1.0 INTRODUCTION

This technical report is prepared as part of the East-West Gateway Coordinating Council's (EWGCC) Major Transportation Investment Analysis (MTIA) for the Southside Study Area. The MTIA is a process for identifying transportation problems, evaluating alternative solutions, and reaching decisions on the best overall solution. This report identifies the goals, objectives, and evaluation criteria to be used in comparing the transportation alternatives that are presently under consideration in the Southside Study Area. The evaluation framework will help decision-makers and the public to understand the implications of the alternatives and to make informed choices.

This evaluation methodology recognizes the focus areas that were defined in the EWGCC's long range transportation plan, Transportation Redefined (May 1995) and reaffirmed in Transportation Redefined II (March 1999):

- Access to opportunity
- Efficient movement of goods
- Congestion management
- Safety and security
- Resource conservation
- Sustainable development
- System preservation

The methodology also draws upon the recommended evaluation framework and criteria in the EWGCC's St. Louis Performance Measures Study. In addition, attention has been given to goals, objectives, and evaluation criteria that reflect the specific needs and aspirations of Southside Study Area residents.

The Southside study is one of three MTIAs that the EWGCC is carrying out concurrently. Thus, the information developed in the Southside MTIA will be designed for two separate but highly interrelated decisions. The first of these decisions is the selection of the alternative or strategy that best meets the needs of the Southside corridor. The second is the selection of the corridor or corridors that will be given priority for investment. It is highly unlikely that the region will have the financial capacity to pursue major investments in all three corridors simultaneously. Thus, this methodology provides for cross-corridor comparisons, providing a technical basis for identifying the most promising corridor for investment.

The remainder of the report is divided into six sections:

- Section 2 describes the planning context for this study
- Section 3 presents the alternatives that have been recommended for analysis in the Southside Study Area
- Section 4 offers a recommended framework for evaluating alternative transportation investments
- Section 5 identifies the goals and objectives that a major investment is intended to achieve in the Southside Study Area
- Section 6 proposes a set of evaluation criteria and a draft evaluation matrix
- Section 7 lists the references that were cited in other sections of this report

2.0 PLANNING CONTEXT

The Southside Corridor was originally conceptualized and illustrated in the St. Louis Systems Analysis for Major Transit Capital Investments (1989, revised 1991). The need to conduct a MTIA and to consider alternative investment strategies was first identified in the subsequent Regional Transportation Plan for the St. Louis metropolitan area, Transportation Redefined (1995). According to Transportation Redefined, the Southside Study Area warrants the consideration of transportation improvements to address mobility and traffic congestion concerns. Transportation Redefined identifies this Study Area as having priority for implementation of transportation improvements in the mid-term.

2.1 REGIONAL PLANNING

EWGCC carries out a regional transportation planning process for the St. Louis metropolitan area. The process has six major integrated components:

- Regional Transportation Plan
- Transportation Project Planning
- Regional Project Selection
- Project Implementation
- Project Monitoring and Evaluation
- Community Engagement

The current Regional Transportation Plan, Transportation Redefined II (1999), identifies a set of transportation-related goals and objectives and the policies, services, and facilities needed to meet them over the next 20 years. The plan is fiscally constrained, and sets forth a funding strategy to show where the funds will come from to implement needed transportation improvements while continuing to operate and maintain the existing system. Projects identified in the plan can be selected for advancement and implementation using Federal funds.

The EWGCC's Transportation Improvement Program (TIP) identifies the federally-funded transportation projects to be built in the short term. Currently, the TIP contains a three-year schedule of transportation improvement projects drawn from the Regional Transportation Plan. A project must be included in the TIP to be eligible for Federal funding.

As noted above, Transportation Redefined (I and II) identify the Southside Corridor for study. The Southside MTIA is part of the Transportation Project Planning phase, and is considering alternative ways to meet the study area's transportation needs. As a result of this MTIA, one or more projects may be adopted into the Regional Transportation Plan and eventually added to the TIP. This approval action would be a prerequisite to further advancement with Federal funds. Additional MTIAs are being conducted in the Northside Study Area and the Daniel Boone Study Area.

