Memorandum

Date:	September 3, 2008
To:	I-70 FTEIS Cooperating and Participating Agencies and Other Interested Stakeholders
From:	MoDOT I-70 FTEIS Study Team
Subject:	I-70 FTEIS Proposed Environmental Impact Assessment Methodologies Coordination Memorandum

I-70 First Tier Environmental Impact Statement
Proposed Environmental Impact Assessment Methodologies

1.0 Introduction

This document presents a general outline of steps and methodologies that will be used by the Missouri Department of Transportation (MoDOT) Study Team to carry out the impact evaluation process for different categories of environmental analysis for the I-70 First Tier Environmental Impact Statement (FTEIS) in Kansas City Metro. The Study Team consists of representatives from Federal Highway Administration (FHWA), MoDOT, and the members of their consultant team for the project. This impact assessment methodologies summary has been prepared per Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Efficiency Act - A Legacy for Users and is provided to assist coordination with cooperating and participating agencies along with other stakeholders. The Study Area for environmental impact analysis covers the existing I-70 corridor plus approximately 100 feet on either side of the existing right-of-way, beginning from the end of the last ramp termini east of the Missouri-Kansas state line to east of the I-470 interchange, including the entire Kansas City, Missouri Downtown Central Business District Freeway Loop. At interchange locations, the area of analysis is expanded to 300 feet from the existing right-of-way. For land use and socioeconomic analysis the Study Team will examine a broader area consisting of 1,000 feet on either side of the corridor including the Downtown Loop. This portion of I-70 spans approximately 18 miles (20 miles including the Downtown Loop) and passes through Kansas City, MO and Independence, MO in Jackson County. **Figure 1** located at the end of this document shows the Study Area.

The assessment of impacts will follow FHWA Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, and other relevant FHWA and MoDOT guidance as appropriate, in order to assess potential impacts of the project. MoDOT's past success with environmental analyses for tiered documents will also inform the assessment methodologies used.

1.1 Tiered Environmental Process

The I-70 FTEIS in Kansas City Metro is following a tiered environmental documentation process. First tier documents address broad programs or overall corridor strategies and issues in an initial, higher level environmental analyses. More specific proposals and impacts are analyzed in subsequent second tier studies. The tiered process enables a decision-making process that focuses on issues that are ready for decision and reduces repetition in environmental documentation. First tier documents frame and narrow the scope for second tier studies and related decisions.

One way to imagine the tiered process is as an umbrella. In the I-70 FTEIS, the umbrella extends approximately 18 miles from the Missouri-Kansas state line to just east of the I-470 interchange and includes the Kansas City, Missouri Downtown Central Business District Freeway Loop. An overall improvement strategy for this corridor will be developed and a broad, general (high level) evaluation will be conducted. This corridor umbrella covers and identifies future detailed second tier project level studies of shorter sections, which may take the form of environmental impact statements, environmental assessments, or categorical exclusions. The second tier studies will analyze shorter portions of I-70 but in greater detail.

During the first tier process, the Study Team will seek the following outcomes:

- Approval of a preferred strategy for improving I-70 in Kansas City Metro including a plan for prioritizing the improvements.
- Identification of portions of I-70 in Kansas City Metro that can be considered "sections of independent utility" for analysis in future second tier studies.
- Environmental documentation that can be referenced by second tier studies and reduce the amount of duplication between studies.
- Public and agency consensus and understanding around the overall improvement plan.

1.2 Relationship to other I-70 Studies

The I-70 FTEIS in Kansas City Metro is a separate and distinct study from the I-70 Supplemental Environmental Impact Statement (SEIS) study being conducted statewide in Missouri. The statewide study essentially covers I-70 between St. Louis and Kansas City (I-470). The purpose of the I-70 statewide study is to investigate the potential for adding truck only lanes along I-70 as a long-term solution for providing enhanced capacity and safety between St. Louis and Kansas City. The Kansas City terminus for the statewide study is the east side of I-470. Truck only lanes are possible for portions for the I-70 corridor in the Kansas City Metropolitan Area but are not the focus of the I-70 FTEIS. The I-70 FTEIS will be coordinated with the statewide study; however, they are separate projects.

