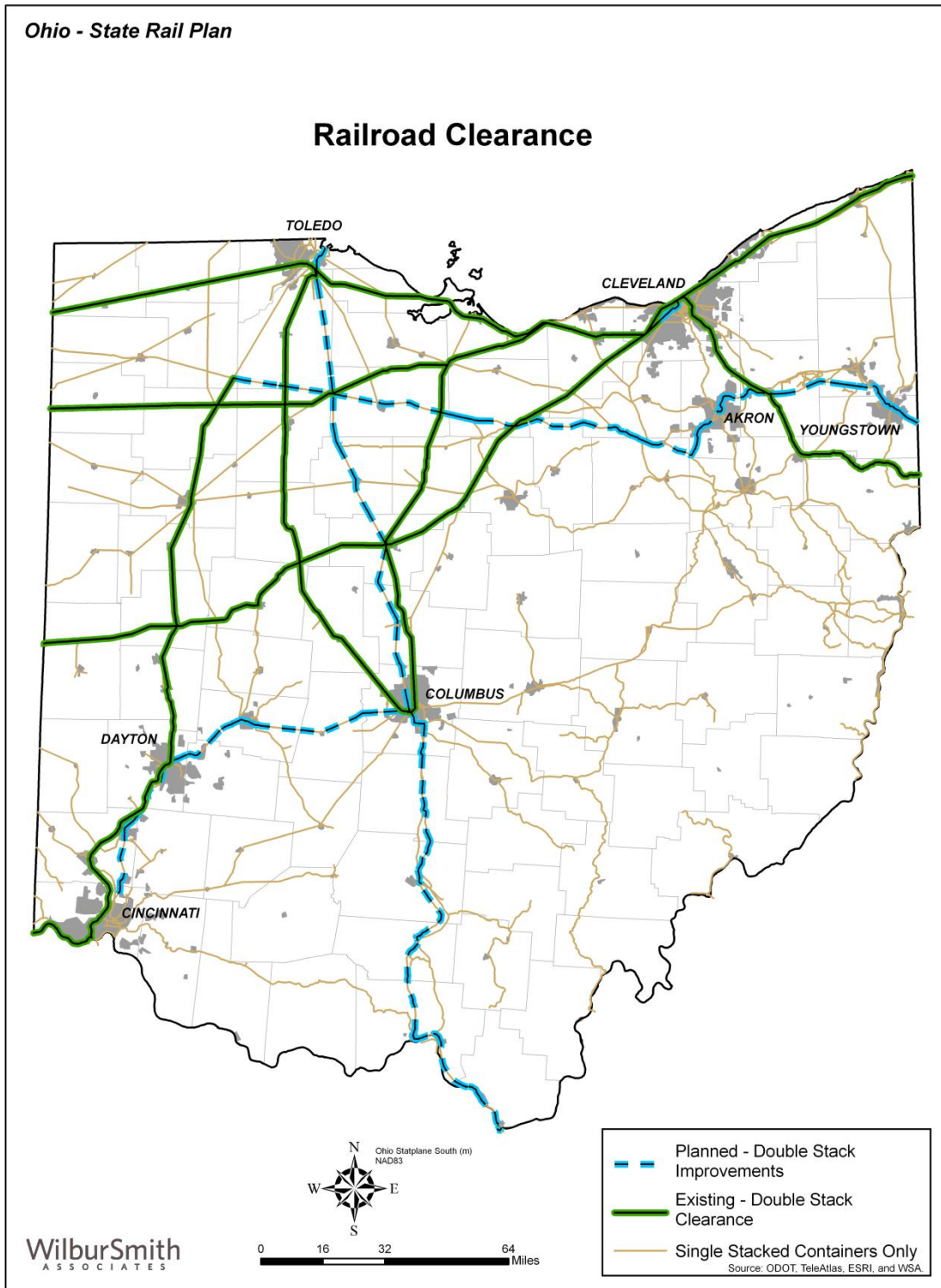


Source: Norfolk Southern Corporation

Existing full-clearance routes through Ohio include NS' Chicago Line through Cleveland and Toledo and CSX's routes between Cleveland and Indianapolis. These routes form key components of their respective intermodal networks connecting Chicago to Northeast markets and East Coast ports. Full-clearance routes between northern Ohio and Columbus provide intermodal routes for regional distribution from major facilities in the Columbus area.

Exhibit 5-4 displays the rail lines in Ohio which have adequate clearances to accommodate double stack containers. The map also displays those lines for which major initiatives are being undertaken on corridors to achieve double stack clearances.