2.2 RELATED PROJECTS/STUDIES

In addition to the Northside and Daniel Boone MTIAs, several other major transportation studies/projects have been completed or are currently in progress within the region. Each of these projects has the potential to influence future transportation conditions within the Southside Study Area to varying degrees. A brief overview of these projects, including how they relate to MTIA planning activities, is provided as follows:

Transit Center Hub Restructuring Study – This study was finalized in February 1998 and provides recommendations for the restructuring of bus service throughout the Missouri portion of the St. Louis metropolitan region. The primary outcome of the study was the reorientation of the radial fixed route network towards a transit center-based bus system. Transit centers would be connected by a network of

direct and frequent principal routes. Feeder routes converge on the transit centers, where timed-transfers occur. This enables Bi-State to provide a higher frequency of service and yet still provide adequate route coverage for the entire service area. This type of system also better serves changing trip patterns in the St. Louis metropolitan area, where multi-centered and dispersed population and employment concentrations are becoming more typical. Bi-State has already initiated efforts to implement the transit center recommendations, which affects the future structure of transit service in the Southside Study Area. Proposed transit solutions in the Southside Study Area will need to complement or build upon these future plans.

Downtown Multimodal Center – The City of St. Louis will soon begin construction of a Multimodal Center that will connect airport users with downtown transportation modes: Amtrak, Greyhound, and MetroLink. The station will be able to accommodate a future high-speed rail line and will be located at 14th and Spruce Streets. This central transportation center is located just north of the Mill Creek Valley at the existing Amtrak station south of Kiel Center. The project will consist of a terminal building; railroad and bus staging areas; pedestrian connections to the Kiel MetroLink Station, Kiel Triangle Park, and related street improvements. Terminal construction is scheduled to commence in Spring 2000, although related track work will occur sooner. This downtown multimodal center provides a logical and strategically located connection point for light rail and other transit alternatives considered in the Southside MTIA.

South County Transit Center – The Transit Center Hub Restructuring Study tentatively identified a transit center for the South County Shopping Center. The study envisioned that the South County Transit Center would play a major role in facilitating travel between south St. Louis County and the City of St. Louis as well as other areas in the region such as Clayton and west St. Louis County. In addition, this location would provide a connection point between conventional local bus service and more innovative transit strategies such as collector-distributor shuttle services and flexible route services. The South County transfer facility would also figure significantly in the development of flexible bus routes and point deviation routing. The planned transit facility, combined with the relatively high concentration of employment and shopping trip destination points, presents an important transportation opportunity in the southern portion of the Study Area for the Southside MTIA.

Cross County MTIA – In 1997, EWGCC in cooperation with MoDOT and Bi-State, completed a major transportation investment analysis of the Cross County Corridor. Through this study, a locally preferred alternative was selected that extends MetroLink light rail service from the existing Forest Park station, west, generally along Forest Park Parkway, to Clayton. From Clayton, one leg of the proposed alignment travels north and another leg south. The southern leg of the Cross County light rail extension runs from Clayton south along railroad rights-of-way to Shrewsbury and then to South County Center where it enters the I-55 right of way and continues south as far as Butler Hill Road. Although the southern segment of Cross County from Shrewsbury to Butler Hill Road is still in the planning stages of project development, it is assumed that this light rail line will be in place by the Year 2020 in the Southside Study Area. As such, connections to this planned light rail alignment will be examined in the Southside MTIA.

Downtown Now – As of this writing, a coalition of groups including the City of St. Louis, St. Louis Development Corporation, Downtown Saint Louis Partnership, Regional Commerce and Growth Association, and Saint Louis 2004, is finalizing plans for the redevelopment of the downtown area in the City of St. Louis. The project, entitled “Downtown Now!,” provides a blueprint for redevelopment activities for downtown St. Louis and makes recommendations regarding land use, transportation facilities, parking, design and architectural features, financing, and phasing. In addition to specific infrastructure improvements, supporting policies and programs are also identified and described. Although a good portion of this redevelopment area is outside the Southside Study Area, transportation alternatives considered in the Southside MTIA will need to tie into the regional transportation system either in or near the downtown area. In addition, the St. Louis Central Business District has the highest concentration of destination points for Southside trips, which means that in order to effectively address transportation needs in the Southside Study Area, downtown St. Louis should be served. Consequently, major transportation improvements proposed in the Southside MTIA will need to be integrated with planned land use and transportation changes in the downtown area.

New Mississippi River Bridge – A new bridge crossing for vehicular traffic over the Mississippi River, connecting Illinois with downtown St. Louis just north of the Convention Center is in the early design phases of project development. It is envisioned that this project, when implemented, will significantly affect circulation and travel movements within the downtown area. In addition, the physical features associated with new bridge and related ramp structures could present a potential barrier for north-south transportation infrastructure improvements in the vicinity of 14th St. and Tucker Blvd. within downtown St. Louis. These potential physical and operational constraints associated with the New Mississippi River Bridge will need to be factored into the MTIA study analysis.