The I-70 FTEIS in Kansas City Metro will build on the efforts of the I-70 Major Investment Study (MIS) as well as other system planning studies that have been or are being completed in the Study Area. MoDOT kicked off the MIS of I-70 in Jackson County in 2000 and completed it in 2004. The objective of the I-70 MIS was to identify a multi-modal investment strategy that addressed the transportation needs of the Jackson County I-70 corridor and that was consistent with regional policy goals and resource constraints. The I-70 MIS analyzed the transportation problems and looked at all possible options for addressing them – including multiple roadway, transit, and pedestrian options. That study, which involved extensive public input, identified a package of recommendations that are now moving into the more detailed environmental analysis phase of study, which is the FTEIS.

The Study Team will also coordinate with neighboring studies on I-470, I-435/I-70, and I-29/I-35/U.S. 71 (kcICON) as well as current regional transit studies.

2.0 Environmental Methodologies

The Study Team will evaluate each of the categories listed below. The following sections will provide a brief summary on how each of the specific categories will be evaluated.

2.1 Land Use

Highway improvements often influence existing land uses and may conflict with existing local land use plans and policies. The Study Team will identify the existing state and local land use policies, plans, and development trends within the Study Area. This will include policies and plans related to land use, housing, community services,

transportation, public facilities, etc. The Study Team will assess the consistency of proposed improvements with the state and local land use policies, development plans, and other relevant plans. The Study Team will coordinate with local agencies regarding any land use conflicts that could result from improvement strategies and potential solutions.

2.2 Social/Community and Neighborhood Impacts

Past observation of highway improvements has shown both beneficial and adverse consequences on communities and neighborhoods. The Study Team will describe the existing communities, schools, parks, neighborhoods, cluster of residences, and community and emergency services in the Study Area. The Study Team will examine the potential for consequences of highway improvements on community facilities, services, and neighborhood cohesion, including the effects on access to community facilities, parks, pedestrian access, school bus routes, emergency vehicle response time, changes in travel patterns, and transit routes. The Study team will also evaluate the impacts on any special groups such as elderly, disabled, minority, and transit-dependant persons.

2.3 Parks and Public Lands Analysis

Potential existing and planned public parks, recreation areas, wildlife and waterfowl refuges, other public use lands, and historic sites adjacent or in close proximity to the proposed projects will be identified. This will include identification of all known properties protected under Section 4(f) of the Department of Transportation Act. Other lands or facilities of special interest that have been funded with a variety of Department of Natural Resources funds, federal Land and Water Conservation Fund Act money (protected under Section 6(f)) or other federal funds such as Dingell-Johnson or Pittman-Robertson money will also be identified.

Coordination with the Missouri Department of Natural Resources (MoDNR), Missouri Department of Conservation, the Department of the Interior, and local governments having jurisdiction over the public-use land will take place in order to determine the use and management of the land and their opinion related to potential impacts or effects resulting from the proposed project. Coordination regarding historic properties is discussed below under **2.15 Cultural/Archaeological Resources**.

The determination of use of any Section 4(f) or Section 6(f) properties along with the development of required documentation regarding the use of these properties will be

developed as a part of second tier studies. Mitigations measures, as needed, will also be determined during the second tier studies.

2.4 Environmental Justice

Among the consequences of highway improvements is the potential for disproportionate and adverse impacts to disadvantaged minorities. In accordance with Executive Order 12898 Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations, the Study Team will seek to avoid disproportionately high adverse impacts on minority, low-income, and elderly populations. Guidance from the U.S. Department of Transportation Order on Environmental Justice (5680-1, 1997) will be used in this analysis. The Study Team will use the latest census, Geographic Information System (GIS), and other available community data to identify and assess the impact of the proposed strategies on minority, low-income, and elderly populations. Additional populations protected under Title VI and the Americans with Disabilities Act will also be identified and impacts evaluated. The Study Team will also coordinate with local agencies, social services, churches, and other local groups to assist in this impact analysis. The analysis will include identification of important social institutions such as schools, churches, emergency services, hospitals, and shelters.

2.5 Relocation Impacts

Highway improvements often require expansion or relocation of right of way with potential impacts to residents and businesses located near the existing highway. Potential residential and commercial relocations associated with first tier strategies will be described, and potential obstacles to relocation and solutions will be addressed in the conceptual relocation plan within the I-70 FTEIS. Exact relocations and their associated tax base and community impacts will be assessed during second tier studies. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended (49 CFR Part 24) will guide the assessment of residential and commercial relocations for both first tier and second tier studies.

