



Technical Memorandum

Corridors Identification



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TRANSPORTATION**

January 2013

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1. INTRODUCTION

Ohio's multi-modal transportation network is owned, operated, and managed by a host of public and private transportation entities, including ODOT. As a "home rule" state, Ohio law provides counties, townships and municipalities the authority to develop and implement their own transportation plans. This creates challenges in preparing a statewide transportation plan with consistent goals, objectives and policies for every transportation asset within the state. In the development of Ohio's Statewide Long Range Transportation Plan, Access Ohio 2040 (AO40), ODOT will address these challenges by using a corridor approach to evaluate, rate and measure the performance of Ohio's aviation, bicycle, highway, maritime, rail, and transit transportation facilities. The focus of the corridor approach will be on the analysis of transportation corridors which move the highest volumes of passengers and freight and which connect population and employment centers inside Ohio and in adjacent states. The AO40 corridor analysis will provide a means to monitor and compare select measurable attributes on identified corridors in an effort to:

- **Guide** transportation investment strategies;
- **Inform** transportation investment decision makers of current system conditions; and
- **Support** economic development and stewardship in the state

The corridor approach will allow for a thorough and meaningful statewide analysis of transportation assets, while respecting home rule provisions that reserve local municipalities' role in developing and implementing local transportation plans.

2. CORRIDOR IDENTIFICATION AND CATEGORIZATION

In order to provide an unbiased corridor analysis, objective criteria were developed to identify and categorize corridors for each transportation mode. The criteria used to identify the corridors include:

- **Volume** - a measure of passenger and freight traffic
- **Classification** - federal or state designations
- **Connectivity** - a consideration of connections to other identified corridors or large population and employment centers

These criteria were established by ODOT staff through an iterative consultation process with stakeholders representing all modes of transportation throughout the state, and included the use of travel demand modeling and other studies. Four categories of corridors were defined as part of AO40:

- **National Corridors** - connect large metropolitan areas in Ohio and adjacent regions. These corridors support heavy passenger traffic and are important to the national economy as they carry large volumes of freight both inside and outside Ohio.
- **Statewide Primary Corridors** - connect metropolitan areas within Ohio. They are important to the statewide economy as they carry freight between regions of the state. These corridors have some national travel, but are predominately used for statewide passenger and freight trips.
- **Statewide Secondary Corridors** - connect people and goods within and between regions of the state. They have some national and statewide travel, but are predominantly used for smaller regional trips.

- **Local Corridors** - have lower traffic volumes and provide connectivity between other corridors and local destinations.

The criteria used to classify the corridors, as well as the process used to develop the criteria, is detailed in Section 3 for each transportation mode.

3. CORRIDOR CRITERIA BY TRANSPORTATION MODE

3.1 Aviation

Ohio’s system of 104 general aviation, reliever, and commercial airports provides a valuable transportation and economic asset to the people and businesses of Ohio. Airports serve a population within a defined geographic service area and will be analyzed based on those service areas. Airports were identified and categorized based on:

- **Classification** - a consideration of FAA airport classification¹

Table 3-1 provides a complete description of FAA airport classification.

Table 3-1 Aviation Service Area Criteria	
Category	Classification
National Service Area	<u>Commercial Service Airports and Cargo Service Airports</u> : have scheduled passenger flights or cargo flights with a total annual landed weight greater than 100 million pounds
Statewide Service Area	<u>Reliever Airports</u> : relieve congestion from commercial service airports
Local Service Area	General Aviation Airports

3.2 Bicycle

Before developing corridor identification criteria for bicycle facilities in the state, a network of future national and statewide bikeway corridors was proposed. These bikeways were chosen based on scoring criteria which favored off-road bike paths; roads with low vehicle volumes, wide shoulders, low speed limits and bike lanes; and the most direct path connecting population centers in excess of 50,000. Once a proposed system of bikeways was identified, objective criteria were developed to categorize the corridors based on:

- **Classification** - a consideration of whether a bike route is part of a designated bike route system
- **Connectivity** - a consideration of bike routes which connect to AASHTO bike routes or population centers over 50,000

¹ http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/categories/

Table 3-2 highlights the specific criteria used to categorize bikeway corridors.

Table 3-2: Bike Corridor Criteria		
Category	Classification	Connectivity
National Corridor	AASHTO US Bike Route System ²	Connect population centers, both in Ohio and surrounding states
Statewide Corridor	Ohio's Cross State Bike Route System	Connect Ohio US Census Designated Urban Areas that are 50,000 in population or greater
Local Corridor	To be determined by MPOs and statewide planning process	

3.3 Highway

Ohio's highway network includes over 123,000 centerline miles of roadway with more than 258,000 lane miles. In addition to moving millions of people every day, highways are an important economic driver that supports the movement of freight. Objective criteria were developed to identify and categorize highway corridors based on:

- **Daily Traffic Volume** - a measure of 2040 daily weighted traffic volume³ and/or truck volume
- **Connectivity** - a consideration of highway connections to other identified corridors or population centers over 50,000

Minimum traffic volume threshold values were derived to define the highway corridor categories based on the following:

- **National Corridors** – thresholds derived from six-lane or greater limited access facilities.
- **Statewide Primary Corridors** - thresholds derived from four-lane or greater limited or controlled access facilities.
- **Statewide Secondary Corridors** - thresholds derived from four-lane or greater facilities without access control.

