

US 169/I-70 North Loop Planning & Environmental Linkages Study



Data Sources

September 2017

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List of Acronyms and Abbreviations

ADA	Americans with Disabilities Act
AM	Morning
APE	Area of potential effect
AST	Aboveground storage tank
ASTM	American Society for Testing and Materials
BGPA	Bald and Golden Eagle Protection Act
BMcD	Burns & McDonnell
BMPs	Best Management Practices
C-D	Collector-Distributor
CWA	Clean Water Act
dBA	A-weighted decibels
EDR	Environmental Data Resources, Inc.
EA	Environmental assessment
EIS	Environmental impact statement
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GDAP	Greater Downtown Area Plan
GIS	Geographic information system
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
I-29	Interstate 29
I-35	Interstate 35
I-70	Interstate 70
IPaC	Information for Planning and Consultation (USFWS)
Hg	Hg Consult, Inc.
KCATA	Kansas City Area Transportation Authority
KC EDC	Kansas City Economic Development Council
KCK	Kansas City, Kansas
KCMO	Kansas City, Missouri
KDHE	Kansas Department of Health and Environment
KDOT	Kansas Department of Transportation
KSHS	Kansas State Historical Society
Leq	Equivalent sound level
LOS	Level of service
LUST	Leaking underground storage tank
MARC	Mid America Regional Council
MBTA	Migratory Bird Treaty Act
MDC	Missouri Department of Conservation

MDNR	Missouri Department of Natural Resources
MoDOT	Missouri Department of Transportation
MP	Milepost
Mph	Miles per hour
MPO	Metropolitan Planning Organization
NAC	Noise abatement criteria
NARA	National Archives Records Administration
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
PEL	Planning and Environmental Linkages
PM	Evening
RCBC	Reinforced concrete box culvert
ROW	Right-of-way
SHPO	State Historic Preservation Office
TAZ	Transportation analysis zone
TNM	Traffic Noise Model (FHWA)
TOD	Transit-oriented development
UG	Unified Government of Wyandotte County/Kansas City, KS
US-169	US Highway 169
USACE	US Army Corps of Engineers
USCG	US Coast Guard
USDOT	US Department of Transportation
USGS	US Geological Survey
USFWS	US Department of the Interior Fish and Wildlife Service
UST	Underground storage tank
VMS	Variable message sign
Vpd	Vehicles per day
Vph	Vehicles per hour
WOUS	Waters of the United States

Data Sources and Applicable Weblinks

Data sources cited in this study and additional information available through federal, local, and state governments or other units of government are included in the listing by applicable area of study.

1. Roadway Design Standards

American Association of State Highway Transportation Officials, *"A Policy on Geometric Design of Highways and Streets"*, 6th Edition, 2011.

2. Accident Information

Accident Reports

Kansas Highway Patrol Accident Reports (2010 – 2014) made available through the Kansas Department of Transportation.

Missouri State Highway Patrol Accident Reports (2010 -2014) made available through the Missouri Department of Transportation.

Accident Rates

Kansas Department of Transportation, 2012 - 2014.

Missouri Department of Transportation, 2012 - 2014

3. Bridge and Pavement Conditions

Bridge Conditions

Kansas Department of Transportation Bureau of Structures and Geotechnical Services, 2015 National Bridge Inventory System Report

Missouri Department of Transportation Planning Division and Kansas City District Office, 2015 National Bridge Inventory System Report.

Missouri Department of Transportation. Conceptual Study and Rehabilitation Report, Bridge A4646 and A4649, U.S. Route 169 Buck O'Neil Bridge over the Missouri River, March 2017.

Pavement Conditions

Kansas Department of Transportation Materials Division. 2016 Network Optimization System Survey. <http://www.ksdot.org/matreslab/pmis/reports.asp>.

Missouri Department of Transportation Planning Division and Kansas City District Office. 2016 Pavement Survey.

4. Traffic Counts

Traffic counts assessed from a variety of available recourses based on a hierarchy of available data.

Highways/Ramps

KC Scout Data (Jan-Dec 2016 Data) – Preferred Source

- If specific count not available then through SkyComp Volume Count
 - o If specific count not available then through SkyComp Routing Matrix via a count estimate
 - If specific count not available then through other projects (KC Icon)

Missouri Department of Transportation. Infrastructure data collection system (ATR Database and recent Miovision collected turning counts) – Secondary Source

Broadway Corridor

Hwy 169/ Broadway Blvd & 5th/6th St morning and evening peak period traffic volumes and turning movements collected by MioVision and split calibrated to average 2016 and 2017 turning movement counts.

Hwy 169 turning movement and ramp counts collected by MioVision at Richards Road interchange and direct connections to Richards Road in vicinity of Wheeler Airport.

Broadway Blvd corridor turning movement counts for each major intersection south of 6th St and north of the I-670 EB ramp terminal were determined through the KCMO city-wide Synchro model.

