



**TRANSPORTATION TECHNICAL COORDINATING COMMITTEE**  
**1:00 p.m., Wednesday, November 9, 2011**  
**KIPDA Burke Room**  
**11520 Commonwealth Drive**  
**Louisville, Kentucky 40299**

**AGENDA**

Kentucky  
Member  
Counties

Bullitt

1. *Call to Order, Welcome, Introductions*

Henry

2. *September 14 Meeting Minutes* – Review and approval (see enclosed). **Action is requested.**

Jefferson

Oldham

3. *Public Comment Period*

Shelby

4. *Transportation Policy Committee Report* – Staff will report on the September and October TPC meetings.

Spencer

Trimble

5. *Horizon 2030 Metropolitan Transportation Plan (MTP)* - Staff will present a proposed amendment to the document (see enclosed). **Action is requested.**

Indiana  
Member  
Counties

6. *FY 2011-2015 Transportation Improvement Program (TIP)* – Staff will present a proposed amendment to the document (see enclosed). **Action is requested.**

Clark

7. *Big Four Bridge - Indiana Approach* – The City of Jeffersonville will present information concerning progress of the bi-state multi-modal facility.

Floyd

8. *Other Business*

9. *Adjourn*

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**Auxiliary aids/services are available when requested 3 business days in advance.**



**MEETING MINUTES**  
**TRANSPORTATION TECHNICAL COORDINATING COMMITTEE (TTCC)**  
**1:00 p.m., Wednesday, August 14, 2011**  
**KIPDA Burke Room**  
**11520 Commonwealth Drive**  
**Louisville, KY 40299**

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**Call to Order**

Vice Chair Tom Clevidence called the meeting to order at 1:04 p.m. After introductions were made, it was determined that a quorum was present.

**Review and Approval of Minutes**

**Amy Thomas, Kentucky Transportation Cabinet (KYTC), made a motion to approve the minutes of the July 13 meeting (see September meeting packet). Cynthia Lee, Louisville Metro Air Pollution Control District (APCD), seconded the motion and it carried with a unanimous vote.**

**Public Comment Period**

There were no public comments.

**Transportation Policy Committee Report**

Larry Chaney, KIPDA staff, reported on the August Transportation Policy Committee (TPC) meeting activities.

**Transportation Planning Overview**

Lori Kelsey, KIPDA staff, provided a presentation on why freight and intermodal issues are important in transportation planning.

**FY 2011-2015 Transportation Improvement Program (TIP)**

Mary Lou Hauber, KIPDA staff, presented information on administrative modifications to the short range funding document (see September meeting packet).

**Horizon 2030 Metropolitan Transportation Plan (MTP) & FY 2011-2015 Transportation Improvement Program (TIP)**

Mary Lou Hauber, KIPDA staff, discussed the status of the latest amendment to the documents.

**Small Area Forecasting Group (SAFG)**

Lori Kelsey, KIPDA staff, discussed the formation of a working group within the TPC to provide technical expertise and information to the region's socioeconomic and demographic forecasting process (see September meeting packet). **Amy Thomas, KYTC, made a motion to recommend approval of the establishment of the working group. Cynthia Lee, Louisville Metro APCD, seconded the motion and it carried with a unanimous vote.**

## **Other Business**

Larry Chaney and Stacey Burton, KIPDA staff, discussed the status of the Sustainable Community grant pre-application process.

Larry Chaney and Andy Rush, KIPDA staff, discussed the status of retro-reflectivity requirements. Deadlines for inventory and replacement of signs will be relaxed or eliminated, providing relief on local and state levels.

## **Adjournment**

**The meeting was adjourned at 1:59 p.m.**

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Larry Chaney  
Recording Secretary

### **Members Present:**

Hyun Lee	Clark County
Amy Thomas	Kentucky Transportation Cabinet
Tom Hall	Kentucky Transportation Cabinet – District 5
Larry Chaney	KIPDA
Cynthia Lee	Louisville Metro Air Pollution Control District
April Jones	Louisville Metro Economic Development
*Eric Pruitt	Louisville Water Company
Beth Stuber	Oldham County
Brian Davis	Oldham County Planning Commission
Brittany Montgomery	Town of Clarksville
Aida Copic	Transit Authority of River City
Tom Clevidence	TTCC Chair

### **Members Absent:**

*Cathy Allgood-Murphy	AARP – Kentucky
Melanie Roberts	Bullitt County
David Flowe	City of Charlestown
Bill Dieruf	City of Jeffersontown
Tom Galligan	City of Jeffersonville
John Rosenbarger	City of New Albany
Ron Barnes	Clark County Air Board
*Brad Meixell	Clark County Fire Chiefs Association
Ramona Bagshaw	Clark County Planning Commission
*Michelle Allen	Federal Highway Administration – Indiana
*Greg Rawlings	Federal Highway Administration – Kentucky
*Robert Buckley	Federal Transit Administration – Region 4
Don Lopp	Floyd County
*Lauren Hardwick	Greater Louisville Inc.
Shawn Seals	Indiana Department of Environmental Management
Larry Buckel	Indiana Department of Transportation – Public Transportation
Jim Ude	Indiana Department of Transportation – Seymour District
Emmanuel Nsonwu	Indiana Department of Transportation – Urban & MPO Section
Joe Forgacs	Kentucky Division for Air Quality
James Mims	Louisville Metro Planning & Design Services
Ted Pullen	Louisville Metro Public Works
Larry McFall	Louisville & Jefferson County Riverport Authority
Skip Miller	Louisville Regional Airport Authority
*Bud Schardein	Louisville/Jefferson County Metro Sewer District
*Tonya Fischer	One Southern Indiana
Matt Smolek	Ports of Indiana – Jeffersonville
*Craig Mackin	Procarent
*Jill Saegesser	River Hills Economic Development District
*John Watkins	Southern Indiana Transportation Advisory Group

Jim Shaw  
Stephen Cotton

TARC Elderly & Disabled Advisory Council  
University of Louisville

**Others Present:**

Sunil Saha  
Justin Harrod  
Lynn Soporowski  
Dane Blackburn  
David Burton  
Stacey Burton  
Gina Marie Guiles  
Mary Lou Hauber  
Lori Kelsey  
Andy Rush  
Josh Suiter  
Milana Boz  
John Swintosky  
Jennifer Decker  
Tim Emington  
Louise Allen

Corradino Group  
Kentucky Transportation Cabinet  
Kentucky Transportation Cabinet  
Kentucky Transportation Cabinet – District 5  
KIPDA  
KIPDA  
KIPDA  
KIPDA  
KIPDA  
KIPDA  
KIPDA  
Louisville Metro Parks  
Louisville Metro Parks  
Office of U.S. Senator Rand Paul  
TRIMARC  
URS

\* Denotes Advisory Members



MEMORANDUM

Kentucky  
Member  
Counties

TO: Transportation Technical Coordinating Committee

FROM: Mary C. Hauber

Bullitt

DATE: November 1, 2011

Henry

SUBJECT: Amendment of the Horizon 2030 Metropolitan Transportation Plan

Jefferson

Oldham

KIPDA has been requested to amend the *Horizon 2030 Metropolitan Transportation Plan*. Attached, please find the requested amendments to the Metropolitan Transportation Plan (project changes are shown in the shaded column), the Ohio River Bridges Project financial documentation, a summary of the Interagency Consultation meeting, and the air quality conformity documentation.

Shelby

Spencer

Trimble

Indiana  
Member  
Counties

These projects changes were examined and it was determined that a regional emissions analysis was necessary, conducted, and shown to pass conformity. The project changes, Ohio River Bridges Project financial documentation, Interagency Consultation meeting summary, and air quality conformity documentation were available for public review from October 19 through November 3 at public libraries and on the KIPDA website. Public open houses were held on October 24 at the Clarksville Public Library and on October 25 at the Highlands/Shelby Park Public Library.

Clark

Floyd

**Action is requested to recommend approval to the TPC.**

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**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
<b>INDIANA PROJECTS</b>							
1558		Blackiston Mill Rd.	Replacement of Bridge #51 over Silver Creek and reconstruction of approaches on Blackiston Mill Road. Total project length is approximately 0.65 miles.	Clarksville		Delete FY 2012 PE \$200,000 federal and \$250,000 total; STP-Urban funds.	Exempt - no change to model.
1572	0300447	Brown Station Way	Reconstruction of Brown Station Way from Randolph Avenue to existing bridge over Silver Creek, a distance of approx. 1.7 miles (no additional lanes proposed).	Clarksville	Change description to "Construction and completion of a new intersection at Lewis & Clark Pkwy. and Brown Station Way, including the removal of the existing bridge and interchange and constructing an at-grade interchange." Change Plan Project Cost from \$4,927,444 to \$5,421,350.	Increase FY 2011 PE to \$421,350 and change from STP-Urban funds to local funds; Add FY 2013 Construction \$4,000,000 federal and \$5,000,000 total, STP-State funds.	Clarification of description - already modeled as an at-grade intersection. No change to model.
1166	0201296	I-265	New bridge construction on PR265, SR265 bridge over Ohio River (joint project with KY).	INDOT		Add FY 2013 Construction \$43,200,000 federal and \$54,000,000 total; Add FY 2014 Construction \$43,200,000 federal and \$54,000,000 total; Add FY 2015 Construction \$43,200,000 federal and \$54,000,000 total; NHS funds.	This is a child project of KIPDA #52 Ohio River Bridges Project.
95	0300779	McDonald Lane	Reconstruct McDonald Lane as a 2 lane road (no additional lanes) from Grantline Road to Charlestown Road.	New Albany	Change Plan Project Cost from \$5,200,000 to \$5,512,500.	Move FY 2015 Construction to Future; STP-Urban funds.	Exempt - no change to model.
52		Ohio River Bridges Project	Construction of 2 new Ohio River bridges, 1 in the downtown (I-65) corridor and 1 in the far east (I-265) corridor.	INDOT	Reduce Plan Project Cost from \$1,166,900,000 to \$871,700,000. Change Open to Public date from 2017 to 2020.		significant-Update 2020 and 2030 networks to reflect modified design. Update tolling

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
	0902207	US 150	Intersection improvement with new signals on US 150 at Cross Street.	INDOT	Change Open to Public date from 2012 to 2013.	Add FY 2012 ROW \$40,000 federal and \$50,000 total; Move FY 2012 Construction to FY 2013 and reduce to \$549,600 federal and \$687,000 total; STP-State funds.	Not regionally significant - no change to model
	1173075	Various Traffic Signals	Add new or modernize traffic signals at five locations in Clark County as follows: US 31 at Charlestown/New Albany Pike; IN 3 at Park St. in Charlestown; US 31 at Utica in Sellersburg; IN 3 at Clark Rd. in Charlestown; and IN 62 at IN 3 (Market St.).	INDOT	Add project to Plan; \$500,000. Open to Public year is 2013.	Add FY 2013 Construction \$500,000 federal and \$500,000 total; STP funds.	Exempt per 93.127
		Vehicle Replacement Purchase - Federal Section 5310	Purchase two new vehicles: a Type C van (modified wheelchair-equipped 15 passenger van) and a Type B van (a non-lift equipped 15 passenger van).	Rauch, Inc.	Add project to Plan; \$98,500. Open to Public Year is 2012.	Add FY 2012 Transit Capital \$78,800 federal and \$98,500 total; Section 5310 funds.	Exempt per 93.126
		Vehicle Replacement Purchase - Federal Section 5310	Purchase one Type C van (modified 15-passenger van with lift) to replace a vehicle currently in service.	New Hope Services	Add project to Plan; \$50,000. Open to Public Year is 2012.	Add FY 2012 Transit Capital \$40,000 federal and \$50,000 total; Section 5310 funds.	Exempt per 93.126
		Vehicle Replacement Purchase - Federal Section 5310	Purchase one Type C van (modified 15-passenger van with lift) to replace a vehicle currently in service.	Volunteers of America KY (IN Office)	Add project to Plan; \$50,000. Open to Public Year is 2012.	Add FY 2012 Transit Capital \$40,000 federal and \$50,000 total; Section 5310 funds.	Exempt per 93.126
		Vehicle Replacement Purchase - Federal Section 5310	Purchase one Type C van (modified 15-passenger van with lift) to replace a vehicle currently in service.	LifeSpan	Add project to Plan; \$50,000. Open to Public Year is 2012.	Add FY 2012 Transit Capital \$40,000 federal and \$50,000 total; Section 5310 funds.	Exempt per 93.126
<b>KENTUCKY PROJECTS</b>							
		12th Street Extension	Extend 12th Street to connect directly to Industry Road.	Louisville Metro Economic Dev.	Add project to Plan, \$6,900,000. Open to Public date 2020.		Regionally significant - add to 2020 and 2030 scenarios.

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
1808		Buckner Connector	Construct new connection from Old LaGrange Road to KY 393 Project length is 0.8 miles.	Oldham County	Increase Plan Project Cost from \$1,300,000 to \$1,450,000. Change Open to Public date from 2012 to 2015.	Move FY 2012 Construction to FY 2014; STP-Urban funds.	Regionally significant - remove from 2012 scenario.
		Bullitt Commuter Express	Creation of a transit link between TARC routes 6, 18, and 50 and businesses located in various business parks in Bullitt County.	Miller Transportation	Add project to Plan, \$138,400	Add FY 2011 Operations \$80,000 federal and \$138,400 total; JARC funding.	Regionally significant - insufficient details to model
		Dutchmans Lane & Breckenridge Lane Intersection Improvements	Turn lane improvements to Dutchmans Lane and Breckenridge Lane at their intersection.	Louisville Metro Public Works	Change description to "Lane additions to Breckenridge Lane south of Dutchmans Lane; Dutchmans Parkway west of Breckenridge Lane; Dutchmans Lane east of Breckenridge Lane; and I-264 ramp widening from southbound Breckenridge Lane to I-264 W. Entrance modifications to east side of Breckenridge Lane north of Dutchmans Lane; and north side of Dutchmans Lane east of Breckenridge Lane." Increase Plan Project Cost from \$2,310,000 to \$2,500,000. Change Open to Public date from 2016 to 2022.		Regionally significant - add to 2030 scenario



