

TRANSPORTATION POLICY COMMITTEE

12:30 p.m., Thursday, April 28, 2016

**KIPDA Burke Room
11520 Commonwealth Drive
Louisville, Kentucky 40299**

AGENDA

**Kentucky
Member
Counties**

Bullitt

Henry

Jefferson

Oldham

Shelby

Spencer

Trimble

**Indiana
Member
Counties**

Clark

Floyd

**Equal
Opportunity
Employer**

1. *Call to Order, Welcome, Introductions*
2. *February 25 Meeting Minutes* – Review and approval (see enclosed). **Action is requested.**
3. *Public Comment Period*
4. *Public Meeting Report* – Staff will report on public involvement activities.
5. *Horizon 2035 Metropolitan Transportation Plan (MTP) and the FY 2015 - FY 2018 Transportation Improvement Program (TIP)* – Staff will present proposed amendments to both documents (see enclosed). **Action is requested.**
6. *Transportation Alternatives Program (TAP)* – Staff will discuss projects proposed for the use of TAP funding dedicated to the metropolitan area (see enclosed). **Action is requested.**
7. *Project Management Process* – Staff will discuss the development, involving committee member participation, of a proposed project management process.
8. *FY 2017 Unified Planning Work Program* – The committee will be asked to recommend approval by the TPC of the Final Draft of the UPWP. **Action is requested.**
NOTE: Due to its size, it is not included in the packet. It is available, however, through the following link: <http://www.kipda.org/Transportation/MPO/2017UPWP/Default.asp>
9. *FY 2015 - FY 2018 Transportation Improvement Program (TIP)* – Staff will present information on Administrative Modifications to the short range funding document.
10. *TPC Meeting Time and Duration* – Staff will discuss possible changes for future meetings. **Action is requested.**
11. *Other Business*
12. *Adjourn*

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

Auxiliary aids/services are available when requested three (3) business days in advance.

11520 Commonwealth Drive
Louisville, KY 40299
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See
<http://www.ridetarc.org/triplan/>
for TARC service



MINUTES
TRANSPORTATION POLICY COMMITTEE (TPC)
Thursday, February 25, 2016, 1:00 p.m.
KIPDA Burke Room
11520 Commonwealth Drive
Louisville, Kentucky 40299

Call to Order

Recording Secretary Larry Chaney called the meeting to order at 1:03 p.m. After introductions were made, it was determined that a quorum was present.

Review and Approval of Minutes

Beth Jones, Kentucky Transportation Cabinet (KYTC), made a motion to approve the minutes of the December 17 meeting. Matt Meunier, City of Jeffersontown, seconded the motion and it carried with a unanimous vote.

Keith Griffee, Bullitt County, made a motion to approve the minutes of the January 28 meeting. Jim Ude, Indiana Department of Transportation (INDOT) – Seymour, seconded the motion and it carried with a unanimous vote.

Public Comment Period

There were no public comments.

Public Meeting Report

Larry Chaney, KIPDA staff, reported on public involvement activities.

Fixing America's Surface Transportation (FAST) Act

Federal Highway Administration (FHWA) – Kentucky Division Administrator Thomas L. Nelson discussed the status of the FAST Act recently-enacted transportation legislation. No action was required.

NuLu Streetscape Project

Rebecca Matheny, Louisville Downtown Partnership, presented project details and discussed the status of the project on East Market Street in Downtown Louisville. No action was required.

Transforming Dixie Highway (Dixie Corridor Improvement Project)

Jeff O'Brien, Louisville Metro staff, presented project details and discussed the status of the project on Dixie Highway. No action was required.

Indiana Dedicated Funding

Mary Lou Hauber, KIPDA staff, presented proposed priorities for the use of dedicated federal funding and the use of prior year balance (PYB) for FY 2017. **Andy Crouch, City of Jeffersonville, made a motion to approve the proposed priorities. Brian Dixon, Clark County, seconded the motion and it carried with a unanimous vote.**

FY 2015-FY 2018 Transportation Improvement Program (TIP)

Mary Lou Hauber, KIPDA staff, presented information on Administrative Modifications to the short range funding document. No action was required.

Other Business

There was no other business.

Adjournment

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

Larry D. Chaney
Recording Secretary

Members Present:

Keith Griffie	Bullitt County
Matt Meunier	City of Jeffersontown
Andy Crouch	City of Jeffersonville
Brian Dixon	Clark County
*Thomas Nelson	Federal Highway Administration – Kentucky
Jim Ude	Indiana Department of Transportation – Seymour
Beth Jones	Kentucky Transportation Cabinet
*Tom Hall	Kentucky Transportation Cabinet – District 5
Jim Mims	Louisville Metro Government
*Emily Liu	Louisville Metro Planning & Design
John Black	Oldham County
Aida Copic	TARC

Members Absent:

Robert Hall	City of Charlestown
Jeff Gahan	City of New Albany
Sherry Conner	City of Shively
Richard Tonini	City of St. Matthews
*Tommy Dupree	Federal Aviation Administration – Memphis
*Michelle Allen	Federal Highway Administration – Indiana
*Robert Buckley	Federal Transit Administration – Region 4
Stephen Bush	Floyd County
Brandye Hendrickson	Indiana Department of Transportation
J. Byron Chapman	Jefferson County League of Cities
Philip Lynch	Louisville Regional Airport Authority
Paul Fetter	Town of Clarksville
*Christopher Taylor	U.S. Department of Housing & Urban Development

Others Present:

Brian Meade	AECOM
Steve Miller	Congressman Brett Guthrie's Office
Christa Robinson	Congressman John Yarmuth's Office
John Ballentyne	Federal Highway Administration – Kentucky
Greg Rawlings	Federal Highway Administration – Kentucky
Joel Merrill	Gresham Smith & Partners
John West	HDR
Gary Valentine	HDR
Tony Harover	HMB
Bobby Campbell	Jacobi Toombs & Lanz
Thomas Witt	Kentucky Transportation Cabinet
Beth Newman	Kentucky Transportation Cabinet – District 5
Susan Oakland	Kentucky Transportation Cabinet – District 5
Travis Thompson	Kentucky Transportation Cabinet – District 5
Sarah Baer	KIPDA

Agenda Item #2

David Burton	KIPDA
Larry Chaney	KIPDA
Jack Couch	KIPDA
Amanda Deatherage	KIPDA
Adam Forseth	KIPDA
Mary Lou Hauber	KIPDA
Lori Kelsey	KIPDA
Andy Rush	KIPDA
Randy Simon	KIPDA
Nick Vail	KIPDA
Carl Ellis	Louisville Downtown Partnership
Rebecca Matheny	Louisville Downtown Partnership
John Callihan	Louisville Metro Government
*Jeff O'Brien	Louisville Metro Planning & Design
Dirk Gowin	Louisville Metro Public Works & Assets
Patti Clare	Neel-Schaffer
Brian Aldridge	Stantec
Dan O'Dea	Stantec
Rickie Boller	TRIMARC
Bob Stein	United Consulting
Shawn Dikes	WSP/Parsons Brinckerhoff

* Denotes Advisory Members



MEMORANDUM

Kentucky
Member
Counties

TO: Transportation Policy Committee

FROM: Mary C. Hauber

Bullitt

DATE: April 20, 2016

Henry

SUBJECT: Amendment of the Horizon 2035 Metropolitan Transportation Plan and the FY 2015 – FY 2018 Transportation Improvement Program

Jefferson

Oldham

KIPDA has been requested to amend the *Horizon 2035 Metropolitan Transportation Plan* and the *FY 2015 – FY 2018 Transportation Improvement Program*. Attached, please find the proposed amendments to the Metropolitan Transportation Plan and the TIP, a summary of the Interagency Consultation meeting, and the air quality conformity documentation.

Shelby

Spencer

Trimble

In an effort to expedite the process, the proposed project changes have been separated into two categories, air quality exempt and non-exempt projects. The exempt projects are included in Amendment 5 and the non-exempt projects are in Amendment 6. Both of these amendments will move along through the process at the same time but Amendment 6 will require a full conformity determination following TPC approval.

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The projects proposed for amendment to the TIP are either currently included in, or proposed for amendment to, the Horizon 2035 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.

Floyd

The proposed project changes, Interagency Consultation meeting summary, and air quality conformity documentation were made available for public review from March 25 through April 8, 2016 at public libraries, on the KIPDA Community Remarks webpage and on the KIPDA website. A public open house was held on April 5 at the Southwest Regional Library located at 9725 Dixie Highway in Louisville. All comments that were received will be presented at the TPC meeting.

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Action is requested

11520 Commonwealth Drive
Louisville, KY 40299
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www.kipda.org



**Amendment 5 of Horizon 2035 Metropolitan Transportation Plan
Amendment 5 of FY 2015 - FY 2018 Transportation Improvement Program
April 2016**

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
INDIANA PROJECTS							
2189	1401343	Greenway Connector	The installation of a new Greenway walking and biking path along the Ohio River between the Riverstage and Clarksville.	Jeffersonville	No change to Plan	Delete FY 2016 Construction \$534,331 federal; STP-Urban funds. To be completed with local funds.	Exempt
	1600436	I-65	Implementation of a truck parking information management system using existing ITS technology on I-65 to help truckers more quickly and reliably identify accurate and up-to-date information about the availability of safe truck parking for needed rest and overnight stays. Using TIGER funds.	INDOT	Added to Plan as part of the Regional Truck Parking Information and Management System shown below in the Kentucky projects.	Add FY 2018 Construction \$4,149,751 federal and \$4,758,331 total; TIGER funds.	Exempt
		Port of Indiana Truck-to-Rail and Rail-to-Water Improvements	Completion of a waterfront rail loop, construction of a rail-to-barge transfer facility with mini-rail loop, extension of rail within the existing port boundaries, construction of an additional rail siding adjacent to the existing rail yard that will allow rail carriers to deliver a 90 car unit train to the port, and construction of a 3 acre truck-to-rail paved intermodal yard. All projects are proposed to be constructed within the existing port boundary.	Port of Indiana	Add project to Plan; \$17,000,000 project cost; Completion in 2020.	Add FY 2016 PE \$50,000 local funds; FY 2017 Design \$650,000 local funds; FY 2018 Design \$500,000 local funds; FY 2017 Construction \$1,900,000 federal TIGER funds and \$1,310,000 local; FY 2018 Construction \$4,863,574 federal TIGER funds and \$2,626,426 local funds.	Exempt
539	0400935	Salem Noble Road	Reconstruct as a 2 lane road from IN 62 to IN 403.	Clark County	No change to Plan	Delete FY 2016 ROW; STP-Urban funds.	Exempt
		Various Transportation Amenities	Various transportation amenities including streetscaping, landscaping, plantings, and informational signs. (Grouped Project)	KIPDA	Add project to Plan; \$375,000 project cost.	Add FY 2016 Construction \$100,000 federal and \$125,000 total; Add FY 2017 Construction \$100,000 federal and \$125,000 total; Add FY 2018 Construction \$100,000 federal and \$125,000 total; STP-State funds.	Exempt
		Various Sidewalk Projects	Construction and rehabilitation of various sidewalks. (Grouped Project)	KIPDA	Add project to Plan; \$375,000 project cost.	Add FY 2016 Construction \$100,000 federal and \$125,000 total; Add FY 2017 Construction \$100,000 federal and \$125,000 total; Add FY 2018 Construction \$100,000 federal and \$125,000 total; STP-State funds.	Exempt

