



# DRAFT Recommendations

June 2011

## Public Input on OKI Freight Plan

Review and input from OKI members, private freight stakeholders and members of the public is critical to both the timely completion of the OKI Regional Freight Plan in August 2011 and, more importantly, the creation of solutions that have broad local and regional support for future implementation. Comments may be submitted in writing to Robyn Bancroft, OKI Strategic Projects Manager at [rbancroft@oki.org](mailto:rbancroft@oki.org). In addition, OKI will also host a Freight Stakeholder Public Open House on June 30, 2011 from 4-6pm in the OKI Board Room located at 720 E. Pete Rose Way, Suite 420, Cincinnati, OH 45202. All comments are respectfully requested by noon EST on July 1, 2011.

**Contents**

Summary of Issues and Recommendations ..... 4

    Summary of Freight Issues ..... 4

    Structure of Recommendations ..... 5

    Evaluation Measures ..... 5

    Top Priorities ..... 15

Highway Freight Recommendations ..... 17

    Regional Truck Freight Mobility ..... 17

        ARTIMIS Freight Enhancements ..... 17

        Brent Spence Bridge ..... 18

        I-75 Mill Creek Expressway and Thru the Valley ..... 19

        I-471 Reconstruction ..... 19

    Local Truck Access Projects ..... 19

        Boone County, Kentucky ..... 20

        Butler County, Ohio ..... 20

        Campbell County, Kentucky ..... 22

        Clermont County, Ohio ..... 22

        Dearborn County, Indiana ..... 23

        Hamilton County, Ohio ..... 25

        Kenton County, Kentucky ..... 27

        Warren County, Ohio ..... 29

    Truck Freight Policy Recommendations ..... 31

        National Highway System (NHS) Intermodal Connectors and Facilities ..... 31

        Regional Express Truck Lanes Feasibility Study ..... 34

        Regional Truck Size and Weight Regulation ..... 35

        Truck Environmental ..... 36

Railroad Freight Recommendations ..... 38

    At-Grade Crossings: Safety Review and Improvements ..... 38

    Hopple Street Passing Track and Crossovers ..... 39

    Mill Creek Additional Track ..... 40

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Rail Corridor Banking .....	40
Railroad Economic Development Properties .....	39-41
Reading Road Grade Separation, Sharonville.....	42
Regional Private/Public Freight Rail Partnership .....	43
Western Hills Viaduct .....	45
Barge/Inland Waterway .....	46
Activate the Port of Greater Cincinnati Development Authority .....	46
Port Marketing.....	46
Port Access.....	47
Lock and Dam Funding Advocacy .....	47
Barge Terminal Site Development.....	48
Air Freight.....	49
CVG Air Cargo Park.....	49
Elements of Air Cargo Park.....	49
Examples of Similar Facilities.....	50
Potential Infrastructure Requirements.....	50

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## Summary of Issues and Recommendations

The Ohio-Kentucky-Indiana Regional Council of Governments' (OKI) regional freight planning process identified the key strengths and deficiencies of each mode of freight transportation in the OKI region. This draft document recommends projects and strategies to address deficiencies over the next 30 years. While freight mobility and connectivity are key metrics of these recommendations, economic development is at the heart of the plan: without adequate freight mobility, the regional economy will suffer.

### Summary of Freight Issues

Total freight volume moving into, out of, and through the OKI region is forecast to increase 54 percent by 2040. All freight modes are forecast to experience increases (trucking 62 percent, rail 38 percent, barge 5.5 percent and air 177 percent). With the freight system deficiencies that exist today, the region will not be able to efficiently handle freight demand, which will lead to shipping delays, increased shipping costs, and the worst of all possible scenarios—a possible loss of businesses from the region. The region also has unique freight transportation strengths, such as access to low-cost barge transportation, excellent interstate highway connections and an air cargo hub operation at the Cincinnati/Northern Kentucky International Airport (CVG). Following is a profile of regional freight issues, by mode:

- **Highway:** The region experiences significant peak hour congestion, which impacts the way in which freight flows. In addition there are acute infrastructure problems, most notably, the Brent Spence Bridge, which is functionally obsolete for the volume of traffic it carries.
- **Rail Freight:** The regional rail system has demand that exceeds capacity, especially north of the CSX Queensgate Yard, in the Mill Creek Valley. If freight rail capacity issues are not addressed, rail service to area industries will suffer, and rail traffic could potentially divert to trucks—increasing road congestion and polluting emissions.
- **Barge/Inland Waterway:** There is a good deal of capacity available on the inland waterway system and through the barge terminals in the region. Changes in the economic profile of the region have diminished the demand for barge transportation somewhat, yet given the lower cost and environmental benefits of water transportation, barge terminals should be a larger part of the region's transportation strategy.
- **Air Cargo:** The region is well served as the North American Hub for DHL, which provides jobs for the area and 40 percent of the landing fees at CVG. However, the volume of domestic cargo has declined due to the reduction in passenger service and switch to regional jet aircraft, which have less room for "belly cargo."

Growing the OKI region's economy will require—and result in—more freight traffic on highways, railroads, barge terminals and airports. By planning for freight growth with these

recommendations, the OKI region is both accommodating the forecast in freight movement and providing a platform for regional economic development while reducing negative impacts on local communities.

### Structure of Recommendations

It is the intent that this document will be incorporated into a comprehensive OKI Regional Freight Plan (Plan). Prior sections or chapters of the Plan will precede these recommendations and will detail the entire planning development process, data collection, data analysis, and identification of key strengths and deficiencies of each freight transportation mode. As each recommendation is presented in this document, the problem statement has been greatly summarized due to the fact that prior Plan chapters will have presented the issues in depth. Focus here is placed on the recommended improvement or strategy that is needed to address specific deficiencies.

Following a short text summary, capital cost estimates for each of the recommendations are developed based on existing studies, data from similar projects, or planning level cost estimates. It is important to note that to date no engineering analysis has been performed for most of the recommendations, so cost estimates are at a conceptual planning level and provide the best estimates given current understanding of the issue and data available. Cost estimates are provided in 2011 year dollars.

The timing for each recommendation in this document is categorized as “immediate,” “mid term,” or “long term” depending on the criticality of the freight system deficiency, and the recommendation’s contribution to OKI’s freight transportation goals. “Immediate” is defined as zero-five years, “mid term” as five-10 years and “long term” as anything over 10 years.

### Evaluation Measures

The recommendations in this document will work to remedy freight deficiencies to keep the region competitive in the future, and build on the region’s freight transportation assets as a driver of economic development. All recommendations were evaluated to contribute to one or more of these freight-related goals:

- **Mobility and Intermodal Connectivity:** projects which improve freight mobility by reducing congestion or developing better connections between modes of transportation in the region.
- **Economic Vitality:** projects which promote economic development by providing freight connections for new and expanded businesses or lowering shipping costs for businesses in the region.

- Environment and Public Health: projects which improve air quality or reduce energy consumption.
- Safety and Security: projects which improve safety, such as those which address high crash rates; also projects which reduce hazards, such as a railroad grade separation; and projects that address freight system security, including hazardous material spills, and natural or human disasters.
- System Preservation and Condition: projects which improve or preserve the condition of existing freight infrastructure, including deficient railroad track, deficient bridges, or highway pavement which is heavily distressed by truck traffic.

Each of the freight project and policy recommendations was evaluated based on the above goals. The evaluation results are presented in the charts that follow. For summary and comparison purposes, the recommendation's potential, positive impact on each of the five goals was measured using a rating of "high = +++, "medium = ++," or "low = +."

## Highway Freight Recommendations

Page #	Name of Recommendation	Mobility and Intermodal Connectivity	Economic Vitality	Environment and Public Health	Safety and Security	System Preservation and Condition	Recommendation Timing (Immediate; Mid Term; Long Term)
<b>Regional Truck Freight Mobility</b>							
16	ARTIMIS Freight Enhancements	+++	++	+++	++	n/a	Immediate
17	Brent Spence Bridge	+++	+++	+++	+++	+++	Immediate
18	I-75 Mill Creek Expressway and Thru the Valley	+++	+++	++	+++	+++	Immediate
18	I-471 Reconstruction	+++	+++	++	++	+++	Immediate
<b>Local Truck Access Projects</b>							
<b>BOONE COUNTY, KENTUCKY</b>							
19	Gunpowder Road Improvement	+++	++	++	++	+	Long Term
19	I-71/I-75 Richwood and Mt. Zion Interchanges	+++	+++	++	+++	++	Mid Term
<b>BUTLER COUNTY, OHIO</b>							
19	Hamilton-Mason Road Mouse Hole	+++	+++	++	+++	++	Immediate
20	Cincinnati-Dayton Road Mouse Hole	++	++	+	++	+	Mid Term
20	Kyles Station Road Mouse Hole	++	++	+	++	+	Long Term

## Highway Freight Recommendations

Page #	Name of Recommendation	Mobility and Intermodal Connectivity	Economic Vitality	Environment and Public Health	Safety and Security	System Preservation and Condition	Recommendation Timing (Immediate; Mid Term; Long Term)
20	Princeton Road Mouse Hole	++	++	+	++	+	Long Term
20	Hamilton-Mason Road Grade Separation	+	+++	+	+	+	Mid Term
21	I-75/Union Centre Boulevard Interchange	+++	+++	++	++	+	Long Term
<b>CAMPBELL COUNTY, KENTUCKY</b>							
21	US 27 Improvements	+++	+++	+	+++	++	Long Term
<b>CLERMONT COUNTY, OHIO</b>							
21	SR 125/Ohio Pike Access Management	+++	++	+	+++	+	Long Term
22	US 50/Roundbottom Rd Intersection	++	+	+	++	++	Mid Term
22	US 50/SR 132/SR 276 Intersection	++	+	+	++	+	Mid Term
22	US 50/SR 222 Intersection	++	+	+	++	+	Long Term
<b>DEARBORN COUNTY, INDIANA</b>							
22	South SR 1 Corridor Improvement	++	+	++	++	+	Mid Term