**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
1804	52.00	I- 64 / KY 1747 Interchange	Reconstruct existing interchange including construct a triple left turn movement from WB Linn Station Road to SB KY 1747 (Hurstbourne Parkway); additional SB lane for Hurstbourne Parkway from Linn Station Road to Ramp 1 (I-64 EB off ramp); provide right turn lane for NB KY 1747 to EB Linn Station Road; provide dual left turn lanes from Ramp 5 (I-64 WB off ramp) to SB KY 1747. Widen Ramp 5 to 3 lanes approaching the terminal; Widen Ramp 6 (I-64 WB on ramp) for dual right turn lanes from SB KY 1747; provide dual left turn lanes from SB KY 1747 to Ramp 4 (I-64 EB on ramp). Widen Ramp 4 for dual lanes turning to ramp; Align Ramp 2 (I-64 EB off ramp for local traffic) to the new lane to SB KY 1747.	KYTC	Reduce Plan Project Cost from \$32,620,000 to \$10,800,000.	Add FY 2011 Design \$1,800,000 federal; Move FY 2010 ROW to FY 2011 and reduce from \$2,210,000 to \$118,000 federal; Move FY 2010 Utilities to FY 2011 and reduce from \$5,410,000 to \$2,015,000 federal; Combine FY 2010 Construction with FY 2011 Construction and reduce from \$25,000,000 to \$6,067,000 federal; IM funding with KY Toll Credit Match.	Regionally significant - no change to model
224	378.10	I- 65	Extend and reconstruct I-65 southbound ramp to Brook Street and Floyd Street. The project will include the consideration of bicycle and pedestrian facilities.	KYTC		Move FY 2006 Design and Construction to FY 2012, IMD funds. Reduce FY 2015 Construction from \$4,000,000 to \$1,500,000, STP-Urban funds.	Regionally significant - no change to model
1479	48.20	I- 71	Reconstruct I-71/I-264 interchange including the addition of north and southbound auxiliary lanes on I-71 and I-264. Project length is 2.2 miles.	KYTC	Change Description to "Interim improvements on I-71 including the addition of north and southbound auxiliary lanes on I-71 and I-264."	Delete FY 2010 ROW \$2,320,000 federal; Delete FY 2010 Utilities \$1,130,000 federal; Delete FY 2012 ROW \$2,320,000 federal; Add FY 2012 Construction \$5,000,000 federal; NHS funds with KY Toll Credits match.	Regionally significant - no change to model
		I-264	Construct a sound barrier on I-264 from MP 3.0 to MP 5.0	KYTC	Add project to Plan, \$4,000,000. Open to public 2016.		Exempt per 93.126
1017	136.00	I-265	Power wash and paint all steel bridges and steel bearings on I-265 (Gene Snyder Freeway).	KYTC	Change Open to Public date from 2011 to 2014. Increase the Plan Cost to \$18,000,000.	Increase FY 2010 Construction from \$3,790,000 to \$18,000,000; State funds.	Exempt/Not Regionally Significant
416	150.00	KY 44	Widen KY 44 from 2 to 3 lanes (3rd lane will be a center turn lane) from Floyds Fork Bridge to US 31E (Bardstown Road).	KYTC	Delete project from Plan.		Exempt per 93.127

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November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
1507	446.00	KY 155	Reconstruct intersection of KY 155 and KY 148.	KYTC	Change Open to Public date from 2012 to 2013.	Move FY 2011 ROW to FY 2012; Move FY 2011 Utilities to FY 2012; Move FY 2012 Construction to FY 2013; STP-Urban funds.	Exempt per 93.127
1790	8509.00	KY 245	Minor widening of KY 245 (no additional travel lanes) from Bernheim Forest to the Community College. Project length is 1.2 mi.	KYTC	Change description to "Major widening of KY 245 from 2 to 4 lanes from the I-65/KY 245 Interchange to Clermont. Project length is 1.6 miles." Reduce the Plan Cost from \$4,310,000 to \$4,000,000.	Change description; Add FY 2010 ROW \$500,000 federal; Increase FY 2010 Design to \$800,000 federal; Increase FY 2012 Design to \$2,350,000 federal; STP-State funds with KY Toll Credits match.	Regionally significant - add to 2020 and 2030 scenarios.
1467	284.00	KY 841	Improve KY 841/Stonestreet Road interchange as recommended by KIPDA's interchange study. (Includes additional NB lane north of interchange)	KYTC	Change Open to Public date from 2012 to 2014.	Add FY 2010 Design \$60,000 federal; Reduce FY 2010 Construction from \$360,000 to \$300,000 federal; STP-State funds with KY Toll Credit Match.	Regionally significant - remove from 2012 scenario.
1819	8203.00	KY 1819	Spot improvements to KY 1819 (Billtown Road) between Easum Road and Colonnades Road. Project length is 1.1 mi.	KYTC	Add project to Plan, \$8,580,000. Open to Public date 2012.	Reduce FY 2010 ROW to \$1,580,000; Add FY 2010 Utilities \$2,000,000; Add FY 2011 Construction \$5,000,000; State funds.	Not regionally significant
442	8201.00	LaGrange Overpass	Construct LaGrange overpass (4 travel and 1 center turn lane) over I-71 from Business Park Road to New Moody Lane. Project length is 0.3 miles.	Oldham County	Reduce Plan Project Cost from \$25,000,000 to \$13,500,000.	Move FY 2008 Design to FY 2012; Move FY 2008 ROW to FY 2012; Move FY 2008 Utilities to FY 2013; Move FY 2008 Construction to FY 2014; State funds.	Regionally significant - no change to model
321	434.00	LaGrange Underpass West of LaGrange	Construct a 4 lane uninterrupted rail underpass west of LaGrange.	KYTC	Increase Plan Project Cost from \$5,408,000 to \$8,259,000.		Regionally significant - no change to model
		Northeast Louisville Loop	Construct a shared use path along US 60 (Shelbyville Rd.) from Beckley Station to Eastwood Cut-off.	Louisville Metro Parks	Add project to Plan, \$3,500,000. Open to Public date 2014.	Add FY 2012 Design \$530,000 federal and \$662,500 total; STP-Urban funds.	Exempt per 93.126

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

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185	700.00	Ohio River Bridges Project	Construction of 2 new Ohio River bridges, 1 in downtown (I-65) corridor and 1 in the far east (I-265) corridor and reconstruction of the Kennedy interchange. Also included are enhanced bus service improvements.	KYTC	Reduce Plan Project Cost from \$2,928,900,000 to \$2,044,547,000		Regionally significant- Update 2020 and 2030 networks to reflect modified design. Update tolling assumptions.
		Oldham's Public Bus - Bus Hosts (formerly LOCAL Transit Bus Hosts)	These funds will be used to disseminate information about using LOCAL transit service in Oldham County. Specifically, the project will recruit and train 'bus hosts' to promote Oldham's public transportation system.	HDB	Add project to Plan, \$10,809	Add FY 2012 Transit Capital \$8,647 federal and \$10,809 total; JARC funds.	Exempt per 93.126
		Overcoming Obstacles	This project will provide travel training to clients of Bridgehaven's psychiatric rehabilitation program.	Bridgehaven Mental Health Services	Add project to Plan, \$10,060	Add FY 2012 Operations \$5,030 federal and \$10,060 total; Section 5317 funds.	Exempt per 93.126
		Pedestrian Access to Transit Facilities	Construction of passenger amenities, sidewalks, curb cuts and boarding area pads at locations where access to fixed route service is obstructed or inadequate.	TARC	Add project to Plan, \$404,454	Add FY 2012 Transit Capital \$299,892 federal and \$374,865 total; Section 5317 funds.	Exempt per 93.126

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
		Public Transportation Now and In the Future	Develop a Comprehensive Operational Analysis (COA) for the TARC system/service area and make recommendations for immediate and long-term public transportation improvements. The outcome and recommendations of the CO Analysis should include appropriate measures to: <ul style="list-style-type: none"> <li>• maximize existing bus service efficiency</li> <li>• improve communications and build community partnerships that will support strong public transportation system in the Louisville Metro Region today and in the future</li> <li>• develop plans for implementing major transportation corridors that will spur development, generate investments and support economic growth at the local and regional level. Major transportation corridors should integrate all modes of transportation with enhanced public transportation service.</li> </ul>	TARC	Add project to Plan, \$1,125,000. Open to Public date 2013.		Not regionally significant at this time - results may provide regionally significant amendments.
1829		Synchronization of Traffic Signals	Upgrade and expansion of existing Metro Traffic Signal System in terms of new and more flexible equipment and central control capabilities on a countywide level including communications to traffic signals along critical suburban corridors.	Louisville Metro Public Works	Add project to Plan, \$7,750,000. Open to Public date 2013.	Add FY 2012 Construction \$5,000,000 federal and \$6,250,000 total; TIGER funds.	Exempt per 93.128
581	110.00	US 31	Paint the US 31 (George Rogers Clark) Bridge over the Ohio River between Louisville and Jeffersonville.	KYTC	Change Open to Public date from 2012 to 2014.		Exempt/Not Regionally Significant
230	972.00	US 42	Construct 2 way center turn lane on US 42 from Harrods Creek Bridge north to River Road. Project length is 1.0 mile.	KYTC	Change Open to Public date from 2012 to 2013.		Regionally significant - remove from 2012 scenario.

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
1643		Various Bridge Replacement Projects	Various bridge replacment projects: general cateory needed for bridge replacement projects that are air quality exempt and not regionally significant.	KYTC	Change name to "Various Bridge inspection, Repair, and Replacment Projects" and change description to "Various bridge inspection, repair, and replacment projects: general cateory needed for bridge inspection, repair, and replacement projects that are air quality exempt and not regionally significant." Increase Plan cost to \$4,375,000	Change name and description to match Plan.	Exempt per 93.126
		Various Environmental Site Investigations and Cleanups	Environmental Site Investigations and Cleanups in the Louisville MPO area.	KYTC	Add project to Plan, \$70,000.	Add FY 2011 Construction \$2,000; Add FY 2012 Construction \$2,000; Add FY 2013 Construction \$2,000; Add FY 2014 Construction \$2,000; Add FY 2015 Construction \$2,000; State funds.	Exempt/Not Regionally Significant
1553		Various Reference Markers	Installation of reference markers at various locations in metro Louisville; part of Various general operations projects eligible for resurfacing, restoration, and rehabilitation (KIPDA #172)	KYTC	Add project to Plan, \$150,000. Change description to "Installation of reference markers at various locations in the Louisville MPO region."	Change description; Add FY 2011 Construction \$5,000 federal; Add FY 2012 Construction \$5,000 federal; Add FY 2013 Construction \$5,000 federal; Add FY 2014 Construction \$5,000 federal; Add FY 2015 Construction \$5,000 federal; NHS funding with KY Toll Credits match.	Exempt per 93.127
	253.03	Various Roadway Sign and Sign Support Rehab	Roadway sign and sign support rehabilitation in the Louisville MPO area.	KYTC	Add project to Plan, \$35,000.	Add FY 2011 Construction \$1,000; Add FY 2012 Construction \$1,000; Add FY 2013 Construction \$1,000; Add FY 2014 Construction \$1,000; Add FY 2015 Construction \$1,000; State funds.	Exempt per 93.126

**Financial Demonstration for the Ohio River Bridges Project,  
In Support of the Louisville (KY-IN) Metropolitan Transportation Plan  
September 2011**

**I. Introduction**

Implementation of the Ohio River Bridges Project (consisting of construction of two bridge crossings and reconstruction of the I-65/I-71/I-64 Interchange, and hereinafter referred to as the "Project") will rely upon a combination of conventional (federal, state and local) and alternative funding resources and draw upon an array of traditional and innovative financing techniques. Following a brief background section and a summary of anticipated project costs, this document provides a synopsis of the potential sources of funding that the Louisville and Southern Indiana Bridges Authority (the "Bridges Authority"), the Commonwealth of Kentucky, and the State of Indiana expect could be utilized in some combination to meet the currently anticipated project funding needs. These potential funding sources and finance mechanisms are reasonably expected to be available in the amounts and at the times needed to complete the Project.

The Bridges Authority, working in conjunction with the Commonwealth of Kentucky and the State of Indiana, will continue its work to develop a financial plan for the Ohio River Bridges Project. This document is not that financial plan; nor does it include the full range of potential funding and finance strategies that could be considered by the Bridges Authority as part of that financial plan. Once that financial plan is developed by the Bridges Authority and adopted by the states, the Bridges Authority and the two state sponsors will coordinate to provide any required updates to the Louisville (KY-IN) Metropolitan Transportation Plan ("MTP"), as well as the Louisville (KY-IN) Transportation Improvement Program ("TIP") and the Statewide Transportation Improvement Programs ("STIPs") of both Kentucky and Indiana.

**II. Background**

In January 2008, the Kentucky Transportation Cabinet ("KYTC") and the Indiana Department of Transportation ("INDOT") received approval from the Federal Highway Administration ("FHWA") of an Initial Financial Plan (the "IFP") for the Project. Since that time, the Commonwealth of Kentucky and the State of Indiana have taken several key, affirmative steps to expand the range of strategies available to them to ensure the availability of potential funding sources for the Project. The centerpiece of these activities has been the establishment of a bi-state authority to oversee the financing and construction of the Project. This authority, known as the Louisville and Southern Indiana Bridges Authority, held its inaugural meeting in February 2010. The Bridges Authority's formation was subsequently ratified by the Kentucky General Assembly in late March 2010, as required by the enabling statute (the "Bi-State Authority Statute").

In furtherance of its mission, the Bridges Authority has been coordinating with the Project's state sponsors as it works toward meeting its primary objective of developing a financial plan for the Project. In the course of that work, the Bridges Authority is following the directive of its

appointing authorities— the Governors of Kentucky and Indiana and the Mayor of Louisville—to consider and explore possible funding options for the Project. In December 2010, the Bridges Authority supported the state sponsors in developing and submitting to the Federal Highway Administration an Updated Financial Plan to satisfy requirements of the Kentucky state legislature. The Bridges Authority anticipates building on this Updated Financial Plan and completing its efforts to review and evaluate potential options and to develop a recommended financial plan for the Project by the close of 2011.

### **III. Project Costs**

The currently available project development and construction cost estimate, as developed by the state sponsors in conjunction with the General Engineering Consultant ("GEC") for the Project and updated based on project scope changes initiated by the two states' Governors in January 2011, is \$2.9 billion based on projected year-of-expenditure dollars (i.e., on a cash flow basis in nominal dollars). This cost estimate (i) reflects updated estimates prepared in early 2010 by the state sponsors in conjunction with the GEC and individual design firms for each project segment and updated in July 2011 by the state sponsors per the project scope changes referenced above and (ii) includes project phasing and unit cost estimate adjustments from the IFP cost estimate. The IFP's long-term inflation factor of 4.0 percent was maintained for purposes of this updated estimate and is consistent with MTP assumptions.

#### ***A. Project Development and Construction Costs***

The tables below provide an overview of the Project costs by segment and a breakdown between Kentucky and Indiana based upon the cost-sharing agreements entered into as part of the bi-state agreement for the Project. The overall cost estimate will continue to be reviewed and updated as part of the Bridges Authority's development of the financial plan for the Project.