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KENTUCKY PROJECTS							
		Dixie Hwy TIGER Project	Project will address congestion, safety, and functionality of the Dixie Highway corridor from KY 841 to Broadway including: Intelligent Transportation System (ITS)/Signal System and Technology Upgrades to connect Dixie Highway to the city's existing traffic operations center for active traffic management operations; Complete Streets and Safety/Access Management Improvements to include construction of pedestrian pathways and improved multi-modal connectivity; raised medians, consolidation of access points, modification from TWLTL to dedicated turn lanes, signage and striping upgrades; and Bus Rapid Transit to include upgraded transit facilities along corridor with approximately 36 new, highly visible and easily accessible BRT stations, newly branded vehicles unique to the Dixie Corridor, appropriately located queue-jump lanes and bus turnouts.	Lou. Metro Public Works	Add project to Plan; \$28,910,000 project cost; Open to Public in 2018.	Add project to TIP; Add FY 2016 Project Management \$60,000 local funds; Add FY 2017 Project Management \$200,000 local funds; Add FY 2018 Project Management \$200,000 local funds; Add FY 2019 Project Management \$40,000 local funds; Add FY 2016 Design \$1,500,000 state funds; Add FY 2016 Construction \$10,000,000 state funds; Add FY 2016 Design \$1,500,000 Federal TIGER funds; Add FY 2016 ROW \$500,000 Federal TIGER funds; Add FY 2016 Utilities \$900,000 Federal TIGER funds; Add FY 2016 Construction \$2,000,000 Federal TIGER funds; Add FY 2017 Transit Capital \$8,000,000 Federal TIGER funds; Add FY 2017 Construction \$4,000,000 Federal TIGER funds.	Exempt
369		Kentuckiana Air Education (KAIRE)	Information/outreach campaign to educate public about air quality issues and encourage the public to make air-friendly choices.	APCD	No change to Plan	Add FY 2016 Program Operating \$480,000 federal and \$600,000 total; CMAQ funds	Exempt
		Morgan Conservation Park Trail Maintenance and Trailhead	Construction of an ADA accessible trail, placement of water and electricity services and construction of a composting pit comfort station at Morgan Conservation Park.	Oldham County	Add project to Plan; \$177,161 project cost; Open to public in 2017.	Add project to TIP; Add FY 2016 Construction \$72,000 federal and \$177,161 total; Recreational Trails funds.	Exempt
2116	525.00	Northeast Louisville Loop - Section II	Design and construct a shared-use path system from Eastwood Cut Off Road to Eastwood Recreation Center.	Lou. Metro Parks	No change to Plan	Add FY 2016 ROW \$533,333 federal and \$653,333 total; Add FY 2017 Utilities \$53,333 federal and \$65,333 total; STP-Urban funds.	Exempt
		Regional Truck Parking Information and Management System	Implementation of a regional truck parking information management system using existing ITS technology on major truck freight routes in eight states to help truckers more quickly and reliably identify accurate and up-to-date information about the availability of safe truck parking for needed rest and overnight stays. Using TIGER funds.	Kansas DOT, INDOT, Iowa DOT, KYTC, Michigan DOT, Minnesota DOT, Ohio DOT, Wisconsin DOT	Add project to Plan; \$28,666,364 project cost; This is the total project cost to be divided for eight states. Open to public in 2018.	Add FY 2017 Construction \$2,866,636 federal and \$3,583,295 total; TIGER funds. This is 1/8 of the total project cost to be used for Kentucky freight routes.	Exempt
1423	499.00	River Road Bicycle & Pedestrian Improvements	The Louisville Loop Ohio River Valley Northeast Bicycle/Pedestrian Improvements project will identify alternative shared-use path alignments in the area generally between the Ohio River and approximately Brownsboro Road from the Big 4 Bridge at the Mile 0 trailhead of the Louisville Loop to the City of Prospect at US 42. Approximately 8.5 miles.	Lou. Metro Parks	No change to Plan	Move FY 2016 Design to FY 2017 \$200,000 federal; Delete FY 2017 Construction \$2,043,030 federal and \$2,553,788 total; STP-Urban funds. Move FY 2015 Design to FY 2016; Move FY 2016 ROW to FY 2017; Move FY 2016 Utilities to FY 2017; Move FY 2017 Construction to FY 2018; CMAQ funds.	Exempt

**Amendment 5 of Horizon 2035 Metropolitan Transportation Plan
Amendment 5 of FY 2015 - FY 2018 Transportation Improvement Program
April 2016**

