

Northside Study Area

Major Transportation Investment Analysis

PURPOSE AND NEED STATEMENT

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S.0 EXECUTIVE SUMMARY

S.1 BACKGROUND AND PROCESS

This document presents the purpose and need for surface transportation improvements in the Northside Area. It is a component of a Major Transportation Investment Analysis (MTIA), the planning process used by local decision-makers to identify major transportation projects in the region.

The Northside Study Area lies in the north and northeast portion of the City of St. Louis and St. Louis County and covers approximately 75 square miles. It has 26 municipalities partially or wholly within the Study Area limits. Figure 2-1.1 displays the location and boundaries of the Northside Study Area.

Total 1996 population in the Study Area was almost 312,900 and employment for 1996 was almost 230,500. Year 2020 projections indicate a continued decline in total population of about 28,376 persons, a 9.1 percent decrease from 1996. This projection assumes a further decline in population in the City of St. Louis portion of the Study Area of 12,065 and a decrease in population in the County portion of 16,311.

Total Study Area employment is forecast to decrease by 12,318 jobs between 1996 and 2020, a 5.3 percent decrease over the 24-year projection, indicating a relatively small employment loss. However, this projected decrease is comprised of an 14,235 job loss in the City portion of the Study Area compared to a slight 1,917 job increase in the County portion of the Study Area.

The first step in the MTIA process was the compilation of existing and future conditions information for the Study Area and the metropolitan region. This was done through gathering of available technical data and community engagement. The community engagement process included open houses, focus groups, and community forums. Available technical data on demographics and the surface transportation system was obtained from various sources and is summarized in the Northside Existing and Future Conditions Report (March 1999).

This analysis of this information led to the identification of the transportation issues within the Study Area. These issues serve as the purpose and need for transportation improvements within the Northside Study Area and provide a foundation for the development of alternatives to solve many of these issues. More specific goals and objectives have been identified and will be used in the development of evaluation criteria for potential multi-modal transportation alternatives. This evaluation process will follow the framework identified in the St. Louis regional transportation planning process as described in the documents Transportation Redefined (1995) and Transportation Redefined II (1999) adopted by the East-West Gateway Coordinating Council's (EWGCC) Board of Directors.

S.2 TRANSPORTATION SYSTEM

The Northside Study Area has three east-west interstates (I-270, I-70, I-64) supported by a system of State and local roadways. There are no direct north-south roadway connections through the entire length of the Study Area.

St. Louis' regional bus and light rail transit system is generally oriented in a radial network connected by a series of ring or cross-town routes. Approximately 31 local fixed-routes provide regular service to the Northside Study Area. Fixed-route service in the Northside is more concentrated in the southern portions of the Study Area, due to higher population and employment densities as well as lack of other transportation alternatives for residents of this area.

Within the Northside Study Area, eight bus routes also provide express or limited stop service. These express routes primarily serve commuter trips destined to downtown St. Louis and provide limited stop service in the peak periods along selected arterials in the northern portions of the Study Area.

The existing MetroLink light rail system between Lambert International Airport and East St. Louis, Illinois, transverses the Northside Study Area near its southern border as it approaches downtown St. Louis from the west. Eight of the system's 19 MetroLink stations fall directly within the southernmost portion of the Study Area.

MetroLink indirectly serves portions of the Northside via feeder bus service. There are 31 local routes in the Northside Study Area that provide direct connections with MetroLink rail stations outside downtown St. Louis.

Bi-State operates two demand response programs in the St. Louis region, Call-A-Ride and Call-A-Ride Plus. Call-A-Ride is open to the general public in St. Louis County, whereas Call-A-Ride Plus is provided only to the disabled community in both the County and City of St. Louis. Based on FY 1998 data provided by Bi-State, ridership for Call-A-Ride services averages about 1,300 passengers per weekday regionwide.

S.3 TRANSPORTATION-RELATED PROBLEMS

The following transportation-related problems have been identified in the Northside Study Area:

- Lack of access to jobs and major retail/shopping/medical/places of worship located both within and outside of the Study Area due to mobility limitations for portions of the population in the North City and North County portions of the Study Area
- Lack of transportation choices
- Lengthy travel times in comparison to the entire region as a whole
- Lack of direct north-south routes
- Higher accident rates than the statewide average on selected roadways, including Route 367, which provides a partial north-south connection between Halls Ferry Road and Lindbergh Boulevard
- Loss of population in high-density areas, particularly in the City of St. Louis portion of the Study Area
- The loss of employment, particularly in the City of St. Louis portion of the Study Area
- Decrease in personal safety in areas of decreased commercial and residential activity
- Limited regional funding for major transportation improvements

S.4 GOALS AND OBJECTIVES

The following goals and related objectives have been developed to address the above problems.