**Table 1. Ohio River Bridges Project Cost Estimate – by Segment and by State (Year-of-Expenditure \$, millions)\***

Project Segment	Total Project Cost	Kentucky	Indiana
Section 1. Kennedy Interchange	\$728.2	\$728.2	\$0.0
Section 2. I-65 Downtown Bridge	\$532.6	\$266.3	\$266.3
Section 3. Downtown Indiana Approach	\$177.8	\$0.0	\$177.8
Section 4. East End Kentucky Approach	\$794.8	\$794.8	\$0.0
Section 5. East End Bridge	\$326.2	\$163.1	\$163.1
Section 6. East End Indiana Approach	\$231.7	\$0.0	\$231.7
Other Costs	\$125.0	\$92.2	\$32.8
<b>Total (Y.O.E.)</b>	<b>\$2,916.2</b>	<b>\$2,044.5</b>	<b>\$871.7</b>

*\*Note: Totals may not sum due to rounding. Small differences may occur relative to cost-share agreement based on invoice timing between the states and several small items not subject to the cost-share agreement.*

**Table 2. Ohio River Bridges Project Cost Estimate – by Time Period and State (Year-of-Expenditure \$, millions)\***

State	Expended to Date (as of SFY 2011, est.)	SFY 2012	SFY 2013 - 2016	SFY 2017 - 2020	SFY 2021 - 2024	TOTAL
Kentucky	\$161.0	\$41.1	\$1,189.8	\$501.2	\$151.4	\$2,044.5
Indiana	\$45.1	\$16.9	\$484.6	\$321.9	\$3.1	\$871.7
<b>Total (Y.O.E.)</b>	<b>\$206.1</b>	<b>\$58.0</b>	<b>\$1,674.4</b>	<b>\$823.1</b>	<b>\$154.6</b>	<b>\$2,916.2</b>

*\*Note: Totals may not sum due to rounding.*

### **B. Operations and Maintenance Costs**

In addition to the development and construction costs reviewed above, the Project financial plan must account for reasonably anticipated operations and maintenance costs. These costs include routine facility operations and maintenance costs, major maintenance requirements, and, to the extent tolling is deployed, toll operations costs. These cost items have been incorporated into this financial demonstration and evidence provided that operations and maintenance costs would be fully covered by reasonably available resources, as described further below. As part of the financial plan development process, the Bridges Authority and its advisors will continue to coordinate with the state project sponsors to review and update these estimates as necessary.

## **IV. Sources of Funds**

Both states are fully committed to supporting the Project, as evidenced by their continued funding for the Project on a pay-as-you-go basis since the 2003 issuance by FHWA of the Record of Decision, as well as by their continued cooperation through the bi-state agreement (as supplemented by the recent formation and current work of the Bridges Authority in tandem with KYTC and INDOT).



In addition to funds already expended on the Project of \$206.1 million (\$161.0 million by Kentucky and \$45.1 million by Indiana through SFY 2011<sup>1</sup>), the Bridges Authority and the state sponsors together believe that some combination of the funding sources described below can be reasonably expected to be available in amounts sufficient to fund the Project. The remainder of this document demonstrates that all MTP-related fiscal constraint tests are met for the Project, including with respect to (i) the first two years of the MTP and Transportation Improvement Program (“TIP”), for which funds must be “committed” or “available,” and (ii) the remaining years of the MTP and the TIP, for which funds must be “reasonably expected to be available,” in each case in accordance with applicable federal law and regulations.<sup>2</sup>

#### **A. Conventional state and federal sources.**

Both Kentucky and Indiana have historically used federal-aid resources for the Project and have committed specific funding for the Project from their respective near-term federal-aid highway funding programs, as described further below.

Federal-aid Formula and State Funds. Federal-aid formula funds provided to the Project have been and would continue to be matched by a combination of state road funds and toll credits<sup>3</sup> in Kentucky and by state funds in Indiana. Both states have a demonstrated track record of meeting their state match obligations with a variety of state funding sources, including state-imposed fuel taxes and a variety of transportation-related fees.

In addition to each state’s federal-aid highway programs, additional state transportation funds are potentially available for the Project. In Indiana’s case, this would be through the Major Moves Program in combination with other state transportation program resources through 2015, and through other state transportation program resources thereafter. The State of Indiana launched the Major Moves Program in late 2005 to fund a \$12 billion plan to significantly improve and expand Indiana’s highway infrastructure (involving a \$2.6 billion allocation plus earned income from investments to the Major Moves Program from the long-term lease of the Indiana Toll Road).

The state sponsors and the Bridges Authority have taken note of the history of the states’ federal-aid programs, including increases in funding between ISTEA (“Intermodal Surface Transportation Efficiency Act of 1991”) and SAFETEA-LU (“Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users”) authorizations, and have reasonable expectations for a reauthorized federal surface transportation program at levels that are commensurate with current funding levels. Based on those expectations, as well as reasonable expectations regarding the availability of corresponding state transportation funds, the state sponsors and the Bridges Authority suggest that an estimated \$1.5 billion of federal-aid highway

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<sup>1</sup> Estimated through June 2011.

<sup>2</sup> See generally 23 CFR Part 450.

<sup>3</sup> The application of “toll credits” for matching federal transportation funds is a mechanism allowed by the federal-aid program whereby prior state reinvestment of toll dollars in projects throughout the state can be utilized to offset the required non-federal matching funds for current investments. It does not relate to the future tolling of any facilities, including the Ohio River Bridges Project itself.

formula and state transportation funds could reasonably be expected to be available to the Project, to be utilized as necessary and as part of the comprehensive financial plan to be developed for the Project. This level of funding includes \$206.1 million of funds already expended, as well as proceeds from Kentucky's authorized GARVEE bond issuances, one of which, in the amount of \$100 million, has already been completed.<sup>4</sup> The Commonwealth of Kentucky has committed an additional portion of its federal program resources to the payment of debt service associated with GARVEE bonds issued for the Project. These debt service costs are separately accounted for in the MTP (also see Table 3 below for additional detail).

Federal Discretionary Funds. During the past 25 years, Kentucky and Indiana have secured discretionary funding from the federal Highway Trust Fund and General Appropriations for bridges over the Ohio River, specifically including the Project, for which \$24 million has been received in direct federal appropriations to date. In addition, the Project has received \$92 million through a High Priority Project funding designation under TEA-21 ("Transportation Equity Act for the 21<sup>st</sup> Century") and SAFETEA-LU. On the basis of this experience, the state sponsors and the Bridges Authority will continue to identify and, as appropriate, pursue potential additional federal discretionary funds for the Project. This may include funds made available under subsequent phases of the U.S. Department of Transportation's TIGER (Transportation Investment Generating Economic Recovery) discretionary grant program and additional federal transportation discretionary funds made available through reauthorization of the federal surface transportation program and other Congressional acts. Kentucky and Indiana were successful in securing a \$20 million discretionary grant under the TIGER program for the Milton-Madison Bridge Project, and both states received federal funds for transportation under the American Recovery and Reinvestment Act of 2009 (ARRA). These examples provide strong evidence of the likelihood of the Project's future ability to secure additional discretionary federal funds.

Based on the states' history and their knowledge of current and potential federal discretionary funding opportunities, as well as the importance of this project to national freight movements and the general economy, it is estimated that federal discretionary funds of approximately \$400 million - \$600 million could be reasonably expected to be available to the Project, including the approximately \$116 million already designated to the Project.

### ***B. Alternative Funding Sources.***

Both states have recognized, as indicated in the IFP and the Updated Financial Plan submitted in December 2010, that alternative funding approaches will need to be pursued to augment conventional transportation funding resources in financing the Project. As stated in the IFP, these alternative sources may include, but are not necessarily limited to:

- Public-private partnerships that rely at least in part on tolls as the underlying funding stream;
- Public-sponsored tolling (via authorities that now exist under both Indiana law and Kentucky law, specifically in the context of the Bi-State Authority Statute and Indiana's tolling statutes);

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<sup>4</sup> As discussed further below, Kentucky has an additional \$131 million of authorized but unissued GARVEE bonds available for issuance.

- Development-related private financial participation; and/or
- Other dedicated state and local funding sources, such as transportation-related fees or other revenue measures.

The Bridges Authority is in the process of exploring the full range of alternative funding sources potentially available for the Project. In connection with the organizational process for the Authority, the states' two Governors and the Mayor of Louisville tasked the Bridges Authority with investigating all options in the process of developing a financial plan that would deliver the Project in the most rapid and cost-effective manner possible. As it pursues this approach, the Bridges Authority is mindful of the fact that both states have had successful histories of using innovative funding sources for the development of their road infrastructures.<sup>5</sup>

Toll-Related Revenues. The estimate of reasonably available toll revenues is premised on requirements of the Metropolitan Transportation Plan development process and FHWA's preliminary determinations regarding tolling approaches that would satisfy the fiscal constraint demonstration requirements of that process, in combination with related air quality conformity demonstration requirements. Thus, the figures presented in this demonstration document should be considered in the context of the required financial demonstration for the purposes of the MTP. The estimation method used as part of the financial demonstration effort is by necessity a conservative approach, with limitations on both the range of tolling strategies that are being considered and the range of potential revenues from those strategies. The results should not be construed as representative of the ultimate funding potential of the full range of available tolling strategies for the Project.

The estimates incorporated into this demonstration document are derived from traffic forecasting that is being used in the ongoing Supplemental Environmental Impact Statement (SEIS) development process. The revenue projections incorporated into this document reflect the baseline tolling scenario that is being used in this SEIS update.

Key assumptions, for the limited purpose of this narrow demonstration exercise, include:

- Tolloed facilities and timing – The estimate developed for the purposes of the financial demonstration is based on a single scenario: tolling the East End Bridge once it is open to traffic, assumed to be 2017, and tolling both the existing and new Downtown (I-65) Bridges once the new bridge is open to traffic, assumed to be 2020. The scenario presented in this financial demonstration is a reasonably available funding approach for the limited purpose of the required financial demonstration and is based on currently available information and current statutory authorities.<sup>6</sup>

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<sup>5</sup> See related discussion in the second paragraph of Section C below, "Innovative Financing Techniques."

<sup>6</sup> The Downtown Bridges are eligible as tollod Interstate facilities subject to Toll Agreement requirements pursuant to 23 U.S.C. Section 129. To the extent federal funds are utilized for construction of the East End Bridge as a non-Interstate facility, a Section 129 Toll Agreement would be applicable and required for that facility, as well. In general, if federal-aid funds are used for construction of or improvements to a tollod facility or the approach to a tollod facility, or if a state were to plan to reconstruct and convert a free highway, bridge or tunnel previously constructed with federal-aid funds to a tollod facility, a Toll Agreement under Section 129(a)(3) is required. For a

- Toll rates – For the purposes of this financial demonstration effort, and consistent with the SEIS baseline scenario, the following toll rates have been utilized: \$1.50 passenger vehicles, \$3.00 light duty trucks, and \$6.00 heavy duty trucks (in 2010 dollars) imposed in both directions. This assumption is based upon requirements of the environmental review process and should not be construed as the anticipated toll rates ultimately required to support the Project. Actual rates may differ and may include variation based on time of day, vehicle type, facility, and other factors.
- Allocation of operations and maintenance costs – For the purpose of this demonstration it is assumed that operations and maintenance costs, along with debt service, are included as a “first call” on toll revenues and thus fully covered by reasonably available resources. (Alternatively, all or a portion of such operations and maintenance costs, such as for the non-tolled elements of the Project, could be considered part of the states’ contribution to the Project. This would be a less conservative assumption, however, than the one used here.) These operations and maintenance cost estimates, including both toll operations and routine facility operations and maintenance, are based on information provided by WSA as part of its work. The Bridges Authority will continue to coordinate with the bi-state management team for the Project to develop facility-specific operations and maintenance cost estimates and consider how those costs are addressed as part of the comprehensive financial plan for the Project.

Based on its traffic and revenue analysis and the above assumptions, WSA developed an estimate of a reasonable range financing capacity associated with the forecast revenues. These estimates are described in the following section and incorporated into Table 3, below.

Additional State and Locally-Generated Revenues. The Bridges Authority recognizes that there are a variety of additional revenue options at both the state and local level that potentially could be considered to help fund the Ohio River Bridges Project. The Bridges Authority, however, only has direct access to the imposition of tolls as a revenue tool for the Project. The Authority will continue to explore other options in conjunction with other governmental entities, as appropriate.

### **C. Innovative Financing Techniques.**

In addition to the revenue alternatives discussed above, the financing approaches to be considered include (i) the use of borrowing via the States’ highway revenue bonding programs (including the sale of GARVEE bonds to be repaid with future federal and matching state funds), (ii) federally-supported borrowing such as via the Transportation Infrastructure Finance and Innovation Act (“TIFIA”) program and any successor programs such as is envisioned as part of the National Infrastructure Innovation and Finance Fund (“I-Fund”), (iii) private activity bonds (“PABs”) as part of a public-private partnership approach, and (iv) equity investment. These and any other appropriate financing approaches will be considered in the context of each state’s

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discussion of state enabling laws and other actions, please refer to the discussion under the heading “Recent Supportive Actions of the State Sponsors” in Section V below.

overall transportation programs, the cash flow demands of the Project relative to these programs, and the ability to generate cost savings and/or expedited project delivery.

Both Kentucky and Indiana have successful histories of using a range of alternative funding sources and financing techniques for the development of their transportation infrastructure. Kentucky, for example, built a system of approximately 680 miles of full-access controlled parkways using bonding with debt service supported by a mix of state road funds and tolling. Indiana maintained the 157-mile Indiana Toll Road connecting the Chicago Skyway with the Ohio Turnpike for fifty years, periodically using the proceeds of toll-revenue bonds for necessary expansion and maintenance projects. In 2006, Indiana completed a very successful public-private partnership transaction with a private concessionaire involving the Toll Road, the proceeds of which resulted in approximately \$2.6 billion being allocated for transportation improvements throughout the state via the Major Moves Program.<sup>7</sup>

Kentucky has already issued \$100 million of a total \$231 million of GARVEE bonds specifically authorized for the Project, debt service for which will be paid from the state's future federal highway funding. The Kentucky Legislature provided flexibility to issue an additional \$105 million in GARVEE bonds (as an alternative to the use of separately authorized pay-as-you-go funding should that prove beneficial. While this additional GARVEE funding was not programmed in the recently enacted Biennial Highway Construction Plan, language contained in Kentucky Transportation budget (2010 Extraordinary Session, HB 3, Part I, A., 4. Highways) did provide this fund replacement flexibility.

Table 3, below, incorporates these potential financing mechanisms, together with the underlying revenue sources described in the previous section, to demonstrate that sufficient funds are reasonably expected to be available to fund the Project. These estimates are based on a financial capacity assessment prepared by WSA as part of its work, which supports the reasonable expectation that approximately \$1 billion could be capitalized from revenues generated, net of toll operations and facility operations and maintenance costs that, along with debt service requirements, would be covered first from available toll revenues. This assessment provides a reasonable estimate of funds that could be made available for project development and construction from the application of toll revenues and associated financing techniques without regard to a specific project delivery method or financing structure and without the benefit of detailed financial structuring.

## **V. Summary of Potential Funding Sources and Financing Options**

Working together, KYTC, INDOT, and the Bridges Authority have prepared the following financial demonstration setting forth a range of funding levels that are “committed,” “available,” or “reasonably expected to be available” for the Project. Taken together, these funding categories – and reasonable estimates for each – demonstrate (a) that sufficient resources can be reasonably expected to be available to meet the Project’s estimated funding needs, and in timeframes that

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<sup>7</sup> Interest earned on the Toll Road concession proceeds is also available to fund Indiana’s transportation improvements.

are consistent with the currently staged project implementation timeline and key open-to-traffic milestones, and (b) that all MTP-related fiscal constraint requirements are met.