Exhibit 5-4 Ohio Rail Clearances



5.5 Proposed Rail Intermodal Development in Ohio

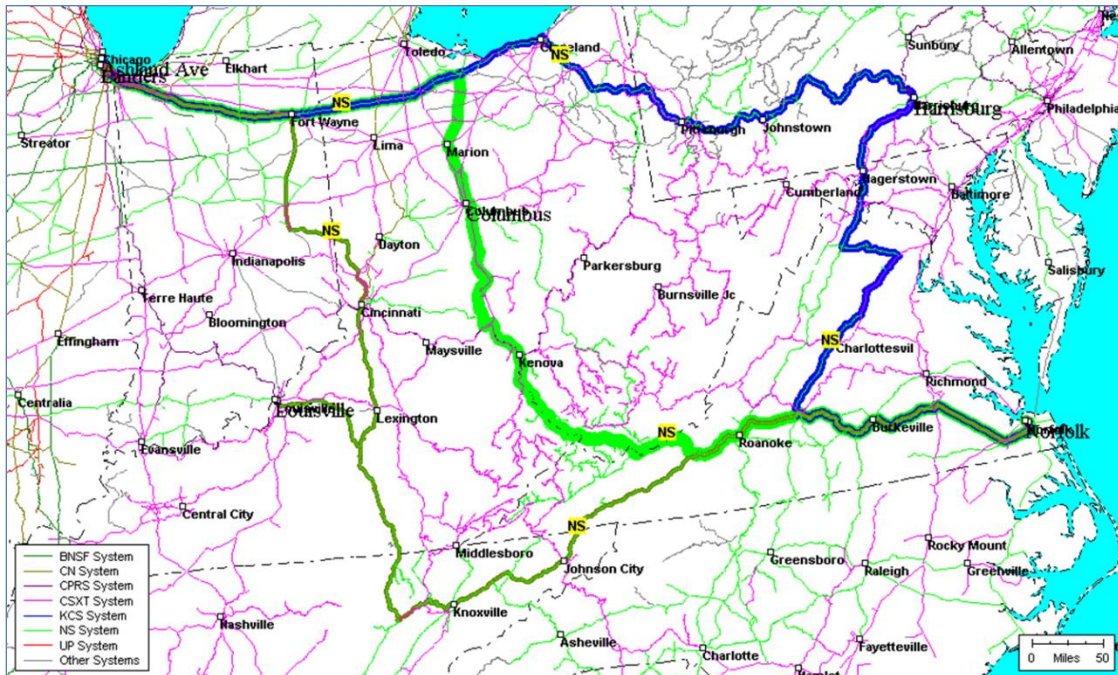
Ohio is a major focus of intermodal rail improvement projects by both NS and CSX. Since 2004 both railroads, in cooperation with states in the region, have embarked on projects to provide more direct and faster double stack routes between intermodal hubs in Ohio and major East Coast ports. The NS-sponsored Heartland Corridor project will eliminate clearance restrictions between the Port of Norfolk, VA to Columbus, the site of the newly constructed NS Rickenbacker Intermodal Facility. CSX’s National Gateway project will connect the Ports of Baltimore and New York/New Jersey to Chicago and its Ohio intermodal hubs, including a new facility at North Baltimore.

The following is a summary of each of these important rail intermodal initiatives:

5.5.1 Heartland Corridor Project

The Heartland Corridor is a public-private partnership initiative between NS, the U.S. Federal Highway Administration, and the states of Ohio and West Virginia and the Commonwealth of Virginia. The project will increase overhead clearances on NS’ mainline between Norfolk, VA and Columbus, OH and Columbus, OH to Cincinnati, OH. The increased clearance will allow NS to run double stack intermodal trains, which require 20’9” of clearance, over the line. **Exhibit 5-5** shows the Heartland Corridor route.

Exhibit 5-5 NS Corridor Improvement Projects – Heartland Corridor



Existing NS Route 
Heartland Corridor 

Source: NS website

The line improvements will reduce over 200 miles from NS’ current double-stack routing from the Norfolk area to Chicago. Currently, trains must follow a circuitous route either north through Harrisburg, PA or south through

Knoxville, TN. A total of 28 tunnels will be modified in addition to 26 other overhead obstructions. These other obstructions include slide fences, overhead bridges, and through truss bridges that will be modified, and three areas where overhead wires must be removed. The total project cost was \$151 million with \$95 million authorized in federal monies, \$9.75 million from the Commonwealth of Virginia Rail Enhancement Grant and \$836,355 from the state of Ohio for work performed within the state.

In conjunction with the \$151 million clearance project, additional funds have been made available for three new intermodal terminals: Roanoke, VA; Prichard, WV; and the Rickenbacker Terminal in Columbus, OH. The Rickenbacker terminal has been completed for a cost of \$68.5 million. The terminal was funded through \$27 million from the federal government and the balance from Norfolk Southern.⁶ The State of Ohio is currently working with NS to expand the Columbus to Cincinnati corridor for doublestack clearance. Total cost of the project is \$ 6.1 million with 3.6 million from the state, \$ 1.1 million from OKI and \$ 2.4 million from NS.