Regional Bicycle Studies – Gateway Trailnet, MoDOT, and St. Louis County Parks and Recreation have undertaken various studies of bicycle and pedestrian facilities within the St. Louis region. In general, the purpose of these studies is to note existing routes and facilities, analyze trends, and identify specific routes for future development. For example, in the Regional Bicycle Facilities Plan (1994), Gateway Trailnet identifies one existing and one proposed bicycle route in the Southside Study Area. In the Southside MTIA, transportation alternatives (roadway, transit, and transportation systems management strategies) will need to recognize both planned and existing bicycle routes.

3.0 SOUTHSIDE ALTERNATIVES

The Southside MTIA initially identified 12 alternatives for consideration – a No Build or baseline alternative, a Transportation Systems Management Alternative composed of low cost or operational improvements, six light rail alternatives, a bus lane alternative, a bus rapid transit alternative, and two roadway improvement alternatives. These alternatives were then evaluated using the following screening criteria:

- Accessibility to concentrations of employment and population
- Accessibility to people without cars
- Potential to encourage and serve redevelopment sites or new development opportunities
- Relative impacts to residents, businesses, or sensitive properties
- Amount of improvement in traffic conditions
- Ability to serve major travel movements within the Study Area
- Ease of transportation system connectivity
- Physical feasibility (ability to be constructed)
- Relative cost to build

As a result of this screening process, six alternatives were chosen for further analysis and evaluation. These alternatives will be further defined in terms of their physical features and operating characteristics. Travel demand forecasts and cost estimates will be prepared, and environmental and community impact assessments will be performed. The evaluation methodology described in this report will then be used to structure the findings and support the selection of a locally preferred alternative (LPA).

The six alternatives that are recommended for further study in the Southside Study Area, and that will be compared using this evaluation methodology, are:

- Alternative 1 – No Build
- Alternative 2 – Transportation Systems Management (TSM)
- Alternative 3 – Light Rail Transit, Union Pacific Railroad Right-of-Way (ROW)
- Alternative 4 – Light Rail Transit, I-55 ROW
- Alternative 5 – Bus Rapid Transit, Union Pacific ROW
- Alternative 6 – Roadway

The LPA selected at the end of this study may be a package of elements drawn from each of these six alternatives. For example, it may include some of the transit elements of Alternatives 3, 4, and 5 plus some roadway from Alternative 6.

1. No Build Alternative: The No Build Alternative consists of planned and committed transportation projects that are anticipated to be in place by the year 2020, the planning horizon year for the Southside MTIA. The No Build Alternative represents the future year transportation condition if no further action is taken in the Study Area beyond what is already planned. This alternative is required by federal planning guidelines to provide a basis of comparison to measure the effects of the other alternatives.

2. Transportation Systems Management (TSM) Alternative: The TSM Alternative consists of an integrated package of relatively low cost or operational transportation projects for the Study Area, such as increased bus service, traffic signal coordination and access management along arterial roadways, and intelligent transportation system improvements. This alternative emphasizes low cost, operational improvements that are structured to bring the greatest benefit from the existing transportation infrastructure. The TSM Alternative is required, along with the No Build Alternative, by federal planning guidelines to provide a basis of comparison to the higher cost, high capital investment alternatives.

3. Light Rail Transit Alternative (UP Railroad ROW): This LRT Alternative would extend MetroLink service from the downtown St. Louis area, south, along the Union Pacific Railroad right-of-way, into South St. Louis County. In South County, this alternative merges with Segment 2 of the proposed Cross-County Extension near Green Park Road and continues south along the Cross-County alignment as far as Butler Hill Road. In the City of St. Louis, three options will be examined to provide a connection from the UP Railroad ROW into the downtown area: 1) near Grand Station, 2) along Chouteau Avenue to 14th Street, and 3) along Lafayette Avenue to 14th Street. The light rail line would be constructed primarily at surface level, including some sections of "in-street running," though it might also include short sections of elevated guideway or tunnel.