S.4.1 Access to Opportunity

Goal: Improve access to opportunities for Northside Study Area residents and businesses.

Objectives:

- Reduce total travel time by transit to neighborhood, Study Area and regional opportunities including:
 - jobs
 - medical care
 - shopping
 - education
 - places of worship
- Reduce travel times from the northern portion of the Study Area to downtown St. Louis

- Improve public transportation to facilitate people traveling between the Study Area and job locations, particularly from areas of high population densities to areas with relatively high employment concentrations
- Provide a balanced transportation system through increased transportation options
- Improve direct north-south connections

S.4.2 Safety and Security in Travel

Goal: Improve the personal and vehicular safety of the transportation system in the Northside Study Area.

Objectives:

- Reduce the existing accident rate on Route 367, through physical and operational improvements
- Improve personal safety through enhanced neighborhood vitality; transportation supporting land uses

S.4.3 Sustainable Development

Goal: Maintain and/or enhance Northside Study Area neighborhoods.

Objectives:

- Implement transportation improvements that will help to reverse or slow the loss of population, particularly in North City
- Invest in new and/or improved transportation services and infrastructure that contribute to maintaining and/or enhancing quality of life and personal safety in stagnating or declining neighborhoods
- Integrate transportation infrastructure investments and land development or redevelopment in ways that are economically sustainable and consistent with community values and historic preservation

S.4.4 Movement of Goods

Goal: Improve the movement of goods/freight within and through the Northside Study Area.

Objectives:

- Improve truck traffic within and through the Study Area by reducing conflicts between trucks and autos
- Improve the connectivity of the existing roadway system through roadway improvements, particularly north-south connections for trucks

S.4.5 Cost-Effectiveness

Goal: Provide transportation system improvements that maximize attainment of the above goals within the financial constraints of the transportation-providing agencies within the region.

Objectives:

- Maximize the cost-effectiveness of the transportation system improvements within the Northside Study Area

1.0 INTRODUCTION

This document presents the purpose and need for surface transportation improvements in the Northside Study Area of the St. Louis metropolitan area. It is a component of a Major Transportation Investment Analysis (MTIA) for this Study Area, which is a planning process designed to provide local decision makers and the public with the information necessary to determine the locally preferred transportation investment alternative for the Study Area.

1.1 MAJOR TRANSPORTATION INVESTMENT ANALYSIS

A Major Transportation Investment Analysis (MTIA) follows a logical order of technical analysis and complementary public engagement activities to develop and assess major transportation investment alternatives in the Study Area. Figure 1.1-1 illustrates these steps and their interaction. Each step is briefly discussed in the following paragraphs.

The first step is to compile information about the Study Area and metropolitan region to assess the existing and future socio-demographic, economic, and transportation system conditions. This assessment is intended to determine the underlying root causes of issues related to the transportation system in each Study Area. This Purpose and Need Statement summarizes this information. These issues also lead to the determination of specific goals and related objectives that shape the development of transportation alternatives, as well as identify which transportation alternative is the “best” solution for the Study Area. Specific problems and issues in the Northside Study Area are described in Section 5.0 of this Purpose and Need document. Related study goals and objectives are discussed in Section 6.0.