Table 3-3 provides a complete description of traffic volume threshold values and other criteria which were used to categorize corridors

² <http://route.transportation.org/Pages/default.aspx>

³ To emphasize the importance of freight traffic, truck counts were tripled rather than using total traffic volume

Table 3-3: Highway Corridor Criteria		
Category	2040 Daily Traffic Volume	Connectivity
National Corridor	Weighted volume* of at least 50,000 or Truck volume of at least 10,000	Corridor length > 200 miles or Connects population centers of at least 200,000
Statewide Primary Corridor	Weighted volume* of at least 30,000 or Truck volume of at least 6,000	Corridor length > 100 miles or Connects population centers of at least 50,000
Statewide Secondary Corridor	Weighted volume* of at least 15,000 or Truck volume of at least 1,650	Corridor Length > 15 miles
Beltways and Connectors	Weighted volume* of at least 50,000	Connects two corridors within an urban area or Is a beltway for an urban area
Local Corridor	Any daily traffic volume	Any length

* Weighted volume = Passenger cars + (Trucks X 3)

3.4 Maritime

Goods movement via waterways is a cost effective means of transporting bulk commodities with the lowest marginal cost per ton-mile. The State of Ohio enjoys convenient access to two of the largest inland waterway systems in North America, designated by the USDOT as the M-70 Marine Highway Corridor (Ohio River) and the M-90 Marine Highway Corridor (Lake Erie)⁴. Objective criteria were developed to identify and categorize maritime corridors based on:

- **Volume** - a consideration of annual tonnage volumes
- **Connectivity** - a consideration of whether a waterway is part of, or connected to, one of America's Marine Highway Corridors

Minimum tonnage volume thresholds were developed based on typical characteristics for each corridor category. Table 3-4 provides a complete description of tonnage volume thresholds and connectivity criteria which were used to categorize corridors.

⁴ http://www.marad.dot.gov/ships_shipping_landing_page/mhi_home/mhi_home.htm

Table 3-4: Maritime Corridor Criteria		
Category	Tonnage Volumes	Connectivity
National Corridor	At least 25 Million Tons / Year	Part of America's Marine Highway Corridors
Statewide Corridor	At least 10 Million Tons / Year	Direct Connection to Federally Designated Maritime Highway System or A Navigable Freight Waterway* of at least 5 Miles

* Navigable Freight Waterway = A waterway capable of handling ships up to 740 ft. long and 78 ft. wide and a minimal channel depth of 20 ft.

3.5 Rail

Ohio has one of the most extensive and heavily utilized freight rail networks in the nation, with 35 railroads operating over 5,290 miles of track. Objective criteria were developed to identify and categorize freight rail corridors based on:

- **Volume** - a consideration of total freight volumes moved and the distance moved per track each year
- **Connectivity** - a consideration of railroad connections to and from designated activity centers or facilities

Minimum volume thresholds were developed to define the rail corridor categories based on the following:

- **National Corridors** – thresholds derived from typical volumes on long-haul service lines which carry multiple commodities and connect to national ports and intermodal facilities.
- **Statewide Primary Corridors** - thresholds derived from typical volumes on long haul or short haul (“short line”) service lines which carry two or three commodities and connect to Ohio ports and intermodal facilities.
- **Statewide Secondary Corridors** - thresholds derived from typical volumes on short haul service lines which carry a single commodity and connect to national or primary regional rail corridors.

Table 3-5 provides a complete description of tonnage volume threshold values and connectivity criteria which were used to categorize corridors.

Table 3-5: Rail Corridor Criteria		
Category	Volume	Connectivity
National Corridor	>=40 GTM*	1) Connect with ocean port; or 2) Connect with national rail gateways; or 3) Connect to major freight rail hub/population centers; or 4) Serve major intermodal terminals; or 5) Serve major classification yards; or 6) Connection with special generators
Statewide Primary Corridor	5 to 40 GTM*	1) Any of the above; or 2) Connects to Lake Port; or 3) Connects to River Port; or 4) Connects to a regional, out of state, freight hub/population center
Statewide Secondary Corridor	>=5 GTM*	1) Serves rail-dependent shippers; or 2) Serves potential future rail-dependent economic development

* GTM=Gross Ton Miles

3.6 Transit

Public transit provided more than 111 million trips in the 2011 fiscal year. Ohio’s transit network includes both local transit operators and intercity bus operators such as Greyhound, Megabus, and GoBus. Transit operators in Ohio service population areas and as such act as service areas rather than corridors. In developing the criteria for transit service areas, ODOT looked at the connectivity provided by the transit system.

- **Connectivity** - a consideration of transit service areas and the cities they connect

Table 3-6 provides a complete description of service area categories based on connectivity.

Table 3-6: Transit Service Area Criteria	
Category	Connectivity
National Service Areas	Connection to cities in Ohio and cities outside of Ohio
Statewide Service Areas	Connection to cities within Ohio
Local Service Areas	Service riders within a city or region ⁵

⁵ Please see the Passenger section, page X, for further information regarding regional transit services.

4. CORRIDOR ANALYSIS APPLICATIONS

As an agency, ODOT's goals are to:

- Provide the easy movement of people and goods from place to place
- Preserve and improve the performance of the existing transportation system
- Continually increase the safety of the existing transportation system
- Enhance the capacity of the transportation system

To advance statewide transportation improvements, ODOT has established separate funding programs within the agency, each of which are intended to focus on one or more of the above goals. All programs are provided an allocation of funding and managed by ODOT staff who are given a certain measure of discretion in how to select projects to fund with the allocation. **The corridor analysis will be used by program managers to help guide their discretionary decision making towards the advancement of their respective goal areas.**