

# **Chapter 14**

## **Efficient Freight Movement**



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### **EFFICIENT FREIGHT MOVEMENT**

The economic well-being of the OKI region depends in part upon the reliable and efficient movement of freight and goods between producers and markets. An efficient transportation system minimizes the time and costs involved in moving freight. The movement of freight-carrying vehicles of various modes also affects the amount of urban congestion and air and noise pollution. Problems or inefficiencies with the transportation system can significantly affect a region's overall economic vitality. Congested or deteriorating roads, for example, may slow truck travel, making delivery times longer and less reliable. This may force companies to maintain larger inventories that would increase their cost of doing business and eventually make them less competitive. This is especially true given the trend of many companies using the "just in time delivery" practice.

The OKI region is an important location in the nation's freight transportation network. The region includes major lines, hubs, and transfer points for all freight transport modes. Figure 14-1 shows the distribution of facilities in the region's freight transportation system. The following section describes each of the freight transport modes.

Given the importance of freight movement to the region's economy, OKI organized a committee to identify impediments to efficient freight movement. The Freight Transportation Advisory Committee was made up of representatives of all the freight transport modes in the region. The committee made recommendations designed to alleviate impediments to the efficient movement of freight.

#### **FREIGHT TRANSPORT MODES**

##### **Roadway Transport**

For moving foods produced or distributed in the region, private trucks and for-hire carriers are the primary mode of transport for market areas within 300 miles. Trucks are also used extensively for carrying goods produced from outside the region to local destinations or for moving them through the region to other markets. Because of its five interstate freeways, this region serves as a gateway for trucks with out-of-region destinations or passing through the region between markets.

Motor carriers provide the most flexible service of any transportation mode. Door-to-door service can be provided to almost all points. A large number of for-hire trucking companies have terminals scattered throughout the region. There are also many private companies that maintain their own fleets of trucks.

## **Rail Transport**

Railroads in the OKI region address both national and regional transportation needs. On the national level, the region serves as an important point for consolidating and rerouting rail freight. Regionally, the railroads provide the area with access to the national rail system for outgoing goods and a terminal for goods with local destinations. Rail sidings permit door-to-door service to many points, while other locations require an intermodal connection.

The north-south rail corridor, which passes through the region, has the most activity. Within this corridor, trains from two railroad companies, CSX and Norfolk Southern, have lines connecting Detroit, Michigan with Atlanta, Georgia; and one railroad, Indiana and Ohio, runs from Detroit to Cincinnati. The section of trackage with highest gross tonnage moved per year in the region is a 3.5 mile section of the CSX mainline in Cincinnati, which parallels the Mill Creek. This section of track carries approximately 100 million gross tons of freight per year. The Norfolk Southern right-of-way, which extends from Cincinnati to Chattanooga, Tennessee, is entirely owned by the City of Cincinnati and leased to Norfolk Southern for the operation of its trains.

Although not as busy as the north-south corridor, the east-west corridor is used by several trains that pass through the region on a daily basis. These trains have destinations to such cities as St. Louis, Missouri, and Newport News, Virginia.