## Highway Freight Recommendations

Page #	Name of Recommendation	Mobility and Intermodal Connectivity	Economic Vitality	Environment and Public Health	Safety and Security	System Preservation and Condition	Recommendation Timing (Immediate; Mid Term; Long Term)
23	SR 1 Intersection Improvements	+	+	+	+++	+	Immediate
23	SR 1 Truck Climbing Lane	+	+	+	+++	+	Immediate
23	US 50/State Line Road Intersection	++	+	+	+++	++	Immediate
<b>HAMILTON COUNTY, OHIO</b>							
24	Ancor Connector	+++	+++	+	+++	+	Mid to Long Term
24	Governor's Way/Union Cemetery Road Intersection	++	+	+	++	++	Mid Term
24	Heavy Truck Load Pavement and Bridge Repair	+	+	+	+++	+++	Mid Term
25	New Ohio River Crossing Future Study	+++	+++	+	+	+	Long Term

## Highway Freight Recommendations

Page #	Name of Recommendation	Mobility and Intermodal Connectivity	Economic Vitality	Environment and Public Health	Safety and Security	System Preservation and Condition	Recommendation Timing (Immediate; Mid Term; Long Term)
25	Sharon Road/Medallion Drive Intersection	++	++	+	+++	+++	Immediate
<b>KENTON COUNTY, KENTUCKY</b>							
26	Grand Avenue Improvement, Taylor Mill	+++	+++	++	+++	+++	Immediate
26	KY 16/KY 17 Intersection	++	+	+	++	++	Long Term
26	KY 536 Road Improvements	+++	+++	+	++	++	Mid Term
27	Mary Grubbs Highway Extension	+++	+++	+	+	+	Mid Term
27	Ritte's Corner	+++	+	+	+++	+++	Immediate
28	Truck Access South of I-275	+++	++	+	++	+	Long Term
<b>WARREN COUNTY, OHIO</b>							

## Highway Freight Recommendations

Page #	Name of Recommendation	Mobility and Intermodal Connectivity	Economic Vitality	Environment and Public Health	Safety and Security	System Preservation and Condition	Recommendation Timing (Immediate; Mid Term; Long Term)
28	Columbia Road Improvement and Kings Island Drive Extension	+++	+++	+	+	+	Immediate
29	Gateway Boulevard Extension	++	+++	+	+	+	Long Term
29	King Avenue/Grandin Road Horizontal Curve Correction	++	++	+	++	+++	Immediate
29	New Connector Road	++	++	+	++	++	Immediate
29	SR 123 Improvements	++	++	+	+	++	Long Term
30	Turtlecreek Road Bridge and Intersection	++	++	+	++	++	Immediate
30	Union Road Improvements	++	++	+	+	++	Long Term
Truck Freight Policy Recommendations							
30	National Highway System Intermodal Connectors and Facilities	+++	+++	+	++	++	Immediate

## Highway Freight Recommendations

Page #	Name of Recommendation	Mobility and Intermodal Connectivity	Economic Vitality	Environment and Public Health	Safety and Security	System Preservation and Condition	Recommendation Timing (Immediate; Mid Term; Long Term)
32	Regional Express Truck Lanes Feasibility Study	+++	+++	++	+++	++	Immediate
33	Regional Truck Size and Weight Regulation	++	++	+	++	+++	Immediate
35	Truck Environmental	+	++	+++	+	+	Mid Term

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### Railroad Recommendations

Page #	Name of Recommendation	Mobility and Intermodal Connectivity	Economic Vitality	Environment and Public Health	Safety and Security	System Preservation and Condition	Recommendation Timing (Short/Immediate; Mid/Medium; Long Term)
36	At-Grade Crossing: Safety Review and Improvements	+	+	+	+++	+	Immediate
37	Hopple Street Passing Track and Crossovers	+++	+++	++	+	+	Immediate
38	Mill Creek Additional Track	+++	+++	++	+	+	Mid Term
38	Rail Corridor Banking	++	++	+	+	+++	Mid Term
39	Railroad Economic Development Properties	++	+++	+	+	++	Mid Term
40	Reading Road Grade Separation, Sharonville	+++	+++	+++	+++	+++	Immediate
41	Regional Private/Public Freight Rail Partnership	+++	+++	+++	+++	+++	Immediate
43	Western Hills Viaduct	+++	+++	++	+	+	Long Term

### Barge/Inland Waterway

Page #	Name of Recommendation	Mobility and Intermodal Connectivity	Economic Vitality	Environment and Public Health	Safety and Security	System Preservation and Condition	Recommendation Timing (Short/Immediate; Mid/Medium; Long Term)
44	Port of Greater Cincinnati Development Authority	+++	+++	++	+	+++	Immediate
44	Port Marketing	++	+++	+	+	++	Immediate
45	Port Access	+++	+++	++	+	+	Immediate
45	Lock and Dam Funding Advocacy	++	++	+	++	+++	Immediate
46	Barge Terminal Site Development	++	+++	+	+	+	Immediate

### Air Freight

Page #	Name of Recommendation	Mobility and Intermodal Connectivity	Economic Vitality	Environment and Public Health	Safety and Security	System Preservation and Condition	Recommendation Timing (Short/Immediate; Mid/Medium; Long Term)
47	CVG Air Cargo Park	+++	+++	++	+	+	Immediate

## Top Priorities

The freight transportation needs for the OKI region are immense and have resulted in a large number of recommendations presented in this document. For each recommendation, there exists a clear, definable need. However, given the overwhelming amount of need, it became clear to OKI that those recommendations having the greatest potential impact on the entire region must be highlighted. The list below summarizes the top regional freight priority recommendations. These top priorities are supported regionally as immediate projects meaning they are required to address deficiencies in the freight transportation network that exist today. These top priorities are also the recommendations that would have the highest impact in addressing each of the plan's six strategic goals.

The Brent Spence Bridge is the sine qua non of any freight, transportation or economic development plan. As such, it stands alone in importance. However, this should not diminish the critical need for other projects that are needed to address the region's freight needs. In fact, the Brent Spence Bridge without these other improvements will not deliver a freight network that will be competitive in coming decades.

The following lists the priority freight recommendations for the region (listed in alphabetical order only):

- **Activate the Port of Greater Cincinnati Development Authority, \$250,000 annually**
- **ARTIMIS Freight Enhancements, \$1,388,000**
- **Brent Spence Bridge, \$2,300,000,000**
- **CVG Air Cargo Park, \$50,000,000**
- **Grand Avenue Improvement, \$4,500,000**
- **Hamilton-Mason Road/Rail Underpass Widening and Reconstruction, \$12,000,000**
- **Hopple Street Passing Track and Crossovers, \$8,000,000-\$10,000,000**
- **I-75 Mill Creek Expressway and Thru the Valley, \$644,900,000**
- **I-471 Reconstruction, \$48,230,000**
- **Reading Road Grade Separation, Sharonville, \$25,000,000**
- **Regional Private/Public Freight Rail Partnership, \$200,000 annually**
- **South SR 1 Intersection Improvements, \$3,000,000**

**Total estimated cost of top regional freight priority recommendations, \$3,101,268,000**

Each of these recommendations is discussed in more detail in the sections that follow along with all other recommendations for the region. The recommendations continue to be presented in this document by alphabetical order and freight mode (highway, rail, barge/inland waterway and air).

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## Highway Freight Recommendations

Trucks handle almost 60 percent of the region's freight transportation today. Truck volume—as measured in the volume of trucks and the miles they drive—is forecast to increase three percent annually over the next 30 years. At this rate, truck travel in the region will double in just 24 years. To accommodate this growth in trucking, the following projects were identified.

### Regional Truck Freight Mobility

#### ARTIMIS Freight Enhancements

Interviews with regional trucking companies showed that dynamic messaging signs are very popular, however many interviewees felt they are placed too close to the point of congestion, to allow for trucks to take alternative routes. It was suggested that the location of dynamic message signs be reviewed and potentially moved or additional signs introduced at new sites to make them more useful for the trucking industry.

The Ohio Department of Transportation (ODOT) is evaluating less costly Destination Dynamic Message Signs (DDMS), with wireless communications, which could be efficiently located at more places on the regional freeway system. As most ARTIMIS dynamic message signs are nearing 20 years of age, identifying cost effective replacement signs is imperative.

Current ARTIMIS message signs in the OKI region are concentrated on north-south traffic movements along the I-71 and I-75 corridors and connecting roadways. Regional growth and traffic patterns require more message signs on western and eastern approaches to the region, with these four locations as the highest priority:

- Clermont County: SR 32, westbound, approaching I-275
- Dearborn County: I-74 eastbound, approaching I-275 (before the SR 1 interchange)
- Western Hamilton County: I-275 westbound, one mile before the interchange with SR 126
- Western Hamilton County: I-275 eastbound, one mile before the interchange with I-74

The locations above call for large dynamic message signs, mounted on a truss over the roadway. The cost for such a sign is approximately \$350,000. ODOT's pilot s DDMS are smaller, ground-mounted, roadside signs that cost approximately \$23,000 each. These smaller signs provide more direct information on travel time to a specific destination, and their lower cost will allow installation of more signs, such as around the I-275 outerbelt.

Cost: \$1,388,000 (estimate of \$347,000 per location, based on overhead, LED dynamic message sign at four locations, and five DDMS, at \$23,000 each, on the I-275 outerbelt)

Timing: Immediate

Implementing Agencies: ODOT, KYTC and INDOT

### Brent Spence Bridge

OKI's top regional transportation priority is the replacement of the Brent Spence Bridge on the busiest freight corridor in the nation. The Brent Spence Bridge is old and experiences twice the number of vehicles as it was designed to carry. Daily backups from congestion on the bridge can extend more than three miles. These concerns have led to this project being considered a top priority by the Kentucky Transportation Cabinet (KYTC), ODOT, OKI and the cities of Covington, Kentucky and Cincinnati, Ohio.

The Brent Spence Bridge carries I-71/75 over the Ohio River and is substandard from a capacity standpoint for the traffic it carries today. Opened in 1963, the bridge was designed to carry 80,000 vehicles per day, but currently handles 150,000 – 30,300 of which are trucks. The United States Department of Transportation National Bridge Inventory lists the Brent Spence Bridge as functionally obsolete due to the capacity, sight distance, and safety concerns associated with its current configuration.

From a freight standpoint, the OKI region would cease to function if the Brent Spence Bridge fails. While freight traffic can now back up because of congestion on the bridge, a failure of the structure would be catastrophic.