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162	384.00	Ticket to Ride	Ticket to Ride regional rideshare program	KIPDA	No change to Plan	Shift all funds up one year and add additional funding for FY 2018 to be used in FY 2019. Increase FY 2016 to \$962,000 federal and \$1,202,500; Increase FY 2017 to \$1,010,000 federal and \$1,262,500 total; Increase FY 2018 to \$1,060,500 federal and \$1,325,625 total; STP-Urban funds.	Exempt
		UPS - CNG Vehicle Infrastructure Development Project	The project will cover the incremental difference in cost of transitioning the truck fleet at the Louisville UPS' regional hub from conventional diesel/gasoline vehicles to CNG vehicle, and will involve approximately 63 Class 8 Tractors and 100 Package Cars. The project will also include the construction of a CNG refueling station to accommodate the fleet at its facility at 8100 Air Commerce Drive, Louisville, Kentucky.	Lou. Metro Public Works	Add project to Plan; \$12,059,899 project cost; Completion in 2018.	Add project to TIP; Add FY 2016 Construction \$4,823,960 federal and \$12,059,899 total; CMAQ funds.	Exempt
		Various Projects for Enhanced Mobility of Seniors and Individuals with Disabilities	Various projects for enhanced mobility of seniors and individuals with disabilities, including providing paratransit trips and vehicle replacement.	TARC	Add project to Plan; \$4,700,000 project cost.	Add project to TIP; Add FY 2016 Transit Capital and Operating \$928,268 federal and \$1,160,335 total; Add FY 2017 Transit Capital and Operating \$1,484,629 federal and \$2,356,848 total; Add FY 2018 Transit Capital and Operating \$928,268 federal and \$1,160,335 total; Section 5310 funds.	Exempt
		TARC Job Access Trips	Project will provide transportation services for paratransit trips to work that require travel beyond the service area required by the ADA.	TARC	Add project to Plan; \$819,926 project cost. Completion in 2017	Add FY 2017 Operations \$409,913 federal and \$819,926 total; Section 5310 funds.	Exempt
		ElderServe Senior Center Van Purchase	Purchase one ADA compliant passenger van (wheelchair lift-equipped) to replace an older vehicle, to be used to transport seniors and individuals with disabilities.	ElderServe	Add project to Plan; \$54,876 project cost. Completion in 2017	Add FY 2016 Transit Capital \$46,645 federal and \$54,876 total; Section 5310 funds.	Exempt
		LifeSpan Resources Transportation	Purchase two vehicles, one lift equipped and one with side/rear ramp equipped, to replace existing high-mileage vehicles; and will be used to transport older adults and persons with disabilities.	LifeSpan	Add project to Plan; \$111,150 project cost. Completion in 2017	Add FY 2016 Transit Capital \$88,920 federal and \$111,150 total; Section 5310 funds.	Exempt
		Rauch Vehicle Replacement	Purchase 3 ADA accessible minivans; two will replace older vehicles, and the third will allow for additional service.	Rauch, Inc.	Add project to Plan; \$109,905 project cost. Completion in 2017	Add FY 2016 Transit Capital \$87,924 federal and \$109,905 total; Section 5310 funds.	Exempt
		Day Spring - Out and About	Purchase a wheelchair accessible vehicle to serve clients who are aging, senior citizens and individuals with disabilities.	Day Spring	Add project to Plan; \$50,000 project cost. Completion in 2017	Add FY 2016 Transit Capital \$40,000 federal and \$50,000 total; Section 5310 funds.	Exempt
		Parr's Rest Vehicle Replacement	Purchase one wheelchair accessible vehicle to replace an older vehicle to provide transportation services to seniors and individuals with disabilities.	Parr's Rest	Add project to Plan; \$66,795 project cost. Completion in 2017	Add FY 2016 Transit Capital \$56,776 federal and \$66,795 total; Section 5310 funds.	Exempt

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KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
		Upward Mobility	Purchase two wheelchair accessible vans to replace two older vehicles.	Volunteers of America KY	Add project to Plan; \$104,885 project cost. Completion in 2017	Add FY 2016 Transit Capital \$83,908 federal and \$104,885 total; Section 5310 funds.	Exempt
		Harbor House Vehicle Replacement	Purchase one wheelchair accessible vehicle to replace an older vehicle to provide transportation services to seniors and individuals with disabilities.	Harbor House	Add project to Plan; \$66,820 project cost. Completion in 2017	Add FY 2016 Transit Capital \$53,456 federal and \$66,820 total; Section 5310 funds.	Exempt
		Neighborhood House Vehicle Replacement	Neighborhood House will purchase one wheelchair lift-equipped vehicle to replace an older vehicle that is at the end of its functional life and is not equipped with a wheelchair lift.	Neighborhood House	Add project to Plan; \$58,376 project cost. Completion in 2017	Add FY 2016 Transit Capital \$53,456,376 federal and \$58,376 total; Section 5310 funds.	Exempt

**Amendment 6 of Horizon 2035 Metropolitan Transportation Plan
Amendment 6 of FY 2015 - FY 2018 Transportation Improvement Program
April 2016**

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
KENTUCKY PROJECTS							
223	404.01	Cooper Chapel Road Phase 3	Phase 3: Extend and construct 2 lane roadway with a continuous center-turn lane from KY 864 (Beulah Church Road) to US 31E (Bardstown Road) at Bardstown Falls Road. Project will include consideration of bicycle and pedestrian facilities.	Lou. Metro Public Works	No change to Plan	Move FY 2016 ROW to FY 2017; Move FY 2017 Utilities to FY 2018; and delete FY 2018 Construction; STP-Urban funds.	Non-Exempt. 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.	Lou. Metro Public Works	No change	Move FY 2016 Design to FY 2018; Delete FY 2018 Utilities; STP-Urban funds.	Non-Exempt. No change to model .
	527.00	I-65	Improve ingress/egress with I-65 for the Cedar Grove Industrial Park by constructing a new interchange and connector, and reconstructing the I-65 SB exit ramp to KY 480.	KYTC	Add project to Plan; \$35,500,000 project cost; Open to public in 2022.	Add project to TIP; Add FY 2015 Design \$2,000,000; State funds.	Non-Exempt. Add to 2025, 2030, and 2035 scenarios.
2214	536.00	KY 1931	Widen KY 1931 (Manslick Rd.) from 2 to 3 lanes from Dixie Highway (US 31W) to Doss High School.	KYTC	No change	Move FY 2015 Design to FY 2016 \$1,000,000 federal; Add FY 2018 Utilities \$3,000,000 federal; STP-Urban funds.	Part of KIPDA 467 KY 1931; Non-Exempt. No change to model.
		Louisville Loop - Northwestern Parkway	Construct bicycle and pedestrian facilities along Northwestern Parkway with improvements in the 4 zones: Zone 1 - from West Market Street to Bank Street includes 10' shared use path, restriping pavement, dedicated bicycle lanes, signage and other bicycle and pedestrian facilities, remains as 2 lanes; Zone 2 - from Bank Street to 39th Street includes 10' shared use path, restriping pavement, dedicated bicycle lanes, signage and other bicycle and pedestrian facilities, and will be reduced from 2 lanes to 1 lane; Zone 3 - from 39th Street to 33rd Street includes restriping pavement, dedicated bicycle lanes, a cycle track, signage and other bicycle and pedestrian facilities, and will be reduced from 4 lanes to 2 lanes; and Zone 4 - from 33rd Street to 31st Street includes restriping pavement, dedicated bicycle lanes, a cycle track, signage and other bicycle and pedestrian facilities, remains as 2 lanes.	Lou. Metro Parks	Add project to Plan; \$3,038,000 project cost; Open to public in 2020.	Not in TIP.	Non-Exempt. Add to 2020, 2025, 2030, and 2035 scenarios.
1935		Northwestern Parkway Road Diet	Reduce Northwestern Parkway from four lanes to three lanes between Portland Avenue to 38th Street. Convert Northwestern Parkway between Portland Avenue and Bank Street from one-way to two-way; and convert Bank Street from 38th Street to Northwestern Parkway from one-way to two-way.	Lou. Metro Public Works	Delete project from the Plan.	Not in TIP.	Non-Exempt. Remove from 2020, 2025, 2030, and 2035 scenarios.