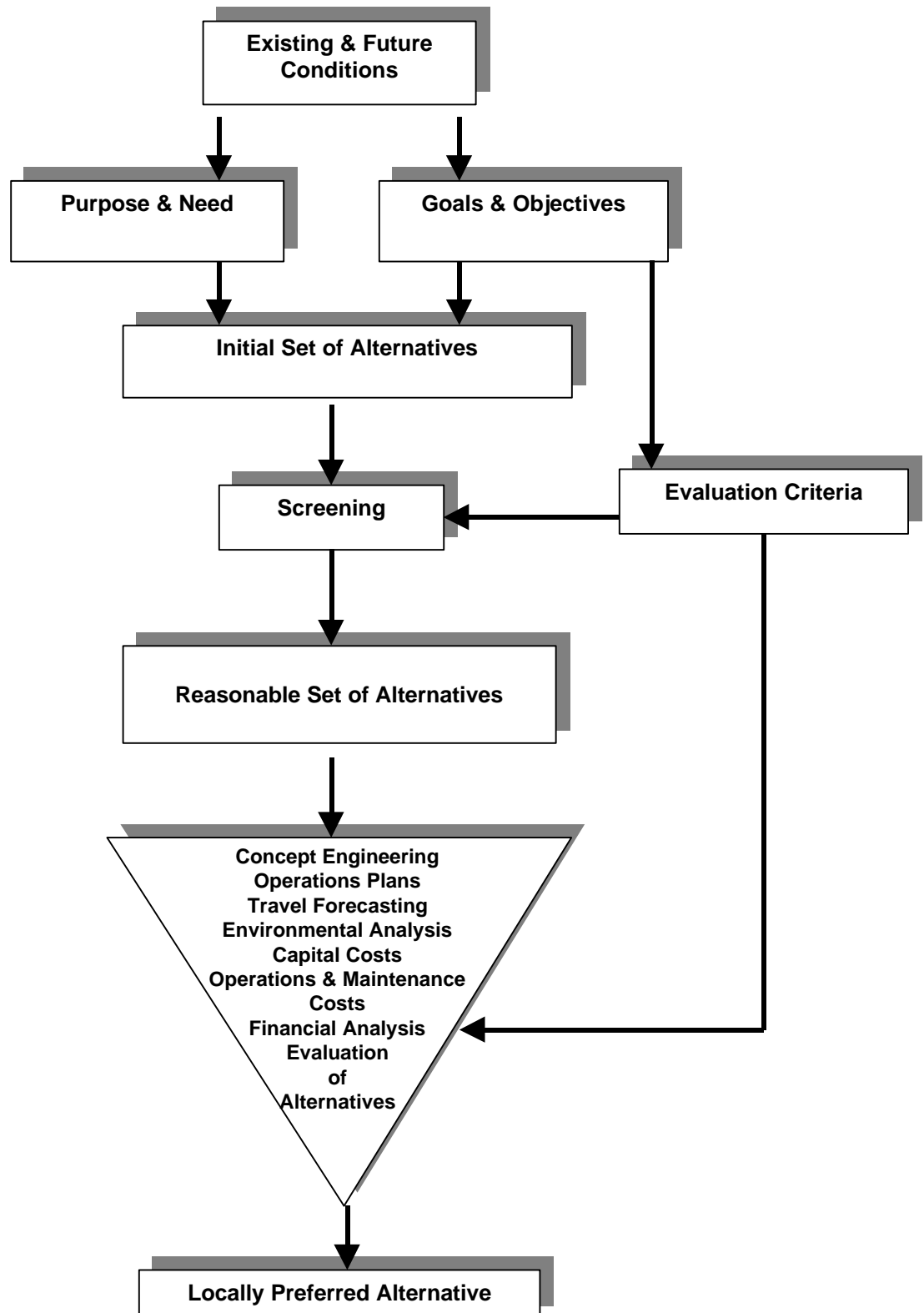
Study goals and objectives lead to the development of a range of multi-modal transportation infrastructure and service alternatives. These alternatives are structured to address different aspects of the study goals and objectives. Included in these alternatives are the No Build and Transportation Systems Management (TSM) Alternatives. The No Build Alternative describes the baseline transportation system and associated system performance for the planning horizon year, which has been established as the year 2020. It includes not only facilities and services in place today, but also those facilities and services thought reasonably to be in place by 2020 based upon on-going planning and project development activities and projected availability of funds. The TSM Alternative is a relatively low capital and operating cost alternative, which attempts to maximize the person trip capacity of both the roadway and transit systems. It can include such projects as improved traffic signal systems, freeway ramp metering, and improved bus service.

Major transportation investment alternatives can include such projects as major roadway widenings, major new roadways, extensions of MetroLink or other types of rail transit, or new facilities reserved for use by buses.

The initial set of alternatives may number up to 15 in the Study Area and will be subjected to a “screening” process, which will narrow down these alternatives to a more manageable number for further study. These alternatives will include the No Build and TSM Alternatives. The No Build and TSM are required to be included in the reduced set of alternatives by federal transportation planning regulations as comparisons to the higher cost major investment alternatives. This screening process will assess each of the initial set of alternatives against evaluation criteria derived from the goals and objectives for the Study Area as well as the physical feasibility of implementing the alternatives. These criteria will apply both numerical and qualitative measures to assess the performance of each alternative against the goals and objectives to be achieved by major transportation investments in the Study Area.