The only alternate highway routes to the Brent Spence Bridge are I-275 and I-471. These routes and their connecting roadways are not constructed to handle the large increase in vehicular traffic that would be diverted. The result would be gridlock for truck freight, adding time and increasing costs for shippers. The inability to adequately serve freight traffic would have deleterious effects on business, employment and regional income.

A project to replace the Brent Spence Bridge is under development by the KYTC and ODOT. The goals of the project are to improve traffic flow, improve safety, correct geometric deficiencies, and enhance connection to key regional and national transportation corridors. While the environmental process is not yet complete, the project is projected to entail construction of a new I-71/75 bridge adjacent to the existing Brent Spence Bridge, with the existing bridge converted to handle local traffic movement.

Cost: \$2.3 billion (Source: OKI 2030 Regional Transportation Plan-Amendment 6, February 2011)

Timing: Immediate

Implementing Agencies: KYTC and ODOT

### I-75 Mill Creek Expressway and Thru the Valley

The I-75 corridor is undergoing significant reconstruction, which will improve conditions in this major north-south truck corridor. While a large portion of I-75 between the Brent Spence Bridge and I-275 currently experiences congestion, the entire corridor is expected to have Level of Service “F” by 2030 if improvements are not made. Some of the I-75 improvement projects are currently underway while others are slated for funding and construction in ODOT’s Transportation Review Advisory Council process. Improvements along the I-75 corridor include adding a fourth through lane and fifth auxiliary lane where warranted, to correct congestion and safety issues. In addition, every interchange along the corridor is slated for some type of improvement based on an existing condition such as; poor turning radii (Hopple Street/Martin Luther King Drive), limited access (Shepherd Lane/Mangham Drive) or underutilization and benefit to overall corridor flow (Towne Boulevard).

Cost: \$644.9 million

Timing: Immediate

Implementing Agency: ODOT

### I-471 Reconstruction

The I-471 corridor forms one of northern Kentucky’s major north-south transportation spines. Within its nine miles, I-471 connects or traverses with US 27 (Alexandria Pike and Monmouth Street), I-275, KY 8, and KY 9 (Licking Pike and AA Highway). I-471 accommodates travel volumes of close to 100,000 total vehicles a day, 10 percent of which are trucks (Source: OKI, 2006). With future improvements planned for the I-75 corridor and Brent Spence Bridge, even greater emphasis is placed on the need to maintain and improve I-471 to handle the additional volumes of diverted passenger and freight traffic. In accordance with the OKI I-471 Corridor Study (October 2008), this recommendation would include consideration of bus on shoulders/express bus service, ramp monitoring and metering, resurfacing and potential lane additions.

Cost: Ramp Metering: \$1,369,000; Bus on Shoulders: \$246,000; Reconstruction: \$25,000,000; Potential Lane Additions: \$10,000,000 (if done in coordination with reconstruction)

Timing: Immediate

Implementing Agency: KYTC

### Local Truck Access Projects

Through outreach with local officials, a number of issues with truck traffic were identified that cause congestion, safety and pavement condition issues. None of these local roads will experience the truck volume of the Brent Spence Bridge, yet existing freight issues for these communities will only exacerbate when truck volume increases as forecast over the next 30 years. These local roads

are often referred to as the “last mile” in the freight distribution network, where congestion, geometric deficiencies, overhead bridge clearances, and pavement condition can all hamper efficient freight transportation. This freight plan recommends that the following highway improvements be evaluated and programmed with local public sponsors. Locations on the federal aid highway system would be eligible for federal funds through the states or through OKI. The region can accommodate these projects as part of OKI’s long range planning process, and fund them through a combination of (1) existing allocation of federal-aid highway funds; (2) federal freight funding (being discussed as part of transportation reauthorization proposals); and (3) local matching funds. Project recommendations are organized alphabetically by jurisdiction.

### **Boone County, Kentucky**

#### ***Gunpowder Road Improvement***

Looking ahead at truck volumes and freight demands, a long term project for Boone County entails an improvement of Gunpowder Road from US 42/127 to Mt. Zion Road. North of US 42/127, Gunpowder Road is KY 237. Improvements for this northern segment of KY 237 are already underway which when combined with enhancements to Gunpowder Road would create a direct connection to I-71/I-75. Gunpowder Road is currently a two-lane corridor. This recommendation calls for Gunpowder Road to be widened to a five-lane roadway.

Cost: \$21,000,000

Timing: Long Term

Implementing Agency: KYTC

#### ***I-71/I-75 Richwood and Mt. Zion Interchanges***

Richwood Road and Mt. Zion Road carry very high volumes of truck traffic traveling from Boone County distribution and manufacturing centers to I-71/I-75. The KYTC Six-Year Plan includes upgrades of the Richwood Road interchange, creating a diverging diamond configuration, and the Mt. Zion Road interchange at I-71/I-75. For efficient and safe traffic flow, the Richwood Road interchange project should include a grade separation for the NS railroad crossing which is located within 1,500 feet of the interstate. Mt. Zion Road already has a grade separation in place along this same NS rail line.

Cost: Richwood: \$22,750,000 and Mt. Zion: \$19,750,000

Timing: Mid Term

Implementing Agency: KYTC

### **Butler County, Ohio**

#### ***Hamilton-Mason Road Mouse Hole***

With a growing suburban population, Butler County has a number of east-west arterial roadways which pass beneath elevated, north-south oriented rail lines. These roadway tunnels are

colloquially known as “mouse holes.” Several “mouse holes” are becoming choke points for the roadway network in terms of width, clearance and capacity issues. These issues are a recurring concern for the Norfolk Southern (NS) railroad bridges passing over Hamilton-Mason, Cincinnati-Dayton, Princeton and Kyles Station roads in southeastern Butler County. In particular, Hamilton-Mason Road’s five lane section to the west is reduced to one lane in each direction at the NS bridge overpass.

To address this immediate roadway capacity issue, the “mouse hole” at Hamilton-Mason is of the highest priority to Butler County. In order to efficiently streamline implementation of this improvement with minimum disruption and cost to freight operations and the public, a private-public collaborative effort will be required between Butler County and NS. As the scope of this project is developed, improvements to the railroad trackage and/or bridge structure may also be advantageous.

Cost: \$12,000,000  
Timing: Immediate  
Implementing Agency: Butler County

Subsequently, Butler County’s other “mouse holes” require improvements due to width and clearance issues. Again, a private-public partnership between Butler County and NS is vital to accomplishing these improvements with the investment of time and money.

#### *Cincinnati-Dayton Road Mouse Hole*

Cost: \$13,000,000  
Timing: Mid Term  
Implementing Agency: Butler County

#### *Kyles Station Road Mouse Hole*

Cost: \$14,000,000  
Timing: Long Term  
Implementing Agency: Butler County

#### *Princeton Road Mouse Hole*

Cost: \$12,000,000  
Timing: Long Term  
Implementing Agency: Butler County

#### *Hamilton-Mason Road Grade Separation*

A railroad grade separation project on Hamilton-Mason Road, just south of the Hamilton city limits, is high on the Butler County list of priorities. This improvement would make the former Champion Coated Paper Company site on the Great Miami River more attractive to redevelopment.

Cost: \$28,000,000  
Timing: Mid Term  
Implementing Agency: Butler County

### *I-75/Union Centre Boulevard Interchange*

Rapid growth in West Chester Township continues to stress capacity of the recently constructed Union Centre Boulevard interchange at I-75. Butler County reports that the interchange is currently operating at capacity. Major retail, light industrial and school district developments to the west of this interchange have been a major contributor to traffic volumes of all types. Between 2003 and 2007, truck counts on I-75 increased 29 percent (18,920 trucks per day to 24,500 trucks per day). Property to the east of the interchange is now beginning to develop with more of a focus on both heavy and light industrial land uses. It is a major distribution hub for the entire county.

The scope of the project is to improve the operations of the interchange without increasing the volume of traffic on I-75. The improvement will include adding lanes to both I-75 exit ramps and reconfiguration of Union Centre Boulevard.

Cost: \$4,000,000  
Timing: Immediate  
Implementing Agencies: Butler County and ODOT

### **Campbell County, Kentucky**

#### *US 27 Improvements*

Over 500 trucks travel US 27 daily between Sunset and AA Highway. The OKI I-471 Corridor Study (October 2008) recommended the implementation of a non-traversable median with mid-block U-turns at some locations along this highway segment. This recommendation is included in this plan due to its recognized congestion management and safety benefits.

Cost: \$20,000,000  
Timing: Long Term  
Implementing Agency: KYTC

### **Clermont County, Ohio**

#### *SR 125/Ohio Pike Access Management*

SR 125/Ohio Pike carries a significant volume of truck traffic between I-275 and the town of Amelia, located less than 10 miles to the east. Congestion and traffic flow problems on SR 125 are exacerbated by the lack of any access management controls. ODOT has begun an access management effort (PID 81425) to address access management controls and improve truck traffic flow for the remaining four miles to Amelia.

Cost: \$10,000,000  
Timing: Long Term  
Implementing Agency: ODOT

#### ***US 50/Roundbottom Road Intersection***

US 50 currently carries the second highest volume of truck traffic in the county, particularly between the Roundbottom Road intersection and the town of Owensville. At the intersection with Roundbottom Road, turning movements for trucks are problematic. Improvements would include a comprehensive upgrade of the intersection as well as turning radii.

Cost: \$200,000  
Timing: Mid Term  
Implementing Agency: Clermont County

#### ***US 50/SR 132/SR 276 Intersection***

A second intersection along US 50 experiencing heavy truck volumes averaging 1402 trucks a day and problems with truck turning movements is at SR 132/SR 276. In order to improve geometric deficiencies, some additional road work would be required in this project recommendation.

Cost: \$300,000  
Timing: Mid Term  
Implementing Agency: Clermont County

#### ***US 50/SR 222 Intersection***

Another intersection along US 50 that experiences heavy truck volumes, approximately 1643 trucks a day and problems with truck turning movements, is at SR 222.

Cost: \$100,000  
Timing: Long Term  
Implementing Agency: Clermont County

#### ***Dearborn County, Indiana***

##### ***South SR 1 Corridor Improvement***

SR 1 suffers high congestion as it meets US 50 and nears the I-275 interchange. Traffic back-ups occur frequently along SR 1 as far north as the intersection at Nowlin Avenue and impede both freight and commuter traffic. A CSX at-grade railroad crossing is located on SR 1 which further increases congestion. There has been discussion about rebuilding this segment of SR 1 to alleviate congestion and create more efficient traffic flow through the area.