**Amendment 6 of Horizon 2035 Metropolitan Transportation Plan
Amendment 6 of FY 2015 - FY 2018 Transportation Improvement Program
April 2016**

KIPDA ID	State ID	Project Name	Project Description	Project Sponsor	Description of Plan Amendment	Description of TIP Amendment	Effect on AQ Analysis
1899		Olmsted Pkways. Multi-Use Path System - Southern Pkwy	Construction of a 2.5 mile shared use path system along Southern Parkway between South 3rd and New Cut Road, reducing roadway from 4 lanes to 3 lanes (3rd lane will be a center turn lane).	Lou. Metro Parks	No change to Plan	Add FY 2017 Utilities \$36,444 federal; Delete FY 2017 Construction \$962,900 federal; STP-Urban funds.	Part of KIPDA 1273 Olmsted Parkways Multi-Use Path System; Non-Exempt. No change to model.
1810		One-Way Street Conversion to Two-Way Phase 2	Design and construction for the conversion of the following one-way streets in downtown Louisville to two-way traffic flow: 3rd Street (Market Street to Main Street); and Main Street (2nd Street to Story Avenue).	Lou. Metro Public Works	No change to Plan	Delete FY 2018 Construction; STP-Urban funds.	Non-Exempt. No change to model .
1338		River Road Extension	Extend River Road west from 7th Street to Northwestern Parkway. The project is feasible using a low design speed criteria and a two-lane section.	Lou. Metro Public Works	No change to Plan	Move FY 2015 Design to FY 2017 \$550,000 federal; Add FY 2018 ROW \$540,000 federal; STP-Urban funds.	Non-Exempt. No change to model .

Interagency Consultation Conference Call

February 23, 2016
10:00 a.m. EST

Participants

FHWA-KY	-- Bernadette Dupont, Greg Rawlings
FHWA-IN	-- Michelle Allen
EPA – Region 4	-- Kelly Sheckler, Egide Louis
KYTC	-- Beth Jones, Justin Harrod, Lynn Soporowski
KYTC District 5	-- Tom Hall, Susan Oatman
INDOT	-- Frank Baukert
KY DAQ	-- Joe Forgacs
LMAPCD	-- Craig Butler, Michelle King
KIPDA	-- Mary Lou Hauber, Andy Rush, Nick Vail, and David Burton

Background

Recently, KIPDA staff has undertaken the steps necessary to amend the Metropolitan Transportation Plan and the FY 2015 – FY 2018 Transportation Improvement Program. KIPDA staff compiled lists of proposed project changes and distributed them—via e-mail—to the members of the Interagency Consultation group (IAC/ICG) on February 17, 2016 along with recommendations about how these changes should be handled with respect to the regional emissions analysis.

Discussion of Schedule

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

- the air quality analysis will be completed on March 16
- public review will be from March 25 through April 8
- TPC review of public comments will be from April 13 through April 27
- TPC action on April 28

Discussion of Planning Assumptions

The planning assumptions for the travel demand forecasting model were discussed. The analysis years will be 2020, 2025, 2030, and 2035. KIPDA staff reviewed with the participants the attainment status for the Louisville area. There was discussion of the status of the revocation of the 1997 PM_{2.5} standard, but EPA is unsure of when that will be finalized. It was agreed that the 2002 Baseline test will be used until we hear differently. It was also noted that Louis Egide will be checking input and running the MOVES model to compare to the results submitted with the amendment.

Discussion of Projects

The proposed project changes will be separated into two categories, exempt and non-exempt projects. The exempt projects are included in Amendment 5 and the non-exempt projects are in Amendment 6. Both of these amendments will move along through the process at the same time but Amendment 6 will require a conformity determination following TPC approval.

Both project lists were reviewed, including a recommendation concerning how they should be handled with respect to the regional emissions analysis. KIPDA staff discussed various projects and provided additional information, changes and/or clarification of those projects. The projects that were discussed include the following:

- **KIPDA ID 1935: Northwestern Parkway Road Diet, and Louisville Loop – Northwestern Parkway** – Construction of bicycle and pedestrian facilities along Northwestern Parkway from West Market St. to 31st St. There was explanation of deleting the Northwestern Pkwy. Road Diet project but adding the Louisville Loop – Northwestern Pkwy. project.
- **Regional Truck Parking Information and Management System** – Implementation of a regional truck parking information management system in eight states including Kentucky and Indiana. There was discussion of how to divide the funding to include in the TIP. For now KIPDA will divide the total funding by the eight states and then revise when additional information is available.
- **KIPDA ID 1338: River Road Extension-** Extend River Road from 7th St. to Northwestern Parkway. There was clarification of the project termini and noted that this project is not included in the Louisville Loop – Northwestern Parkway project.