2.6 Indirect and Cumulative Impacts

The FHWA position paper, Secondary and Cumulative Impact Assessment in the Highway Development Process (April 1992), the Council on Environmental Quality's (CEQ) Considering Cumulative Effects under the National Environmental Policy Act (January 1997), the National Cooperative Research Program (NCHRP) Report 466 and

CEQ guidance will be used to guide the process for the indirect and cumulative effects analysis.

Indirect (secondary) impacts are caused by the project that become evident later in time or are farther removed in distance than direct impacts, but are still "reasonably foreseeable". An example of an indirect impact would be land use changes that occur along a newly constructed highway, such as the development of motels. While the new highway did not directly cause the construction of motels, it encouraged their construction by providing improved access to the properties. The Study Team will identify any such foreseeable indirect impacts by coordinating with local, state, and federal agencies regarding land use issues.

Cumulative impacts are those impacts that result when adding the incremental impacts of a project to other past, present, and foreseeable future projects. The incremental impacts of a project may be minor. However, when these impacts are added to impacts from other projects, the overall impact could be considerable. Cumulative impacts can be positive or negative depending on the environmental resource being evaluated.

Projects considered in cumulative analysis would consist of past, present, and future transportation and land development projects. The time frame to be used for considering past, present, and future projects is from 1985 to 2035 and the area of analysis includes the cities of Kansas City and Independence, MO as well as consideration of other projects along I-70 in Missouri and other interstates in the Kansas City Metropolitan Area. The Study Team will identify any cumulative impacts, including induced development, and its effect on natural resources such as wetlands, forested land, and water resources. Cumulative impacts on communities and neighborhoods will also be assessed. Meetings will be held with Mid-America Regional Council (MARC) and planning staff at the city of Kansas City, MO and city of Independence, MO to assist with this analysis. In addition, MARC's current Long Range Transportation Plan will be reviewed for any major projects that may have cumulative impacts.

2.7 Economics

Highway improvements may potentially affect local and regional economic conditions through the enhanced movement of people and goods leading to economic benefits and through the relocation of residents and businesses, which may affect local jobs and tax bases. The Study Team will conduct windshield surveys and contact local business organizations, economic development commissions, and chambers of commerce to determine an inventory of businesses, trade centers, and business districts with the

potential to be affected by improvements along I-70 in Jackson County. The Study Team will assess the economic impacts of potential improvements including the impact on jobs, local businesses, local tax bases, economic development trends, planned development, and freight movements at a high level. The Study Team will prepare cost estimates of the preferred strategy and its alternatives. Examination of tax role data and other detailed analysis of tax impacts will occur as part of second tier studies.

2.8 Aesthetics and Visual Impacts

The project's impact on aesthetic resources in the project area will be evaluated using the FHWA's Visual Impact Assessment for Highway Projects (DOT FHWA-HI-88-054) guidance. The Study Team will perform an aesthetic and visual impact analysis for the potential alternative strategies from the user's perspective (view from the highway) as well as the neighboring residents and development's perspective (view of the highway). This will include an assessment and description of existing visual resources and views as well as a discussion of likely changes. Detailed mitigation measures will not be developed until second tier studies.

2.9 Air Quality

Highway improvements may change vehicle emissions, a key component of several types of air pollution. The Study Team will carry out a general air quality analysis for the first tier strategies. Project level air quality analysis using predictive air quality models will be conducted as needed as part of the second tier studies. The Study Team will discuss air quality concerns associated with the various strategies using general transportation measures such as vehicle miles traveled as indicators of changes in corridor air pollution emissions. The analysis will include a discussion of Mobile Source Air Toxics (MSATS) per FHWA Guidance (October 2007). Previous air quality studies conducted by MARC along the corridor will also be reviewed.

2.10 Noise Impacts

Highway improvements may affect traffic related noise levels for neighboring residents, businesses, and community facilities. The Study Team will discuss general noise concerns for the first tier strategies and identify potential noise sensitive receptors in the Study Area. The Study Team will not perform a noise impact analysis using FHWA's Traffic Noise Model (TNM®) at this time. Noise measurements and modeling will occur as needed during the second tier studies. The second tier studies will also address the need and feasibility of noise walls. All sound level analysis and noise impact and mitigation determinations will be conducted based on the Federal Highway

Administration's (FHWA) guidelines and MoDOT's Policy Statement on Traffic Noise Analysis and Abatement Guidelines.