5. Traffic Speeds:

Missouri Department of Transportation Traffic Management Center. KC Scout Data (aggregation of Year 2016 data)

Mid-America Regional Council Transportation Planning. Inrix Speed Data for Year 2012.

6. Traffic Models

City of Kansas City, Missouri Downtown VISUM traffic model was used as the seed for the PEL VISSIM simulation model. The traffic signal timings and traffic turning movement count information from the VISUM model was used as the starting point.

Mid-America Regional Council. 2016 and 2040 citywide EMMIE travel demand model, July 2017.

Mid-America Regional Council. Dynameq, Dynamic Traffic Analysis, September 2017.

The following traffic models were also considered:

HNTB. VISSIM Traffic Simulation Model, I-70 Lewis & Clark Viaduct, Wyandotte County Kansas.

Wilson & Company. VISSIM Traffic Simulation Model, KcICON Project, Jackson County, Missouri.

7. Traffic Projections

Mid-America Regional Council. 2040 citywide EMME travel demand model, July 2017.

Upon completion, the regional Dynamic Traffic Analysis, DTA model, using Dynameq software will be assessed for further calibration for future year VISSIM traffic models.

8. Trip Origin and Destination

SkyComp, *"Downtown Kansas City Freeway Loop Origin-Destination, Route and Travel Time Patterns"*, November 2016.

INRIX regional origin/destination data provided by MARC Transportation Planning for calibration of Dynamic Traffic Assignment (DTA) model

Supplemental INRIX data of origin/destination traffic movements at Fairfax District and West Bottoms industrial area provided through Streetlight Data under vendor service to Skycomp.

9. Bicycle and Pedestrian Facilities

Bike lanes, marked bike routes, marked share the road routes, shared use paths, and pedestrian trails.

Mid-America Regional Council. <http://marc-gis.maps.arcgis.com/home/webmap/viewer.html?webmap=c0328d965cf44a10bfb710f3014619ac&extent=-94.837,38.9196,-94.33,39.1809>

Sidewalks.

City of Kansas City Public Works

BikeWalkKC, Bicycle Demand Analysis, March 28, 2016

City of Kansas City, MO, Bike KC Plan Update website: <http://kcmo.gov/planning/kc-bike-plan/> Accessed: August 3, 2017

City of Kansas City, MO. Bike KC Plan Map.

Kansas City, Missouri, Bikeway Projects website: <http://kcmo.gov/publicworks/bikekc>, Accessed August 4, 2017.

LSA Associates for City of Kansas City, MO. Kansas City Walkability Plan. Adopted by City Council on March 20, 2003.

10. Transit Information

Bus routes, Max routes, streetcar routes, park and ride locations, and transit centers.

RideKC, System Map webpage: <http://ridekc.org/rider-guide/system-map>

KCATA, Transit Initiatives website: <http://www.kcata.org/transit-initiatives>.

11. Utility Information

Sanitary sewer, storm sewer and water.

City of Kansas City Public Works Capital Projects Division.

Fiber optic communications.

City of Kansas City GIS system.

<http://kcmo.maps.arcgis.com/apps/webappviewer/index.html?id=dba3bd971fad4d3facf13fda9425cd9c>

Utility survey for replacement of KDOT Bridge B0031, I-70 Lewis and Clark Viaduct, August 2015.

Utility survey for Kansas City Streetcar, September 2012.

12. Demographics

2000, 2010 and 2015 population data including age, race and ethnicity.

U.S. Census Bureau 2000 Census, 2010 Census, and 2015 American Community Survey. Missouri Census Data Center. <https://census.missouri.edu/population/?c=29000>

2040 population projections.

Mid-America Regional Council 2040 Forecast. <http://www.marc.org/Data-Economy/Forecast/Forecast-Process/2040-Forecast>

Study area census tracts.

Mid-America Regional Council 2010 Cities and Census Tract Maps. <http://www.marc.org/Data-Economy/Maps-and-GIS/Maps/Cities-Census-Tract-Maps>

2015 Economic Indicators.

Missouri Census Data Center.

<https://census.missouri.edu/acs/profiles/report.php?period=1&g=04000US29|01000US>

2015 Employment by Industry.

Missouri Census Data Center.

<https://census.missouri.edu/acs/profiles/report.php?period=1&g=04000US29|01000US>

13. Floodways and Floodplain

Regulated floodway and floodplain.

Federal Emergency Management Agency Flood Map Service Center. <https://msc.fema.gov/portal>

14. Water Quality

Water Body Classification.

Missouri Department of Natural Resources, Missouri Water Quality.
<https://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm>

Water Body Classification.

Kansas Department of Health and Environment, Bureau of Water.
<http://www.kdheks.gov/tmdl/methodology.htm>

15. Wetlands

National Wetlands Inventory mapped wetlands.