It was reiterated that the Transportation Improvement Program is a subset of the Metropolitan Transportation Plan, and therefore the air quality conformity determination for the Metropolitan Transportation Plan will serve as the conformity determination for the TIP.

The conference call adjourned.

AIR QUALITY CONFORMITY

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 and approximately 4 square miles of Shelby County in Kentucky. As background information, much of this area was, at one time, designated as nonattainment of either the 1-hour ozone standard and/or, more recently, the 8-hour ozone standard. The Louisville 8-hour ozone maintenance area consisted of Clark and Floyd counties, IN, and Bullitt, Jefferson, and Oldham counties, KY. It was designated as a basic nonattainment area in June 2004 and redesignated as an attainment area with a maintenance status in July, 2007. This standard was revoked for the Louisville area in April, 2015. (The local area is still eligible to receive Congestion Mitigation/Air Quality funding).

A portion of the Louisville, KY-IN transportation planning study area has also been designated as nonattainment under the 1997 annual PM 2.5 standard. 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). It is expected that the local area will be designated as attainment of this standard in the near future.

KIPDA is amending *Horizon 2035*, the metropolitan transportation plan (MTP), and the FY 2015 – FY 2018 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 the annual PM 2.5 standard.

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 approved establishing new budgets for PM 2.5 and its precursors.

CONSULTATION FOR *HORIZON 2035*

The first step in determining conformity of *Horizon 2035* was to consult with the interagency consultation (IAC/ICG) group concerning matters not explicitly determined by the conformity rule. Since conformity under the PM 2.5 standard 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 consultation involved a review of the following items:

- (a) important dates in the schedule for the amendment;
 - March 16 -- Regional Emissions (Air Quality) Analysis completed
 - March 25 -- Public Review begins.
 - April 13 -- Action by the Transportation Technical Coordinating Committee
 - April 28 -- Action by the Transportation Policy Committee
 - April 29 -- Documentation sent to review agencies for federal conformity determination
- (b) a draft list of projects—sent to the IAC/ICG with consultation notice;
- (c) the horizon year of the transportation plan—2035;
- (d) the proposed conformity test methodology/ies and analysis years—see the discussion of issues and ESTABLISHED PRACTICE sections below;
- (e) the pollutant(s)/precursor(s) of concern and the motor vehicle emissions budget(s), if applicable—see table 2 at the end of the report;
- (f) information concerning the inputs for the travel demand model and the approved emissions model—see the issues section below, the list of projects included in accompanying documentation, 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 proposed project changes have been separated into two categories, exempt and non-exempt projects. The exempt projects are included in Amendment 5 and the non-exempt projects are in Amendment 6. Both of these amendments will move along

through the process at the same time but Amendment 6 will require a conformity determination following TPC approval.

Both project lists were reviewed, including a recommendation concerning how they should be handled with respect to the regional emissions analysis. KIPDA staff discussed various projects and provided additional information, changes and/or clarification of those projects. The projects that were discussed include the following:

- **KIPDA ID 1935: Northwestern Parkway Road Diet, and Louisville Loop – Northwestern Parkway** – Construction of bicycle and pedestrian facilities along Northwestern Parkway from West Market St. to 31st St. There was explanation of deleting the Northwestern Pkwy. Road Diet project but adding the Louisville Loop – Northwestern Pkwy. project.
- **Regional Truck Parking Information and Management System** – Implementation of a regional truck parking information management system in eight states including Kentucky and Indiana. There was discussion of how to divide the funding to include in the TIP. For now KIPDA will divide the total funding by the eight states and then revise when additional information is available.
- **KIPDA ID 1338: River Road Extension-** Extend River Road from 7th St. to Northwestern Parkway. There was clarification of the project termini and noted that this project is not included in the Louisville Loop – Northwestern Parkway project.

It was reiterated that the Transportation Improvement Program is a subset of the Metropolitan Transportation Plan, and therefore the air quality conformity determination for the Metropolitan Transportation Plan will serve as the conformity determination for the TIP.

Conclusion: The IAC/ICG members, after discussing the details of the projects listed above, accepted the recommendations of KIPDA staff concerning the incorporation of these projects and the other projects described in the documentation into the regional emissions analysis.

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 the estimation of PM 2.5 emissions

Recent Changes to the KIPDA travel demand forecasting model

During a previous update (July, 2014) to the MTP, there were two changes of note to the KIPDA travel demand forecasting model.

(1) First, the census urbanized area has recently been updated to include a small area in northwest Shelby County, KY. The metropolitan planning area is in the process of being updated to reflect the 2010 census urbanized area. This area was added to the KIPDA travel demand forecasting model to be consistent with this update.

(2) Second, the proposed toll structure for the Louisville Southern Indiana Ohio River Bridges project changed. Changes were made to the KIPDA travel demand forecasting model to reflect the changes in the toll structure.

Conclusion: The IAC/ICG members were informed of the recent changes to the KIPDA travel demand forecasting model and expressed no disagreement with them.

Source of Bullitt 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 County 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 County. In June, 2011, the MOVES 2010 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 County, 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 County. The established practice is that LMAPCD will provide emission estimates for Bullitt County, as well as the other counties for which they have been providing emission estimates prior to June, 2011.

Analysis Years and Conformity Tests

Since there are no applicable Motor Vehicle Emission Budgets (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. 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 time the analysis is being conducted. In addition, other intermittent year(s) are required such that no two analysis years are more than ten years apart.