4. Light Rail Transit Alternative (I-55/I-255 ROW): This LRT Alternative would extend MetroLink service from the downtown St. Louis area, south, along the I-55 right-of-way, as far as the South County Shopping Center in South St. Louis County. From the shopping center, the light rail line travels east along the I-255 right-of-way terminating at a park-and-ride lot near the Jefferson Barracks Medical Center. In the City of St. Louis, this alternative would connect with the downtown area via 7th Street. The light rail line would be constructed primarily at the surface level, including some sections of "in-street" running, though it would likely require sections of elevated structure or tunnel to negotiate the major interchanges along the two interstates.

5. Bus Rapid Transit (UP Railroad ROW): This alternative proposes the construction of a two-lane roadway for exclusive use by buses within the Union Pacific Railroad right-of-way between Grand Station and I-55 near Loughborough Drive. Freeway ramps at I-55 would be widened at selected locations to accommodate a bypass lane for buses along with other access improvements in the vicinity of a transit center proposed for the South County Shopping Center. Buses would run at relatively high frequencies along the dedicated busway. Riders would embark and disembark at transit stations along the route as well as ride bus routes that would enter the busway after circulating through local neighborhoods. The purpose of this alternative is to provide a travel time preference for transit riders by separating transit vehicles from local traffic and congestion on city streets.

6. Roadway Alternative: This alternative proposes roadway widenings along major arterials that are projected to experience high levels of congestion in the Southside Study Area. This alternative also provides new roadway connections to better serve travel movements in the Study Area. These roadway improvements would take place primarily within South St. Louis County along major north-south arterials such as Gravois Road, Tesson Ferry Road, Lemay Ferry Road, and Telegraph Road. South of I-270/I-255, new east-west roadway segments are being considered between Telegraph Road and I-55 as well as between Tesson Ferry Road and I-55. Within the City of St. Louis, added ramp connectors at the I-55/I-64 interchange will be examined in this alternative as well as an enhanced north-south roadway connection between I-64 and I-44 along either Kingshighway or Hampton Avenue.

4.0 EVALUATION FRAMEWORK

This MTIA will develop a considerable body of information on the costs, benefits, and impacts of the six alternatives or strategies summarized in the previous section. An evaluation framework is needed to organize this information in such a way that decision-makers can understand the implications of each alternative and consider the trade-offs involved in selecting a preferred alternative. This Evaluation Methodology identifies the kinds of information the study will need to produce, and provides a structured framework for presenting the information to decision-makers and the public. It identifies the benefits, impacts, and costs that are thought to be of greatest interest to those who will participate in the selection of a preferred strategy. The results of this evaluation will be presented in a subsequent report, once the technical analysis has been completed.

This section of the Evaluation Methodology identifies the separate decisions that are expected to result from the Southside MTIA, and outlines a basic framework for organizing the information necessary for each decision.

4.1 DECISION REQUIREMENTS

This MTIA will need to produce information to support two interrelated decisions – the selection of a preferred alternative for the Study Area, and the adoption of the preferred alternative into the EWGCC plan. For the first of these decisions, the Southside alternatives will be evaluated to see what investment strategy best addresses the Study Area's current and future transportation and related needs. This evaluation will be based on the specific needs of the Southside Study Area. For the second of these decisions, the merits of an investment in the Southside will need to be compared with investments elsewhere in the region, including the Northside and Daniel Boone Study Areas. Since it is unlikely that the region will have sufficient resources to build the best alternative in each corridor at the same time, trade-offs will need to be made and priorities established.

Thus, the evaluation framework to be used in this MTIA will need provide information for both intra-corridor and cross-corridor comparisons. The framework will include one set of evaluation criteria that are reflective of Sourthside needs. In addition, the framework will include some criteria that will be addressed in all three of the ongoing MTIAs.

In addition, since this MTIA is considering fixed guideway transit alternatives (such as light rail and bus rapid transit) that might be built with Federal Transit Administration (FTA) Section 5309 New Starts funds, this Evaluation Methodology has been designed to address certain FTA requirements. FTA has established a set of New Starts Criteria that it uses to assess the merits of fixed guideway projects at several stages. The agency first applies these criteria after the corridor planning phase is completed and a project has been recommended for advancement into preliminary engineering. From that point on, FTA evaluates each project on an annual basis and makes funding recommendations to Congress. With the FTA measures included within the MTIA framework, local decision-makers will gain an understanding of how each alternative might fare in the national competition for FTA New Starts funding.