Cost: \$3,000,000  
Timing: Mid  
Implementing Agencies: INDOT and Dearborn County

### *SR 1 Intersection Improvements*

SR 1 travels north-south across the county from St. Leon to Lawrenceburg. SR 1 carries traffic volumes as high as 14,000 vehicles per day near US 50 and I-275. This roadway is also heavily traveled by trucks. While signs discouraging truck traffic are posted, the industry continues to utilize the roadway as a short-cut between I-74 and I-275, as well as a non-highway alternative route into Lawrenceburg. The route is plagued with steep grades, poor sight distances, numerous access points, uneven pavement and rolling topography. Although SR 1 is far from an optimal roadway for trucks, drivers continue to ignore posted signs and utilize the route. With continued truck usage and forecast for higher truck volumes, Dearborn County officials stress the need for greater maintenance and improvements including turn lanes at major intersections along the corridor including: York Ridge, Pribble, North Dearborn, Sawdon Ridge, and Mt. Pleasant.

Cost: \$2,000,000

Timing: Immediate

Implementing Agencies: INDOT and Dearborn County

### *SR 1 Northbound Climbing Lane*

Truck usage of SR 1 as an alternative route to I-74/I-275 has been detailed above. Adding to the long list of SR 1 deficiencies is the fact there are no passing lanes along the entire SR 1 corridor, however automobiles often pass slower-traveling trucks, creating safety concerns.

The one mile segment of northbound SR 1 located one and a half miles south of Dover has a severely steep grade which reduces truck speeds to well below posted limits. It is recommended that the steep grade segment on SR 1 be analyzed for truck climbing lanes and, if warranted, a climbing lane be constructed to separate trucks from other northbound, uphill through traffic.

Cost: \$3,000,000

Timing: Immediate

Implementing Agencies: INDOT and Dearborn County

### *US 50/State Line Road Intersection*

Currently, there are no dedicated turn lanes at the US 50/State Line Road intersection. This creates two separate situations where truck congestion occurs, turning movements are hindered and safety is jeopardized. There is a historic monument located on the northeast corner of the intersection. Dearborn and Hamilton county officials have discussed the possibility of creating a free-flowing right turn lane from westbound US 50 onto State Line Road. The design of this improvement would create a safe median around the monument in its current location while permitting traffic the appropriate turning radii necessary for safe transition onto US 50 without impeding US 50 westbound through traffic .

The other turning concern at the intersection is for movements from southbound State Line Road onto westbound US 50. Currently, one lane handles all traffic at this intersection where State Line Road terminates at US 50. A two lane approach is needed that would separate westbound and eastbound traffic turning movements. An eastbound left turn lane would decrease traffic congestion by removing eastbound left turning traffic from the inside through lane.

Cost: \$500,000

Timing: Immediate

Implementing Agencies: Dearborn and Hamilton counties

### Hamilton County, Ohio

#### *Anchor Connector*

The existing NS “Pea Vine” railroad underpass on Mt. Carmel Road near Roundbottom Road is too small for many trucks to pass. As a result, truck traffic chooses an alternative route along Broadwell Road. Trucks are also prohibited on the portion of Mt. Carmel Road south of Broadwell Road further exacerbating the situation. One possible solution for this area is construction of the proposed Hamilton County Anchor Connector project that would create a two-lane facility with appropriate turn lanes between Broadwell Road and SR 32 east of Roundbottom Road. Officials noted that the Anchor area is one of the few remaining locations available for development within the entire county. The Anchor Connector could provide an alternate route for truck traffic, while opening up land for development.

Cost: \$15,000,000

Timing: Mid to Long Term

Implementing Agency: Hamilton County

#### *Governor’s Way/Union Cemetery Road Intersection*

While turning radius issues were noted as a general concern throughout Hamilton County, the intersection at Governor’s Way and Union Cemetery Road was identified as a major concern with current volumes of truck traffic.

Cost: \$1,000,000

Timing: Mid Term

Implementing Agency: Hamilton County

#### *Heavy Truck Load Pavement and Bridge Repair*

The Hamilton County Engineer’s staff noted that recently increased legal weight load limits are causing excessive damage to the county road system. To illustrate this point, they cited the current super-load route from the Queensgate/Gest Street Railroad Yards. This route utilizes Spring Grove Avenue, Winton Road, North Bend Road and Hamilton Avenue to reach the I-275 corridor and points north. The recommendation is to repave roadways and repair structures

servicing the overweight truck route to these intermodal facilities with appropriate new materials designed to handle increased truck weights and ensure long-term performance and safety.

A recommendation that addresses regional truck size and weight regulations has been included in this plan under “Truck Freight Policy Recommendations” on page 34.

Cost: To be determined

Timing: Mid Term

Implementing Agencies: City of Cincinnati and Hamilton County

#### *New Ohio River Crossing Future Study*

There has been discussion regarding the construction of a new Ohio River bridge that would connect western Hamilton County to Boone County between the Brent Spence and Carroll C. Cropper bridges. This has been a very controversial topic with much community opposition in the past amongst long-established residential communities in western Hamilton County. All agree that the political will for such a project is not present at the current time. However, the project is not without transportation and economic development interest to the region. Two OKI studies have recommended this new crossing or its study. One study estimated that the forecasted volume of a western county river crossing could be as many as 50,000 vehicles per day, much of it from the heavily congested Brent Spence Bridge. . It is emphasized that prior to any future discussion or study of a new Ohio River crossing, the OKI region’s foremost priority is the full funding and completed construction of all Brent Spence Bridge improvements. Once completed, the improved Brent Spence Bridge may show that consideration of a new Ohio River Crossing is unwarranted.

Cost: \$350,000

Timing: Long Term

Implementing Agencies: Hamilton and Boone counties

#### *Sharon Road/Medallion Drive Intersection*

There are significant trucking issues around the Sharonville NS Railroad Yard and the Sharon Road/Medallion Drive intersection. As intermodal traffic increases in the NS rail yard, truck volume using the intersection will increase as well. This is not conducive to safe turning movements due to poor sight lines and proximity of the rail overpass. Highlighting the hazardous condition, there was a fatal crash at this intersection in the last year. The recommendation is to analyze the benefits of installing a signal and turning lanes at this intersection and, if warranted, to complete such an improvement.

Cost: \$250,000

Timing: Immediate

Implementing Agencies: City of Sharonville and Hamilton County

## Kenton County, Kentucky

### *Grand Avenue Improvement, Taylor Mill*

In Kenton County, there is redevelopment potential on the eastern banks of the Licking River, near the I-275 crossing. Much of this stretch of riverfront was formerly occupied by CSX and its Decoursey Yards rail operations. Over the last several years, the use of this property for yard service has diminished. As a result, CSX has removed large amounts of yard rail track from this area, leaving prime undeveloped parcels with good rail and water access available for brownfield redevelopment. Efficient truck access between I-275 and the Decoursey Yards area along KY 177/Decoursey Pike is lacking. A recommended solution involves the improvement of Grand Avenue between KY 177/Decoursey Pike and KY 16/Taylor Mill Road, so that it can handle future truck traffic. Improvement of mobility from the river to I-275 would also assist in reducing the amount of freight traffic traveling through Ritte's Corner (refer to recommendation on page 27) and other local roadways to the north.

Cost: \$4,500,000

Timing: Immediate

Implementing Agencies: Kenton County and City of Taylor Mill

### *KY 16/KY 17 Intersection*

Tight turning radius issues exist at the KY 16/Decoursey Avenue and KY 17/Madison Pike intersection. The recommendation would entail redesign for safe and efficient turning movements for all vehicle types.

Cost: \$20,000,000

Timing: Long Term

Implementing Agencies: City of Covington, Kenton County and KYTC

### *KY 536 Road Improvements*

Recent improvements to major north-south routes in Kenton County have highlighted the need for better east-west access. Both KY 16 and KY 17 provide excellent access to I-275. KY 536 currently connects to I-71/I-75 in neighboring Boone County (Mt. Zion Road). However, sections of KY 536 (Bristow Road/Shaw Road/Harris Pike) are unimproved, narrow two-lane roads with numerous intersections which are deficient for truck traffic. Recent residential and commercial developments in the city of Independence have increased congestion. Improvement of this route would provide much needed congestion relief and open more of the southern portion of Kenton County for development. KY 536 improvements could also provide a more direct connection across the tri-county area to the I-71/I-75 corridor and reduce more circuitous routing for traffic heading south on I-71/75. There are alternative solutions which would create a Mt. Zion Road to the AA Tri-County Connector. In the absence of I-71 and I-471 connections, Kenton and Campbell counties access is greatly hindered. The design phase for KY 536's reconstruction and widening to

five lanes from the Boone County Line to KY 17 has been completed. This project's right of way and utility phases are listed in the OKI Transportation Improvement Program (TIP) and slated for completion in fiscal year 2012. Design, right of way and utilities is estimated at \$31,410,000. The project is listed in the OKI 2030 Regional Transportation Plan (June 2008), however the construction phase is currently unscheduled and unfunded.

Cost: \$18,300,000 (in OKI Long Range Plan)

Timing: Mid Term

Implementing Agency: Kenton County

### *Mary Grubbs Highway Extension*

County officials are also interested in the potential to extend the Mary Grubbs Highway that currently dead ends into an industrial park on the Boone County border. This highway provides a direct interchange connection with I-71/I-75. Eastward extension would provide access needed to support additional industrial tenants in this rapidly developing area. A structure was recently built in Boone County to move trucks into/out of the industrial park by traveling under the railroad tracks.