During the last few years, the analysis years have changed for various reasons. When the MTP was updated in 2014, the horizon year of the plan was being changed to 2035, and that year had to be added to the analysis years. At the same time, in order to allow for more orderly transition as time progressed, 2025 was added as an analysis year. By having the analysis years five years apart throughout the life of the MTP, it was noted that there would always be an analysis year within five years of the time of the analysis—one of the requirements of the conformity rule. Further, when the horizon year of the MTP is extended, that year will be added as an analysis year. Otherwise, the analysis years can remain constant except for the removal of an analysis year when it was in the past, as the 2015 analysis year was for this analysis.

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

Annual PM 2.5 Standard	
Analysis Year	Conformity Test(s)
2020	2002 Baseline test for the PM 2.5 nonattainment area
2025	2002 Baseline test for the PM 2.5 nonattainment area
2030	2002 Baseline test for the PM 2.5 nonattainment area
2035	2002 Baseline test for the PM 2.5 nonattainment area

Vehicle Registration (Fleet Mix) Data

At various times in the past and most recently during 2012 and 2013, new vehicle registration data has been provided for use in developing pollutant emissions. This vehicle registration data has been reviewed and accepted by the IAC/ICG. The vehicle registration data now being used for the Indiana counties is for 2009, and the registration data now being used for the Kentucky counties is for 2011. This data represents the most recent information available for this issue.

Conclusion: Based on a consensus of the IAC/ICG members, vehicle registration data for 2009 for the Indiana counties and for 2011 for the Kentucky counties is now being used in developing emission estimates.

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.

Prior to June, 2011, the air quality agencies in the area had previously used MOBILE 6.2 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 month calculations in a single run of the MOVES emissions model for each analysis year. This approach was also used for the analysis of *Horizon 2035* 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 to run MOVES with a twelve month calculation in a single run for calculating annual direct PM 2.5 and NOx emissions.

CONFORMITY OF *HORIZON 2035*

The MTP, *Horizon 2035*, was examined to determine if it met the requirements of the conformity rule under 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 set in the SIPs, if applicable, 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 2035* simply by determining that the

air pollutant emissions do not exceed the budgets in the SIPs or the base year emissions. For PM 2.5, the pending SIP, which contains budgets for PM 2.5 and NO_x, has not been approved nor have the budgets been found adequate. Therefore, conformity will be demonstrated by comparing future year emissions to 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 area. The details of their use are discussed in the Regional Emissions Analysis section below.

AIR QUALITY ANALYSIS

The air quality analysis for *Horizon 2035* 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 metropolitan transportation plan projects were "regionally significant" and therefore to be included in the regional emissions analysis. During the development (update) of *Horizon 2035*, 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 2035* 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. The details of the consultation concerning the project review are discussed above in the section entitled, “CONSULTATION FOR *HORIZON 2035*.”

As in prior plans, some of the projects in *Horizon 2035* 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 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 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 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 update, 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 a previous amendment of Horizon 2030 could be used for Horizon 2035, as well.

In addition, there were several projects which could not be analyzed using the travel model. The TSM projects and corridors 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 is the relocated (southern) section of US 31E. This project, which had been discussed during consultation in the past, involves the relocation of a small (approximately 0.2 mile) section of US 31E from Nelson County (outside of the nonattainment area) to Bullitt County (inside the ozone maintenance area and the PM 2.5 nonattainment area) 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 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

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.

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 Indiana, and Bullitt, Jefferson, and Oldham counties and approximately 4 square miles in Shelby County in Kentucky. 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 46 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 2035* 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 2035* 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 will be used as a means of providing for a portion of the cost of the Louisville Southern Indiana Ohio River Bridges project. To reflect the effect of the tolls in the KIPDA travel

model, time penalties have been used in the model on the bridges where tolls are expected to be placed. As mentioned above, the toll structure was recently changed. To reflect this in the MTP update, the time penalties used in the KIPDA travel model were likewise changed to reflect the effect of the new toll structure.

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 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 urban 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 area for the pollutant PM 2.5 and must therefore control direct PM 2.5 and its precursor, NOx. The emission estimates for PM 2.5 and NOx were determined using the MOVES emissions model. The Louisville Metro Air Pollution Control District (LMAPCD) produced the emissions for all of the nonattainment 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 County, 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 represented 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 2003 for the 2002 baseline with a few exceptions where newer data was incorporated. The changes which affected the PM 2.5 and NOx emissions included:

- (1) the incorporation of newer vehicle registration data (for 2009) for Clark and Floyd counties (provided by IDEM),
- (2) the development and use of newer vehicle registration data (for 2011) for Jefferson County (KY),
- (3) the recently adopted (twelve month) approach to calculating emissions of PM 2.5 and its precursor described in the ESTABLISHED PRACTICE was utilized , and
- (4) the development and use of newer vehicle registration data (for 2011) for Bullitt County in Kentucky.

The emissions for Bullitt County were also developed by LMAPCD. Most of the inputs to the MOVES model were defaults and/or data used in previous SIPs. Before Bullitt County was designated as being nonattainment of the PM 2.5 standard, it was designated as being nonattainment/maintenance of various ozone standards. A portion (the "original" portion) of Bullitt County had previously had a nonattainment/ maintenance status for both the 1-hour ozone standard and the 8-hour ozone standard, and a portion (the "new" portion) had only been designated under the 8-hour ozone standard. Neither portion of the 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 portion of Bullitt County while unregulated gasoline is used in the new nonattainment areas of the county. 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 Bullitt County.