First, sufficient funds are “available” and “committed” to the Project by the two state sponsors to meet the currently anticipated project costs for State Fiscal Years (“SFYs”) 2011 and 2012.<sup>8</sup> For Kentucky, this commitment is in the form of a combination of previously authorized but unexpended funds (including (i) previously issued but unexpended GARVEE bond proceeds and (ii) new funds authorized by the state’s enacted 2010 – 2012 Biennial Budget and 2010 – 2012 Biennial Highway Construction Plan. For Indiana, this commitment is in the form of authorized and designated funding in INDOT’s internal financial management systems and consistent with the anticipated STIP and TIP designations for the Project.

Second, for years following the SFY 2011-12 period, funds are “reasonably expected to be available” to meet the remaining funding demands of the Project, as currently and reasonably anticipated, and as evidenced further below. This includes \$131 million in proceeds from authorized but unissued GARVEE bonds in Kentucky and additional allocations from the state’s Six-Year Highway Plan as well as additional allocations of Indiana’s federal and state resources, as currently reflected in INDOT’s internal financial management systems and consistent with anticipated updates to the STIP and TIP. This also includes funds reasonably expected to be available from alternative funding sources and financing mechanisms, as shown below.

This demonstration is not intended to serve as a definition of the financial plan for the Project currently being developed by the Bridges Authority, but rather as a description of the reasonably available funding sources and techniques that could be used in some combination to fully fund the Project. For purposes of estimating levels of funding that might reasonably be expected to be available, this demonstration is premised on an assembly of reasonable ranges for each potential funding source. Taken together, these ranges demonstrate that the Project can be fully funded through a combination of sources and within the reasonable ranges for each source. Although the sum of the high end of these ranges is indeed higher than the currently anticipated total funding need for the Project, this approach was taken to account for the fact that the precise level of funding within each component is still to be determined. The ultimate financial plan for the Project will more fully specify the individual funding components and exact funding combinations.

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<sup>8</sup> As required by 40 CFR § 93.108.

**Table 3. Ohio River Bridges Project Financial Demonstration – Committed, Available, and Reasonably Expected to be Available Funding Sources and Finance Mechanisms (in Year-of-Expenditure \$, millions)<sup>9</sup>**

Anticipated Funding Needs & Sources	State	Expended to Date (as of SFY 2011, est.)	SFY 2012	SFY 2013 - 2016	SFY 2017 - 2020	SFY 2021 - 2024	TOTAL
<b>Reasonably Anticipated Project Development and Construction Funding Needs</b>							
Project Development and Construction Costs as Allocated Per Bi-State Agreement <sup>1</sup>	KY	\$161	\$41	\$1,190	\$501	\$151	\$2,045
	IN	\$45	\$17	\$485	\$322	\$3	\$872
	<b>TOTAL</b>	<b>\$206</b>	<b>\$58</b>	<b>\$1,674</b>	<b>\$823</b>	<b>\$155</b>	<b>\$2,916</b>
<b>Committed, Available, and Reasonably Available Funding Sources</b>							
<b>Conventional State and Federal Sources</b>							
Federal-aid Formula and State Transportation Funds, incl. KY GARVEE Debt Proceeds <sup>2</sup>	KY	\$108	\$50	\$458 <sup>4</sup>	\$200	\$200	\$1,016
	IN	\$26	\$19	\$218	\$218	\$5	\$486
	<b>TOTAL</b>	<b>\$134</b>	<b>\$69</b>	<b>\$676</b>	<b>\$418</b>	<b>\$205</b>	<b>\$1,502</b>
Federal Discretionary Funds <sup>3</sup>	KY	\$53	\$0 <sup>5</sup>	\$150 - 250	\$100 - 135	\$5 - 20	\$300 - 450
	IN	\$19	\$0 <sup>5</sup>	\$50 - 80	\$50 - 75	N/A	\$120 - 175
	<b>TOTAL</b>	<b>\$72</b>	<b>\$0</b>	<b>\$200 - 330</b>	<b>\$150 - 210</b>	<b>\$5 - 20</b>	<b>\$400 - 600</b>
<b>Subtotal – Conventional Sources</b>		<b>\$206</b>	<b>\$69</b>	<b>\$875 - 1,005</b>	<b>\$565 - 625</b>	<b>\$210 - 225</b>	<b>\$1,900 - 2,100</b>
<b>Alternative Funding and Financing Sources (Toll-Based Financing)</b>							
Toll-Based Commercial Financing Sources (e.g., traditional tax-exempt debt, private activity bonds, taxable commercial debt, and equity investment) <sup>6</sup>	Combined	N/A	N/A	\$100 - 150	\$25 - 50	N/A	\$125 - 175
Toll-Based TIFIA Financing, I-Fund, & Successor Federal Financing Alternatives (based on 33% of Project Costs, exclusive of any potential grants from these programs) <sup>7</sup>	Combined	N/A	N/A	\$700	\$250	N/A	\$950
<b>Subtotal – Alt. Sources &amp; Financing</b>		<b>N/A</b>	<b>N/A</b>	<b>\$800 - 850</b>	<b>\$275 - 300</b>	<b>N/A</b>	<b>\$1,075 - 1,125</b>
<b>TOTAL – ALL SOURCES</b>		<b>\$206</b>	<b>\$69</b>	<b>\$1,675 - 1,855</b>	<b>\$840 - 925</b>	<b>\$210 - 225</b>	<b>\$2,975 - 3,225</b>

1) In addition to these project development and construction costs, the financial plan must support ongoing operations and maintenance costs associated with the project facilities. For the purposes of this demonstration, operations and maintenance costs are included as a reduction in the net revenues available from toll revenues, along with debt service.

2) Does not include additional Kentucky funds for debt service obligations on GARVEE bonds which constitute an additional commitment of state resources and are accounted for in the MTP.

3) Any required state matching funds included as part of above category (federal-aid formula and state transportation funds).

4) Includes \$131 million authorized GARVEEs, \$22 million in GARVEE bond proceeds carried forward, \$105 million budget authorization carried forward, and \$50 million additional per year as provided for in Recommended Six-Year Plan.

5) Kentucky and Indiana have \$23.8 million and \$20.2 million discretionary funds available, respectively, that are currently included in the 2013-2016 timeframe and that may be advanced into FY2012 to reduce the amount of federal-aid formula funds shown for FY2012.

6) Based on a single scenario of tolling East End Bridge and two Downtown Bridges upon opening, as provided by the traffic consultants to the state sponsors. Also assuming federal credit available in the amount of 33% of project costs (if not available, this portion would increase accordingly).

7) To the extent that this level of TIFIA financing is not available, the other toll-backed financing mechanisms (e.g., commercial debt and equity) could reasonably be increased to offset the difference via a dedication of reasonably available toll revenues.

## VI. Recent Supportive Actions of the State Sponsors

In addition to continued efforts to fund the Ohio River Bridges Project on a pay-as-you-go basis and to move forward with design work, right-of-way acquisitions and other preliminary planning through the coordinated efforts of the bi-state management team, both states have recently taken

<sup>9</sup> Totals may not sum due to rounding.

actions to strengthen and expand the range of possible funding and financing strategies available to the Project.

Each state has enacted legislation and taken numerous other actions since the summer of 2009 to expand the authorities for bringing alternative funding sources and financing techniques to bear on the Project. Specifically:

- The Kentucky General Assembly enacted the Bi-State Authority Statute, which established the framework for the Bridges Authority and recognized the possibility of using tolls for the Project, as well as entering into a public-private partnership via a development agreement as a means to deliver the Project;<sup>10</sup>
- The legislation enacted by the Kentucky General Assembly that contained the Bi-State Authority Statute also included general recognition and approval of the use of tolling as part of financing plans developed within a newly-created legal structure for authorizing the construction, operation, financing and oversight of significant transportation projects within Kentucky and between Kentucky and Indiana;<sup>11</sup>
- Indiana Governor Mitch Daniels issued an Executive Order authorizing Indiana's participation with Kentucky in the Bridges Authority;<sup>12</sup>
- The two Governors, in conjunction with the Mayor of Louisville, have duly constituted and organized the Bridges Authority—a bi-state authority tasked with developing a financial plan for the Project (and ultimately participating in the development of the Project);<sup>13</sup>
- The Kentucky General Assembly has ratified the formation of the Bridges Authority so that it could move forward expeditiously with its work;<sup>14</sup>
- In its 2010 session, the Indiana General Assembly amended both the state's tolling statutes and its public-private partnership statute so that they now apply expressly to the Project, thus allowing it to have the benefit of these tools as it relates to Indiana components;<sup>15</sup>
- Kentucky completed the issuance of \$100 million of \$231 million of authorized GARVEE bonds for the Project, and the Kentucky legislature provided additional flexibility to issue additional GARVEE bonds for the Project as an alternative to pay-as-you-go funding resources in the future;

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<sup>10</sup> Kentucky Revised Statutes (“KRS”) Section 175B.030.

<sup>11</sup> See generally KRS 175B.005 *et seq.* (formerly known as “House Bill 3”); see also KRS 175B.040.

<sup>12</sup> Executive Order 09-11 (December 2009).

<sup>13</sup> The authority is comprised of 14 members: seven appointed by Indiana Governor Mitch Daniels, three appointed by Kentucky Governor Steve Beshear and four appointed by Louisville Mayor Jerry Abramson. The work of the authority is supported by an executive director and a communications director.

<sup>14</sup> On March 25, 2010, Kentucky Governor Steve Beshear signed into law Senate Joint Resolution 169, pursuant to which the Kentucky General Assembly ratified the formation of the Bridges Authority.

<sup>15</sup> See Indiana Senate Enrolled Act No. 382 (2010).



- Working in collaboration with the Bridges Authority, the state sponsors submitted an Updated Financial Plan to FHWA as required by the Kentucky state legislature, reaffirming their financial commitment to the Project; and
- Each state continues to demonstrate an ongoing commitment to supporting the mission of the Bridges Authority, which is steadily progressing its work toward the objective of developing a plan that will set forth the financing and construction parameters for the Project (both for purposes of the FHWA’s “Major Project” financial plan requirement and the Bi-State Authority Statute’s financial plan requirement).

In summary, these actions, which have created very promising momentum for the Project, indicate clear evidence of support by the Governors, the state legislatures, and local decision-makers for the Project.

The Bridges Authority, KYTC, and INDOT concur that the Ohio River Bridges Project could be funded using a combination of conventional and innovative funding and financing strategies. KYTC and INDOT concur that the funds portrayed in this financial demonstration can be reasonably expected to be available and that provision of such funds would not impair either state’s ability to continue to maintain its existing highway system in adequate condition. Further analysis will be performed by the Bridges Authority, as mandated by the Bi-State Authority Statute, in connection with the development of a specific financial plan for the Project.

**Interagency Consultation Conference Call  
Summary**

**September 13, 2011  
2:00 p.m. EST**

Participants

FHWA-KY	-- Bernadette Dupont and Greg Rawlings
FHWA – IN	-- Michelle Allen
IDEM	-- Gale Ferris, Shawn Seals
KYTC	-- Amy Thomas, Lynn Soporowski, and Justin Harrod
APCD	-- Cynthia Lee and Michelle King
KIPDA	-- Mary Lou Hauber, Andy Rush, Randy Simon, David Burton, and Larry Chaney

Background

Recently, KIPDA staff has undertaken the steps necessary to amend the Metropolitan Transportation Plan and the FY 2011 – FY 2015 Transportation Improvement Program. KIPDA staff compiled a list of proposed project changes and distributed it—via e-mail—to the members of the Interagency Consultation group (IAC/ICG) on September 1, 2011 along with recommendations about how these changes should be handled with respect to the regional emissions analysis. A revised list was distributed on September 8, adding eight projects and deleting two projects from the original list.

Discussion of Schedule

The amendment schedule of activities was discussed and includes the following key elements:

- the air quality analysis will begin on September 13
- public review will be from October 19 through November 3
- TPC action on November 29
- federal conformity review will be approximately from November 30 through January 30

Discussion of Projects

The project list was reviewed including recommendations concerning how the projects should be handled with respect to the regional emissions analysis. KIPDA staff and project sponsors discussed various projects and provided additional information, changes and/or clarification of those projects. Discussion of projects included the following:

- **Public Transportation Now and In the Future** - Develop a Comprehensive Operational Analysis (COA) for the TARC system/service area and make recommendations for immediate and long-term public transportation improvements. Add project to Plan, \$1,125,000 and include Open to Public date of 2013. There was clarification of the project.
- **KIPDA ID 1808: Buckner Connector** - Construct new connection from Old LaGrange Road to KY 393. Change Open to Public date from 2012 to 2015. There was discussion of the project location.

- **KIPDA ID 1804, State ID 52.00: I- 64 / KY 1747 Interchange** - Reconstruct existing interchange including construct a triple left turn movement from WB Linn Station Road to SB KY 1747 (Hurstbourne Parkway); additional SB lane for Hurstbourne Parkway from Linn Station Road to Ramp 1 (I-64 EB off ramp); provide right turn lane for NB KY 1747 to EB Linn Station Road; provide dual left turn lanes from Ramp 5 (I-64 WB off ramp) to SB KY 1747. Widen Ramp 5 to 3 lanes approaching the terminal; Widen Ramp 6 (I-64 WB on ramp) for dual right turn lanes from SB KY 1747; provide dual left turn lanes from SB KY 1747 to Ramp 4 (I-64 EB on ramp). Widen Ramp 4 for dual lanes turning to ramp; Align Ramp 2 (I-64 EB off ramp for local traffic) to the new lane to SB KY 1747. The change is to reduce the Plan cost. The project is regionally significant but this change does not cause a change to the model.
- **KIPDA ID 442, State ID 8201.00: LaGrange Overpass** - Construct LaGrange overpass (4 travel and 1 center turn lane) over I-71 from Business Park Road to New Moody Lane. The project location was discussed. This project is regionally significant but the change in project cost does not cause a change to the model.
- **KIPDA ID 321, State ID 434.00: LaGrange Underpass West of LaGrange** - Construct a 4 lane uninterrupted rail underpass west of LaGrange. The project location was discussed. This project is regionally significant but the change in project cost does not cause a change to the model.

#### Additional Discussion

KIPDA Staff noted that budget tests will be used for the analysis of Ozone and its precursors, and the 2002 baseline test will be used to analyze PM2.5 and its precursors. There was discussion concerning whether to use existing vehicle registration data or the data that is presently being developed. It was decided by the group to use the existing data.

Following discussion, it was the consensus of the IAC group to proceed with the analysis of the project changes included in this amendment using MOVES instead of MOBILE6.

The conference call adjourned.