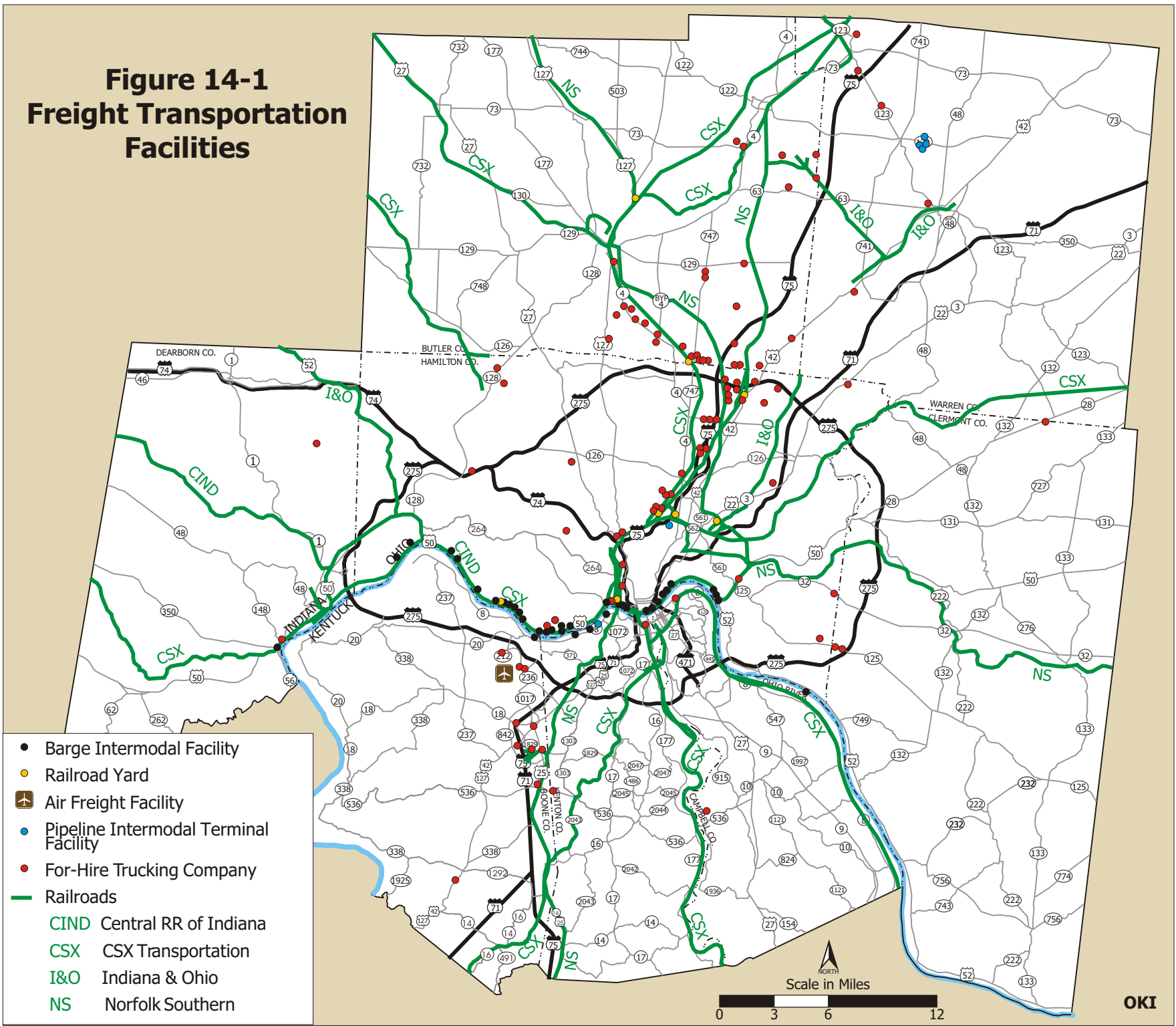
There are two truck-to-rail intermodal hub facilities in the region that are operated by CSX Transportation and Norfolk Southern. CSX's Queensgate Yard, which includes an intermodal facility and a classification yard for sorting freight cars for continued travel, can handle about 5,000 freight cars per day. This facility is one of the nation's largest classification railroad yards. Norfolk Southern's Gest Street Yard, located south of Queensgate Yard, is also a combination of an intermodal and classification facility.

## **Water Transport**

The Port of Cincinnati, defined as the 23 mile section of Ohio River between the Little Miami River and the Great Miami River, is used to move about 12 million tons of freight by barge each year. Of the 52 water terminal facilities along the Ohio and Licking Rivers, most serve intermodal purposes, with transfers between barge and rail, barge and truck, or barge and pipeline. The region's water terminals provide shippers access to all of the country's major river communities and the Gulf of Mexico. The region's river terminal facilities account for about 30 percent of Ohio's total river traffic.

Barge is the primary mover of goods produced in the OKI region to market areas within a 500 to 700 mile radius. It is the most energy efficient mode for carrying

**Figure 14-1  
Freight Transportation  
Facilities**



- Barge Intermodal Facility
- Railroad Yard
- ✈ Air Freight Facility
- Pipeline Intermodal Terminal Facility
- For-Hire Trucking Company
- Railroads
- CIND Central RR of Indiana
- CSX CSX Transportation
- I&O Indiana & Ohio
- NS Norfolk Southern

NORTH  
Scale in Miles



OKI

large quantities of bulk commodities. A typical barge can carry as much coal or grain as 15 rail cars for a little more than one-fourth the energy per ton-mile.

The number of barges in a tow ranges from four to 30, with the typical Ohio River tow consisting of 15 barges. Three barge types common to the Ohio River include open hopper, covered hopper, and tanker. Open hopper barges account for nearly 50 percent of the tonnage capacity on the waterway system and are used for all types of bulk, solid cargo. Covered hopper and tanker barges each provide about 25 percent of system tonnage capacity.