5.5.2 CSX National Gateway Project

Another important initiative impacting Ohio's intermodal system is the CSX National Gateway initiative. This is a plan to create a more efficient rail route linking Mid-Atlantic ports with Midwestern markets. Similar to the Heartland Corridor, a major component of this project is to accommodate rail lines for double-stack clearances. In the case of the National Gateway initiative, the plan focuses on three primary corridors:

- I-95 between North Carolina and Baltimore, MD via Washington, DC
- I-70/I-76 Corridor between Washington, DC and northwest Ohio via Pittsburgh, PA
- Carolina Corridor between Wilmington, NC and Charlotte, NC

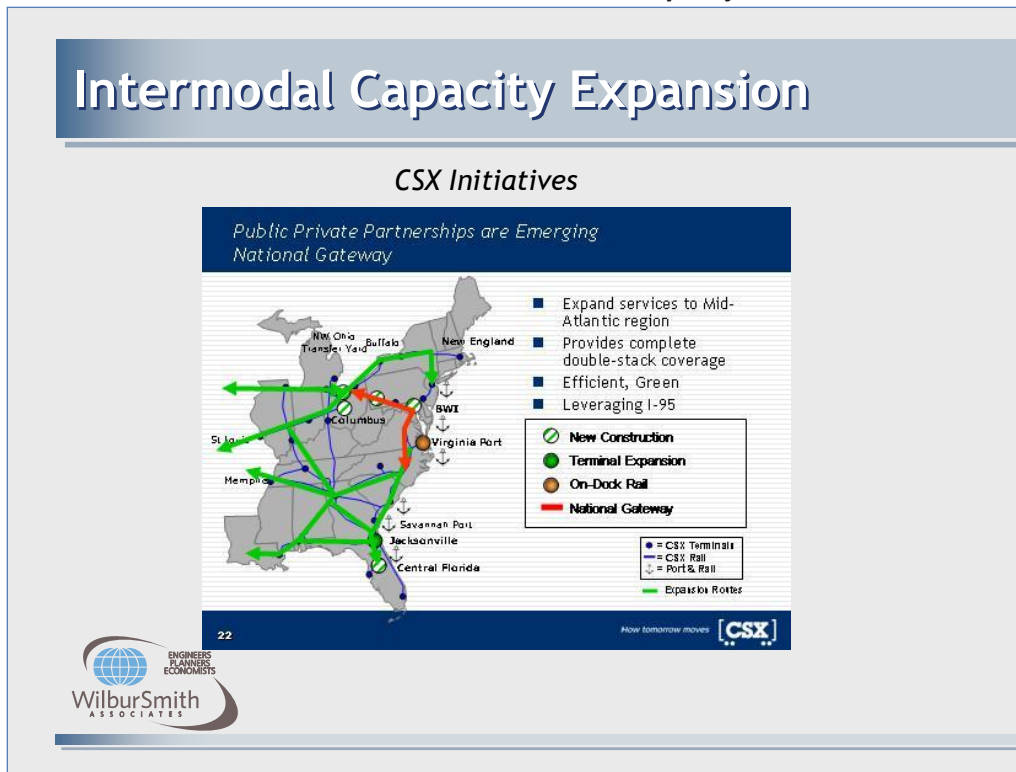
The most important primary corridor to Ohio is the I-70/I-76 corridor. The National Gateway initiative anticipates intermodal improvements that would link many of the major cities within Ohio, including Cincinnati, Toledo, Cleveland, and Columbus.

The National Gateway Corridor involves the construction of new intermodal ramps, as well as clearing routes for double stack trains. In August 2009, ground was broken for a new intermodal terminal in North Baltimore, OH. CSX affiliate, Evansville Western Railway, Inc. will construct and operate the 185 acre facility, which is projected to handle 630,000 containers annually and should be completed in 2011.

The State of Ohio as the lead applicant for a coalition of states including PA, WV, MD, & VA, in conjunction with CSX, sought \$258 million in federal assistance for the National Gateway project in the form of a TIGER grant. In February, 2010, USDOT announced a \$98 million TIGER award for the project for the first segment of the corridor from the new intermodal yard under construction at North Baltimore, Ohio to an existing intermodal yard in Chambersburg, PA. The states of Ohio and PA are collectively contributing \$65 million and CSX is contributing \$20 million to complete the segment.

⁶ Norfolk Southern Corporation web site, press release of March 3, 2008, "Intermodal Terminal Opens at Rickenbacker," *Columbus Messenger*, March 11, 2008.

Exhibit 5-6 CSX National Gateway Project



Source: Wilbur Smith Associates using CSX website

In addition to these major projects, another important intermodal initiative is the Airline Junction Rail Project in Lucas County. This would improve the NS intermodal ramp in Toledo, increasing its capacity to handle 60,000 lifts per year in contrast to the current 30,000. The estimated total cost of the project is \$12.3 million, of which \$6.5 million is being funded by ARRA, \$2.75 million by the Ohio Department of Development and City of Toledo, \$250,000 is coming from the Ohio Rail Development Commission Safety Funding, and \$2.8 million is coming from Norfolk Southern. The project would consist of a series of improvements to the existing intermodal yard, including the reactivation of a new approach, new sidings, and the extension of the existing intermodal ramp. These improvements are estimated to create 893 new jobs and a total additional annual payroll of \$25.6 million.⁷

5.6 Ohio Intermodal Container Terminals

The importance of Ohio as a distribution hub is underscored by the abundance of intermodal container terminals within the state. Ohio is home to twelve intermodal facilities as described in **Exhibit 5-7**.