## AIR QUALITY CONFORMITY

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The Louisville, KY-IN transportation planning study area consists of Clark and Floyd counties and 0.1 square miles of Harrison County in Indiana, and Bullitt, Jefferson, and Oldham counties in Kentucky. Much of this area coincides with an air quality maintenance area and/or an air quality nonattainment area. The Louisville 8-hour ozone maintenance area consists of Clark and Floyd counties, IN, and Bullitt, Jefferson, and Oldham counties, KY. In June 2004, it was designated as a basic nonattainment area under the 8-hour standard for the pollutant ozone. The area was redesignated as an attainment area with a maintenance status during July, 2007. The Louisville fine particulate matter (PM 2.5) nonattainment area consists of Clark and Floyd counties and the Madison Township of Jefferson County, IN, and Bullitt and Jefferson counties, KY. In April 2005, it was designated as a nonattainment area under the PM 2.5 standard (based on average annual concentration).

KIPDA is amending *Horizon 2030*, the metropolitan transportation plan (MTP) and the FY 2011 – FY 2015 Transportation Improvement Program (TIP). This conformity analysis will support conformity determinations by the metropolitan planning organization and the U. S. Department of Transportation agencies for both documents. This analysis is intended to support determinations of conformity under both the 8-hour ozone standard and the annual PM 2.5 standard.

### CONFORMITY UNDER THE 8-HOUR OZONE STANDARD

Subsequent to being designated as nonattainment of the 8-hour ozone standard and prior to being redesignated as attainment of the standard, the Louisville area relied on the use of interim tests to demonstrate conformity. These tests had been established during a 2004 update to the federal conformity rule. Interim tests are used between the time an area is designated as nonattainment and the time motor vehicle emission budgets (MVEBs) are established. The MVEBs limit the amount of a pollutant or precursor that can be emitted.

When the local area was designated as nonattainment of the 8-hour ozone standard, the air quality agencies with responsibility for the local area were charged with the additional responsibility to develop a set of actions that could be taken to reduce pollutant/precursor emissions. Since the Louisville nonattainment area is a bi-state area, these sets of the actions to reduce precursor emissions were to be incorporated into the Indiana and Kentucky State Implementation Plans (SIPs). Originally, the plans including these sets of actions were to be included in an attainment demonstration, which would show how the local area would reach the standard. While these plans were being developed, the data from the air quality monitors in the area indicated that the 8-hour ozone standard had been met. With this data in hand, the air quality agencies were able to submit a redesignation request instead. The establishment of the MVEBs was one of the components of the redesignation request. Since the MVEBs were included in the redesignation request for ozone, the MVEBs are established for its precursors, volatile organic compounds and oxides of Nitrogen.

## CONFORMITY UNDER THE PM 2.5 STANDARD

In April 2005, when the local area was designated as being in nonattainment of the fine particulate matter standard, there were no previous budgets for PM 2.5. In addition, there were no counties which had been previously divided on an attainment/nonattainment basis for the PM 2.5 standard. The counties which were designated as nonattainment under the PM 2.5 standard were all designated in their entirety with the exception of the Madison Township of Jefferson County, IN which had not been previously designated as nonattainment for any pollutant.

During 2005, along with the designation of PM 2.5 nonattainment areas, EPA promulgated an update to the federal conformity rule (40 CFR 93). This update established new interim tests to be applied when an area sought to determine conformity after being designated as nonattainment under the PM 2.5 standard and before SIPs were developed establishing new budgets for PM 2.5 and its precursors.

## CONSULTATION FOR THE AMENDMENT OF *HORIZON 2030*

The first step in determining conformity of *Horizon 2030* was to consult with the interagency consultation (IAC/ICG) partners concerning matters not explicitly determined by the conformity rule. Since conformity under both the 8-hour ozone and PM 2.5 standards had been previously determined, many of the issues normally arising in conformity had already undergone consultation. Since these issues were not raised during consultation this time, the portions of the analysis involving those issues were accomplished consistent with established practice. The initial consultation involved a review of the following items:

- (a) important dates in the schedule for the update;
  - September 13 -- Regional Emissions (Air Quality) Analysis begins.
  - October 19 -- Public Review begins.
  - November 9 -- Action by the Transportation Technical Coordinating Committee
  - November 29 -- Action by the Transportation Policy Committee
  - November 30 -- Documentation sent to review agencies for federal conformity determination
- (b) a draft list of projects—see accompanying list of projects;
- (c) the horizon year of the transportation plan—2030;
- (d) the proposed conformity test methodology/ies and analysis years—see the ESTABLISHED PRACTICE section;
- (e) the pollutant(s)/precursor(s) of concern and the motor vehicle emissions budget(s), if applicable—see tables 2 and 4 at the end of the report;

- (f) information concerning the inputs for the travel demand model and the approved emissions model—see accompanying list of projects and the items concerning the travel demand model and emissions model under Other Planning Issues; and
- (g) a listing of any transportation control measures (TCMs) in SIPs, if applicable—there are none.

## Issues

### Discussion of Projects

The amendment involved forty projects. There was some discussion of five of the projects. Three of those five projects involved a change which had no effect concerning the travel demand modeling. With respect to the way the projects were reflected in the regional emissions analysis, the recommendations of KIPDA staff were accepted.

**Conclusion: The IAC/ICG members accepted the recommendations of KIPDA staff concerning the incorporation of the projects into the regional emissions analysis.**

### Other Planning Issues

In addition to the discussion of projects, the following planning assumptions and other issues were discussed.

- (1) Staff reported that the MOVES emissions model was used for the previous conformity analysis. That analysis passed the tests for conformity. Therefore, staff suggested that the MOVES emissions model (rather than the MOBILE 6 emission factor model) be used for this analysis.
- (2) Staff proposed continuing to use the budget test for the ozone precursors. Since there are no approved/ adequate MVEBs for PM 2.5, staff proposed continuing to use the 2002 baseline test for that pollutant and its precursor. There was little discussion concerning this point. More about this issue can be found in the ESTABLISHED PRACTICE section.
- (3) There was another issue which affected the calculation of emissions for this analysis. This was the issue of how to calculate the annual emissions for PM 2.5. As discussed in the section on ESTABLISHED PRACTICE, this area had previously used the single run approach to calculate the annual emissions of PM 2.5 and its precursor. This issue was not discussed during consultation for the amendment of *Horizon 2030*, but it had been recently reported by staff of LMAPCD that they were now calculating annual emissions for PM 2.5 and its precursor using twelve monthly runs of the MOVES emissions model. This approach was also used for the analysis for the amendment of *Horizon 2030*. More on this topic can be found below in the ESTABLISHED PRACTICE section.

**Conclusion: The IAC/ICG members accepted the recommendations of KIPDA staff concerning the use of the MOVES emissions model, the tests for conformity, and the method for calculating annual emissions for PM 2.5 and its precursor.**

## ESTABLISHED PRACTICE

In addition to the issues discussed during consultation, there were several issues which were not explicitly discussed or received little discussion but which had impacts on the analysis. Many of these issues had been discussed during previous consultations. These issues were handled in a manner consistent with the previous established practice. The more prominent issues are discussed below.

### Issues affecting both Ozone and PM 2.5

#### Source of Bullitt County and Oldham County VMT, Speeds, and Emission Estimates

Originally, the Kentucky Transportation Cabinet (KYTC) had provided the vehicle-miles-traveled (VMT) and speeds to be used in estimating pollutant emissions for Bullitt and Oldham counties in the analyses supporting conformity determinations. During 2006, it was mentioned that the KIPDA travel model included those counties. As a consequence, it was stated that KIPDA should supply that information starting with the next conformity analysis, and KIPDA agreed to do this. KIPDA has provided this data since that time.

Prior to June, 2011, the staff of the Kentucky Division for Air Quality (KYDAQ) had provided emission estimates for Bullitt and Oldham counties. In June, 2011, the MOVES emissions model was first used to estimate emissions for the local area. In order to ensure a more consistent approach to estimating emissions, LMAPCD accepted responsibility for providing emission estimates for Bullitt and Oldham counties, as well as the other counties for which they were previously providing emission estimates.

**Conclusion: The established practice is that KIPDA will provide VMT and speed information for the determination of emission estimates for Bullitt and Oldham counties. The established practice is that LMAPCD will provide emission estimates for Bullitt and Oldham counties, as well as the other counties for which they have been providing emission estimates prior to June, 2011.**

#### Analysis Years and Conformity Tests

Motor Vehicle Emissions Budgets (MVEBs) for the 8-hour ozone standard were approved by EPA in July, 2007. The MVEBs were for the precursors of ozone, volatile organic compounds (VOCs) and oxides of Nitrogen (NOx), The Federal Register notice can be found at 72 FR 36601. The budgets are shown in Table 2 at the end of this document. Since there are MVEBs for the ozone precursors, the conformity rule requires that ozone analyses be done for the attainment year and the last year of the transportation plan. In addition, other intermittent year(s) are required such that no two analysis years are more than ten years apart. The maintenance plan established when the local area was redesignated established MVEBs for VOCs and NOx for 2003 (the attainment year) and

2020 (the last year of the maintenance plan). The year 2012 is also used as an analysis year to ensure that no two analysis years are more than ten years apart.

Since there are not MVEBs available for PM 2.5 and its precursor (oxides of Nitrogen), the conformity rule requires that PM 2.5 analyses be done for the last year of the transportation plan and for a year within five years of the present. In addition, other intermittent year(s) are required such that no two analysis years are more than ten years apart.

The established practice for analysis years and conformity tests are outlined in this and the following paragraph. Since the MVEBs are available for the ozone precursors, the conformity tests can be budget tests. For the budget tests, the estimated emission levels must be less than or equal to the applicable MVEBs. Since budgets have been established for 2003 and 2020, the 2003 budgets will be used for analysis years prior to 2020, and the 2020 budgets will be used for 2020 and later analysis years.

Since there are no applicable MVEBs for PM 2.5 and NOx (as a PM 2.5 precursor), the conformity rule requires the use of an interim emission test. The interim emission test must be either of the following:

- (1) build emissions no greater than no-build emissions, or
- (2) analysis year emissions no greater than 2002 emissions.

The established practice is to use the 2002 baseline or “no greater than 2002” test. The 2002 baseline test would be applied to the entire PM 2.5 nonattainment area for all analysis years.

**Conclusion: The established practice is that the analysis years and conformity tests for the regional emissions analysis is as shown in the tables below.**

<b>8-hour Ozone Standard</b>	
<b>Analysis Year</b>	<b>Conformity Test(s)</b>
2012	Budget test using the 2003 MVEBs for the 8-hour maintenance area
2020	Budget test using the 2020 MVEBs for the 8-hour maintenance area
2030	Budget test using the 2020 MVEBs for the 8-hour maintenance area

<b>Annual PM 2.5 Standard</b>	
<b>Analysis Year</b>	<b>Conformity Test(s)</b>
2012	2002 Baseline test for the PM 2.5 nonattainment area
2020	2002 Baseline test for the PM 2.5 nonattainment area
2030	2002 Baseline test for the PM 2.5 nonattainment area



## Other PM 2.5 Issues

### Pollutants and Precursors

The conformity rule requires that direct vehicle PM 2.5 from the tailpipe and brake and tire wear be analyzed. The rule also requires that oxides of Nitrogen (NOx) (one of the PM 2.5 precursors) must be analyzed unless EPA and the respective state air agency make findings that its influence is insignificant. PM 2.5 from road dust and the other precursors (volatile organic compounds, oxides of Sulfur, and ammonia) do not have to be considered because neither EPA nor the respective state air agency has made a finding of significance for them. PM 2.5 from construction dust does not have to be considered because there is no State Implementation Plan (SIP) indicating its influence is significant.

**Conclusion: The established practice is that only direct PM 2.5 from the tailpipe and brake and tire wear and NOx will be considered in the analysis.**

### Approaches for Developing Annual Emission Estimates

As stated above, the local area was designated as nonattainment of the PM 2.5 standard because it was exceeding the annual average concentration allowed by the standard. This means that the conformity analysis will need to be based on an estimate of annual direct PM 2.5 and NOx emissions rather than an estimate of daily emissions as is used in the conformity analysis for ozone.

Four approaches were included in the guidance. They are the:

- Single-run approach,
- Two-season approach,
- Four-season approach, and
- Monthly approach.

These vary in complexity and effort. The single-run approach is the simplest, requiring the least amount of time and effort. The guidance indicated that this approach is applicable when input conditions do not vary significantly throughout the year. Other factors that were to be considered included (1) consistency with a SIP budget or base year emissions, (2) availability and quality of seasonal or monthly data, and (3) resource implications.

Prior to June, 2011, the air quality agencies in the area had previously used the single-run approach to calculate the emissions of PM 2.5 and its precursor. Recently, the staff of LMAPCD indicated that they were now calculating annual emissions for PM 2.5 and its precursor using twelve monthly runs of the MOVES emissions model. This approach was also used for the analysis for the amendment of *Horizon 2030* for the PM 2.5 nonattainment area with the exclusion of Madison Township of Jefferson County, IN. Madison Township typically accounts for less than five percent of the area's emissions. So any differences in approach for Madison Township should have a minimal effect on the total emissions. Further, because the conformity test is the "not greater than 2002" test, the results for Madison Township cannot affect the passing of conformity unless the 2002 estimates were

less than the estimates for a future analysis year, and this has never happened for Madison Township.

**Conclusion: The established practice is now the use of twelve monthly runs of the MOVES emissions model for calculating annual direct PM 2.5 and NOx emissions.**

### CONFORMITY OF *HORIZON 2030*

The MTP, *Horizon 2030*, was examined to determine if it meets the requirements of the conformity rule under both the 8-hour ozone standard and the annual PM 2.5 standard. In general, examinations for conformity have two major components:

- (1) an air quality (regional emissions) analysis to determine that air pollutant emissions do not exceed the budgets (for ozone) set in the SIPs or the emission levels for a given base year such as 2002 (for PM 2.5); and
- (2) a monitoring of the progress in implementation of the Transportation Control Measures (TCMs) contained in the SIPs.

In the past, consultation with the state and local air quality agencies and EPA had determined that there are no approved TCMs in the SIPs of Indiana and Kentucky. Therefore, it is possible to show conformity of *Horizon 2030* simply by determining that the air pollutant emissions do not exceed the budgets in the SIPs or the base year emissions.

In general, the calculation of the regional emissions for 2002 and the other analysis years involved two steps. First, the travel-related information (VMT, speeds, etc.) was determined. Second, the travel-related information was used as inputs to the MOVES emissions model, which provided emission estimates for the pollutants and precursors. The use of these two steps in estimating emissions for the Madison Township of Jefferson County (IN) may have varied slightly from their use in the other counties, but essentially the same steps were undertaken for all portions of the nonattainment/maintenance areas. The details of their use are discussed in the Regional Emissions Analysis section below.