2.11 Ground Water, Drainage and Surface Water Quality

The construction of highway improvements and the improvements themselves will alter the existing drainage patterns and potentially affect ground water and surface water quality. The Study Team will identify surface and groundwater resources in the Study Area. The Study Team will review and summarize pertinent information in previous studies such as the State Water Plan and 305B Report from the Missouri Department of Natural Resources and the U.S. Geological Survey regarding ambient water quality within the geographic region(s) of the Study Area. The Study Team will identify significant water resources such as lakes, high quality streams, and wellhead areas, which may require special protection measures during or after construction. The Study Team will identify the potential magnitude of anticipated impact to local water resources from construction activities. The Study Team will also evaluate potential impacts from roadway runoff, accidental spills, and other pollutants associated with highways.

2.12 Flood Plains

Highway improvements may be designed to minimize adverse effects on streams and storm water flows on floodplains. The Study Team will identify major stream crossings which will require bridges with expected span lengths equal to or greater than 20 feet. The Study Team will prepare GIS based 100-year floodplain and regulatory floodway exhibits. For each first tier strategy with encroachments of the floodplain, the Study Team will summarize the risk associated with implementation of the alternative in the floodplain and significance of environmental impacts including impacts on natural and beneficial floodplain values. Hydraulic modeling/analysis, if required, will not be conducted until second tier studies. Potential impacts to Federal Emergency Management Agency/State Emergency Management Agency buyout properties will also be identified. Measures to minimize floodplain impacts and measures to restore and preserve the natural and beneficial floodplain values will be developed as a part of future second tier studies.

2.13 Wetlands and Aquatic Resources

Highway improvements should be designed to minimize effects on wetlands, aquatic resources, and ecological resources. The Study Team will conduct a preliminary wetlands identification and impact assessment based on National Wetland Inventory

(NWI) and any other existing available wetlands database data. The Study Team will also develop written descriptions of any perennial streams and associated NWI wetlands. Wetlands will be mapped and the potential impacts of the proposed strategies assessed. Any formal wetland delineations required will be conducted as part of future second tier studies along with completion of jurisdictional wetland determination forms. Only Practicable Alternative Findings regarding wetland impacts, in accordance with Executive Order 11990, will be included within the second tier environmental documents. All wetland impact analysis will be completed in accordance with Section 404 of the Clean Water Act.

2.14 Plants, Wildlife and Threatened and Endangered Species

Highway improvements, especially on new or expanded right of way, may affect habitat for plants, wildlife, and threatened and endangered species. The Study Team will collect information on specific habitats, including those for threatened, endangered, and rare species, and any natural communities through a database search and correspondence with agencies. The Missouri Department of Conservation's (MDC) Heritage Database and all other available information will be used to determine if there are any known locations of federal and/or state listed threatened or endangered species or designated critical habitat within the project limits. The Heritage Database will also be used to identify any other rare species or rare natural communities that occur within the project limits. Coordination will take place with MDC and the U.S. Fish and Wildlife Service to identify any rare species concerns they may have. These sites will be mapped and the potential for impacts discussed. Formal species surveys, if required, will not occur until future second tier studies. The Study Team will also identify probable locations for wildlife crossings and discuss measures to accommodate them.

2.15 Cultural/Archeological Resources

Highway improvements may disturb or destroy valuable cultural and archaeological resources or may uncover previously unknown cultural resources. The Study Team will coordinate with MoDNR State Historic Preservation Office to identify available databases or data sources for cultural resources in the Study Area. This will include historical architectural, bridge, and archaeological sites. The Study Team will develop a general cultural resource overview to generate historical themes and provide a cultural context for the evaluation of cultural resources identified in the project vicinity. This report will identify areas that have a high potential to contain National Register of Historic Places (NRHP) eligible historic sites, buildings, or districts. This report will involve a brief description from secondary sources to identify potential "fatal flaws" with regards to cultural resources.