The reduced set of alternatives will be presented to the East West Gateway Coordinating Council (EWGCC) Board of Directors for further study. This action represents a major study milestone.

**FIGURE 1.1-1
MTIA PROCESS**



The reduced set of alternatives will then be analyzed with respect to a detailed set of evaluation criteria related to the goals and objectives of the Study Area. Conceptual engineering of the alternatives will be performed to provide estimates of capital costs and provide more specific information for an assessment of the environmental and community impacts and benefits of each alternative. Travel demand forecasts will be made to estimate the future usage of proposed transportation facilities and services included in each alternative, and annual operating and maintenance costs will be estimated. A financial analysis will be performed to assess the fundability of each alternative and the regional financial resources available to undertake the implementation of each alternative.

This information will be presented in an evaluation report so that decision-makers and the public can determine the relative benefits, costs and impacts of each alternative and which alternative best meets the purpose and need for major transportation investments in the Northside Study Area. Finally, the EWGCC Board of Directors will select a Locally Preferred Alternative (LPA) for the Study Area, which will then be adopted into the long-range transportation plan for the St. Louis region.

1.2 PROJECT DEVELOPMENT PROCESS

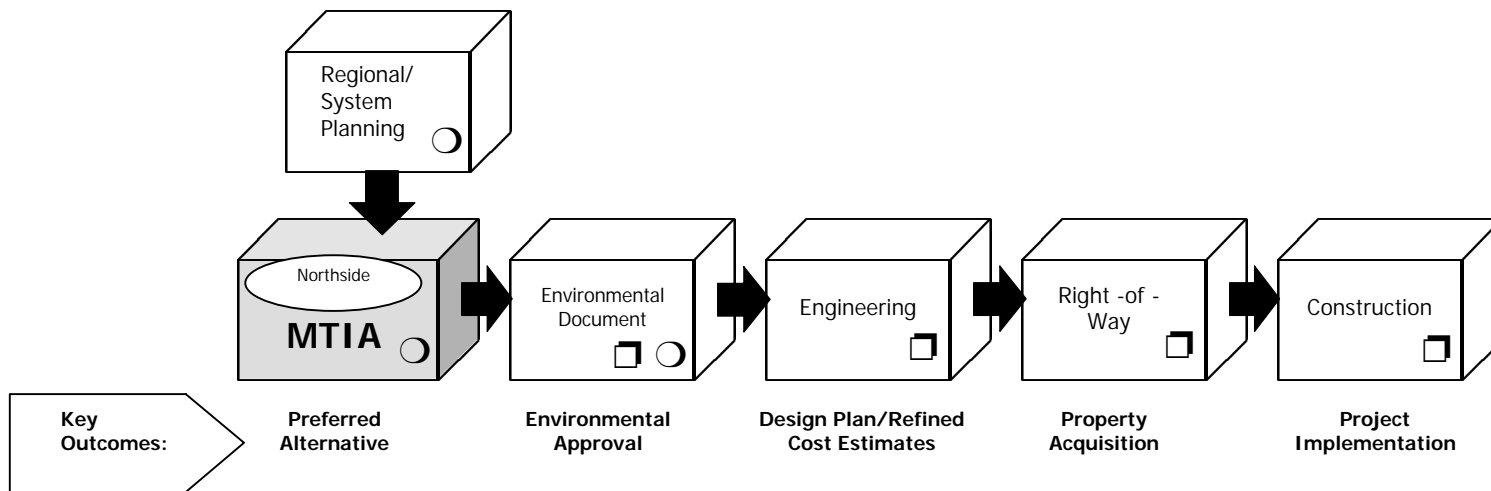
The MTIA is the second step in a multi-step process for the development and construction of a federally funded major transportation investment project in an urban area. Figure 1.2-1 displays the steps in this process, which are briefly described below. EWGCC, along with its partner transportation agencies, Missouri Department of Transportation (MoDOT), Illinois Department of Transportation (IDOT), and the Bi-State Development Agency (Bi-State), have adopted a long range transportation systems plan, Transportation Redefined II (1999), which documents an on-going regional transportation planning process. This process identified the Northside Study Area, along with two others, as warranting a MTIA to determine the appropriate major transportation investment project(s) in each study area for adoption into a subsequent update of the long-range plan. Once this MTIA is completed, the EWGCC Board will adopt a LPA for inclusion in the long-range plan. It also will adopt a financing strategy for the project(s).