4.2 FRAMEWORK

A basic framework for evaluating alternatives in an MTIA is suggested in Federal guidance. In their Major Investment Study Desk Reference, FTA and the Federal Highway Administration recommend that alternatives be considered from four different perspectives:

- Effectiveness – the extent to which each alternative meets established goals and objectives, including community and urban development goals as well as transportation goals.
- Cost effectiveness – to show the trade-off between the effectiveness of an alternative and its capital and operating costs.
- Financial feasibility – the ability of the region to obtain the financial resources needed to build and operate an alternative.
- Equity – the distribution of costs and benefits.

The evaluation framework for the Southside MTIA will use the four FTA/FHWA perspectives as a basic organizing structure. Within this structure, Regional and Southside goals and objectives will be used to establish the specific evaluation criteria to be addressed. The goals and objectives to be used are presented in Section 5 of this Methodology, and the specific evaluation criteria are presented in Section 6.

The evaluation framework will consist of two parts:

- An evaluation matrix in which the alternatives are arrayed one axis and the criteria on another. The cells of the matrix will contain quantitative or qualitative indicators of how well an alternative performs on a particular criterion.
- A cogent discussion highlighting the significant differences between the alternatives and the trade-offs to be made in making a selection.

The evaluation matrix will serve as a summary of those technical findings that are considered to be most important to the decisions at hand. No weighting or scoring will be done to suggest that any one measure is more important than the others. Rather, each decision-maker and interested stakeholder will be able to review the technical findings and to determine for himself or herself those factors are most important to them. As appropriate, the discussion of significant differences and trade-offs can be used to provide some sense of proportion and the relative significance of the technical findings.

5.0 GOALS AND OBJECTIVES

The EWGCC's long range transportation plan, Transportation Redefined, established seven focus areas around which the needs of the region's transportation users are clustered:

- Access to opportunity
- Efficient movement of goods
- Congestion management
- Safety and security
- Resource conservation
- Sustainable development
- System preservation

These seven focus areas provide the basic categories or topics to be addressed in determining the effectiveness of each alternative in meeting the goals and objectives of the St. Louis metropolitan area.

The specific transportation needs of the Southside Study Area are defined in the Purpose and Need Statement (May 1999) that was prepared as part of this MTIA. These needs reflect a variety of early technical analysis activities conducted as part of the MTIA, as well as early stakeholder/public involvement activities. The Purpose and Need Statement translated these needs into five goals and supporting objectives that roughly correspond to the EWGCC's focus areas.

Access to Opportunity

Goal: Improve travel for the home to work commute for Southside residents and employees.

Objectives:
- Provide more direct transit connections linking Southside residents with employment sites in the Southside study area and throughout the region as a whole.
- Reduce travel times (both auto and transit).
- Improve intermodal connections.

Sustainable Development

Goal: Maintain and/or enhance Southside neighborhoods and communities.

Objectives:
- Invest in new transportation services and/or infrastructure that contribute to maintaining and/or enhancing quality of life in Southside neighborhoods.
- Integrate transportation infrastructure investments and land development and redevelopment in ways that are economically sustainable and consistent with community values and historic preservation.

Congestion Management

Goal: Relieve congestion in areas projected to experience traffic growth.

Objectives:
- Improve traffic conditions on congested major arterials within the Southside Study Area.
- Increase use of alternative transportation modes.
- Enhance roadway connectivity or provide improvements to facilitate major travel movements in the study area.

Funding Constraints

Goal: Pursue cost-effective, safe transportation solutions.

Objectives:

- Make best use of the existing transportation infrastructure.
- Increase the effectiveness of the existing and planned regional transportation system in relation to funding constraints.
- Provide for safer roadways, including pedestrian and bicycle opportunities.

The next section shows how the four FTA/FHWA evaluation perspectives, the seven regional focus areas, and the Southside goals and objectives all relate to one another, and provides a set of specific evaluation criteria for comparing the six Southside alternatives.

6.0 EVALUATION CRITERIA

This section identifies the specific evaluation criteria or measures of effectiveness that will be used to compare the final set of alternatives for the Southside MTIA. Many of the criteria are drawn from the St. Louis Performance Measures Study (November 1998) developed by EWGCC.

Table 6-1 presents the list of recommended evaluation criteria for the Southside MTIA. Criteria have been included for both intra-corridor and cross-corridor comparisons. The criteria shown in bold italic print will be addressed in all three of the ongoing MTIAs. While some of these may not be particularly relevant or useful for comparing alternatives within the Southside study area, they do address the region's adopted focus areas and thus may provide insights that are relevant for establishing regional funding priorities. Those criteria that are not in bold italic print have been selected for use in addressing the goals and objectives that are unique to the Southside.