⁷ "Airline Yard: Evaluating the Economic Impacts of Expanded Rail to Truck Intermodal Capacity in Northwest Ohio," University of Toledo Intermodal Transportation Institute, public meeting presentation, July 30, 2009.

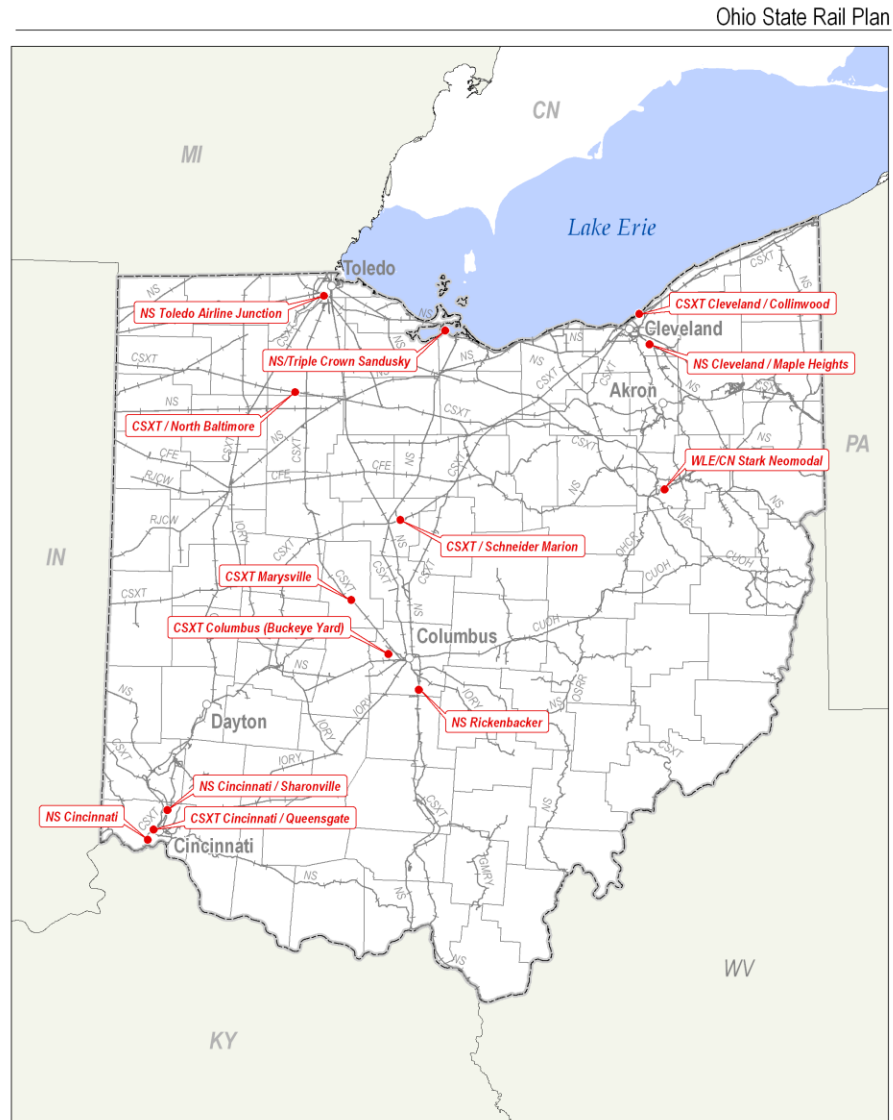
Exhibit 5-7 Intermodal Facilities in Ohio

Carrier	Name	Address	Capacity	Cities on train schedule	Remarks
CSX	Columbus (Buckeye Yard)	2351 West Belt Drive Columbus	67,000	Chicago, New York/New Jersey, Orlando, Miami, Jacksonville, Portsmouth, VA, Worcester, MA	
CSX	Marysville	20500 St. Rt. 739 Columbus	N/A	Chicago	Public facility located at Honda plant, 30 miles northwest of Columbus
CSX	Cleveland – Collinwood	601 East 152 nd Street Cleveland	17,000	Chicago, New York/New Jersey, Orlando, Miami, Jacksonville, Portsmouth, VA, Worcester, MA	
CSX	Cincinnati – Queensgate	2149 Western Ave. Cincinnati	N/A	Chicago, New York/New Jersey, Orlando, Miami, Jacksonville, Portsmouth, VA, Worcester, MA, Savannah	
CSX (North Baltimore		630,000	TBD	Scheduled completion - 2011
NS	Cincinnati	1400 Gest Street Cincinnati	N/A	Charleston, Chicago, Jacksonville, Miami, Savannah	
NS	Cincinnati – Sharonville	3155 E. Sharon Road Sharonville	N/A	Norfolk	
NS	Cleveland - Maple Heights	5300 Greenhurst Dr. Maple Heights	N/A	Chicago, New York/New Jersey, Norfolk/Portsmouth, VA	
NS	Toledo Airline Junction		30,000 exp. to 60,000 lifts	Ayer, MA, Buffalo, Chicago, New York/New Jersey	\$13M Airline Junction Project PPP
NS	Rickenbacker	3329 Thoroughbred Dr. Columbus	250,000 lifts initially, expandable to 400,000	Norfolk, Chicago, New York/New Jersey	Part of Heartland Corridor initiative, opened 3/3/08
NS/Triple Crown	Sandusky		N/A	Atlanta, Dallas/Ft. Worth, Bethlehem, PA, Harrisburg, Jacksonville, Minneapolis/St. Paul, Kansas City, St. Louis	Uses specialized bimodal trailers rather than conventional intermodal
CSXT/Schneider	Marion Intermodal Center	SR 309 Claridon Township	60,000 expanding to 100,000	Kansas City	Not marketed by CSX
WLE/CN	Stark Neomodal	Canton	Not available		No longer served by CN