The assumptions used for Bullitt County were the same as those used in 2003 for the 2002 baseline with two exceptions, aside from the new VMT and speed estimates that were developed for the development of this amendment of *Horizon 2035*. New vehicle registration data for Bullitt County for 2011 was developed during the last few years, and it

was used. The (twelve month) approach to calculating emissions of PM 2.5 and its precursor described in the ESTABLISHED PRACTICE was also 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 conceptually similar to the method used by LMAPCD. However, in practice, there are a number of differences. 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 previous amendment of *Horizon 2030* could be used for *Horizon 2035*, as well.

RESULTS OF THE ANALYSIS

The transportation plan, *Horizon 2035*, 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 did not exceed the 2002 emission levels for PM 2.5 and NOx.

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 PM 2.5 are discussed below.

PM 2.5 Analysis

There are no emission budgets for fine particulate matter, PM 2.5, or oxides of Nitrogen as a precursor of PM 2.5. 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 1 and 2. Table 1 shows the annual vehicle-miles-traveled from the analysis. Table 2 shows that for 2020, 2025, 2030, and 2035, the annual PM 2.5 and NOx emission levels for the local PM 2.5 nonattainment area are less than those for 2002.

Conclusions – PM 2.5

The regional emissions analysis of *Horizon 2035* indicates that the plan is consistent with the goals and emission budgets established in the State Implementation Plans of Indiana and Kentucky. The effect of the results shown in Table 2 indicates that *Horizon 2035* has met the requirements of conformity under the PM 2.5 standard. In summary, it can be concluded that *Horizon 2035* conforms to the SIPs and meets the requirements of the federal conformity rule.

TABLE 1

ANNUAL VEHICLE-MILES-TRAVELED (VMT) ESTIMATED FOR THE PM 2.5 NONATTAINMENT AREA (in 1,000,000's of vmt/year)			
YEAR	INDIANA	KENTUCKY	TOTAL
2002	2326	7963	10289
2020	2848	9507	12355
2025	3017	9941	12958
2030	3237	10550	13787
2035	3425	11056	14481

TABLE 2

ANNUAL EMISSIONS FOR THE LOUISVILLE PM 2.5 NONATTAINMENT AREA (in 1000's of kg/year)			
EMISSION LEVELS FOR VARIOUS YEARS			
YEAR	PM 2.5	NOx	PASS
2002	1006	35724	-----
2020	202	6067	YES
2025	147	3940	YES
2030	130	3075	YES
2035	119	2660	YES

NOTE: The criteria for conformity are as follows:

The emission levels for 2020, 2025, 2030, and 2035 must be no greater than those for 2002.



MEMORANDUM

TO: Transportation Policy Committee

FROM: Nick Vail

DATE: April 19, 2016

SUBJECT: Transportation Alternatives Program (TAP):
KYTC Oversight Funding and Indiana Projects

Kentucky
Member
Counties

Bullitt

Henry

Jefferson

Oldham

Shelby

Spencer

Trimble

The Louisville/Jefferson County KY-IN Metropolitan Area receives a sub-allocation of federal Transportation Alternatives Program (TAP) funds in both Indiana and Kentucky. The TAP funds are generally intended for non-motorized transportation facilities, but other types of projects may be eligible as well. INDOT and KYTC require each MPO to have a local selection and prioritization process in place in order to access these funds. That process was approved by the Transportation Policy Committee at their August 27, 2015 meeting.

Indiana
Member
Counties

Clark

Floyd

At the January 2016 Transportation Policy Committee (TPC) meeting, six Kentucky TAP projects were awarded funding. Following TPC action, KYTC informed KIPDA that the budgets for five of the six projects should be increased by 10% to account for KYTC project oversight. On April 13, 2016, the Transportation Technical Coordinating Committee (TTCC) recommended that the TPC approve the cost increases. Staff will request TPC approval to increase the five TAP projects by 10% to account for KYTC staff oversight.

Equal
Opportunity
Employer

During the first announcement of available TAP funds, KIPDA did not receive any projects from Indiana LPAs. Subsequently, KIPDA initiated a second Call for Projects for Indiana only. KIPDA has since received two project applications, which have been reviewed and evaluated for eligibility purposes. On April 13, 2016, the TTCC recommended that the TPC approve the award of TAP funds to the two Indiana projects. Staff will request TPC approval to award TAP funds to the City of New Albany and the Transit Authority of River City (TARC).

Action is requested.

**Transportation Alternatives Program
Winter 2015/2016 Call for Projects
INDIANA**

Agenda Item #6a

Local Public Agency	Project Name	Project Description	Federal Funding Requested
City of New Albany	Market Street / Spring Street Two-Way Lane Conversion	Construction of bike lanes and pedestrian improvements as well as integration of traffic calming techniques	\$227,000
Transit Authority of River City (TARC)	Bus Stop and Access Improvement - Spring Street Corridor (Jeffersonville, IN)	Installation of bus stop improvements and construction of continuous sidewalks on Eastern Blvd. connecting to Spring Street	\$453,988 \$226,996

**Transportation Alternatives Program
Winter 2015/2016 Call for Projects
KENTUCKY**

LPA	Intial Project Cost	Approved TAP funding	Local Match	10% KYTC oversight	Toll Credit Match	Revised TAP funding	Revised Total Project Cost
Jeffersontown	\$755,500	\$604,400	\$151,100	\$75,550	\$15,110	\$679,950	\$831,050
Middletown - Bliss	\$163,779	\$131,023	\$32,756	\$16,378	\$3,276	\$147,401	\$180,157
Middletown - Wetherby	\$430,527	\$344,422	\$86,105	\$43,053	\$8,611	\$387,475	\$473,580
Shively	\$1,467,483	\$1,173,986	\$293,497	\$146,748	\$29,350	\$1,320,734	\$1,614,231
U of L	\$788,077	\$630,462	\$157,615	\$78,808	\$15,762	\$709,270	\$866,885
Additional KIPDA KY TAP funding requested						\$360,537	