When the agencies determine that the project(s) is ready to move forward from a financial perspective, the next step is to complete the required federal environmental documentation including an Environmental Impact Statement (EIS) for the LPA. These documents present, in detail, the physical and operational characteristics of the LPA, and its associated environmental and community impacts and benefits. In concert with these documents, additional preliminary engineering is performed to refine the designs and associated cost estimates developed conceptually in the MTIA. Once the sponsoring federal agency [either Federal Highway Administration (FHWA) or Federal Transit Administration (FTA)] has certified the Final EIS, the project can move into final engineering design, acquisition of right-of-way as required by the project, and ultimately construction and implementation of operations.

1.3 ROLE OF PURPOSE AND NEED

This purpose and need discussion will establish the nature of surface transportation related problems and issues for the Study Area and the related goals and objectives to be attained by a major transportation investment. The discussion will lead to the development of transportation improvement alternatives to be considered and the means by which they will be evaluated to help decision-makers and the public ascertain a LPA that meets the purpose and need in the Northside Study Area.

**FIGURE 1.2-1
PROJECT DEVELOPMENT PROCESS**



- Bi-State or MoDOT Lead Responsibility
- East West Gateway Lead Responsibility

1.4 MTIA DECISION-MAKING AND APPROVAL PROCESS

The decision-making body for this MTIA is the EWGCC Board of Directors. The composition of the Board of Directors reflects their commitment to an inclusive, bi-state decision-making structure. Of the Board's 21 voting members, seven are the chief elected officials from the local governments of the Illinois portion of the St. Louis region, seven are the chief elected officials from the local governments of the Missouri portion of the region, six are citizens representing both states, and one is the Chair of the Bi-State Development Agency. Representatives of a number of other state and federal agencies sit on the Board as non-voting members. The Board will review this MTIA along with other studies, considering information and recommendations presented by senior staff from the cooperating transportation agencies, including EWGCC, MoDOT and Bi-State. These agencies have entered into cooperative agreements to jointly manage and direct the conduct of MTIAs through a Transportation Corridor Improvement Group (TCIG) staffed by all three agencies. The decision of the alternative to be adopted into the long-range transportation plan for future implementation, along with possible timing of its implementation, will be made in the context of the regional transportation system.

2.0 CORRIDOR STUDY AREA

2.1 STUDY AREA DESCRIPTION

2.1.1 Study Area Boundaries

The Northside Study Area lies in the north and northeast portion of the City of St. Louis and St. Louis County. It is roughly bounded by the Mississippi River on the East, Lindbergh Boulevard on the North, North Florissant Road and Union Boulevard on the West and Chouteau Avenue on the South (see Figure 2.1-1), comprising an area of approximately 75 square miles. Twenty-six municipalities lie wholly, or in part, within the Study Area as well as a portion of unincorporated St. Louis County. Over 40 percent of the Study Area lies within the City of St. Louis.

The Northside Study Area covers approximately 77 square miles, 32 miles in St. Louis City and 45 square miles in St. Louis County. In addition to unincorporated portions of St. Louis County, the Study Area includes either wholly or partially 27 municipalities: Bellefontaine Neighbors, Beverly Hills, Black Jack, Calverton Park, Cool Valley, Country Club Hills, Dellwood, Ferguson, Flordell Hills, Florissant, Glen Echo Park, Hillside, Jennings, Moline Acres, Normandy, Northwoods, Norwood Court, Pasadena Hills, Pasadena Park, Pine Lawn, Riverview, St. Louis County, Uplands Park, Velda City, Velda Village Hills, and Wellston.

2.1.2 Transportation System

This section provides a broad overview of the transportation facilities in the Northside Study Area. A more detailed description of roadway conditions can be found in the Existing and Future Conditions Report (March 1999).

Roadways

Three interstates bisect the Northside Study Area (see Figure 2.1-1). The first, Interstate 270 (I-270), runs east-west through the St. Louis County portion of the Study Area. Providing an east-west movement through the Study Area, this eight-lane facility is generally considered an “outerbelt” for the St. Louis region. The second, Interstate 70 (I-70), runs diagonally from downtown St. Louis to the northwest. This six-lane facility generally provides an east-west movement to the region. Interstate 64 (I-64, U.S. Highway 40/61) runs east-west through the very southern portion of the Study Area.