Source: Carrier websites, Ohio Department of Transportation

Exhibit 5-8 presents a map of Ohio's truck/rail intermodal container facilities.

Exhibit 5-8 Truck/Rail Intermodal Container Terminals in Ohio



Source: Carrier websites, Ohio Department of Transportation, Ohio Rail Development Commission

5.7 Rail/Truck Bulk Transload Facilities in Ohio

In addition to the intermodal facilities described above which serve containerized goods, Ohio is home to numerous other truck/rail transfer facilities. These include bulk transload facilities, where either liquid or dry products are transferred between truck and rail. Other facilities enable the transfer of break-bulk goods. Break-bulk cargo entails goods which are packaged in small, separable units such as bags, bales, boxes, pallets, or drums.

The movement of bulk and break-bulk commodities is essential to the economy of Ohio as these goods comprise the major commodities moved in the state. Bulk commodities handled at these facilities include lumber, steel coils, plastic pellets and resins, aggregates, flour, and grains. These commodities are needed to support to support the manufacturing, construction, agricultural, food, and energy sectors of the economy, and the transportation of these commodities in the most operational and cost-efficient manner possible enables Ohio to remain competitive in these sectors of the economy.

Transload facilities provide a vital service to existing and potential rail customers. Public and private transload facilities enable shippers that do not have direct access to still benefit from the efficiencies of rail transportation. A number of transloading facilities also offer intermediate warehousing.

Several Ohio facilities have been identified by the U.S. Federal Highway Administration as being of **strategic importance**. In 2001 the FHWA completed the *NHS Intermodal Freight Connectors* study in order to identify those road segments that linked “major” intermodal facilities to the National Highway System. The FHWA applied a series of criteria to commercial aviation airports, ports, truck/rail facilities, pipeline heads, Amtrak stations, intercity bus stations, public transit stations, and ferries to identify which facilities are of the highest strategic importance. The FHWA designated intermodal facilities as “major” if at least 50 TEUs (twenty foot equivalent units) or 100 trucks per day were transferred at these facilities.

FHWA identified the following bulk/break-bulk transload facilities as having particular strategic significance:

- CSXT Bulk Intermodal Distribution System in Toledo
- Major Grain/Bulk Materials Terminal Operations in Toledo
- Interstate Terminal Warehouse in Cleveland
- Medina Supply Company & Stone Yard in Medina

Additional Ohio rail/truck transload facilities served by Class I railroads are shown in **Exhibit 5-9**.

Exhibit 5-9 Class I Railroad-Truck Transfer Facilities

Operator	Location	Facility Type					
		Bulk		Warehouse			Open Air
		Dry Bulk	Liquid Bulk	Steel	Food Grade	General	Open Air
ADS Logistics	Macedonia			X			
Advanced Warehousing	Columbus					X	
Amware Distribution Warehouse	Cleveland					X	
Cleveland Industrial Warehouse Corp.	Cleveland			X			X
Columbus Cold Storage	Columbus			X	X	X	
Dayton Synchronous Support Center	Dayton			X		X	
Findlay's Tall Timbers Distribution Center	Findlay			X		X	X
Findlay's Tall Timbers Distribution Center	Findlay			X		X	
Good's Rail/Truck Transfer	Camden, Franklin	X	X	X		X	X
Handl-it	Bedford Heights					X	
Handl-it	Cleveland			X			X
Handl-it	Euclid			X		X	X
Heinz North America	Toledo			X		X	
Heinz North America Total				X		X	
International Distribution Services	Macedonia			X			
Interstate Terminal Warehouse	Cleveland			X			X
Jonick and Company	Sheffield			X			X
Kuhlman Corporation	Maumee	X	X	X			
Mansfield Railport	Mansfield			X			
Mid-West Materials Incorporated	Perry			X			
Nordic Cold Storage	Columbus			X	X		
NS Thoroughbred Bulk Transfer Terminal	Cincinnati	X	X				
NS Thoroughbred Bulk Transfer Terminal	Cleveland	X	X				
NS Thoroughbred Bulk Transfer Terminal	Columbus	X	X				
NS Thoroughbred Bulk Transfer Terminal	Columbus	X	X				
NS Thoroughbred Bulk Transfer Terminal	Norwood	X	X				