Cost: \$90,000,000

Timing: Long Term

Implementing Agency: Kenton County or KYTC

### *Ritte's Corner*

As identified in the Northern Kentucky Area Planning Commission's Latonia Small Areas Study Existing Conditions Report (February 2011), freight traffic from the Mobil Terminal and Lally Pipe and Tube on Locust Pike in Taylor Mill regularly travel through Latonia to reach I-275. Currently, all freight traffic is routed through the five leg intersection of KY 16/Winston, Decoursey and Southern avenues which is locally referred to as "Ritte's Corner." Kenton County and city of Covington officials also shared concern over this intersection and its inability to handle truck traffic. Heavy truck traffic moving through this intersection from KY 16/Winston Avenue to the south on Decoursey Avenue must negotiate a sharp right turn of approximately 45 degrees. As a result, trucks frequently over track onto the adjacent sidewalk and evidence of contact with existing utility poles have been identified. This over tracking creates maintenance issues with sidewalks and utility poles and poses a serious safety hazard to pedestrians. These turning movements also require large trucks to travel slowly, which often results in intermittent periods of delay at and around this intersection. In order to avoid this maneuver, some northbound trucks have been observed turning right onto Southern Avenue, rather than using Decoursey Avenue. This route creates additional problems in the area such as large trucks operating in areas not intended or constructed for such heavy usage. The residential areas on Southern Avenue and

within the vicinity of Holy Cross High School are generally the most affected by this alternate route.

The Latonia Small Areas Study made a short term (0-5 years) recommendation that the intersection at Ritte's Corner be improved to allow for smoother freight operations. Improvements to the intersection should include minor changes at the southeast corner of Winston Avenue and Decoursey Pike, including the relocation of the utility pole on the corner. Redesign of the corner may also be warranted, however, any redesign of the pedestrian area must not negatively impact the Korean War Memorial Park. Changes to the intersection may provide an easier turning path for truck traffic, relieving some of the associated congestion.

Cost: \$75,000

Timing: Immediate

Implementing Agencies: cities of Covington and Latonia

#### *Truck Access South of I-275*

In southern Kenton County, below I-275, roadway access is a problem between the river, KY 177 and KY 16. Locust Pike is a north/south route that runs parallel and on the west side of the Licking River. This roadway cannot handle large volumes of heavy trucks due to its narrowness and geometric limitations. Improving connections to KY 177 and KY 16 via Porter and Wolf roads could be another solution to these I-275 truck access problems.

Cost: \$11,500,000

Timing: Mid Term

Implementing Agency: Kenton County

#### *Warren County, Ohio*

##### *Columbia Road Improvement and Kings Island Drive Extension*

In order to support future development of the Columbus Business Place, improvements on Columbia Road and a northern extension of Kings Island Drive are needed. Improvements to Columbia Road include the introduction of a continuous center lane to enable left turning movements from both directions. Kings Island Drive will be extended from its current north terminus to Columbia Road. The Kings Island Drive extension will incorporate improvements to Mason-Morrow-Millgrove Road including intersection reconstruction, additional turn lanes and correction of geometric deficiencies.

Cost: \$11,000,000

Timing: Immediate

Implementing Agency: Warren County Engineers Office

### *Gateway Boulevard Extension*

To further support economic development, Warren County has future plans to extend Gateway Boulevard south from Mason Road to connect with Butler Warren and the Union Liberty Interchange with I-75.

Cost: \$20,000,000

Timing: Long Term

Implementing Agency: Warren County Engineers Office

### *King Avenue/Grandin Road Horizontal Curve Correction*

A major truck access issue in Warren County is an impassable bridge and a hair-pin turn on King Avenue/Grandin Road in the Kings Mills area. The Sumco Phoenix Corporation is located on Grandin Road and receives several trucks per day. The county has tried to communicate drivers' use of alternate routes to the trucking industry, including the SR 48/I-71 Interchange and Fujitec Drive, with limited success.

Cost: \$500,000

Timing: Immediate

Implementing Agency: Warren County Engineers Office

### *New Connector Road*

Due to growing freight volumes, a new connector road is needed between the Cincinnati Premium Outlets development and Butler-Warren Road to provide an alternative route for truck deliveries to light industrial customers and outlet mall customers.

Cost: \$5,000,000

Timing: Immediate

Implementing Agency: Warren County Engineers Office

### *SR 123 Improvements*

High volumes of truck traffic were a problem on SR 123 when the Texas Eastern Gas company, located on SR 123 south of SR 122 was in operation. Texas Eastern was a major jet fuel supplier to the former DHL facility in Wilmington. Truck volumes are not as high since the DHL facility relocated to CVG, however Texas Eastern has the capacity to provide major fuel supplies should another customer purchase their services and reopen the site. Improvements to SR 123 could help attract new business relocation and use of this corridor.

Cost: \$18,000,000

Timing: Long Term

Implementing Agency: Warren County Engineers Office

### *Turtlecreek Road Bridge and Intersection*

County officials noted truck turning radius issues on the Turtlecreek Road Bridge, just east of US 42, and at the Lebanon Commerce Park near the Turtlecreek and Kingsview Road intersection. This recommendation would enable safe and efficient travel through the intersection for all vehicles.

Cost: \$1,600,000

Timing: Immediate

Implementing Agency: Warren County Engineers Office

### *Union Road Improvements*

Warren County is planning to improve Union Road between SR 63 and SR 123 interchanges with I-75 to address heavy local truck volumes, noting that in the last 10 years, SR 63 truck traffic has increased dramatically.

Cost: \$23,000,000

Timing: Long Term

Implementing Agency: Warren County Engineers Office

## **Truck Freight Policy Recommendations**

### **National Highway System (NHS) Intermodal Connectors and Facilities**

Intermodal connectors are primary links for the movement of freight and passengers from intermodal facilities to the interstate and principal arterials on the NHS. Due to the number of physical and operational concerns associated with intermodal connectors across the nation, they may be addressed in future federal transportation legislation reauthorization. This is not only a freight issue. Following the events of September 11, connectors are seen as a national security issue as well, providing intermodal choice to shippers and the defense industry when, and if, an event of national or local emergency occurs.

In advance of potential federal funding, OKI took the opportunity of the Regional Freight Plan to better understand the importance and needs on the NHS connectors. Staff also examined where additional connectors or facilities should be authorized to effectively bring attention to these short, but important, NHS segments for potential future improvements and support.

### *Sharonville Intermodal Yard*

Currently, NS's Sharonville Intermodal Yard is not designated as an intermodal facility. With an estimated 50,000 TEUs (Twenty-foot Equivalent Units, a measure of intermodal container volume) per year, or 100 trucks per day, in each direction on Sharon Road, the principal connecting route, the yard meets primary intermodal facility criteria for truck/rail. Trucks are

defined as large single-unit trucks or combination vehicles carrying freight. With local and regional support, this plan recommends that the Sharonville Yard be designated as an Intermodal Facility in the State of Ohio and Sharon Road from Medallion Drive to I-75 as an intermodal connector.

Cost: Administrative

Timing: Immediate

Implementing Agency: OKI

### *Dixie Highway*

In eastern Boone County, between I-75/I-71 and the Kenton County border, there is an extremely dense pocket of freight-related industry and distribution centers. Over 18 manufacturers are located on or adjacent to Dixie Highway (US 25) between US 42/125 and KY 338 that utilize both rail and truck for their operations. An examination of truck count data collected along this intermodal freight corridor shows extremely high daily truck volumes. Due to the high volumes of rail for raw materials and semi-finished goods and trucks for outbound shipments, this plan recommends, with local and regional support, that Dixie Highway between US 42/125 and KY 338 and the east/west roadways linking Dixie Highway to I-71/I-75 (US 42/125, KY 536/Mt. Zion Rd, and KY 338/Richwood Rd) be designated collectively as an intermodal connector.

Table 1: Dixie Highway Intermodal Connector Links

Facility Name	Segment Description	Actual Truck Count	Count Year
RAMP FROM I-71 SB	TO US-127	887	2006
RAMP FROM I-71 NB	TO US-127	539	2006
RAMP TO I-71 SB	FROM BURLINGTON PIKE AND US-127	1304	2006
INDUSTRIAL RD (SR-1829)	W OF DIXIE HWY (US-25)	614	2006
DIXIE HWY (US-25)	S OF INDUSTRIAL RD (SR-1829)	858	2006
RAMP FROM I-75-71 SB	TO MT ZION RD	642	2005
RAMP TO I-75-71 SB	FROM MT ZION RD	542	2005
RAMP FROM I-75-71 NB	TO MT ZION RD	480	2005
RAMP TO I-75-71 NB	FROM MT ZION RD	979	2005
MT ZION RD (SR-536)	W OF DIXIE HWY (US-25)	1885	2006
DIXIE HWY (SR-25)	S OF MT ZION RD	1037	2006

RAMP FROM RICHWOOD RD	TO I-71 NB	681	2006
RAMP TO I-75-71 SB	FROM RICHWOOD RD	862	2005
RICHWOOD RD (SR-338)	E OF I-71-75	1048	2005
RICHWOOD RD (SR-338)	W OF DIXIE HWY	1921	2006

Cost: Administrative

Timing: Immediate

Implementing Agency: OKI

### AK Steel

The Middletown Works is AK Steel's manufacturing site located in Butler County. Its carbon steel melting, casting, hot and cold rolling, and finishing operations cover more than 2,791 acres. A set of roadways link this huge industrial facility with I-75 and include SR 122 (Roosevelt Boulevard), Oxford State Road, Breiel Road and Dixie Highway. In the first quarter 2005, AK Steel reported shipments of 1,520,500 tons from the Middletown facility. Most raw materials arrive by CSX or NS rail on one of the numerous spurs. Trucks shipping from AK Steel lead to high daily truck counts. Due to its dependence on rail and trucks, and the high volume of trucks shipping from the facility, this plan recommends, with local and regional support, that SR 122, Oxford State Road, Breiel Road and Dixie Highway be designated collectively as an intermodal connector for AK Steel to I-75.

Table 2: AK Steel Intermodal Connector Links

Facility Name	Segment Description	Actual Truck Count	Count Year
ROOSEVELT BLVD (SR-122)	E OF JACKSON LN*	878	2004
ROOSEVELT BLVD (SR-122)	E OF ELLIOT DR	1049	2009
OXFORD STATE RD	E OF MAIN ST	1123	2009
DIXIE HWY	N OF OXFORD STATE RD	1294	2006

Count Source: OKI. (\*ODOT is source)

Cost: Administrative

Timing: Immediate

Implementing Agency: OKI

### Regional Express Truck Lanes Feasibility Study

Traffic forecasts for the regional highway network suggest that most roadways will experience severe peak hour congestion by 2030. Figure 1 below shows the regional highway congestion forecast for 2030, with black denoting the most severe congestion, red denoting the next-most severe congestion, and yellow denoting areas which are nearing capacity. This includes all sections of I-71, I-74 and I-75, and most of I-275. These forecasts include the improvements underway on I-75 (Mill Creek Expressway and Thru the Valley projects) and the most recent investment study for I-71 from downtown Cincinnati to Kings Mill which, by OKI policy, sets capacity at three lanes in each direction.

