Chapter 14

Corridor Studies
CHAPTER 14

CORRIDOR STUDIES

In large measure, the corridor study process focuses on how to do a better job of connecting the planning process with project development in a way that provides a better rationale and basis for sustaining those investments. The corridor study is a unique problem-solving tool that adds value to the planning process and leads to better decisions. It focuses on defining problems to be solved within a corridor or sub-area, and then builds a process to reach a consensus on appropriate solutions. The process focuses on building consensus by involving local communities and interests early and often. Local involvement includes identifying a broad range of alternatives and a comprehensive evaluation of those alternatives so decisions address problems, needs, and objectives. This evaluation includes consideration of multimodal alternatives such as transit and the roles of bicycle and pedestrian travel. It adds value by ensuring that a broad range of alternatives is considered and by offering an opportunity to streamline the overall planning and project development process. For the corridor process to work as intended, there must be strong collaborative working relationships among all interested agencies and a proactive public involvement program.

The corridor study provides a level playing field among all modes of transportation because it was conceived jointly by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The metropolitan planning regulations of October 1993 require a corridor study where there are high-cost and high-impact transportation alternatives being considered. Since a corridor study is a major undertaking and there are limited resources available to do these types of studies, it is important to carefully consider which projects are really appropriate for a corridor study. For that reason, when this transportation plan is next updated approximately three years from now, a determination must be made as to whether corridors recommended for future study should be maintained or dropped from further consideration and whether new corridors should be added.

The regional transportation plan identifies corridors and sub-areas needing major transportation improvements to be studied. The decision resulting from a corridor study may then be incorporated as an update to the plan. This, of course, is a federal requirement that also specifies that the plan be financially constrained and in conformity with the air quality requirement.
**COMPLETED CORRIDOR STUDIES**

Although the corridor study should emanate from the planning process, exceptions can occur. For example, ODOT had three existing projects that pre-dated the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), but new planning requirements compelled the state to conduct Major Investment Studies (MIS) which are presented herein as completed corridor studies. The locations of the three ODOT corridor studies as well as the OKI completed corridor studies are shown in Figure 14-1.

**I-75 Corridor, Phase I (completed by ODOT–1996)**
The I-75 study area extended from I-275 north to SR 63. ODOT embarked on the Phase I, I-75 study because of additional traffic expected from the construction of the Michael A. Fox Highway (SR 129) and the Allen Road Interchange. The study was completed by ODOT in late 1996.

The preferred alternative for Phase I of the I-75 corridor was a combination of improvements and strategies at a cost of $54,268,500 as described herein:

- Build an auxiliary lane in each direction of I-75 between I-275 and Cincinnati-Dayton Road and between SR 129 and Tylersville Road
- Expand bus service within the corridor
- Implement an expanded rideshare program
- Expand ARTIMIS to SR 63
- Implement an incident management program
- Coordinate the signal system of SR 747 and US 42
- Improve access management along SR 4, SR 747 and US 42

In 1999, Phase II, known as the North/South Transportation Initiative, was initiated by OKI in partnership with the Miami Valley Regional Planning Commission (MVRPC) and included the I-75 corridor from northern Kentucky through Dayton to the Miami County line. The recommendations from Phase I served as the base scenario for Phase II.

**I-71 Corridor, Phase I (completed by ODOT–1997)**
The I-71 Corridor study began in 1994 as an effort to evaluate the operations of the interstate and options to improve mobility in the corridor. The corridor is defined as the area within approximately one mile east and west of the interstate facility.

The boundaries of the study area were defined as SR 48 in Warren County to I-275 in northern Hamilton County. The study recommended that I-71 in Warren County be widened to four lanes in each direction between I-275 and SR 48.
Figure 14-1
Corridor Studies Completed by OKI

Legend
- Central Area Loop Study
- Eastern
- I-71
- Northeast Boone
- North South Transp. Initiative
- Northwest Butler
- Counties
- Interstate Highways

0 2 4 8 12 16
Miles
**I-275 East Corridor (completed by ODOT–1997)**

As with the two previously mentioned studies, this MIS was conducted by ODOT when the need for additional highway capacity was identified to alleviate existing and future congestion problems by the year 2010. Current and projected traffic volumes on I-275 resulted in unacceptable levels of congestion and delay.