From the databases, the Study Team will identify previously reported archaeological sites within the Study Area, present them in a table indicating the nature of the site, the potential for it containing human burials, and their potential NRHP eligibility; and locate them on a map layer. The Study Team will field verify sites from public rights of way. The Study Team will also prepare a brief, generalized predictive model based upon existing information that will estimate the potential for the presence of archaeological sites, for buried sites, for sites containing human burials, and for sites potentially requiring extensive mitigation for all alternatives. High probability areas will be designated on an appropriate map.

The Study Team will review and summarize the existing architectural records for the Study Area and document and map all architectural properties listed in the National Register of Historic Places (i.e., buildings, structures, objects, and districts/landscapes) located within the Study Area. The computer database at the Landmarks Commission in Kansas City will be used. The Study Team will also record the location of cemeteries identified during the architectural investigations. The Study Team will field verify sites from public rights of way and identify obvious resources that may constrain the project.

The Study Team will complete historic bridge investigations to identify and document all bridge resources located within the Study Area that have been identified in Clayton Fraser's Historical Bridge Survey that are fifty or more years of age. The results of this analysis will be documented and mapped.

Detailed cultural resources investigations including site walkovers, Phase 1 or Phase 2 archaeological investigations including soil samples and other more site specific investigations for previously unidentified sites are not a part of this FTEIS. If required, additional cultural resource investigations will occur as part of future second tier studies.

2.16 Potential Contaminated Sites/Hazardous Waste

The Study Team will identify and assess the probable beneficial and adverse impact of the project and first tier strategies in regards to potential contaminated/hazardous waste sites in the Study Area. The Study Team will review appropriate Environmental Protection Agency (EPA) and MoDNR lists of major known hazardous waste, hazardous material, or solid waste disposal locations within the Study Area. For example, superfund sites; hazardous waste treatment, storage, or disposal facilities; or solid waste landfills that could impact the location of proposed strategies. A windshield survey will be conducted from existing right of way to verify the presence

and boundaries of sites. These major sites will be mapped. Petroleum underground storage tanks, hazardous waste generators, small rural dumps, etc. would not normally impact location of proposed strategies and will not be located or evaluated as part of this study. Further formal Study Area contamination surveys including site walkovers will not be conducted until the second tier studies.

2.17 Farmland

The Study Team will identify farmland within the Study Area and the potential for conversion as protected by the Farmland Protection Policy Act (FPPA). The Study Team will also discuss the potential effects on farm operations and farm businesses from parcel severances and other potential impacts. The FPPA rating form(s) identifying specific impacts of projects will not be completed until the second tier studies.

2.18 Geotechnical

The Study Team will complete a literature search for existing surface and subsurface information within the Study Area. Data will be analyzed and a general geologic conditions map will be developed for input into GIS mapping.

The Study Team will also complete a records search relating to mining operations and mineral deposits in the Study Area. Locations of potential subsidence and other geologic information of record will be identified through known information, existing documents, and aerial/topographic maps. The Study Team will identify locations of any springs, caves, sinkholes, and other unique features in the Study Area. Potential mineral resources that may be affected by the proposed alternatives will also be identified.

The geotechnical analyses will be completed through existing databases literature and record information only. Geotechnical field studies will be conducted, as needed, as part of second tier studies.

2.19 Construction Impacts

The Study Team will identify and list any likely construction impacts (noise, air, water, traffic congestion, detours, safety, visual, etc.) associated with construction of proposed improvements. This will be a general high level analysis based on experiences with similar construction projects and their environmental impacts during the construction phase.

2.20 Other Environmental Impacts

The Study Team will also identify any of the following impacts as applicable:

- Joint development
- Permits
- Wild and scenic rivers
- Coastal barriers
- Coastal zone impacts
- Energy
- Relationship of local short-term uses vs. long-term productivity
- Irreversible and irretrievable commitment of resources

3.0 Coordination

This document is meant to assist coordination with cooperating and participating agencies regarding the assessment of impacts and the methods used in the FTEIS. It is not intended to be an all-inclusive scope of work. The Study Team welcomes comments on the proposed impact assessment and methodologies, with the understanding that many detailed studies will not take place until the second tier projects. All impact assessments will be conducted in accordance with standard Council on Environment Quality, FHWA, and MoDOT guidance. Proposed modifications to impact assessment and methodologies that do not fit with or contradict standard guidance and practices will not be implemented unless a highly unique situation warrants a change in the assessment methodology.