The Route 367/U.S. 67 corridor extends from Halls Ferry Circle north to the Illinois state line.

In addition, the primary arterials generally within the City of St. Louis portion of the Study Area include:

- Market Street
- Lindell Boulevard
- Delmar Boulevard
- Page Avenue
- Dr. Martin Luther King Drive
- St. Louis Avenue
- Natural Bridge Avenue
- West and North Florissant Avenues
- Jefferson Avenue
- Tucker Boulevard

- Goodfellow Boulevard
- Riverview Drive

**FIGURE 2.1-1
STUDY AREA**

Primary arterials in the Northside Study Area generally in the St. Louis County portion of the Study Area include:

-
- Lucas and Hunt Road
- Bellefontaine Road
- Halls Ferry Road
- Jennings Station Road
- Elizabeth Avenue
- Parker Road
- Redman Avenue
- Lindbergh Boulevard
-
- There are no direct north-south routes through the entire length of the Study Area.

Several major roadway improvements are underway or anticipated in the Study Area and are included as part of the year 2020 No Build Alternative for this study. Some of the more significant projects include constructing a new Mississippi River bridge and associated improvements, widening to three lanes Bellefontaine Road from I-64 to Cole Street, constructing new ramps on I-70 at Spruce Street and I-64, and reconstructing as a four-lane arterial the 22nd Street Parkway from I-64 to Cole Street. In addition to these significant improvements, numerous minor roadway improvements and enhancements are anticipated in the Study Area and also are included in the No Build Alternative.

Transit

Intraregional Bus Services

St. Louis' regional transit system is generally oriented on a radial network connected by a series of ring or cross-town routes. This framework largely serves a transit trip pattern that links suburban communities and the outlying residential areas in the City of St. Louis with major concentrations of employment in Downtown St. Louis. Cross-town and cross-county routes provide some connections between non-downtown points.

Approximately 31 local fixed routes provide regular service to the Northside Study Area. The local routes that serve the Northside Study Area tie into Bi-State's regional transit network. Fixed-route service in the Northside is more concentrated in the southern portions of the Study Area, due to higher population and employment densities as well as lack of other transportation alternatives for residents of this area [see the Existing and Future Conditions Report (March 1999)].

In the northern portions of the Study Area, local service is slightly more dispersed and oriented towards serving clusters of development along major travel corridors such as Florissant Road, West Florissant Avenue, New Halls Ferry Road, Lewis and Clark Boulevard, and Bellefontaine Road.

Within the Northside Study Area, eight bus routes provide express or limited-stop service. These express routes primarily serve commuter trips to downtown St. Louis and provide limited-stop service in the peak periods along selected arterials in the northern portions of the Study Area. All of these routes use I-70 to complete their trip to downtown. Cross town and cross county routes provide some connections between non-downtown points, including the MetroLink stations.

MetroLink Light Rail Transit (LRT)

The existing MetroLink light rail system between Lambert St. Louis International Airport and East St. Louis, Illinois, transverses the Northside Study Area near its southern border as it approaches downtown

St. Louis from the west. Eight of the system's 19 MetroLink stations fall directly within the southernmost portion of the Study Area.

MetroLink indirectly serves portions of the Northside via feeder bus service. There are 22 local routes in the Northside Study Area that provide direct connections with MetroLink rail stations outside downtown St. Louis.

Transit Facilities

Bi-State is currently examining options to transition from the more traditional radial configuration of fixed route bus services to a transit center-based system. This is driven, in part, by the need to better serve changes in regional travel patterns resulting from shifts in population and employment throughout the region given constrained financial resources. In February 1998, Bi-State completed the Transit Center Hub Restructuring Study, Final Report which identified 17 potential transit centers in urban/suburban St. Louis. Five of the proposed transit centers would serve the Northside Study Area:

- Grand MetroLink Station
- Central West End MetroLink Station
- Natural Bridge Road/Union Boulevard
- Northland Shopping Center
- Florissant

Three of these transit centers, Grand Station, Central West End Station, and Natural Bridge/Union, would be located in the St. Louis City portion of the Northside Study Area. The Grand and Central West End stations are located on the existing MetroLink line and already serve as transfer points between bus and rail. In these three transfer centers, urban transit riders also could be collected in the City for trips to destinations in the suburbs and other major activity centers in the region primarily to the west (i.e., the "reverse commute.")