The table includes criteria addressing each of the regional focus areas and each of the Southside goals and objectives. A significant number of the criteria address the regional and Southside goal of improving access to opportunity and relieving traffic congestion. Sustainable development and funding constraints are also covered. Criteria are also included for each of the evaluation perspectives recommended by FTA/FHWA.

The selected criteria will differentiate between the various investment alternatives that are being considered in the Sourthside Study Area. For example, the transit alternatives can be compared in terms of such factors as transit travel time; transit ridership; service to existing residences, jobs, and low income households; and cost. The roadway alternative can be compared with the No Build and TSM alternatives in terms of highway travel time, delay, level of service, and cost. A number of the criteria will be useful for cross-modal comparisons between transit improvements and highway improvements. These include travel time savings, mode share, vehicle miles of travel, displacements, land consumption, and financial feasibility.

FTA's New Starts Criteria are included to the extent that they will be helpful in distinguishing among the Study Area alternatives. Some of FTA's criteria are more regional in nature – such as the metropolitan area's air quality attainment status, and the region's financial capacity. These have not been included at this time. If this MTIA leads to a decision to advance a fixed guideway project for FTA New Starts funding, information addressing all of FTA's criteria will need to be assembled.

Data for addressing the evaluation criteria will come from a variety of sources. Many will come directly from or are derived from the travel demand forecasting and environmental impact assessment done in Task 10. Cost estimates will be produced in Task 11, and the financial feasibility analysis will be an output of Task 12.

Table 6-2 provides the evaluation matrix that will be used to summarize the technical results and compare the Southside alternatives in Task 13. This matrix will be accompanied by a narrative discussion of the significant trade-offs to be made in the selection of the preferred alternative.

TABLE 6-1
PROPOSED EVALUATION CRITERIA

Perspectives	EWGCC Focus Areas	Southside Goals	Southside Objectives	Evaluation Criteria (a, b)

Effectiveness	Access to Opportunity	Improve travel for the home to work commute for Southside residents and employees	• Provide more direct transit connections linking Southside residents with employment sites in the Southside and throughout the region
			• Reduce travel time (both auto and transit)
			• Improve intermodal connections
				• ***Annual hours of travel time savings compared with No Build and TSM (FTA measure)***
				• Transit travel time between the following O/D pairs (peak period, year 2020):
				  • South County Shopping Center and downtown St. Louis
				  • South County Shopping Center and Central West End
				  • Chippewa/Grand and downtown
				  • Chippewa/Grand and Central West End
				• Highway travel time between the following O/D pairs (peak period, year 2020):
				  • Tesson Ferry/Meramec Bottom Road and downtown
				  • Tesson Ferry/Meramec Bottom Road and Clayton
				  • Baumgartner/Telegraph and downtown
				  • Baumgartner/Telegraph and Clayton
				• Number of Southside households within 30 minutes of downtown by transit in peak period
				• Number of Southside households within 30 minutes of downtown by highway in peak period
				• Number of existing Study Area households within ½ mile of a proposed LRT/BRT station
				• Number of existing Study Area jobs within ½ mile of a proposed LRT/BRT station

	Congestion Management	Relieve congestion in areas projected to experience growth	• Improve traffic conditions on congested major arterials within the study area
			• Increase use of alternative transportation modes
			• Enhance roadway connectivity or provide improvements to facilitate major travel movements in the study area.
				• ***Change in hours of highway travel delay within Study Area (annual, compared with No Build)***
				• V/C ratio in on following highway segments (peak period, year 2020):
				  • Kingshighway Blvd., I-64 to I-44
				  • Hampton Ave., I-64 to I-44
				  • I-55 off-ramps at Lafayette Ave.
				  • Broadway, I-64 to I-44
				  • Lindbergh Blvd., Lemay Ferry to Tesson Ferry
				  • Telegraph Rd., I-255 to Baumgartner