The OKI region, like most other metropolitan areas of similar size in the country, is following a pattern of highway capacity building, based on the Interstate Highway Program of the mid-1950s. Under this pattern, which has been extended to the present day, state DOTs and MPOs make incremental capacity improvements with the limited funding they have available.

Larger urban areas, with more acute highway and freight congestion, are considering new programs to accommodate current and future truck growth—dedicated truck lanes, which can be self-financed by tolls. Looking forward, such truck toll policies may become the norm for regional freight mobility, but are currently only considered or implemented in the most-congested parts of the country (e.g., Los Angeles, Atlanta, New Jersey). In light of freight growth and regional traffic congestion, there are two provocative questions to consider for area transportation policy makers:

- If the OKI region implemented truck toll lanes, what competitive advantage would the region have in 30 years, compared to regions which did not implement truck lanes?
- Conversely, what logistical disadvantages would the OKI region have if competitive regions such as Columbus and Indianapolis developed truck toll lanes and the OKI region did not?

The OKI region could take the offensive and move forward in terms of freight mobility by evaluating and implementing toll truck lanes on a regional basis or on specific freeway corridors. It is recommended that OKI sponsor a study of truck lane potential and feasibility for the region. Truck lanes could offer a competitive advantage for the region and an opportunity for the OKI region to advance ahead of the status quo in most Midwest urban areas.

Cost: \$ 250,000

Timing: Immediate

Implementing Agencies: OKI, ODOT, KYTC and INDOT

### Regional Truck Size and Weight Regulation

Truck weight regulation is a top policy concern of the transportation community. Heavy trucks cause severe pavement damage, especially on the local road system, which often does not have sufficient pavement thickness to handle heavy loads. The adequacy of local bridges to handle heavy trucks is also a critical safety concern.

Even in the face of these legitimate policy concerns, there is industry and political pressure to increase truck weight limits. The reason for increasing weight limits lies with productivity—with driver shortages, increased fuel costs, and more strict insurance and safety regulations, trucking productivity is in decline. A prime way to increase truck productivity is through higher loads per truck, which brings into play all of the public policy concerns indicated above.

While interstate size and weight regulations are determined at the federal level, there is latitude at the state level for issuing oversize/overweight truck permits. For example, the State of Ohio has two permits that directly affect overweight trucking in the OKI region. Ohio allows three steel coils of up to 120,000 pounds - a permit used extensively, for example, by AK Steel in Middletown. Ohio also has a special permit for agricultural exports. The NS Gest Street Yard is designated as an agricultural export terminal by the State of Ohio, meaning it can receive 94,000 pound loads on five axles for intermodal containers.

Through these special permit mechanisms, truck weights are being legally increased on a commodity-by-commodity basis. Not surprisingly, there are some roads and bridges that are deteriorating under heavy trucks, such as the route from the Gest Street Yard in which trucks use Spring Grove Avenue, Winton Road, North Bend Road and Hamilton Avenue to reach the I-275 corridor and points north (Hamilton County recommendation, page 24).

A state, region or local jurisdiction can rely on federal officials to manage truck size and weight regulations or work constructively with the trucking industry and state regulators to shape the parameters of overweight permits and regulations. It is recommended that regional leaders take the latter approach, and actively engage with the trucking industry and state regulators to address, at a minimum, the following critical policy issues:

- Identify appropriate truck routes for overweight trucks, based on sufficiency in terms of geometric design, pavement thickness, and bridge condition.
- Modify existing ODOT permit language, as appropriate, to define the routes which are most adequate for heavy trucks.
- Map and communicate eligible heavy truck routes and terminals to freight stakeholders (e.g., specific terminals and commodities, like agricultural exports from NS Gest Street Yard, or general permit conditions like Ohio three steel coil permit)

- Include law enforcement officials, to ensure strict enforcement of routes and permits. If appropriate, consider a necessary fee structure to finance heavy truck enforcement.
- Identify other businesses in the tri-state area which would benefit from heavy truck routes, and develop a regional permit as appropriate.

To carry out this recommendation, regional leaders should meet with trucking industry representatives and state transportation officials from Ohio, Kentucky and Indiana to investigate the parameters of existing overweight permits, modify the route specifications if necessary, and explore options for regional permitting of heavy trucks where there is evidence of economic benefit.

Cost: Administrative only

Timing: Immediate

Implementing Agencies: ODOT, KYTC, and INDOT, convened by a regional agency

### Truck Environmental

The trucking industry is understandably concerned about environmental regulations and increasing diesel fuel costs. In congested areas such as southern California, trucking companies are turning to alternative fuels—especially Compressed Natural Gas and Liquefied Natural Gas (CNG, LNG)—to meet California’s strict environmental emissions standards. Vehicles using CNG or LNG emit 25 percent less greenhouse gases than those using petroleum, according to the U.S. Department of Energy.

There are several necessary economic precursors to CNG/LNG freight fuels. First, the price of CNG/LNG must be competitive to diesel fuel. At the time of this report, with diesel prices rising, LNG holds a 20 cent per mile advantage over diesel. The other economic precursors are the availability of trucks on a mass market basis and the infrastructure for CNG/LNG fueling.

Manufacturers are responding to demand and developing more CNG/LNG options, but fueling infrastructure takes longer to develop. There are a large number of stations in southern California and the Northeast, and growing CNG/LNG availability in the Midwest. However, the OKI region has no CNG/LNG fuel stations. The closest stations are in Indianapolis and Columbus.

To help the trucking industry adapt to alternative fuels, while addressing air quality concerns and enhancing the attractiveness of the region to new business development, OKI could sponsor commercial CNG/LNG fueling stations in partnership with the private sector. Such sponsorship would be conditional on markets showing increased demand for CNG/LNG vehicles and an appropriate funding partnership and risk sharing with the private sector. Area governments could provide additional market demand by converting their fleets (e.g., garbage trucks or service trucks) to run on alternative fuel. OKI and potential project sponsors should coordinate on the

location of one or more fueling stations in the region to ensure that the stations serve regional truck fleets efficiently and on the publicity of the new fuel source to broadcast its availability.

Cost: Varies by the size and capacity of the station; planning estimate \$5 million

Timing: Mid Term

Implementing Agency: Local public agency, possibly in partnership with OKI and private sponsor

DRAFT

## Railroad Freight Recommendations

After review of the railroad operation in the OKI Region, the following comments and recommendations are made to prepare the OKI region for the 38 percent increase in rail traffic forecast over the next 30 years.

### At-Grade Crossings: Safety Review and Improvements

At-grade railroad/highway crossings are a large safety concern of local governments in the OKI region. As train volumes increase, the potential for collisions at these crossings grows as well, so the rail freight growth forecast for the region adds to the concern of local agencies. This recommendation is for a safety review of at-grade crossings of greatest concern in the region, with follow up improvements as appropriate.

There are different types of warning devices and safety improvements available for at-grade crossings:

- Crossbucks/warning signs
- Flashing lights
- Flashing lights and gates
- Traffic channelization (to prevent motor vehicles from driving around gates); or four-quadrant gates
- Closing at-grade crossings (often in concert with other improvements above)
- Rail-highway grade separation projects

Areas of concern in the OKI region include Butler County, which had five crashes at grade crossings in 2010 (out of 13 total for the region). Waneta Street in Middletown has been the site of two fatal grade crossing crashes (2006 and 2008).

In developing this recommendation, OKI referenced the Federal Railroad Administration's Web Accident Prediction System (WBAPS), an analytical tool, which combined with other site-specific information (such as sight-distance, highway congestion, bus or hazardous material traffic, and local topography), can assist in determining where scarce highway-rail grade crossing resources can best be directed.

Regional planners should use WBAPS as a tool for a comprehensive safety review of area at-grade crossings, in concert with state and local transportation officials. The following five highway-rail at-grade crossings are the top ranking by WBAPS, and should receive further on-the-ground review by highway traffic engineers and specialists:

Table 3: FRA Web Accident Prediction System Top 5 Regional At-Grade Crossings

Crossing Number	Railroad	County	City	Road	Total Trains per Day	Average Annual Daily Traffic (count for highway vehicles)
525235M	IORY	Warren	Mason	W. Main St.	2	23,425
152383Y	CSX	Butler	Fairfield	Seward Rd.	64	7,551
524683S	NS	Butler	Middletown	Waneta St.	22	2,786
524882U	NS	Hamilton	Sharonville	E. Sharon Rd.	28	20,490
152394L	CSX	Butler	Hamilton	Central Ave.	56	11,215

Source: Federal Railroad Administration's Web Accident Prediction System (WBAPS), June 2011.

Cost: Review=\$25,000; Improvements TBD following review on a site-by-site basis

Timing: Immediate

Implementing Agencies: cities of Mason, Fairfield, Middletown, Sharonville and Hamilton

### Hopple Street Passing Track and Crossovers

At the Hopple Street overpass of the NS and CSX mainlines, three main tracks narrow to two tracks for approximately 1,000 feet, in order to pass through the Hopple Street bridge piers. This effectively creates a chokepoint. The major problem is the inability of NS southbound traffic to move from the third track (NS Main Line) north of Hopple Street into the Gest Street Yard while NS trains depart northbound from the Gest Street Yard at the same time. This chokepoint creates delays for both NS and CSX through trains.

Relocating the Hopple Street bridge pier would allow the construction of 1,000 feet of passing track through the chokepoint. This addition of track would minimize through train delay around the Hopple Street area and also help with better coordination of NS departures from the Gest Street Yard.

In addition to the new passing track, installing crossovers south of the Hopple Street Bridge would allow through trains to access the two main tracks for northbound and southbound movements.

Resolving this bottleneck condition involves the following project elements:

- Removal/reconstruction of Hopple Street Bridge Pier;
- Dispatching changes and software upgrades;
- Approximately 1,000 feet of new track under Hopple Street;
- Three to four power crossovers.