The boundaries of the study area for I-275, as depicted in Figure 14-1, included Five Mile Road to the south and US 50 to the north. Additional routes, such as Eight Mile Road, Mt. Carmel-Tobasco Road, Glen Este-Withamsville Road, Beechwood Road, Summerside Road, and Tealtown Road were also included in the analysis to provide evaluation on a corridor scale.

The preferred alternative for the I-275 East Corridor was a combination of improvements and strategies at a cost of $91,568,300. The major recommendation was to add one lane in each direction on I-275 between US 50 and Five Mile Road. This roadway widening, at an estimated cost of $40,500,000, has been completed.

**Fort Washington Way (completed by OKI–1997)**

The Fort Washington Way section of I-71 along the central riverfront area of Cincinnati was studied as a sub-corridor within the I-71 Phase II corridor. The study of Ft. Washington Way, conducted separately but concurrently with the I-71 corridor study, was completed in January 1997.

At the request of the City of Cincinnati, the OKI Board of Trustees agreed in September 1995 to conduct an analysis of Fort Washington Way to determine whether to rebuild it as it is, modify it in some manner, or eliminate it altogether. The decision was made to redesign the facility. It became apparent that this major highway project would prove to be the keystone for a redevelopment of the Cincinnati riverfront.

The redesign of the facility not only improved the performance of the highway system but also did so on a smaller “footprint,” freeing up valuable real estate. Paul Brown Stadium, Great American Ballpark and the National Underground Railroad Freedom Center benefited from the additional land made available by the smaller Fort Washington Way footprint. A major storm water retention basin was also built into the project at the foot of the new Third Street. Staging areas for buses were also included below the new Second Street. The main line of the new facility was fully opened by the end of 2000.

This project was remarkable in terms of the amount of interagency coordination and communication required to make it possible. This major project went from concept to completion in an astounding five years.
I-71 Corridor, Phase II (completed by OKI–1997)

An MIS for the I-71 corridor was completed in order to improve mobility along the northeast corridor near I-71 and its neighboring areas. The Phase II I-71 Corridor extends from two points — Florence, Kentucky, and the Cincinnati/Northern Kentucky International Airport — north through Boone and Kenton counties; along I-71/I-75 into downtown Covington; through downtown Cincinnati, the University of Cincinnati/Medical Center area, the cities of Norwood, Silverton, and Blue Ash and several other Hamilton County cities; and terminates in southern Warren County at Kings Mills Road.

Light rail transit was identified as the preferred alternative to address the transportation goals established for the corridor including improving mobility, accessibility, the physical and social environment, economic development and air quality. The decision was made by the I-71 Oversight Committee by majority decision in March 1998 and adopted by the OKI Board of Trustees in April 1998. The Minimal Operable Segment (MOS) was identified as the area between 12th Street in Covington, Kentucky and approximately Cornell Road in Blue Ash, Ohio. The Preliminary Engineering and Draft Environmental Impact Statement (PE/DEIS) Report was submitted to the Federal Transit Administration (FTA) in July 2003. During the PE/DEIS portion of the study, the exact alignment and station locations and environmental impacts were evaluated.

Eastern Corridor (completed by OKI–1999)

Like the I-71 Corridor study, the Eastern Corridor study is an outgrowth of OKI’s 1993 Metropolitan Transportation Plan. The MIS phase of the study was completed in 1998 and the plan has now entered the PE/EIS phase. The PE/EIS is being conducted by the Hamilton County Transportation Improvement District (TID). The Eastern Corridor study area covers nearly 200 square miles in parts of Hamilton and Clermont Counties in Ohio and also part of Campbell County in Kentucky. The study area extends east from the Cincinnati Business District (CBD) to Milford, Batavia and Amelia and dips into northern Kentucky along I-275 and I-471.

The MIS study culminated in a plan that was recommended by the Eastern Corridor Task Force and was adopted on December 10, 1998 by OKI’s Board. Following consideration of public comments and group discussion, the Task Force, comprised of nearly 60 members representing 18 local governments in the corridor, recommended a multimodal plan with four categories of improvements:

- Highway improvements to preserve and expand the capacity of the roadway network
- Transportation System Management (TSM) to optimize the performance of existing roadway and bus transit investments and to expand pedestrian and bicycle facilities
• Expanded bus service to extend new routes in developed areas, including a busway
• Rail transit on existing infrastructure to establish new east-west transit service and connect major employment centers
• Preserve right-of-way along the existing Wasson rail line from the Xavier area to Fairfax for potential connection to the I-71 LRT