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Operator	Location	Facility Type					
		Bulk		Warehouse			Open Air
		Dry Bulk	Liquid Bulk	Steel	Food Grade	General	Open Air
Peoples Cartage	Massillon	X	X	X		X	
Precision Strip Incorporated	Minster			X			
R. P. Sweeney Warehouse	Fremont			X		X	
SERVISTEEL	Sheffield			X			X
Spartan Logistics	Columbus			X		X	
Spartan Logistics	Toledo			X		X	
Taylor Distributing Co.	Evendale					X	
The Andersons Incorporated	Toledo	X					
United Steel Service	Masury			X			
Vogt Warehouse	Cincinnati					X	X
Warehouse Associates	Lima			X		X	X
Grand Total		9	8	25	2	17	10

Source: NS, CSXT web sites

5.8 Rail/Water Transfer Terminals

Port facilities served by rail also provide a cost-efficient means of moving heavy commodities between Ohio and both domestic and international markets. Water transportation is both economical and environmentally friendly and combined with rail provides transportation of these commodities with little or no impact on the state's highway system. The following is a summary of Ohio port facilities served by the state's rail system.

5.8.1 The Ohio River System

Ohio's rail network includes key intermodal connections with maritime facilities. Ohio benefits from port access to the Great Lakes/ St. Lawrence Seaway water system and the Ohio River system. A U.S. Army Corps of Engineers database of port facilities lists 144 river and lake terminals that have rail access. Of these, 75 are located on the Ohio River system with the remainder located on the Great Lakes or its tributaries.



Exhibit 5-10 Key Rail/Marine Connections in Ohio

Ohio State Rail Plan



5.8.2 Great Lakes System

Eighteen Great Lakes terminals served by rail are located the vicinity of Toledo and Lucas County, three of which are not currently operating. The terminals are used for a wide variety of goods, including petroleum products such as asphalt, grains, food products, and general goods. These facilities are listed in **Exhibit 5-11** below.

Exhibit 5-11 Toledo Area Operational Rail Served Lake Terminals

Terminal	Operator	Cargo handled	Rail Link
CSX Toledo Lakefront Ore Docks, TORCO Slip No. 1.	TORCO subsidiary of CSX	Iron ore pellets	CSX
CSX Toledo Lakefront Ore Docks, Slip No. 2.	CSX Transportation-Toledo Docks.	None identified	CSX
CSX Toledo Presque Isle Coal Docks, Slip No. 1.	CSX Transportation-Toledo Docks.	Coal and petroleum coke	CSX
CSX Toledo Presque Isle Coal Docks, Slip No. 2.	CSX Transportation-Toledo Docks.	Limestone, ore, and petroleum coke	CSX
CSX Toledo Presque Isle Coal Docks, Slip No. 3	CSX Transportation-Toledo Docks.	Mooring vessels; and bunkering vessels.	CSX
Toledo-Lucas County Port Authority, Facility No. 1 Wharf.	Midwest Terminals of Toledo Intl	General cargo, misc. dry-bulk materials, metal products, processed foods.	CSX
Kraft Foods Grain Terminal	Toledo Ship Repair Co.	Grain	NS
Seneca Petroleum Co., Edison Acme Station Slip.	Seneca Petroleum, Inc.	Asphalt	NS
ADM Countrymark, Toledo Elevator Wharf.	Archer Daniels Midland Co.	Grain	CSX
The Andersons, Toledo Edwin Drive Elevator Dock.	The Andersons, Inc.	Grain	NS
Kuhlman Corp., Upper Dock.	Kuhlman Corp.	Dry-bulk fertilizer, salt, stone, petroleum coke	NS
The Andersons, Toledo Kuhlman Drive Terminal Wharf.	The Andersons, Inc.	Grain; dry bulk and liquid fertilizer.	NS
City of Toledo, Salt Wharf.	City of Toledo, Department of Streets, Bridges, and Harbors.	Salt	NS
Arms/Criscione Grain Co. Wharf.	Arms Dock Co.; Criscione Grain Co., Inc.	Stone, salt, fertilizer, oats	NS
Clark Refining and Marketing Co. Wharf.	Clark Refining and Marketing Co.	Petroleum products.	NS

Source: U.S. Army Corps of Engineers/U.S. Bureau of Transportation Statistics

Cleveland, Ohio’s largest port city has 23 rail-served lake terminals, most of which are operational. Most of the Cleveland terminals are served by CSX or Norfolk Southern. **Exhibit 5-12** shows the rail port terminals in Cleveland operated by the Cleveland-Cuyahoga County Port Authority. These terminals process a mix of goods, including aluminum and iron ores, newsprint, and general goods.