### AIR QUALITY ANALYSIS

The air quality analysis for the amendment of *Horizon 2030* involved two steps. The first step was to review the projects to determine which projects were “regionally significant” and needed to be included in the regional emissions analysis and to have this list of projects reviewed and accepted by the IAC/ICG. The second step was to develop estimates of travel behavior using the KIPDA travel demand model and to calculate the emissions associated with the travel using the MOVES emissions model. The second procedure is known as the Regional Emissions Analysis. These steps are discussed below in greater detail.

## PROJECT REVIEW

The first procedure involved determining which transportation plan projects were "regionally significant" and therefore to be included in the regional emissions analysis. During the development (update) of *Horizon 2030*, a group of projects had been proposed for the plan, reviewed by conformity partners, and incorporated into the plan. For each amendment, additions, deletions, and/or changes to the projects are proposed. These additions, deletions, and/or changes are discussed with the IAC/ICG, and agreement is reached as to how each of the additions, deletions, and/or changes should be analyzed in the regional emissions analysis. Those projects in *Horizon 2030* which were not changed will be analyzed as they were previously. There is usually a straightforward explanation for why projects are included in the analysis and why they are analyzed as they are. The following paragraphs explain why some projects are excluded from the regional emissions analysis.

As in prior plans, some of the projects in *Horizon 2030* have been excluded from the regional emissions analysis. Most of the projects which were excluded were exempt projects as defined in the Code of Federal Regulations in 40 CFR 93.126 and 40 CFR 93.127. In addition, a few projects were excluded from the regional emissions analysis due to a lack of sufficiently detailed information. They include:

### 1. Transportation System Management (TSM) Projects

#### Incident Management Program:

This project involves providing the motorist with information concerning lane closures due to accidents, construction, etc., which reduce the capacity of the facility. At this time, the route for diversion is totally at the discretion of the motorist. Therefore, there is insufficient information to quantify the emission impacts using the travel demand model approach.

#### Spot Improvements:

This is a funding mechanism for undetermined intersection improvements which would have minimal air quality impacts. No projects with air quality impacts are currently proposing use of these funds.

### 2. TSM Corridors

A group of corridors was identified for improvements utilizing Transportation System Management. At this point, sufficient detail is lacking for inclusion in the air quality conformity analysis.

These projects continue to be excluded from the regional emissions analysis.

## REGIONAL EMISSIONS ANALYSIS

The regional emission analysis consists of two procedures—(1) the analysis of travel behavior impacts and (2) the estimation of emissions due to those impacts. Two slightly different methods were used for estimating the travel behavior impacts—one for Madison Township of Jefferson County, IN and the other for the rest of the nonattainment/maintenance area. The reason for the two methods is that there is no travel demand model for Madison Township. The estimation of emissions for both areas was done using a similar method.

The analysis of the travel behavior impacts for the portion of the nonattainment/maintenance area excluding Madison Township involved using the KIPDA travel demand model to determine measures of travel such as VMT and speed. The method for accomplishing this was to input the appropriate roadway and transit information into the model and to run the model using the appropriate socioeconomic information for a given analysis year. This analysis is explained below in further detail in the sections concerning the KIPDA travel demand model and adjustment factors for travel model output.

As previously mentioned, the procedures used for the Madison Township of Jefferson County (IN) varied slightly from those used for the rest of the nonattainment /maintenance area. VMT was based on values from the Highway Performance Monitoring System. A growth rate approach was used to estimate VMT for future years. Further discussion of the methodology for estimating emissions for Madison Township is included in the section concerning the MOVES emissions model. For this amendment, INDOT staff reviewed the changes in travel impacts occurring in the non-Madison Township portion of the local PM 2.5 nonattainment area and concluded that the emission estimates developed for Madison Township during the June, 2011 amendment could be used for this amendment, as well.

In addition, there were several projects which could not be analyzed using the travel model. The ones discussed above were not included in the emissions analysis; others had been previously evaluated using spreadsheet methods involving emission factors. Since the MOVES emissions model was being used in the inventory mode, emission factors were not available for this analysis. However, past experience has shown that the emission impacts for these projects were always small and positive (i.e. emission reducing). Therefore, it is reasonable to predict that the emission impacts of these projects—if they could be quantified—would decrease the emissions shown in the tables at the end of this document.

In addition, there was one project affecting Bullitt County that could not be included in the travel model. Unlike the projects described in the paragraph above, this project could have the potential to increase emissions. Therefore, a special effort was made to include its impacts in the analysis of travel behavior impacts and, consequently, in the regional emissions analysis. This project was the relocated (southern) section of US 31E. This project, which had been discussed during consultation in the past, involved the relocation of a small (0.18 mile) section of US 31E from Nelson County (outside of the nonattainment area) to Bullitt County (inside both the 8-hour ozone maintenance and PM 2.5 nonattainment areas) during the reconstruction of that road. Estimates of the VMT for this

project were developed using a spreadsheet approach. The VMT estimates were the product of the estimated traffic volumes for each of the analysis years and the length of the relocated section in Bullitt County. The VMT estimates for this project were then added to other Bullitt County VMT estimates of the same functional class. Consequently, the VMT estimates from this project were included with the other Bullitt County VMT, and the emissions in Bullitt County associated with this project were included in the overall emission estimates for Bullitt County.

Regardless of the method to analyze the travel behavior impacts, the method used to translate those travel impacts into emission impacts was the MOVES emissions model. The inputs to the MOVES model were different for each county, but the MOVES model was used for all counties. The description of its use is provided in more detail in the section concerning the MOVES emissions model below

The emission estimates for all of the nonattainment/maintenance area except Madison Township of Jefferson County, IN were determined in the following manner. First, the KIPDA travel demand forecasting model was used to estimate travel behavior in the region. Second, the output from the travel model was adjusted using the adjustment factors discussed below, and the adjusted VMT was placed in five miles per hour speed bins. Third, the VMT in each of the speed bins was divided by the total VMT for that county to determine VMT fractions. Fourth, the VMT fractions and total VMT were used as input to the MOVES emissions model to determine the emissions for the county. It should be noted that the emissions for the ozone precursors were estimated for a typical summer day and the emissions for PM 2.5 and its precursor were estimated for each of the twelve months with the annual emissions being the sum of the monthly values. Further, only ozone precursors were calculated for Oldham County since it is not part of the PM 2.5 nonattainment area.

#### KIPDA Travel Demand Model

The KIPDA travel demand model is a mathematical model which relates travel to the transportation system and basic socioeconomic information. The domain of the model is a study area which includes the Louisville (KY-IN) Metropolitan Planning Area. The Louisville (KY-IN) Metropolitan Planning Area consists of Clark and Floyd counties, and 0.1 square miles in Harrison County, IN, and Bullitt, Jefferson, and Oldham counties, KY. This area is divided into 807 smaller units called traffic analysis zones.

The KIPDA regional travel demand model was updated and calibrated during 2011. This update established 2007 as the new base year for the model. The model update utilized the information incorporated into the travel model during previous updates. In particular, information from the 2000 Census, the 2000 KIPDA Household Travel Survey, and the 2004 on-board survey of transit riders by the Transit Authority of River City had been previously incorporated. During the update, the model parameters were adjusted such that the model output matched—within reason—three main calibration criteria based on measured data. These criteria were: (1) daily VMT for all highway facilities except local roads for the region; (2) the distribution of trip lengths (duration in time); and (3) highway traffic volumes crossing the Ohio River screenline. The result of the update was a travel

model which replicated travel in the Louisville area for 2007. The updated travel model was used in the regional air quality analysis.

The KIPDA travel demand model uses the standard four steps of modeling: trip generation, trip distribution, mode choice, and trip assignment. In addition, it considers travel by vehicles entering, leaving, and crossing the study area. These types of trips are known as external-internal, internal-external, and external-external, respectively. The internal ends of these trips are determined by the methods described below for internal-internal travel. The external ends are determined from the volume of traffic crossing the study area boundary at any of the 48 external stations.

Trip generation is the process of determining the number of unlinked trip ends--called productions and attractions--and their spatial distribution based on socioeconomic variables such as households and employment. Trip rates used to define these relationships were derived from the travel data collection efforts described above. This information was supplemented by use of the *National Cooperative Highway Research Program Report #365* and the Institute of Transportation Engineers' *Trip Generation Report*. The KIPDA travel demand model uses three internal-internal trip purposes and utilizes different trip rates for each. Internal-internal trips are those which have both ends inside the modeling domain. The three purposes are home-based work, home-based other, and non home-based.

Trip distribution is the process of linking the trip ends thereby creating trips which traverse the area. The KIPDA travel model uses a gravity model to link all trips except the external-external ones. The gravity model is based on the principle that productions are linked to attractions as a direct function of the number of attractions of a zone and as an inverse function of the travel time between zones. This inverse function of travel time is used to generate parameters called friction factors which, in turn, direct the gravity model. The friction factors used in the gravity model were developed as part of the calibration effort performed during the model update. In addition, information from a study which investigated the behavior of travelers crossing the Ohio River and traffic count information from 2007 were utilized to develop additional parameters called K-factors. The K-factors are used by the model to ensure that it is predicting the correct volume of traffic crossing the Ohio River.

Mode choice is the process used to separate the trips which use transit from those which use automobiles. It is also used to separate the auto drive-alone trips from auto shared-ride trips. In some previous KIPDA travel demand models, mode choice was based primarily on information provided by the *TARC Travel Forecasting Study*. In that model, the user's benefit or utility was calculated for each mode based on zonal socioeconomic characteristics and the cost and time of the trip using the various modes. A nested logit model was used to determine the probability of the trip being made by each of the modes. This probability was then multiplied by the number of trips between zones to determine the number of trips by each mode.

As previously stated, the conformity analysis for *Horizon 2030* utilizes transit information from the previous travel demand model. The results of the 2004 TARC on-board survey

had been used to supplement the previous information. This was deemed acceptable for several reasons. The primary reason was that the transit network envisioned by *Horizon 2030* is essentially the same as the existing one. In addition, the number of total trips from the two models was similar. Therefore, the use of the transit trip information from previous travel models did not change significantly the proportion of trips allocated to transit. Finally, the proportion of trips utilizing transit is less than 2% of the total trips. So small differences in the number of transit trips should provide a negligible effect on overall travel.

Trip assignment is the process used to determine which links of the network a trip will use. There are several assignment schemes which may be used. Two of the more common schemes are All-or-Nothing (AON)--in which all trips between two zones follow the shortest time path--and Stochastic--in which trips between two zones may be assigned to several paths based on their impedances or travel times. It is not uncommon for travel models to use several assignment schemes in sequence to converge to a better assignment. A sequence commonly used involves using several AONs with the traffic volumes reported at the end of each scheme being a weighted average of the volumes from the most recent scheme and the volumes from the previous schemes. A capacity restraint provision is used to adjust travel times between assignment schemes. This sequence is called an equilibrium assignment. The KIPDA travel model uses an equilibrium assignment which converges when the change in system-wide travel time over successive iterations is estimated to be within 0.1 percent of the minimum (optimal) value or less.

Tolls are being considered as a means of providing for a portion of the cost of the Ohio River Bridges project. To reflect this possibility in the MTP update, the KIPDA travel model was modified by placing time penalties on the bridges where tolls may be placed. The use of this modification was continued.

The output from the KIPDA travel model is in the form of a series of links with each link having certain associated data such as number of lanes, capacity, facility type, area type, functional class, and volume. This data allows for the calculation of other link information such as VMT. The VMT can be calculated as the product of the volume of traffic using a link times the distance of the link.

#### Adjustment Factors for Travel Model Output

The VMT and speeds from the travel demand model were adjusted before being used in the calculation of regional emissions. The purpose of these adjustments was to reconcile the model output with travel estimates from other sources, such as the Highway Performance Monitoring System (HPMS) estimates of VMT. To perform this adjustment, factors were developed for the year of the HPMS or other estimates and applied to model output for other years.

The development of the VMT adjustment factors involved comparing the VMT outputs of the travel demand model to the HPMS VMT estimates for 2007. Factors were developed to adjust the model output to account for variation between the model and HPMS within each of the counties. To do this, the VMT from the 2007 model run was tabulated by county and functional classification. The VMT estimates derived from the model were then compared

to the HPMS VMT estimates for 2007 to develop adjustment factors to be applied to the model output for subsequent years. The 8-hour ozone analysis is based on a level of traffic and the accompanying emissions expected on a typical summer weekday. For that analysis, the adjustment factors were increased by 2.9% to reflect the higher volume of traffic that can be expected on a typical summer weekday relative to the annual average daily traffic. The PM 2.5 analysis is based on annual traffic and the accompanying annual emissions. Therefore, the adjustment factors for that analysis were not increased; rather they were based on the annual average daily traffic. The adjustment factors for VMT were developed on a functional classification basis for each county.

The development of the speed adjustment factors involved a similar process. The outputs of the travel demand model were compared to estimates of speed based on: (1) the equations of the Highway Economic Reporting System (HERS) and (2) the use of data from the Automatic Continuous Traffic Recorders (ATRs) of the Kentucky Transportation Cabinet (KYTC) for 2001-2002.

The HERS equations were used to estimate speeds on 402 sections of urban roadways for five functional classifications. The speeds from these roadway sections were used to determine the average speed for each of five functional classes. The speeds used in the travel model were also averaged for each urban functional class. The speed adjustment factor for each urban functional class was calculated as the ratio of the average speed using the HERS equations to the average speed using the travel model data.

The KYTC ATR data was used to estimate speeds on 84 sections of rural roadways for four functional classifications. The speeds from these roadway sections were used to determine the average speed for each of four functional classes. The speeds used in the travel model were also averaged for each rural functional class. The speed adjustment factor for each rural functional class was calculated as the ratio of the average speed using the ATR data to the average speed using the travel model data.

The procedures described above produced speed adjustment factors for all functional classes except rural minor collectors and rural and urban local roads and ramps. (Ramps are not officially a separate functional class, but the speed behavior of traffic on ramps is not expected to be like that of any other functional class. Therefore, the ramps were treated as a separate "functional class.") There was not sufficient data to estimate speeds for the roadways of these classes. For the rural minor collectors and rural and local roads, the speed adjustment factor of the next higher functional class was used. For ramps, the speeds in the travel model were used without adjustment (i.e. the speed adjustment factor for ramps = 1).

### MOVES Emissions Model

As previously mentioned, the Louisville region is a nonattainment/maintenance area for the pollutants ozone and PM 2.5 and must therefore control direct PM 2.5 and the precursors of ozone and PM 2.5, VOCs and NOx. The emission estimates for VOCs, NOx, and PM 2.5 were determined using the MOVES emissions model. The Louisville Metro Air Pollution



Control District (LMAPCD) produced the emissions for all of the nonattainment/maintenance area except for the Madison Township of Jefferson County, IN. The emission estimates for the Madison Township were developed by the Indiana Department of Transportation (INDOT). The procedures used in calculating these emission estimates are discussed below.