Barge facilities provide local industries an opportunity for the bulk shipment of dry or liquid commodities. Coal, which is one of the major commodities shipped by barge, is both transported through and consumed locally in the region. One important local coal user in the region is Cincinnati Gas and Electric (CG&E), a subsidiary of the Cinergy Corporation. Four CG&E power plants along the Ohio River consume over 10 million tons of coal annually, nearly 100 percent of which is transported via water. Other commodities such as chemicals, grains, construction materials, metals, salt for roads, and a variety of general freight items are brought into the region by barge for local consumption.

Unlike those goods that are produced or consumed in the OKI region, the majority of petroleum products are shipped to the area for storage and transfer to other regions. Approximately 29 percent of river barge traffic is involved in the transporting of a variety of fuels and lubricants.

### **Air Transport**

DHL Worldwide Express, a major air cargo company, uses the Cincinnati/Northern Kentucky International Airport as its hub. Nearly one million pounds of cargo are unloaded, sorted and reloaded onto DHL's fleet of planes each night, in a three-hour period, destined for all parts of the world.

Federal Express also has air cargo service to the Cincinnati/Northern Kentucky International Airport. One flight per night travels from Cincinnati to Memphis, Tennessee, which is a hub that connects with other cities in the Federal Express air cargo system.

Although their main function is to transport passengers, the major airlines also provide air cargo service on a limited basis at the Cincinnati/Northern Kentucky International Airport. Some of these provide contract carrier service for DHL to cities not in DHL's network.

DHL is in the process of constructing a new facility south of its present location. The new facility will have a larger terminal and there will be more ramp space for aircraft.

## **Pipeline Transport**

Pipelines are generally the lowest cost, highest volume, and least flexible mode of goods transport. Natural gas and petroleum products are the primary commodities delivered by a local pipeline distribution network. The BP Oil Company, Marathon Petroleum, and the TEPPCO Corporation have pipeline-to-truck terminal facilities in the region that receive petroleum products by pipeline for transport by truck to service stations within a 100 to 200 mile radius.

## **Intermodal Transport**

Freight intermodal transport is the movement of freight by at least two different modes. There are two basic types of intermodal transport: containerized and bulk. Containerized intermodal consists of truck trailers or containers that travel on a portion of their journey by highway and the remainder by rail. Truck-to-rail intermodal transfer facilities are located within CSX Transportation's Queensgate Yard and Norfolk Southern's Gest Street Yard in Cincinnati.

Bulk intermodal transport consists of the movement of material such as salt or grain by barge with a transfer to rail hopper cars or open hopper trucks. There are several bulk intermodal transfer stations located along the Ohio River.

OKI's *Looking Ahead: 2020 Metropolitan Transportation Plan* recommended three freight-related improvements:

- Widening and straightening of US 50 west of the Cincinnati Central Business District to improve access to the intermodal facilities
- Conduct a study that assesses future truck traffic impacts as a basis for improving freight transport
- Conduct a study to identify highway-railroad grade crossings that may warrant closing

Listed below is the current status of each recommendation.

The City of Cincinnati is in the process of widening and straightening US 50 between State Avenue and Fairbanks Avenue. US 50 has two lanes of through traffic in each direction, but the segment between Fairbanks and State Avenues within the City of Cincinnati is used for parking during off-peak hours and the lanes are narrow. This segment is particularly hazardous because coupled with the large number of trucks; the road has many horizontal curves. The road improvements should greatly improve safety on the segment.

Instead of undertaking a stand alone truck traffic study as recommended in the 2020 plan, truck traffic patterns through the region will be studied as part of a corridor study. I-75 is the most heavily traveled roadway in the region and carries the largest truck volumes. The North/South Transportation Initiative, an

ongoing corridor study, will identify methods to alleviate highway and rail congestion in the I-75 corridor. This corridor stretches from Miami County to the north and Boone County to the south. As part of its focus, it will identify the manner in which freight-carrying trucks use the transportation system, evaluate future truck traffic's potential impacts on the highway system, and investigate options for enhancing the efficiency of truck movements. Alternatives may include such things as dedicated truckways and/or exclusive truck lanes.

This plan recommends expanding the efforts of the North/South Initiative to address truck and rail freight issues regionwide.

Since the adoption of the 2020 plan, the Ohio Rail Development Commission has undertaken a program to close redundant, under-used, or dangerous grade crossings in Ohio. Likewise, the Kentucky Transportation Cabinet has a similar ongoing program. Therefore there is no specific recommendation for at grade rail and highway crossings in this plan.

This plan recommends continued monitoring and facilitation of the movement of freight in, around and through the region.

The importance of efficient movement of people and goods in the region is re-emphasized.

The plan recommends preservation, maintenance and improvement of freight and multimodal facilities in the region as well as access to those facilities.