Cost: \$8,000,000 to \$10,000,000

Timing: Immediate

Implementing Agencies: CSX, NS, public partner to be determined

### Mill Creek Additional Track

Another major area for rail delay along the Mill Creek is the segment from the RH Tower, located at the north end of the CSX Queensgate Terminal, to the NA Junction. The convergence of CSX traffic from the north, traffic in and out of Queensgate Terminal and the NS through trains makes this one of the busiest, if not the busiest stretch of railroad in the OKI region. This chokepoint adds to the delays of NS and CSX through movements, and makes the coordination of train movements to and from the Gest Street Yard extremely challenging.

The solution to this chokepoint is to increase rail capacity by adding approximately 8,600 feet of fourth track in this corridor from the RH Tower to the NA Junction. While not a fourth mainline, this length of track will provide capacity for a 156-car train, which will allow better dispatching into the Gest Street Yard by spreading out train arrivals, instead of idling numerous trains while other traffic clears.

Prior recommendation for a fourth main line track north of RH Tower exceeding 14,000 feet in length and costing in excess of \$50 million had been discussed as part of planning for future passenger rail access to Cincinnati Union Terminal. This recommendation suggests a much more cost-effective solution. Implementation will require a public-private partnership between NS, CSX, and local public agencies.

Cost: \$15,000,000 to \$20,000,000

Timing: Mid Term

Implementing Agencies: CSX, NS, public partner to be determined

### Rail Corridor Banking

It is expensive to develop and expand transportation infrastructure, especially in urban areas, due to the cost of right-of-way acquisition. Yet there are a number of rail corridors which are underused and therefore potential candidates for abandonment. With rail freight demand forecast to increase 38 percent over the next 30 years, these underused rail lines could have benefits for future freight handling, if they do not fall into abandonment.

The city of Cincinnati articulates a policy of rail corridor preservation, wherever possible, for future rail freight or passenger service. Such a policy seems prudent from a regional standpoint, as there are a few rail lines where service has been reduced:

- NS “Pea-Vine” line which connects Cincinnati, Fairfax, Milford and Batavia (and runs east to the village of Peebles near Portsmouth, Ohio)
- A number of industrial tracks and sidings, such as the CSX line on the west side of Mill Creek which serves a Kroger distribution center

Where rail service is being diminished, a rail corridor banking program would seek to preserve it through the following hierarchy of uses:

- Preserve for freight service with the current rail operator
- Identify a purchaser, such as a short line, to assume freight operation of the line
- “Bank” the rail line for future transportation use, including public transit, pedestrian and bicycle

Rail lines which are potentially threatened by abandonment include those with less than three trains per day and unused industrial leads (such as the CSX line mentioned above). On a continuing basis, the implementing agency should monitor these railroad lines and meet with railroad strategic planning staff to assess their viability and identify any plans for abandonment. Where rail lines move into an abandonment phase, the implementing agency will meet with local stakeholders to create a preservation plan for the line.

Cost: Administrative only

Timing: Mid Term

Implementing Agency: Regional Private/Public Freight Rail Partnership (recommendation page 42)

### Railroad Economic Development Properties

Within the OKI region there are a number of properties which are available for economic development and have railroad access. Examples include:

- Clermont County SR 32 (across from the Ford facility), 650 acres.
- RailAmerica, which has several warehouses in the region, including 67 acres of developable property on River Road
- West of the Queensgate Yard, CSX has an industrial track that now serves only a Kroger distribution center. City of Cincinnati officials have a policy of preserving rail infrastructure for economic development but this line represents a threat for abandonment due to low traffic volume. Perhaps it also represents an opportunity for attracting a rail-reliant industry
- In Kenton County there is redevelopment potential on the Licking River’s eastern banks, near the I-275 crossing. Much of this stretch of riverfront was formerly occupied by CSX and its Decoursey Yards rail operations. Over the last several years, CSX has decreased service and removed large amounts of yard trackage from this area, leaving prime undeveloped parcels with good rail and water access

Developing businesses on these properties can have several benefits for the region:

- Economic activity (employment, sales, tax revenue, etc.) from the property itself

- Increasing the rail traffic density on some of these lines will increase their viability and make abandonment less likely
- Environmental benefits of rail transportation as compared to trucking

This recommendation involves inventorying property that has rail access and other development attributes such as zoning, water, sewer and power service, so that regional economic development agencies can market their availability. The inventory itself could be developed and maintained with a minimal level of effort, by coordinating with railroads and commercial real estate companies. This recommendation could be combined with the Regional Private/Public Freight Rail Partnership on page 42, such that rail economic development initiatives could be added to the mission of a Regional Freight Rail Partnership.

Cost: Administrative only

Timing: Mid Term

Implementing Agency: Regional Private/Public Freight Rail Partnership (recommendation page 42)

### Reading Road Grade Separation, Sharonville

The NS railroad line through Sharonville presents a critical freight issue for the region, as well as a critical safety issue for the city. The Sharonville Railroad Yard is of growing importance to NS operations in the region. The yard offers relief for rail congestion at Gest Street Yard. Currently, Sharonville Yard handles one or two intermodal single-stacked trains per day. With the Heartland Corridor connection from Rickenbacker Intermodal Facility in Columbus to Sharonville, these one or two trains could double their intermodal cargo loads with the use of double-stacking. Timing for this increase in freight depends on market and regional freight demand.

The critical issue in Sharonville involves NS trains blocking the Reading Road at-grade crossing. The yard tracks do not offer enough length for NS to assemble trains for outbound movement, so they must be “doubled,” which means that half the train parks on the mainline, blocking Reading Road, while the other half of the train is switched and assembled. The delays are not trivial, as train crews must perform inspections and brake testing of the assembled train before departure.

Blocking Reading Road creates critical safety and congestion problems for Sharonville. From a safety standpoint, the blocked crossing delays the efficiency and speed of emergency response vehicles, which must otherwise route around the grade crossing. The congestion gridlocks Sharonville and hampers truck movements to local businesses and the Sharonville Yard itself.

In 1999, ODOT initiated a grade separation program and the Sharonville Reading Road crossing was selected for preliminary engineering development. The state hired a consultant to perform

alternatives and cost estimates, but later withdrew its commitment to the project when it deemed the capital cost too excessive.

The Reading Road Grade Separation is critical to the safety and efficient traffic flow of the region. As such, it is a priority for immediate attention in OKI Regional Freight Plan. It is recommended that regional leaders review the Reading Road grade crossing hazards, and preliminary work that was performed for the grade separation, in order to prioritize the project for federal funding. In turn, Sharonville should approach ODOT to lay out this regional transportation concern and prepare a new application for state safety and major new funding to build the project.

Cost: \$25,000,000

Timing: Immediate

Implementing Agency: Local sponsor city of Sharonville; federal funding through OKI and ODOT and private partnership with NS

### Regional Private/Public Freight Rail Partnership

The OKI region suffers from major rail bottlenecks from both Class 1 operators. The bottlenecks create conflict between NS and CSX, which share trackage rights and must carefully coordinate daily operations to minimize delays. Congested railroad operations in the region also raise significant public policy concerns. Blocked grade crossings are a frequently-cited issue in every OKI county and one that could exacerbate given the forecast growth in rail traffic over the next 30 years. Also, freight railroads sometimes have poor coordination with public officials on critical matters such as closing grade crossings for maintenance activities.

The status quo of communication between railroads and local public officials is not acceptable. The two sectors must engage to resolve public/private conflicts, develop projects which will improve freight transportation in the region and take action to see immediate results.

An example of such a partnership comes from Chicago, where the “CREATE” (Chicago Region Environmental and Transportation Efficiency) program was formed to address and resolve regional railroad issues. The CREATE partners include six freight railroads, AMTRAK, commuter rail agencies and local and state elected officials. CREATE has developed a comprehensive program of freight infrastructure projects which will improve safety, reduce congestion for rail passenger and freight trains, and provide environmental benefits. CREATE has also been successful at applying for federal grants and leveraging private dollars to fund infrastructure improvements that have public and private benefit.

A similar partnership program for the OKI region could focus on the following OKI regional issues:

- Apply for federal funding to meet railroad freight infrastructure deficiencies, such as the Reading Road Grade Separation project, and others mentioned in this plan. There are

some existing funding sources, such as the federal Congestion Mitigation Air Quality Improvement Program (CMAQ), which can fund freight infrastructure. On the horizon, Congress may enact new streams of funding for freight projects. In order to compete against other metropolitan areas across the country, the OKI region must be coordinated and prepared before such programs or funding becomes available. In Chicago, for example, the CREATE program was able to secure significant federal grants from the federal stimulus program.

- Improve communication between railroad companies and local public officials, especially for railroad construction projects which close public roadways and/or require local permitting approval prior to commencement. Also better communication would support more collaborative partnerships when local roadway improvements may have rail impacts such as Butler County's mouse hole recommendations (page 19).
- Address maintenance of railroad overpasses or lack thereof. Crumbling structures provide safety hazard to motorists.
- Coordination between railroads to reduce congestion and grade crossing blockages.
- Address shipper concerns (e.g., access and switching fees) to promote economic competitiveness for the region, and address opportunities to reduce truck traffic by providing direct rail service to industry.
- Improve railroad at-grade signage, which are posted with 1-800 call numbers and location identification information to report grade crossing safety equipment malfunctions or other emergencies.
- Introduce railroad mile markers to enable accurate location identification for communication between railroads and local communities for trackage not associated with at-grades or overpasses.
- Work collaboratively to create public/-private solutions should passenger rail gain local, regional and state support.
- Continue long range planning coordination, so that OKI and other regional stakeholders can respond to industry trends and business needs, as well as leverage the region's transportation assets for economic development (i.e. container growth at Sharonville Yard which would impact the number of trucks entering/exiting the yard and using local roadways, as well as may impact length of at-grade crossing blockages).

The structure of such an organization would be left to regional stakeholders to decide. While not ruling out a new entity, existing organizations such as OKI or the Port of Greater Cincinnati Development Authority could be tasked by local leaders to accept this role.

Cost: Administrative only, up to \$200,000 annually

Timing: Immediate

Implementing Agency: Regional interests should determine the form and content of this Partnership

### Western Hills Viaduct

In the central part of Cincinnati, the Western Hills Viaduct spanning the CSX Queensgate Yard is under study for rehabilitation or replacement. If a replacement of the Viaduct is warranted, there is an opportunity to design a structure with fewer piers, presenting the opportunity to cost-effectively increase rail capacity and improve access at the Queensgate Yard.