Exhibit 5-12 Cleveland Rail Served Lake Terminals Operated by Port Authority

Terminal	Operator	Cargo handled	Rail Link
Cleveland-Cuyahoga County Port Authority, Pier No. 24.	Cleveland-Cuyahoga County Port Authority & Ceres Terminals Co.	General cargo; steel products; bulk fluorspar and bauxite, newsprint.	CSX
Cleveland-Cuyahoga County Port Authority, Stadium Wharf, Berth 28 West.	Cleveland-Cuyahoga County Port Authority.	General cargo in foreign trade; aluminum pigs; steel products; heavy-lift items.	CSX
Cleveland-Cuyahoga County Port Authority, Berth 22 East.	Cleveland-Cuyahoga County Port Authority & Federal Marine Terminals Co.	Misc dry bulk materials	CSX
Cleveland-Cuyahoga County Port Authority, Stadium Wharf, Berths 28, 30, and 32 North.	Cleveland-Cuyahoga County Port Authority & Federal Marine Terminals Co.	General cargo in foreign trade; receipt of aluminum pigs; handling steel products.	CSX
Cleveland-Cuyahoga County Port Authority, Stadium Wharf, Berth 32 East.	Cleveland-Cuyahoga County Port Authority and Federal Marine Terminals Co.	General cargo in foreign trade; aluminum pigs; steel products.	CSX
Cleveland-Cuyahoga County Port Authority, Dock No. 20.	Cleveland-Cuyahoga County Port Authority.	Miscellaneous bulk materials.	One surface track on apron; connect to NS

Source: U.S. Army Corps of Engineers/U.S. Bureau of Transportation Statistics

Exhibit 5-13 lists private terminals located in the Cleveland area, many of which serve the steel or food processing industry. The steel terminals are generally served by the River Terminal Railroad, which connects to the Norfolk Southern system.



Exhibit 5-13 Cleveland Rail Served Private Lake Terminals

Terminal	Operator	Cargo handled	Rail Link
Arcelor-Mittal Steel Corp., Cuyahoga Upper Dock East Side	Arcelor-Mittal Steel Corp.	Iron ore and other dry bulk commodities	River Terminal RR; connect to NS
Arcelor-Mittal Steel Corp., Cuyahoga West Side, Middle Dock	Arcelor-Mittal Steel Corp.	Iron ore pellets and limestone, ferrous scrap and fuel oil	Cuyahoga Valley RR; connect to NS
Arcelor-Mittal Steel Corp., Cuyahoga Fuel Oil Dock	Arcelor-Mittal Steel Corp.	Receipt of fuel oil for plant consumption	River Terminal Railway; connect with NS
Arcelor-Mittal Steel Corp., Cuyahoga Lower West Side Dock	Arcelor-Mittal Steel Corp.	Receipt of iron ore pellets and limestone by self-unloading vessels	River Terminal Railway; connect with NS
Lafarge Corps Construction Materials Group, Cleveland "J" Wharf	Lafarge Corp.	Limestone and other miscellaneous dry bulk materials	NS
Cargill Salt Division, Cleveland Mine Wharf	Cargill, Inc.	Graded dry bulk rock salt.	NS
Oglebay Norton Terminals, Inc., "C&P" Lakefront Wharf	Oglebay Norton Terminals, Inc.	Iron ore and other dry bulk commodities	NS
MARSULEX, Inc., Cleveland Wharf	Not operated.	Not used	NS
Cleveland-Cuyahoga County Port Authority, Dock No. 20	Cleveland-Cuyahoga County Port Authority.	Miscellaneous bulk materials.	One surface track on apron; connect to NS
Essroc Cement Dock	Essroc Italcementi Group.	Cement	NS
Cereal Food Processors, Cleveland Dock	Cereal Food Processors, Inc.	Wheat	NS
Mid-Continent Coal & Coke Co., Cleveland Dock	Mid-Continent Coal & Coke Co.	Coke breeze	NS
Forest City Enterprises Wharf	Great Lakes Towing Co.	Used for moorage	NS
The Osterland Co. Cleveland "South" Dock	The Osterland Co.	Limestone; other misc. dry bulk commodities	NS
Ontario Stone Corp., Cuyahoga River Dock No. 2	Ontario Stone Corp.	Receipt of limestone	NS

Terminal	Operator	Cargo handled	Rail Link
Fleet Supplies, Inc., Cuyahoga River Wharf	Fleet Supply, Inc.	Liquid calcium, diesel fuel and gasoline	NS
Marathon Ashland Petroleum LLC, Cleveland Asphalt Terminal Barge Wharf	Not operated	Not used	NS

Source: U.S. Army Corps of Engineers/U.S. Bureau of Transportation Statistics

The Port of Lorain is located to the west of Cleveland. Of the three terminals identified in Lorain, only two are currently in use. Both are oriented toward the needs of Republic Steel, handling iron ore and coke breeze. **Exhibit 5-14** shows the rail terminals in Lorain.

Exhibit 5-14 Lorain Area Rail-Lake Terminals

Terminal	Operator	Cargo handled	Rail Link
Lorain Pellet Terminal Wharf	Lorain Pellet Terminal Co.	Iron ore pellets	None identified
Republic Technologies International, Lorain Works, Coke Breeze Dock	Not operated	Not used	NS
Republic Technologies International, Lorain Works, Ore Dock	Republic Technologies International	Iron ore pellets; coke breeze	NS

Source: U.S. Army Corps of Engineers/U.S. Bureau of Transportation Statistics

Exhibit 5-15 shows the terminals currently in use in Fairport Harbor and Grand River. Two of these are oriented toward the steel industry. The third handles bulk salt.