Northeast Boone County (completed by OKI–1999)
The Northeast Boone County MIS was initiated to explore possible transportation solutions in the vicinity of the Cincinnati/Northern Kentucky International Airport, a rapidly growing area experiencing high rates of traffic growth. The Northeast Boone County MIS was completed in September 1999. The top three projects, highway projects designed to improve mobility in the corridor, were added to the list of recommendations:

• Widening North Bend Road
• Improvements to the interchanges of KY 212 and Donaldson Road with I-275
• New South Airfield Road, which would skirt the eastern and southern airport property and connect Mineola Pike and KY 18

Central Area Loop Study (completed by OKI–2001)
The Central Area Loop Study examined the need for a loop circulator system to connect Cincinnati, Covington, and Newport; examined the traffic flow on Fourth and Fifth Streets in Covington and Newport; and investigated possible alignments for a light rail link from the proposed I-71 light rail line to the City of Newport. The boundaries of the Central Area Loop Study were I-75 on the west, the City of Newport’s eastern city line on the east (I-471), Central Parkway in Cincinnati on the north, and 12th Street in Covington and 11th Street in Newport on the south.

Following 18 months of analysis, the Advisory Committee developed recommendations designed to decrease traffic congestion and improve mobility to downtown Cincinnati, Covington and Newport. Recommendations were made regarding loop circulator service, streetcar, personal rapid transit, Fourth and Fifth Streets in Covington and Newport, the Veteran’s Memorial Bridge and a possible Newport Light Rail Spur.

Northwest Butler Transportation Study (completed by OKI–2003)
The Northwest Butler Transportation Study (NBTS) was an in-depth study of the transportation needs and possible solutions to transportation-related problems in a 125 square-mile area centered on US 27 and SR 73, spanning eight townships in northwest Butler County, Ohio. The purpose of this study was to determine a
recommended long-range strategic plan of implementable improvements for future transportation in the NBTS area.

The recommendations resulting from the NBTS study included:

- Upgrading key intersections and roadway sections (lane and shoulder widths)
- Re-aligning US 27 and SR 129 in Millville
- Widening US 27 to four lanes from SR 128 to Millville
- Expanding to a three-lane segment on US 27 between Minton Road and McGonigle and between Stillwell Beckett and Chestnut Roads
- Adding a two-lane connector between US 27 and SR 73 and between US 27 and SR 732 (south of Oxford)
- Consideration of re-routing US 27 over local roads

**North/South Transportation Initiative (completed by OKI - 2003)**
The North South Transportation Initiative, Phase II of the I-75 Corridor Study, was a major study of the I-75 highway and rail corridor. This major transportation system carries people and goods not only through the Cincinnati and Dayton regions, but also through six states. Following a three-year study, the study's Oversight Committee made recommendations for a preferred program of projects separated into three classifications:

- System modification alternatives – those projects that improve the overall flow of the interstate mainline, as well as improvements to parallel roadways.

- Access modification alternatives – those projects that address new or modified access points (interchanges) on the interstate. During the study, the access modification alternatives were prioritized and grouped into three categories according to their implementation timeframe.

- Corridor capacity alternatives – those projects both highway and transit, which are designed to increase the overall capacity of the interstate. They include:
  - Four continuous lanes on I-75 throughout the Ohio portion of the OKI region with an auxiliary lane to be added in areas of congestion
  - High frequency light rail and enhanced bus service
  - Study of multimodal freight movement. The study would examine improved freight connections, truck restrictions, and additional freight rail.
CORRIDOR STUDIES UNDERWAY
There are two ongoing corridor studies as shown in Figure 14-2. OKI is responsible for these studies as described herein.

Southwest Warren County Transportation Study
OKI recently undertook a study to identify the most effective alternative(s) for improving mobility in Warren County. The study will address the need for maintaining accessibility along major transportation corridors on the basis of the existing and future conditions. OKI’s effort will include responsibilities for coordination of both the technical and public involvement aspects of the study process. The study is expected to take two years to complete. The study area is bounded by I-75 to the west, SR 63 to the north, SR 48 to the east, and to the south along US 22/SR 3 to the county line.

Dixie Highway Corridor Study
The Dixie Highway Corridor Study will provide an analysis for improving traffic flow and safety along Dixie Highway, a major and heavily traveled urban arterial in Northern Kentucky between the Ohio River and Florence. The study will focus on the application of a coordinated adaptive signal system, incident management coordination with I-75/I-71 linkages with ARTIMIS and deployment of signal pre-emption by emergency vehicles. The study will also include conceptual design of intersections in need of improvements and segments requiring access management. These operational improvements are expected to increase traffic movement on this arterial.