U.S. Fish and Wildlife Service. <http://www.fws.gov/wetlands/kdheks.gov/tmdl/methodology.htm>

16. Historic Districts and Historic Buildings

Kansas Historic Resources. _ Kansas Historical Society. <http://www.kshs.org/p/register-database/14638>

Missouri Department of Natural Resources, State Historic Preservation Office.
<http://dnr.mo.gov/shpo/cultresinv.htm>

Historic Preservation Commission, City of Kansas City, MO.

State Historical Society of Missouri-Kansas City, Kansas City, MO.

National Archives Records Administration II (NARA), College Park, MD.

Historic American Building Survey (HABS) and the Historic American Engineering Record (HAER) archives,
National Park Service, Department of the Interior.

Linda Hall Library, Kansas City, MO.

Special Collections, Missouri Valley Room, Kansas City Public Library, Kansas City, MO.

North Kansas City Public Library, North Kansas City, MO.

Architectural & Historic Research, LLC, Kansas City, MO

Mid-Continent Library, Jackson County, MO.

Wyandotte County Historical Society, Wyandotte County, KS.

Correspondence from Toni Prawl, Director and Deputy State Historic Preservation Officer, Missouri
Department of Natural Resources to Ron Schikevitz, Project Manager, Burns & McDonnell. February 6,
2017.

Correspondence from Diane Hunter, Tribal Historic Officer, Miami Tribe of Oklahoma to Cydney Millstein,
Architectural Historian, Architectural & Historical Research. Dated: March 7, 2017.

17. Hazardous Materials and Hazardous Waste

Missouri Department of Natural Resources Environmental Site Tracking and Research Tool (E-START), <http://dnr.mo.gov/ESTART/>.

Environmental Data Resources. EDR DataMap Environmental Atlas, Inquiry Number 4788631.5s. November 29, 2016

18. Natural Habitat

Kansas Department of Wildlife, Parks & Tourism Threatened and Endangered Wildlife webpage: <http://ksoutdoors.com/layout/set/print/Services/Threatened-and-Endangered-Wildlife>

Missouri Department of Conservation. Missouri Fish and Wildlife Information System Website: http://mdc7.mdc.mo.gov/applications/mofwis/Mofwis_Summary.aspx?id=0400004 Accessed: February 14, 2017.

U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC): <https://ecos.fws.gov/ipac/>

Correspondence from Samantha Pounds, Ecologist, Ecological Services Section, Kansas Department of Wildlife, Parks & Tourism to David Kocour, Sr. Environmental Scientist/Planner, Hg Consult, Inc. Dated: March 10, 2017.

19. Parks and Recreational Resources

City of Kansas City Parks Department, Parks and Recreational Facilities. <http://kcparks.org/parks/city-park/> and <http://kcparks.org/recreations/>

National Park Service Land and Water Conservation Fund. Section 6(f) Project Listing. <https://waso-lwcf.nrc.nps.gov/public/index.cfm>

Mid-America Regional Council. Natural Resource Inventory (NRI). <http://www.marc.org/Environment/Natural-Resources/Natural-Resources-Inventory/Natural-Resource-Inventory>

20. Previously Approved Environmental Documents

U. S. Department of Transportation/Federal Highway Administration, Missouri Department of Transportation, Final Environmental Impact Statement, Interstate 29/35 Paseo Bridge Corridor. November 2006.

U. S. Department of Transportation/Federal Highway Administration, Kansas Department of Transportation and Missouri Department of Transportation, Environmental Assessment, U.S. 69 Bridges over the Missouri River, August 2013.

U. S. Department of Transportation/Federal Highway Administration, Illinois Department of Transportation and Missouri Department of Transportation, Environmental Assessment, U.S. 54 Mississippi River Bridge. April 2016.

20. Aviation

Kansas City Aviation Department, Charles B. Wheeler Downtown Airport webpage: www.flymykc.com
Accessed: August 1, 2017.

Correspondence from Scott Tener, Federal Aviation Administration to Martin Rivarola, Mid-America Regional Council. February 28, 2017.

Correspondence from Jade Liska, Manager Airport Planning, Kansas City Aviation Department to David Kocour, Sr. Environmental Scientist/Planner, Hg Consult, Inc. Dated: August 7, 2017.

21. Missouri River Navigation

Correspondence between Richard Grenville, Vice President of Multimodal Logistics, PortKC and David Kocour, Sr. Scientist/Planner, Hg Consult, Inc. on August 1, 2017.

22. Prime Farmland

Correspondence from Cynthia Lucas, on behalf of Jeffrey Hellerich, State Soil Scientist, Natural Resources Conservation Service, United States Department of Agriculture, Kansas Office to Martin Rivarola, Project Manager, Mid-America Regional Council. Dated: February 8, 2017.