				• Lemay Ferry, Lindbergh to Forder • Mehl, Forder to Ringer • Tesson Ferry, I-270 to Butler Hill • I-55, I-255 to Baumgartner • ***Number of new transit riders (linked trips, annualized, compared with No Build)*** • ***Change in transit mode share for all work trips originating in Study Area (compared with No Build)***
	Safety and Security		• Provide for safer roadways, including pedestrian and bicycle opportunities	• ***Number of high accident locations that are improved*** • Number of miles of new sidewalks and bicycle facilities
	Resource Conservation			• ***Change in vehicle miles of travel within the Study Area (daily, compared with No Build)*** • ***Acres of land converted to transportation uses***
	Sustainable Development	Maintain and/or enhance Southside neighborhoods and communities	• Invest in new transportation services and/or infrastructure that contribute to maintaining and/or enhancing quality of life in Southside neighborhoods • Integrate transportation infrastructure investments and land development or redevelopment in ways that are economically sustainable and consistent with community values and historic preservation	• Amount of investment in neighborhood amenities (e.g., sidewalks, bicycle facilities, lighting, landscaping) • Number of households displaced • Number of jobs displaced • Number of joint development opportunities created • Number of historic sites adversely affected • Other impacts on neighborhoods (subjective measure: positive, neutral, adverse)
	System Preservation			• ***Lane miles of existing highways that are rebuilt*** • ***Number of buses >12 years old***
Equity				• ***Low income households within ½ mile of transit stop (FTA measure)*** • ***Number of low income or minority households displaced***
Cost Effectiveness		Pursue cost-effective, safe transportation solutions	• Make best use of the existing transportation infrastructure	• ***Incremental cost per new transit trip (FTA measure)*** • ***Cost per hour of travel time savings***
Financial Feasibility			• Increase the effectiveness of the existing and planned regional transportation system in relation to funding constraints	• ***Capital cost*** • ***Operating and maintenance cost*** • ***Availability of funds for capital costs (subjective assessment: high, medium or low)*** • ***Availability of funds for O&M costs (subjective assessment: high, medium, or low)***

(a) Measures of effectiveness shown in bold italics will be addressed in all Study Areas, for use in regionwide evaluations.
(b) The measures of effectiveness comprise the proposed evaluation methodology and are subject to change.

TABLE 6-2
PROPOSED EVALUATION MATRIX

	1	2	3	4	5	6
	No Build	**TSM**	**LRT: Union Pacific ROW**	**LRT: I-55/I-255 ROW**	**BRT: Union Pacific ROW**	**Roadway**
Effectiveness: Access to Opportunity						
Annual hours of travel time savings compared with: No Build and TSM (FTA measure)						
Transit travel time between South County Shopping Center and downtown St. Louis						
Transit travel time between South County Shopping Center and Central West End						
Transit travel time between Chippewa/Grand and downtown						
Transit travel time between Chippewa/Grand and Central West End						
Highway travel time between Tesson Ferry/Meramec Bottom and downtown						
Highway travel time between Tesson Ferry/Meramec Bottom and Clayton						
Highway travel time between Baumgartner/Telegraph and downtown						
Highway travel time between Baumgartner/Telegraph and Clayton						
Number of Southside households within 30 minutes of downtown by transit in peak period						
Number of Southside residents within 30 minutes of downtown by highway in peak period						
Number of existing Study Area households within 1/2 mile of a proposed LRT/BRT station						
Number of existing Study Area jobs within 1/2 mile of a proposed LRT/BRT station						
Effectiveness: Congestion Management						
Change in hours of highway travel delay within Study Area (annual, compared with No Build)						
V/C ratio: Kingshighway between I-64 and I-44						
V/C ratio: Hampton Ave. between I-64 and I-44						
V/C ratio: I-55 off-ramps at Lafayette Ave.						
V/C ratio: Broadway, I-64 to I-44						
V/C ratio: Lindbergh Blvd., Lemay Ferry Rd. to Tesson Ferry Rd.						
V/C ratio: Telegraph Rd., I-255 to Baumgartner Rd.						
V/C ratio: Lemay Ferry Rd., Lindbergh Blvd. to Forder Rd.						
V/C ratio: Mehl Ave., Forder Rd. to Ringer Rd.						
V/C ratio: Tesson Ferry Rd., I-270 to Butler Hill Rd.						
V/C ratio: I-55 between I-255 and Baumgartner Rd.						
Number of new transit riders (linked trips, compared with No Build)						
Change in transit mode share for all work trips originating in Study Area (compared with No Build)						
Effectiveness: Safety and Security						
Number of high accident locations that are improved						
Number of miles of new sidewalks and bicycle paths						
Effectiveness: Resource Conservation						
Change in VMT within the Study Area (daily, compared with No Build)						

7.0 REFERENCES

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