Transit centers at Northland Shopping Center and Florissant would play a major role in facilitating travel between North 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. Although proposed transfer facilities at the UMSL South MetroLink Station and Rock Road MetroLink Station are not located within the Northside Study Area, these two transit centers also would serve Northside residents.

Bicycle/Pedestrian Facilities

Currently, no routes identified in the St. Louis Regional Bicycle Facilities Plan (1994) lie within the Northside Study Area. Local municipalities, however, have implemented or are planning on implementing individual bicycle and pedestrian paths and walkways. One such instance is the North County Bikeway, scheduled for construction in 1999. This facility is a joint project with St. Louis County and the City of Black Jack and will connect Black Jack with Florissant Valley Community College and Jamestown Mall. The Chain of Rocks Bridge Bike Trail to Illinois and the bike trail from Laclede's Landing to Chain of Rocks Bridge also just opened.

Freight/Intermodal

The highways located within the Northside Study Area used for goods movement are I-70, I-64 (Highway 40/61) and I-270. All these interstates predominantly serve east-west truck movements and mix with commuter traffic. There are no direct north-south routes within the Study Area. The Northside Study Area includes numerous rail facilities such as Burlington Northern's North St. Louis yard and Norfolk

Southern's Luther yard. There also are numerous piers, wharves and docks along the Mississippi River in the Northside Study Area. There are no airports located within the Study Area.

2.2 DEMOGRAPHIC TRENDS

This section describes past, current and future projections of demographic information of the Northside Study Area. For additional information see the Existing and Future Conditions Report (March 1999).

2.2.1 Population and Demographics

Recent year 2020 projections made by EWGCC indicate a decline in total population of about 28,300 persons, a 9.1 percent decrease from 1996. This projection assumes a decline in population in the City of St. Louis portion of the Study Area of 12,000 and a decrease in population in the County portion of almost 16,300.

The City of St. Louis portion of the Study Area has the higher population densities, generally greater than 5,000 persons per square mile, while the County's portion of the Study Area predominantly has population densities lower than 5,000 persons per square mile. Higher population densities tend to encourage transit use, as a more concentrated population is easier to serve with transit as more people live within walking distance of transit stops. Conversely, lower population densities tend to encourage automobile use and discourage transit use, as households that are dispersed are more difficult to serve effectively with fixed route transit services.

In contrast to the population trends, the number of households has decreased in the City portion of the Study Area but increased in the County portion. Projections for the year 2020 estimate a small, additional decrease of 2,000 households in the overall Study Area over 1996. This compares with the projected decrease of 28,376 in total Study Area population. As a result of this loss of residential population, and most likely increased concerns regarding safety, commercial activity in the Study Area also has dropped, especially in the North City portion of the Study Area. While commercial properties may not have been abandoned by their property owners, many large and small businesses along major arterials are closed and boarded up.

2.2.2 Age and Mobility

Approximately 39 percent of the population in 1990 were either under the age of 16 or over the age of 65, which indicates a need to provide transportation options for these potentially mobility deficient age groups. The two age groupings might not have access to automobiles due to age, either because they are too young to hold a driver's license or, having reached a more elderly age, they no longer drive.

2.2.3 Income and Auto Availability

The household income distribution of the City and County portions of the Study Area indicates lower incomes compared to the overall income distributions for the City and County. Income levels in the City portion of the Study Area were significantly below those in the County portion of the Study Area, with almost 60 percent of households in the City portion earning less than \$20,000 per year in 1990 compared with 28.5 percent in the County portion. This indicates that residents of the City portion of the Study Area likely have fewer transportation options than the County portion and both have fewer options than the remainder of the region as lower incomes correlate with lower vehicle ownership and operation.

Both portions of the Study Area have lower auto ownership than the City or County overall. However, the City portion of the Study Area has significantly lower auto ownership than the County portion, with 39 percent of the households in the City portion in 1990 not having an auto available compared to only 8.5 percent in the County portion. This indicates that the mobility available to households in the Northside Study Area is restricted and that the City portion of the Study Area has a higher transit dependency than

the County portion due to the greater lack of access to automobiles. However, for those County residents without automobiles, present public transit options are more limited in the County, compared to most places in the City portion of the Study Area.