The preliminary evaluation and design of the Western Hills Viaduct is underway, being managed by the city of Cincinnati. Capital costs of rehabilitation versus replacement will be a key decision in the scope and design of the project. However, project development should include consultation with NS and CSX to determine and assess any benefits a reconstruction might have to freight rail operations and the costs/benefits of various alternatives. Such rail freight benefits may help support private funding participation in the project.

Cost: Undetermined at this time

Timing: Long Term

Implementing Agency: city of Cincinnati

## Barge/Inland Waterway

In the OKI region, Ohio River barge terminals have the largest amount of capacity to expand freight transportation. Barge transportation is low cost and environmentally superior to other modes of transportation (in terms of pollutants per ton of cargo moved). With barge transportation, the region has a clear competitive advantage over regions which lack such access. However, there is no promotion of the region's barge terminals and no active development of barge terminals or intermodal access to them. To capitalize on the potential for barge transportation in the region, the OKI freight plan makes the following recommendations.

### Activate the Port of Greater Cincinnati Development Authority

Ohio port authorities can exercise significant powers to develop transportation, such as planning and promotional activities, and the authority to tax and issue debt to finance capital improvements. To date, the Port of Greater Cincinnati Development Authority has been successful in providing public finance for downtown construction and brownfield redevelopment projects, but has not provided leadership or coordination of port development. Talks are currently underway between the City of Cincinnati and Hamilton County regarding the reorganization of the Port Authority. The intention is to hire a new executive director of the port authority and possibly identify ongoing funding appropriations for development activity. The recommendations below address the deficiencies of current port development, and identify the Port Authority as the key organization to lead each initiative.

Cost: \$250,000 annually for administrative costs

Timing: Immediate

Implementing Agency: Port of Greater Cincinnati Development Authority as directed by its Board and funding agencies (Hamilton County and the city of Cincinnati)

### Port Marketing

Many barge terminal operators in the region endorse the establishment of a public or private non-profit entity, which would take on the role of promoting the "Port of Cincinnati" for economic development. The suggested activities align with the mission of the Port of Greater Cincinnati Development Authority. Specific recommendations and activities include:

- Create a vision and plan for the region's barge/river terminals, which would:
  - Identify market sectors and customers—domestic and international—that can take advantage of the region's location, commodities and other freight assets;
  - Identify areas for expansion of commodity handling businesses, as warranted by cargo demand
- Interface with state and regional economic development agencies, to expand the promotion of barge terminals as part of the region's transportation assets

- Represent the “Port of Cincinnati” at domestic and international trade and industry conferences and events
- Coordinate development efforts with port authorities in Butler County, Clermont County, and Northern Kentucky

### Port Access

Intermodal access is a very important consideration for barge terminals, and many terminals in the region have been designated by the US DOT as “National Highway System Intermodal Connectors.” Adequate highway and rail access ensures that barge terminals can efficiently serve important regional markets, such as the agribusiness and steel industries.

Problems with barge terminal access can be either physical or institutional. Physical access problems involve the road or rail infrastructure that connects with barge terminals. Examples include:

- **RailAmerica Service to Cincinnati Bulk Terminal:** RailAmerica’s Central Railroad Company of Indiana (CIND) line serves the Cincinnati Bulk Terminal facility, which presently trucks pig iron across West Mehring Way for transloading to rail cars; CIND then moves the loaded cars through Queensgate Terminal to connection with Indiana and Ohio Railway (IORY) for delivery to Dover, Ohio. There are discussions underway to build tracks to directly serve the terminal location, eliminate the short truck haul and increase efficiency. Cincinnati Bulk Terminal has received initial permit approval from the city of Cincinnati to construct this connection and at-grade crossing.
- **Cincinnati Barge and River Terminal:** RailAmerica has tracks next to this facility, but does not currently service any cargo from it. If business develops, RailAmerica could efficiently receive freight directly from the terminal and move it to locations north of the region. Such an operation would avoid the movement through Queensgate Terminal that RailAmerica makes today via its CIND line.

“Institutional” issues with barge terminal access include policies or business practices which prevent the transfer of cargo between modes. Two examples in the OKI region include:

- Competing railroad access, such as where one railroad physically prohibits another from connecting to a terminal.
- Railroad switching fees (a charge between railroads to interchange rail cars) can make connection by two or more railroads economically unfeasible.

### Lock and Dam Funding Advocacy

As with many parts of the nation’s infrastructure, the inland waterway system of locks and dams is not receiving adequate funding for maintenance and modernization. By 2015, over half of the

current navigation structures will be past their structural design life. Replacements for a number of locks are under construction. Some of the new designs being implemented will reduce the number of locks required and therefore reduce time lost due to stoppages.

The OKI region is especially dependent on such modernization as the Mississippi/Ohio River system, north of St. Louis, has a number of lock and dam structures that determine the speed and reliability of barge transportation.

The OKI region should recognize the importance of modernizing the locks and dams on the Ohio River system and join other inland waterway policy groups in advocating for the adequate funding of this infrastructure.

### **Barge Terminal Site Development**

The OKI region's barge terminals should be actively promoted in economic development efforts. In turn, there are a number of issues with regard to developing the region's barge terminals including:

- Marketing available land for barge terminal expansion, such as sites on the Ohio and Licking River waterfronts.
- Funding redevelopment of riverfront brownfield properties for potential reuse as river terminals.
- Identifying sites which are appropriate and supported publicly for river terminal use.

Implementing this recommendation would involve some basic planning steps, such as inventorying properties with barge access and other development attributes like water, sewer and utilities; identifying development requirements; and identifying potential public funding sources such as for brownfield remediation.

## Air Freight

In the wake of Delta Airline's downsizing of its hub operations, increasing flight activity at CVG is a vital economic development priority for the region and of the utmost importance. Since its peak year in 2005, CVG daily departures have decreased from 673 to 200 in 2010; and annual passengers from 22 million to 8 million. However, air freight is a positive growth opportunity for CVG. In 2010, DHL's flights provided 40 percent of all landing revenues, and the company is currently expanding its warehouse/cargo handling facility at the airport. In another positive action, CVG management is currently updating their airport master plan (due summer 2012), which will provide a 20-year recommended program of projects to meet airport demand under different market scenarios.

## CVG Air Cargo Park

Expanding CVG's air cargo business could provide both an increase in traffic and an economic development boost for the region. One way to expand this business is through an Air Cargo Park concept, which would increase CVG service offerings beyond cargo transfer operations to an integrated, value-added logistics and manufacturing center.

### Elements of Air Cargo Park

The concept of an air cargo park is to provide logistics service offerings which are far superior to a warehouse or distribution center, where air freight is offloaded, sorted, and stored for distribution by truck or air.

An air cargo park is a state-of-the-art transportation hub which combines all transportation modes, distribution centers, logistics service providers, and advanced manufacturing facilities which process near-finished goods for just-in-time delivery. The air cargo park becomes an economic development magnet, where advanced logistics services provides a competitive advantage for area business, including access to better and more frequent transportation service, as well as access to all modes of transportation.

An air cargo park would include:

- Ability to handle all cargo aircraft in operation today
- Connection to all modes of transportation, including air, rail, truck and barge
- Full cargo handling capabilities
- Direct aircraft ramp access to cargo handling facilities
- Facilities for freight handling and manufacturing activities (on site and in close proximity)
- Facilities with flexible space for multiple tenants

- Real estate services, to build and manage facilities for tenants
- Third party logistics, forwarder and broker services
- On-site customs and homeland security clearance
- Foreign trade zone status

### Examples of Similar Facilities

The Air Cargo Park envisioned for CVG would have few peers in the Midwest. The Rickenbacker Inland Port in Columbus, Ohio aspires to a similar economic development strategy and has had success as a logistics center. A CVG Air Cargo Park would have advantages over Rickenbacker, as the Cincinnati region has a larger industrial base than Columbus, and thus more potential for value-added manufacturing. In addition, the Cincinnati region has access to barge transportation services, providing the full spectrum of intermodal transportation, short of direct ocean access.

Other air cargo park concepts in operation or under development include the Alliance Global Logistics Park in Alliance, Texas with 17,000 acres for logistics development; Huntsville International Airport (Alabama) with a 4,000 acre industrial park and rail intermodal terminal on-site; and the Port of San Antonio (Texas) with 1,900 acres of property on or adjacent to the airport (the former Kelly Air Force Base).

### Potential Infrastructure Requirements

As CVG develops its master plan and considers the Air Cargo Park development, intermodal connections will be critical to attracting potential tenants. OKI will coordinate with CVG, Boone County, and other local officials to identify the infrastructure needed to support an Air Cargo Park. Examples of critical infrastructure improvements include:

- A connector road from the expanded DHL facility and CVG property to the future South Airfield Road, which would help accommodate additional DHL truck traffic, as well as provide more convenient freight access to I-75, while opening additional land for commercial, industrial, and other airport-related development.
- Proposals to study possible new river crossing connecting western Hamilton County to the CVG/Mineola Pike area between the Brent Spence and Carroll C. Cropper bridges (See New Ohio River Crossing Future Study recommendation, page 25).
- Freight railroad connection.
- Barge/river terminal access.

Defining and advancing the vision for a CVG Air Cargo Park will require master planning by CVG and the coordination of area stakeholders.

The capital cost of this recommendation will depend on freight carrier and shipper requirements.

In terms of infrastructure, for comparative purposes, the NS intermodal facility at Rickenbacker Airport in Columbus cost approximately \$60 million. Similarly, roadway improvements might be necessary, but are determined based on the logistics requirements of shippers using the facility.

There will be significant private sector capital costs in terms of real estate and new facilities for warehouses and distribution centers. Again using the Rickenbacker Airport as an example, there is more than 6.8 million square feet of new construction in 13 industrial parks around the area. Through industrial revenue bonds and county, state and federal funding, more than \$72 million was spent on the airport by 2000, even before the NS intermodal facility was built.

As another example of Air Cargo Park capital costs, in Kinston, North Carolina, the state and federal governments have spent \$42 million on the Global TransPark cargo airport.

Based on the investments of similar air cargo parks, this freight plan estimates an initial public investment of \$50 million over 5 years to provide the necessary public infrastructure—rail and road—to support an airport logistics hub.

Cost: \$50,000,000

Timing: Immediate

Implementing Agencies: CVG and Boone County, and other regional stakeholders