There are a number of factors affecting the emission estimates developed from the MOVES model. These factors include the fuel used by the vehicles driven in each county, and in the past, the presence of inspection/ maintenance (I/M) programs in some of the counties. In the past, the VMT generated in Clark, Floyd, and Jefferson (KY) counties came from some vehicles subject to an I/M program and from some vehicles not subject to an I/M program. The I/M program in Clark and Floyd counties was discontinued at the end of 2006. The I/M program in Jefferson County (KY) was discontinued in 2003. Therefore, these programs were modeled as being in existence in 2002 but not for the other analysis years. The fuels which are used in Clark, Floyd, and Jefferson counties include reduced Reid vapor pressure gasoline (RVP) and reformulated gasoline (RFG). While RFG is used in some portions of Bullitt and Oldham counties, unregulated gasoline is used in the other portions of those counties as well as the areas adjacent to the nonattainment area. Vehicles from these other areas can be expected to travel in the Clark, Floyd, and Jefferson (KY) counties also. In the past, the emission factors (from the MOBILE 6 model) for Clark, Floyd, and Jefferson (KY) counties used in the air quality analysis varied by county because they represent a VMT-weighted composite based on an estimate of travel in each county by vehicles from the various portions of the region. For this analysis, the MOVES model was used in what is known as the inventory mode. Using the inventory mode, it is possible to define the fuel characteristics and the presence of an I/M program for each county, but it is not possible to represent the effect of travel in a county by vehicles from other counties. Therefore, the use of composite emission factors was not possible. Other than that, the assumptions used in the analysis were consistent with those of the appropriate air quality agency for each of the counties. For Clark and Floyd counties, the assumptions of the Indiana Department of Environmental Management (IDEM) were used. Some assumptions of LMAPCD were also used for Clark and Floyd counties. For Jefferson County (KY), the assumptions of the LMAPCD were used. These assumptions had been previously reviewed and accepted by the IAC/ICG partners.

The assumptions used in developing the emissions for Clark, Floyd, and Jefferson (KY) counties were the same as those that were used in developing the updated VOC and NOx budgets (in 2003) with a few exceptions where newer data was incorporated. The changes which affected the VOC and NOx emissions included:

- (1) the incorporation—in 2004—of newer vehicle registration data for Clark and Floyd counties (provided by IDEM),
- (2) the development and use—in 2004 and again in 2008—of new vehicle registration data for Jefferson County (KY), and
- (3) the new (twelve month) approach to calculating emissions of PM 2.5 and its precursor described in the ESTABLISHED PRACTICE was utilized.

The emissions for Bullitt and Oldham counties were also developed by LMAPCD. Most of the inputs to the MOVES model were defaults and/or data used in previous SIPs. Both counties had portions (the “original” portions) which had previously had a nonattainment/maintenance status for the 1-hour ozone standard and portions (the “new” portions) which had only been designated under the 8-hour ozone standard. Neither portion of either county had an I/M program. So it was not necessary to have I/M input information for MOVES. However, reformulated gasoline (RFG) is required for the original nonattainment/maintenance portions of Bullitt and Oldham counties while unregulated gasoline is used in the new nonattainment areas of those counties. Since the use of the MOVES model in the inventory mode does not allow for the characteristics of different blends of gasoline within the same county, a choice had to be made concerning which one to use. The choice was made to use the characteristics of unregulated (conventional) gasoline since this was the more “conservative” choice. (It was more “conservative” because this choice produces higher emission estimates and, therefore, reduces the margin by which conformity is passed.) LMAPCD received VMT and speed information by functional class from KIPDA. Using this data, LMAPCD developed emission estimates for each of the counties.

The assumptions used for Bullitt and Oldham counties were the same as those for the 2003 budget updates with two exceptions, aside from the new VMT and speed estimates that were developed for this amendment of *Horizon 2030*. New vehicle registration data for Bullitt and Oldham counties for 2008 was developed and used, and the new (twelve month) approach to calculating emissions of PM 2.5 and its precursor described in the ESTABLISHED PRACTICE was utilized.

The PM 2.5 emission estimates for the Madison Township of Jefferson County, IN were developed by INDOT. INDOT used an approach to developing emission estimates that was similar to the method used by LMAPCD. However, since there is no travel model for Madison Township, determining the origin of the travel in that township required another source of information. The estimates of the origin of tripmaking (and therefore gasoline specifications and the presence/ absence of I/M programs) were based on data from 2000 Census. In addition, other data was “borrowed” from the Floyd County data developed by LMAPCD. This data was adjusted to account for conditions typical of the Madison Township (e.g. no freeways or ramps, no I/M program for 2002).

The PM 2.5 emission estimates for the Madison Township of Jefferson County, IN were developed by INDOT in the following manner.

- (1) VMT was estimated from a countywide estimate (using an updated growth rate).
- (2) VMT was identified by source (origin) county.
- (3) The proportion of each source county’s VMT of total county VMT was used to weight emission factors reflecting control and fuel programs for that source county.
- (4) The weighted, composite emission factors were applied to the Madison Township VMT to calculate criterion pollutant burdens.

As previously stated, for this analysis, INDOT staff reviewed the changes in travel impacts occurring in the non-Madison Township portion of the local PM 2.5 nonattainment area and

concluded that the emission estimates developed for Madison Township during the June, 2011 amendment could be used for this amendment, as well.

## RESULTS OF THE ANALYSIS

The transportation plan, *Horizon 2030*, has been examined to determine if it is in conformity with the SIPs of Indiana and Kentucky and fulfills the criteria in the federal conformity rule (found in 40 CFR 93). The examination has been based on an air quality analysis to determine that air pollutant emissions of the appropriate areas did not exceed the budgets set in the SIPs or 2002 emission levels.

As previously mentioned, the other criterion for determining conformity would have been the progress in implementation of the Transportation Control Measures (TCMs) contained in the SIPs. However, since previous consultation had determined that there were no approved TCMs, that criterion did not affect the determination of conformity. The results of the regional emissions analyses for ozone and PM 2.5 are discussed below.

### 8-hour Ozone Analysis

The eight-hour ozone maintenance SIPs of Indiana and Kentucky contain emission budgets for the precursors of ozone, volatile organic compounds (VOCs) and oxides of Nitrogen (NOx). The regional emissions analysis was conducted to provide estimates of the levels of emissions of VOCs and NOx for the various analysis years. These emission levels were then compared to the budgets in the SIPs to determine if the conformity tests were passed.

The results of the regional emissions analysis are summarized in Tables 1 and 2. Table 1 shows the summer weekday vehicle-miles-traveled from the analysis. Table 2 shows that for 2012, 2020, and 2030, the summer weekday VOC and NOx emission levels for the 8-hour maintenance area are less than the emission budgets established in the 8-hour maintenance SIP.

### PM 2.5 Analysis

There are no emission budgets for fine particulate matter, PM 2.5, or oxides of Nitrogen, one of its precursors. The regional emissions analysis was conducted to provide estimates of the levels of emissions of PM 2.5 and NOx for the various analysis years. These emission levels for the years after 2002 were then compared to the emission levels in 2002 to determine if the conformity tests were passed.

The results of the regional emissions analysis are summarized in Tables 3 and 4. Table 3 shows the annual vehicle-miles-traveled from the analysis. Table 4 shows that for 2012, 2020, and 2030, the annual PM 2.5 and NOx emission levels for the local PM 2.5 nonattainment area are less than those for 2002.

### Conclusions – 8-hour Ozone and PM 2.5

The regional emissions analysis of the updated *Horizon 2030* indicates that the plan is consistent with the goals and emission budgets established in the State Implementation Plans of Indiana and Kentucky. The cumulative effect of the results shown in Table 2 indicates that *Horizon 2030* has met the requirements of conformity under the 8-hour ozone standard. The effect of the results shown in Table 4 indicates that *Horizon 2030* has met the requirements of conformity under the PM 2.5 standard. In summary, it can be concluded that *Horizon 2030* conforms to the SIPs and meets the requirements of the federal conformity rule.

**TABLE 1**

<b>SUMMER WEEKDAY VEHICLE-MILES-TRAVELED (VMT) ESTIMATED FOR THE 8-HOUR OZONE NONATTAINMENT AREA</b> (in 1000's of vmt/day)			
<b>YEAR</b>	<b>INDIANA</b>	<b>KENTUCKY</b>	<b>TOTAL</b>
<b>2002</b>	<b>6153</b>	<b>23873</b>	<b>30026</b>
<b>2012</b>	<b>6759</b>	<b>26180</b>	<b>32939</b>
<b>2020</b>	<b>7569</b>	<b>28627</b>	<b>36196</b>
<b>2030</b>	<b>8569</b>	<b>32067</b>	<b>40636</b>

**TABLE 2**

<b>SUMMER WEEKDAY EMISSIONS FOR THE 8-HOUR MAINTENANCE AREA (kg/day)</b>				
<b>EMISSION LEVELS FOR VARIOUS YEARS</b>				
<b>YEAR</b>	<b>Area</b>	<b>VOCs</b>	<b>NOx</b>	<b>PASS</b>
<b>2012</b>	<b>Regional</b>	<b>17703</b>	<b>45208</b>	<b>YES</b>
<b>2020</b>		<b>9609</b>	<b>21526</b>	<b>YES</b>
<b>2030</b>		<b>7765</b>	<b>17389</b>	<b>YES</b>
<p>NOTE: The criteria for conformity are as follows:</p> <p>2012 Regional emission levels for VOCs must be below the maintenance plan emission budget of 40.97 tons/day or 37,168 kg/day.</p> <p>2012 Regional emission levels for NOx must be below the maintenance plan emission budget of 95.51 tons/day or 86,647 kg/day.</p> <p>2020 and 2030 Regional emission levels for VOCs must be below the maintenance plan emission budget of 22.92 tons/day or 20,793 kg/day.</p> <p>2020 and 2030 Regional emission levels for NOx must be below the maintenance plan emission budget of 29.46.13 tons/day or 26,726 kg/day.</p>				

**TABLE 3**

<b>ANNUAL AVERAGE DAILY VEHICLE-MILES-TRAVELED (VMT) ESTIMATED FOR THE PM 2.5 NONATTAINMENT AREA (in 1,000,000's of vmt/year)</b>			
<b>YEAR</b>	<b>INDIANA</b>	<b>KENTUCKY</b>	<b>TOTAL</b>
<b>2002</b>	<b>2327</b>	<b>7963</b>	<b>10290</b>
<b>2012</b>	<b>2548</b>	<b>8715</b>	<b>11263</b>
<b>2020</b>	<b>2848</b>	<b>9494</b>	<b>12342</b>
<b>2030</b>	<b>3231</b>	<b>10595</b>	<b>13826</b>

**TABLE 4**

<b>ANNUAL EMISSIONS FOR THE LOUISVILLE PM 2.5 NONATTAINMENT AREA (in 1000's of kg/year)</b>			
<b>EMISSION LEVELS FOR VARIOUS YEARS</b>			
<b>YEAR</b>	<b>PM 2.5</b>	<b>NOx</b>	<b>PASS</b>
<b>2002</b>	<b>1047</b>	<b>33166</b>	<b>-----</b>
<b>2012</b>	<b>518</b>	<b>16094</b>	<b>YES</b>
<b>2020</b>	<b>254</b>	<b>7627</b>	<b>YES</b>
<b>2030</b>	<b>222</b>	<b>6122</b>	<b>YES</b>

NOTE: The criteria for conformity are as follows:  
The emission levels for 2012, 2020, and 2030 must be no greater than those for 2002.



**MEMORANDUM**

Kentucky  
Member  
Counties

TO: Transportation Technical Coordinating Committee

FROM: Mary C. Hauber

Bullitt

DATE: November 1, 2011

Henry

Jefferson

SUBJECT: Amendment of the FY 2011 – FY 2015 Transportation Improvement Program

Oldham

Shelby

Spencer

Trimble

KIPDA has been requested by project sponsors to amend the FY 2011 – FY 2015 Transportation Improvement Program (TIP) to include the project changes shown in the shaded column on the attached list. These projects are either currently included in, or proposed for amendment to, the Horizon 2030 Metropolitan Transportation Plan. The TIP is a subset of the Metropolitan Transportation Plan and therefore the conformity analysis is performed on the Plan and not the TIP.

Indiana  
Member  
Counties

This project information was made available for public review October 19 through November 3 at public libraries and on the KIPDA website. Public open houses were held on October 24 at the Clarksville Public Library and on October 25 at the Highlands/Shelby Park Public Library.

Clark

Floyd

**Action is requested to recommend approval to the TPC.**

Equal  
Opportunity  
Employer

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**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
<b>INDIANA PROJECTS</b>							
1558		Blackiston Mill Rd.	Replacement of Bridge #51 over Silver Creek and reconstruction of approaches on Blackiston Mill Road. Total project length is approximately 0.65 miles.	Clarksville		Delete FY 2012 PE \$200,000 federal and \$250,000 total; STP-Urban funds.	Exempt - no change to model.
1572	0300447	Brown Station Way	Reconstruction of Brown Station Way from Randolph Avenue to existing bridge over Silver Creek, a distance of approx. 1.7 miles (no additional lanes proposed).	Clarksville	Change description to "Construction and completion of a new intersection at Lewis & Clark Pkwy. and Brown Station Way, including the removal of the existing bridge and interchange and constructing an at-grade interchange." Change Plan Project Cost from \$4,927,444 to \$5,421,350.	Increase FY 2011 PE to \$421,350 and change from STP-Urban funds to local funds; Add FY 2013 Construction \$4,000,000 federal and \$5,000,000 total, STP-State funds.	Clarification of description - already modeled as an at-grade intersection. No change to model.
1166	0201296	I-265	New bridge construction on PR265, SR265 bridge over Ohio River (joint project with KY).	INDOT		Add FY 2013 Construction \$43,200,000 federal and \$54,000,000 total; Add FY 2014 Construction \$43,200,000 federal and \$54,000,000 total; Add FY 2015 Construction \$43,200,000 federal and \$54,000,000 total; NHS funds.	This is a child project of KIPDA #52 Ohio River Bridges Project.
95	0300779	McDonald Lane	Reconstruct McDonald Lane as a 2 lane road (no additional lanes) from Grantline Road to Charlestown Road.	New Albany	Change Plan Project Cost from \$5,200,000 to \$5,512,500.	Move FY 2015 Construction to Future; STP-Urban funds.	Exempt - no change to model.
52		Ohio River Bridges Project	Construction of 2 new Ohio River bridges, 1 in the downtown (I-65) corridor and 1 in the far east (I-265) corridor.	INDOT	Reduce Plan Project Cost from \$1,166,900,000 to \$871,700,000. Change Open to Public date from 2017 to 2020.		significant-Update 2020 and 2030 networks to reflect modified design. Update tolling



**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
	0902207	US 150	Intersection improvement with new signals on US 150 at Cross Street.	INDOT	Change Open to Public date from 2012 to 2013.	Add FY 2012 ROW \$40,000 federal and \$50,000 total; Move FY 2012 Construction to FY 2013 and reduce to \$549,600 federal and \$687,000 total; STP-State funds.	Not regionally significant - no change to model
	1173075	Various Traffic Signals	Add new or modernize traffic signals at five locations in Clark County as follows: US 31 at Charlestown/New Albany Pike; IN 3 at Park St. in Charlestown; US 31 at Utica in Sellersburg; IN 3 at Clark Rd. in Charlestown; and IN 62 at IN 3 (Market St.).	INDOT	Add project to Plan; \$500,000. Open to Public year is 2013.	Add FY 2013 Construction \$500,000 federal and \$500,000 total; STP funds.	Exempt per 93.127
		Vehicle Replacement Purchase - Federal Section 5310	Purchase two new vehicles: a Type C van (modified wheelchair-equipped 15 passenger van) and a Type B van (a non-lift equipped 15 passenger van).	Rauch, Inc.	Add project to Plan; \$98,500. Open to Public Year is 2012.	Add FY 2012 Transit Capital \$78,800 federal and \$98,500 total; Section 5310 funds.	Exempt per 93.126
		Vehicle Replacement Purchase - Federal Section 5310	Purchase one Type C van (modified 15-passenger van with lift) to replace a vehicle currently in service.	New Hope Services	Add project to Plan; \$50,000. Open to Public Year is 2012.	Add FY 2012 Transit Capital \$40,000 federal and \$50,000 total; Section 5310 funds.	Exempt per 93.126
		Vehicle Replacement Purchase - Federal Section 5310	Purchase one Type C van (modified 15-passenger van with lift) to replace a vehicle currently in service.	Volunteers of America KY (IN Office)	Add project to Plan; \$50,000. Open to Public Year is 2012.	Add FY 2012 Transit Capital \$40,000 federal and \$50,000 total; Section 5310 funds.	Exempt per 93.126
		Vehicle Replacement Purchase - Federal Section 5310	Purchase one Type C van (modified 15-passenger van with lift) to replace a vehicle currently in service.	LifeSpan	Add project to Plan; \$50,000. Open to Public Year is 2012.	Add FY 2012 Transit Capital \$40,000 federal and \$50,000 total; Section 5310 funds.	Exempt per 93.126
<b>KENTUCKY PROJECTS</b>							
		12th Street Extension	Extend 12th Street to connect directly to Industry Road.	Louisville Metro Economic Dev.	Add project to Plan, \$6,900,000. Open to Public date 2020.		Regionally significant - add to 2020 and 2030 scenarios.