Exhibit 5-15 Fairport Harbor & Grand River Area Rail Served Lake Terminals

Terminal	Operator	Cargo handled	Rail Link
Osborne Concrete & Stone Co., Fairport Harbor Dock	Osborne Concrete & Stone Co.	Sand and limestone	CSX (abandoned link)
Arcelor-Mittal Steel Co., Fairport Harbor Dock	Arcelor-Mittal Steel Co.	Limestone	CSX
Morton Salt Co., Fairport Harbor Dock	Morton Salt Co.	Bulk salt	CSX

Source: U.S. Army Corps of Engineers/U.S. Bureau of Transportation Statistics

The Ashtabula and Conneaut areas are located in the northeastern corner of the state, near Erie, PA. **Exhibit 5-16** shows the terminals identified in Ashtabula. **Exhibit 5-17** lists the terminals in Conneaut. Both the Ashtabula and Conneaut terminals generally handle mineral products needed for heavy manufacturing.



Exhibit 5-16 Ashtabula Area Rail Served Lake Terminals

Terminal	Operator	Cargo handled	Rail Link
Norfolk Southern Corp., Ashtabula Coal Dock	Norfolk Southern Corp.	Coal	NS, CSX
Norfolk Southern Corp., Ashtabula Dock No. 9	Norfolk Southern Corp.	Unidentified	NS, CSX
Pinney Dock & Transport Co., Ashtabula A & B Dock, Inner End	Pinney Dock & Transport Co.	Unidentified	NS, CSX
Great Lakes Towing Co., Ashtabula Dock	Great Lakes Towing Co.	Unidentified	NS, CSX
Pinney Dock & Transport Co., Ashtabula Union Dock, Inner End	Pinney Dock & Transport Co.	Unidentified	NS, CSX
Pinney Dock & Transport Co., Ashtabula Dock Nos. 1 and 2	Pinney Dock & Transport Co.	Sand, potash, quartz, limestone, and ore	NS, CSX
Pinney Dock & Transport Co., Ashtabula Dock No. 3	Pinney Dock & Transport Co.	Sand, potash, quartz, limestone, and ore	NS, CSX
Pinney Dock & Transport Co., Ashtabula Dock No. 4	Pinney Dock & Transport Co.	General cargo, ore, pig iron, lumber	NS, CSX
Pinney Dock & Transport Co., Ashtabula A & B Dock, Outer End	Pinney Dock & Transport Co.	Iron ore	NS, CSX
Pinney Dock & Transport Co., Ashtabula Union Dock, Outer End	Pinney Dock & Transport Co.	Iron ore pellets	NS, CSX

Source: U.S. Army Corps of Engineers/U.S. Bureau of Transportation Statistics

Exhibit 5-17 Conneaut Area Rail Served Lake Terminals

(Note: the Bessemer and Lake Erie Railroad, a subsidiary of CN serves Conneaut)

Terminal	Operator	Cargo handled	Rail Link
Pittsburgh & Conneaut Dock Co., Perry Dock	Not operated	Not used	Canadian National
Pittsburgh & Conneaut Dock Co., Dock No. 1	Pittsburgh & Conneaut Dock Co.	Stone, aggregate, bulk dolomite	Canadian National
Pittsburgh & Conneaut Dock Co., Dock No. 2	Not Operated	Not Used	Canadian National
Pittsburgh & Conneaut Dock Co., Dock No. 3	Pittsburgh & Conneaut Dock Co.	Coal	Canadian National
Pittsburgh & Conneaut Dock Co., Dock No. 1 Extension	Pittsburgh & Conneaut Dock Co.	Limestone	Canadian National
Pittsburgh & Conneaut Dock Co., Dock No. 4	Pittsburgh & Conneaut Dock Co.	Iron ore, limestone	Canadian National

Source: U.S. Army Corps of Engineers/U.S. Bureau of Transportation Statistics

Exhibit 5-18 shows the terminals in operation in the Sandusky-Huron area.

Exhibit 5-18 Sandusky-Huron Area Rail Served Lake Terminals

Terminal	Operator	Cargo handled	Rail Link
Peavey Co, Huron Elevator Wharf	Peavey Co.	Grain	NS
WLH Rentals, Huron Ore Dock Ore Wharf	Huron Ore Dock	Iron ore	Wheeling & Lake Erie Railway RR; connect to NS
WLH Rentals, Huron Ore Dock Mooring Wharf	Huron Ore Dock	Unidentified	Wheeling & Lake Erie Railway RR; connect to NS
Huron Lime Co., Stone Dock	Huron Lime Co.	Limestone	NS
Sandusky Dock Corp., Pier No. 3	Sandusky Dock Corp. subsidiary of NS	Coal	NS

Source: U.S. Army Corps of Engineers/U.S. Bureau of Transportation Statistics