4.0 Contact Point

For further information on the I-70 FTEIS and the methodologies provided in this memorandum or to provide comments, please contact:

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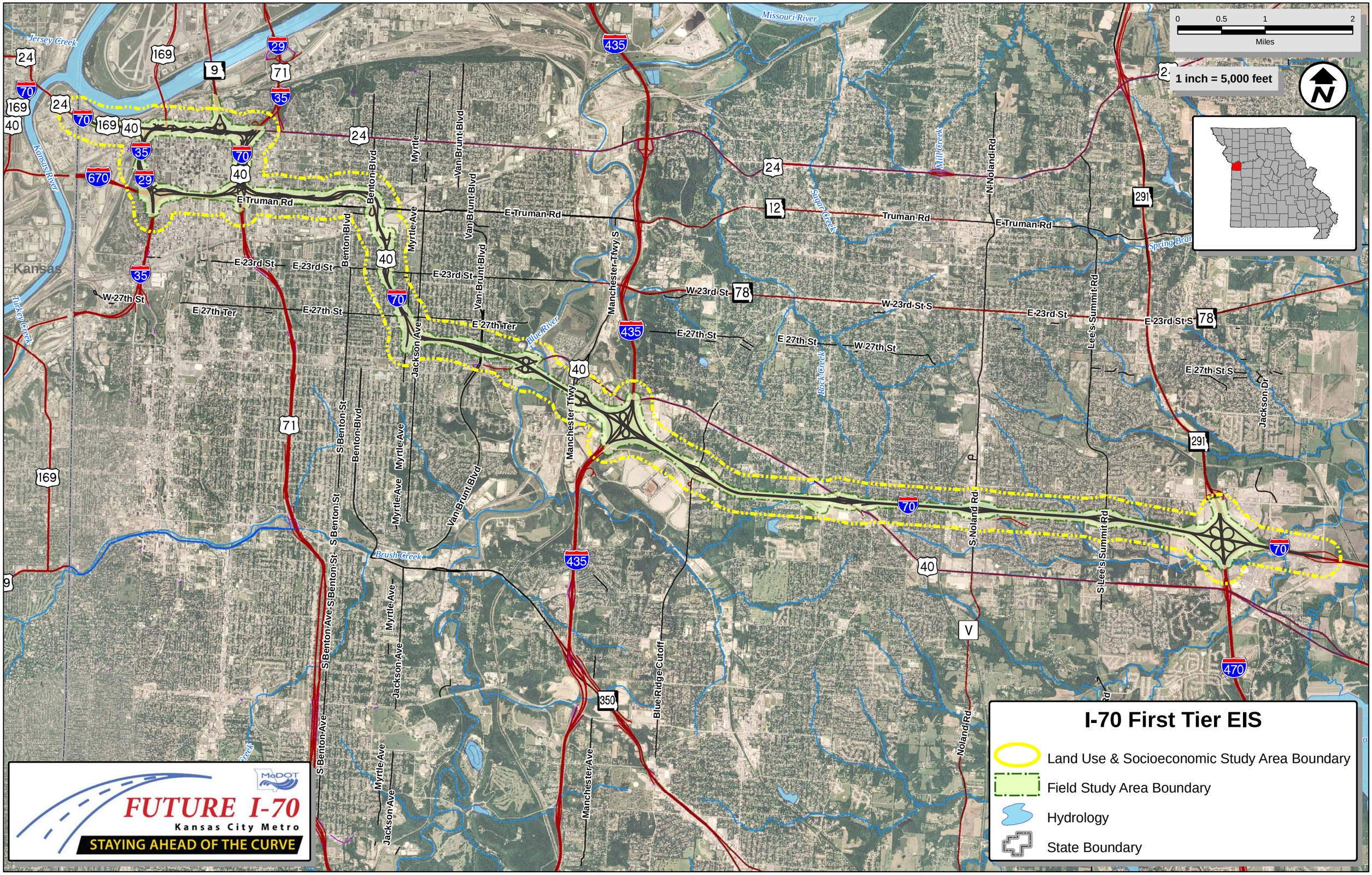
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Noland Rd
Lee's Summit Rd
Jackson Dr
FUTURE I-70
Kansas City Metro
STAYING AHEAD OF THE CURVE
MoDOT
I-70 First Tier EIS
Land Use & Socioeconomic Study Area Boundary
Field Study Area Boundary
Hydrology
State Boundary