RECOMMENDED CORRIDOR STUDIES
It is recommended that OKI conduct corridor studies for four areas as shown in Figure 14-2.

The studies that are to be conducted and their estimated costs are shown in Table 14-1. No priority has been set regarding the order of study execution.

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-275 South</td>
<td>$450,000</td>
</tr>
<tr>
<td>Southeastern</td>
<td>$750,000</td>
</tr>
<tr>
<td>Western</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Uptown</td>
<td>$1,875,000</td>
</tr>
<tr>
<td>Total</td>
<td>$4,075,000</td>
</tr>
</tbody>
</table>

OKI 2030 Regional Transportation Plan 2004 Update
Figure 14-2

Underway and Recommended Corridor Studies

Legend
- Dixie Highway
- Southwest Warren
- I-275 South
- Southeastern
- Uptown
- Western
- Counties
- Interstate Highways

Miles
I-275 South Corridor
The I-275 South Corridor is Northern Kentucky's primary east-west route. It runs from KY 212 at the Cincinnati/Northern Kentucky International Airport east to I-471. The I-275 South Corridor will continue to grow in response to economic development in Northern Kentucky, airport expansion, and new residential, office, and industrial development. This growth will place greater demand on I-275 and adjacent roadways.

Southeastern Corridor
The Southeastern Corridor connects the Cincinnati Central Business District (CBD) with Northern Kentucky University. This corridor contains I-471 and US 27, congested primary north-south access routes to Northern Kentucky University. I-471 is experiencing poor levels of service during the morning peak from St. Luke Hospital to north of the Ohio River bridge. US 27 is a principal arterial roadway serving the entire length of Campbell County and providing access to adjacent residential and commercial properties. Future expansion of these facilities will be difficult and costly. A rail transit line that connects the Cincinnati Central Business District with Northern Kentucky University would provide an alternative to highway travel. The railroad section of the L&N Bridge, which has not been used for railroad freight in many years, could be used for rail transit vehicles to cross the Ohio River. The availability of this structure could reduce right-of-way and construction costs if the bridge is found to be suitable for light rail. Structural analysis of the bridge is recommended.

Western Corridor
A local roadway network operating at or close to capacity serves most of the Western Corridor’s transportation needs. As shown in Figure 13-3, the Western Corridor lies entirely in southern Hamilton County just west of the Cincinnati Central Business District. Its local roadway network is sandwiched between roads outside of the corridor’s boundaries: I-74 to the north, US 50 to the south, and I-75 to the east. To the west, the roadway network and land are less developed, but are experiencing suburban residential growth. Various strategies will likely be required to effectively address transportation needs in the area. Special consideration will be given to computerized signalization and transportation system management improvements in the Glenway Avenue travelshed.

Uptown
The Uptown area of Cincinnati is one of the region’s leading economic generators with nearly 60,000 employees and 70,000 residents traveling through the area on a daily basis. This demand on the area’s aging transportation system is beginning to impact the quality of business and life in the area.

The purpose of this study is to identify transportation problems in the Uptown area and identify feasible solutions. The study will consider multimodal
approaches that will address congestion, safety, and connectivity issues with the nearby interstate highways while minimizing impacts on the human and natural environment. Because of the study area, and the possibility that new or revised interstate highway access may be part of a recommended solution, the study will be conducted in such a way as to develop and document the necessary information that will satisfy such a request.

The ODOT Project Development Process for Major Projects will provide the framework for the study. Scoping will be performed in order to gauge effectively the preparation of the environmental document and identify what will be covered and in what detail. There shall be an early and open process for determining the scope of issues to be addressed, including interviews with key stakeholders.

COUNTYWIDE TRANSPORTATION PLANS
In addition to Corridor Studies, OKI has been active in countywide transportation planning efforts in Kentucky and Indiana. Recently completed plans in Kenton and Campbell counties included:

- Recommended priorities for federal, state and county roadways and transit improvements
- An evaluation and inventory of the complete listing of roads the county is responsible to maintain
- A vision for a multimodal system that touches upon the full spectrum of transport modes compatible with and supportive of each county's land use plan

Concurrent with this planning update, similar plans in Dearborn and Boone counties are being prepared.