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
1808		Buckner Connector	Construct new connection from Old LaGrange Road to KY 393 Project length is 0.8 miles.	Oldham County	Increase Plan Project Cost from \$1,300,000 to \$1,450,000. Change Open to Public date from 2012 to 2015.	Move FY 2012 Construction to FY 2014; STP-Urban funds.	Regionally significant - remove from 2012 scenario.
		Bullitt Commuter Express	Creation of a transit link between TARC routes 6, 18, and 50 and businesses located in various business parks in Bullitt County.	Miller Transportation	Add project to Plan, \$138,400	Add FY 2011 Operations \$80,000 federal and \$138,400 total; JARC funding.	Regionally significant - insufficient details to model
		Dutchmans Lane & Breckenridge Lane Intersection Improvements	Turn lane improvements to Dutchmans Lane and Breckenridge Lane at their intersection.	Louisville Metro Public Works	Change description to "Lane additions to Breckenridge Lane south of Dutchmans Lane; Dutchmans Parkway west of Breckenridge Lane; Dutchmans Lane east of Breckenridge Lane; and I-264 ramp widening from southbound Breckenridge Lane to I-264 W. Entrance modifications to east side of Breckenridge Lane north of Dutchmans Lane; and north side of Dutchmans Lane east of Breckenridge Lane." Increase Plan Project Cost from \$2,310,000 to \$2,500,000. Change Open to Public date from 2016 to 2022.		Regionally significant - add to 2030 scenario

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
1804	52.00	I- 64 / KY 1747 Interchange	Reconstruct existing interchange including construct a triple left turn movement from WB Linn Station Road to SB KY 1747 (Hurstbourne Parkway); additional SB lane for Hurstbourne Parkway from Linn Station Road to Ramp 1 (I-64 EB off ramp); provide right turn lane for NB KY 1747 to EB Linn Station Road; provide dual left turn lanes from Ramp 5 (I-64 WB off ramp) to SB KY 1747. Widen Ramp 5 to 3 lanes approaching the terminal; Widen Ramp 6 (I-64 WB on ramp) for dual right turn lanes from SB KY 1747; provide dual left turn lanes from SB KY 1747 to Ramp 4 (I-64 EB on ramp). Widen Ramp 4 for dual lanes turning to ramp; Align Ramp 2 (I-64 EB off ramp for local traffic) to the new lane to SB KY 1747.	KYTC	Reduce Plan Project Cost from \$32,620,000 to \$10,800,000.	Add FY 2011 Design \$1,800,000 federal; Move FY 2010 ROW to FY 2011 and reduce from \$2,210,000 to \$118,000 federal; Move FY 2010 Utilities to FY 2011 and reduce from \$5,410,000 to \$2,015,000 federal; Combine FY 2010 Construction with FY 2011 Construction and reduce from \$25,000,000 to \$6,067,000 federal; IM funding with KY Toll Credit Match.	Regionally significant - no change to model
224	378.10	I- 65	Extend and reconstruct I-65 southbound ramp to Brook Street and Floyd Street. The project will include the consideration of bicycle and pedestrian facilities.	KYTC		Move FY 2006 Design and Construction to FY 2012, IMD funds. Reduce FY 2015 Construction from \$4,000,000 to \$1,500,000, STP-Urban funds.	Regionally significant - no change to model
1479	48.20	I- 71	Reconstruct I-71/I-264 interchange including the addition of north and southbound auxiliary lanes on I-71 and I-264. Project length is 2.2 miles.	KYTC	Change Description to "Interim improvements on I-71 including the addition of north and southbound auxiliary lanes on I-71 and I-264."	Delete FY 2010 ROW \$2,320,000 federal; Delete FY 2010 Utilities \$1,130,000 federal; Delete FY 2012 ROW \$2,320,000 federal; Add FY 2012 Construction \$5,000,000 federal; NHS funds with KY Toll Credits match.	Regionally significant - no change to model
		I-264	Construct a sound barrier on I-264 from MP 3.0 to MP 5.0	KYTC	Add project to Plan, \$4,000,000. Open to public 2016.		Exempt per 93.126
1017	136.00	I-265	Power wash and paint all steel bridges and steel bearings on I-265 (Gene Snyder Freeway).	KYTC	Change Open to Public date from 2011 to 2014. Increase the Plan Cost to \$18,000,000.	Increase FY 2010 Construction from \$3,790,000 to \$18,000,000; State funds.	Exempt/Not Regionally Significant
416	150.00	KY 44	Widen KY 44 from 2 to 3 lanes (3rd lane will be a center turn lane) from Floyds Fork Bridge to US 31E (Bardstown Road).	KYTC	Delete project from Plan.		Exempt per 93.127

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
1507	446.00	KY 155	Reconstruct intersection of KY 155 and KY 148.	KYTC	Change Open to Public date from 2012 to 2013.	Move FY 2011 ROW to FY 2012; Move FY 2011 Utilities to FY 2012; Move FY 2012 Construction to FY 2013; STP-Urban funds.	Exempt per 93.127
1790	8509.00	KY 245	Minor widening of KY 245 (no additional travel lanes) from Bernheim Forest to the Community College. Project length is 1.2 mi.	KYTC	Change description to "Major widening of KY 245 from 2 to 4 lanes from the I-65/KY 245 Interchange to Clermont. Project length is 1.6 miles." Reduce the Plan Cost from \$4,310,000 to \$4,000,000.	Change description; Add FY 2010 ROW \$500,000 federal; Increase FY 2010 Design to \$800,000 federal; Increase FY 2012 Design to \$2,350,000 federal; STP-State funds with KY Toll Credits match.	Regionally significant - add to 2020 and 2030 scenarios.
1467	284.00	KY 841	Improve KY 841/Stonestreet Road interchange as recommended by KIPDA's interchange study. (Includes additional NB lane north of interchange)	KYTC	Change Open to Public date from 2012 to 2014.	Add FY 2010 Design \$60,000 federal; Reduce FY 2010 Construction from \$360,000 to \$300,000 federal; STP-State funds with KY Toll Credit Match.	Regionally significant - remove from 2012 scenario.
1819	8203.00	KY 1819	Spot improvements to KY 1819 (Billtown Road) between Easum Road and Colonnades Road. Project length is 1.1 mi.	KYTC	Add project to Plan, \$8,580,000. Open to Public date 2012.	Reduce FY 2010 ROW to \$1,580,000; Add FY 2010 Utilities \$2,000,000; Add FY 2011 Construction \$5,000,000; State funds.	Not regionally significant
442	8201.00	LaGrange Overpass	Construct LaGrange overpass (4 travel and 1 center turn lane) over I-71 from Business Park Road to New Moody Lane. Project length is 0.3 miles.	Oldham County	Reduce Plan Project Cost from \$25,000,000 to \$13,500,000.	Move FY 2008 Design to FY 2012; Move FY 2008 ROW to FY 2012; Move FY 2008 Utilities to FY 2013; Move FY 2008 Construction to FY 2014; State funds.	Regionally significant - no change to model
321	434.00	LaGrange Underpass West of LaGrange	Construct a 4 lane uninterrupted rail underpass west of LaGrange.	KYTC	Increase Plan Project Cost from \$5,408,000 to \$8,259,000.		Regionally significant - no change to model
		Northeast Louisville Loop	Construct a shared use path along US 60 (Shelbyville Rd.) from Beckley Station to Eastwood Cut-off.	Louisville Metro Parks	Add project to Plan, \$3,500,000. Open to Public date 2014.	Add FY 2012 Design \$530,000 federal and \$662,500 total; STP-Urban funds.	Exempt per 93.126

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
185	700.00	Ohio River Bridges Project	Construction of 2 new Ohio River bridges, 1 in downtown (I-65) corridor and 1 in the far east (I-265) corridor and reconstruction of the Kennedy interchange. Also included are enhanced bus service improvements.	KYTC	Reduce Plan Project Cost from \$2,928,900,000 to \$2,044,547,000		Regionally significant- Update 2020 and 2030 networks to reflect modified design. Update tolling assumptions.
		Oldham's Public Bus - Bus Hosts (formerly LOCAL Transit Bus Hosts)	These funds will be used to disseminate information about using LOCAL transit service in Oldham County. Specifically, the project will recruit and train 'bus hosts' to promote Oldham's public transportation system.	HDB	Add project to Plan, \$10,809	Add FY 2012 Transit Capital \$8,647 federal and \$10,809 total; JARC funds.	Exempt per 93.126
		Overcoming Obstacles	This project will provide travel training to clients of Bridgehaven's psychiatric rehabilitation program.	Bridgehaven Mental Health Services	Add project to Plan, \$10,060	Add FY 2012 Operations \$5,030 federal and \$10,060 total; Section 5317 funds.	Exempt per 93.126
		Pedestrian Access to Transit Facilities	Construction of passenger amenities, sidewalks, curb cuts and boarding area pads at locations where access to fixed route service is obstructed or inadequate.	TARC	Add project to Plan, \$404,454	Add FY 2012 Transit Capital \$299,892 federal and \$374,865 total; Section 5317 funds.	Exempt per 93.126

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
		Public Transportation Now and In the Future	Develop a Comprehensive Operational Analysis (COA) for the TARC system/service area and make recommendations for immediate and long-term public transportation improvements. The outcome and recommendations of the CO Analysis should include appropriate measures to: <ul style="list-style-type: none"> <li>• maximize existing bus service efficiency</li> <li>• improve communications and build community partnerships that will support strong public transportation system in the Louisville Metro Region today and in the future</li> <li>• develop plans for implementing major transportation corridors that will spur development, generate investments and support economic growth at the local and regional level. Major transportation corridors should integrate all modes of transportation with enhanced public transportation service.</li> </ul>	TARC	Add project to Plan, \$1,125,000. Open to Public date 2013.		Not regionally significant at this time - results may provide regionally significant amendments.
1829		Synchronization of Traffic Signals	Upgrade and expansion of existing Metro Traffic Signal System in terms of new and more flexible equipment and central control capabilities on a countywide level including communications to traffic signals along critical suburban corridors.	Louisville Metro Public Works	Add project to Plan, \$7,750,000. Open to Public date 2013.	Add FY 2012 Construction \$5,000,000 federal and \$6,250,000 total; TIGER funds.	Exempt per 93.128
581	110.00	US 31	Paint the US 31 (George Rogers Clark) Bridge over the Ohio River between Louisville and Jeffersonville.	KYTC	Change Open to Public date from 2012 to 2014.		Exempt/Not Regionally Significant
230	972.00	US 42	Construct 2 way center turn lane on US 42 from Harrods Creek Bridge north to River Road. Project length is 1.0 mile.	KYTC	Change Open to Public date from 2012 to 2013.		Regionally significant - remove from 2012 scenario.

**Amendment 3 of Horizon 2030 Metropolitan Transportation Plan  
Amendment 3 of FY 2011 - FY 2015 Transportation Improvement Program**

November 2011

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
1643		Various Bridge Replacement Projects	Various bridge replacment projects: general cateory needed for bridge replacement projects that are air quality exempt and not regionally significant.	KYTC	Change name to "Various Bridge inspection, Repair, and Replacment Projects" and change description to "Various bridge inspection, repair, and replacment projects: general cateory needed for bridge inspection, repair, and replacement projects that are air quality exempt and not regionally significant." Increase Plan cost to \$4,375,000	Change name and description to match Plan.	Exempt per 93.126
		Various Environmental Site Investigations and Cleanups	Environmental Site Investigations and Cleanups in the Louisville MPO area.	KYTC	Add project to Plan, \$70,000.	Add FY 2011 Construction \$2,000; Add FY 2012 Construction \$2,000; Add FY 2013 Construction \$2,000; Add FY 2014 Construction \$2,000; Add FY 2015 Construction \$2,000; State funds.	Exempt/Not Regionally Significant
1553		Various Reference Markers	Installation of reference markers at various locations in metro Louisville; part of Various general operations projects eligible for resurfacing, restoration, and rehabilitation (KIPDA #172)	KYTC	Add project to Plan, \$150,000. Change description to "Installation of reference markers at various locations in the Louisville MPO region."	Change description; Add FY 2011 Construction \$5,000 federal; Add FY 2012 Construction \$5,000 federal; Add FY 2013 Construction \$5,000 federal; Add FY 2014 Construction \$5,000 federal; Add FY 2015 Construction \$5,000 federal; NHS funding with KY Toll Credits match.	Exempt per 93.127
	253.03	Various Roadway Sign and Sign Support Rehab	Roadway sign and sign support rehabilitation in the Louisville MPO area.	KYTC	Add project to Plan, \$35,000.	Add FY 2011 Construction \$1,000; Add FY 2012 Construction \$1,000; Add FY 2013 Construction \$1,000; Add FY 2014 Construction \$1,000; Add FY 2015 Construction \$1,000; State funds.	Exempt per 93.126