2.2.4 Employment

Year 2020 employment is a projection by EWGCC based upon information provided by state and local agencies. Employment in the Study Area has been decreasing during the past decade and is projected to continue to decrease through the study planning horizon of 2020. Total Study Area employment is forecast to decrease by approximately 12,300 jobs between 1996 and 2020, a 5.3 percent decrease over the 24-year projection, indicating a relatively small employment loss. However, this projected decrease is comprised of an almost 14,200 job loss in the City portion of the study area compared to a slight 1,900 job increase in the County portion of the Study Area. The Northside Study Area's proportion of total City employment is forecast to remain at about 77 percent and its proportion of total County employment is projected to remain at about seven percent.

The highest employment densities are generally found in the southern portion of the Study Area within the City of St. Louis. The highest employment densities include the City of St. Louis Central Business District (CBD), the BJC Medical Complex and the Olive Street/Lindell Boulevard corridor with A.G. Edwards and Sons and St. Louis University. Other high employment density locations in the study area include the Union/Seventy Business Park, Emerson Electric, and along I-270, especially near New Halls Ferry Road.

Aside from the City, other important concentrations of work destinations for the Northside Study Area residents include the BJC Medical Complex, the McDonnell-Douglas/Boeing facilities near Lambert St. Louis International Airport, and other areas surrounding and including the airport, as well as downtown Clayton. Additional concentrations of employment for Study Area residents include Page Avenue to the west of I-170, St. Charles Rock Road to the west of I-170 and Lindbergh Boulevard between I-270 and Olive Boulevard.

2.3 ACTIVITY CENTERS

Activity centers encompass concentrations of recreational/cultural facilities and parks, employment centers, retail shopping centers, and educational institutions. For more detailed discussion of all activity centers see the Existing and Future Conditions Report (March 1999). For employment centers see Section 2.2.4 of this report. Additional employment centers include the three regional shopping malls and seven shopping centers which are located within the Northside Study Area.

Also located within the St. Louis Central Business District are six major recreational facilities with venues that in 1997/1998 drew nearly 15,000,000 people to Downtown St. Louis. With the exception of the Florissant Valley Campus of St. Louis Community College (enrollment approximately 10,000), institutions of higher education are concentrated along an east-west corridor at the southern end of the Northside Study Area, including St. Louis University, one of the largest with an enrollment of 10,998. The University of Missouri-St. Louis, a major higher education facility, while not in the Study Area, is located adjacent to the Study Area on Florissant Road.

2.4 TRAVEL PATTERNS

The total daily person trips produced in the Northside Study Area are forecast to decrease by about 37,000 between 1996 and 2020, a 4.1 percent decline, consistent with projected changes in population, households and employment in the Study Area. Similarly, daily trips attracted to the Study Area are forecast to decrease by about 34,000, also a 4.1 percent decrease. The majority of trips in both years are estimated to both start and end within the Study Area. Almost 47 percent (46.7 percent) in 1996 and

45.8 percent in 2020 of the trips produced are estimated to remain in the Study Area. Of the trips attracted to the Study Area, 56.8 percent in 1996 and 50.5 percent in 2020 are estimated to come from locations within the Study Area. The second largest location of trip productions in both years to the Study Area is the rest of St. Louis County and it also is the second largest location of trip attractions for trips produced in the Northside Study Area. Slightly less than ten percent of the total person trips produced by the Study Area are attracted to the St. Louis CBD in 1996 and this is estimated to decline to 8.7 percent of trips in 2020.

Work trips are estimated to be approximately 25.8 percent of total daily person trips produced in the Study Area in 1996 and 25.1 percent in the year 2020. The majority of work trips produced in the Study Area in both years are attracted to work locations within the Study Area. The second largest attractor of Study Area work trips in both years is the remainder of St. Louis County. However, 16.4 percent of estimated 1996 Study Area work trips produced in the Study Area and 14.2 percent of estimated 2020 work trips produced in the Study Area are attracted to the downtown St. Louis, the third largest destination of work trips produced by the Study Area. The majority of work trips attracted to the Study Area in both 1996 and 2020 are estimated to be produced within the Northside Study Area itself, while the second largest producer of work trips attracted to the Study Area in both years is the remainder of St. Louis County.

While estimates of average trip length by Study Area are not available, regional estimates show that daily average trip lengths are forecast to increase from 8.9 miles per trip in 1996 to 9.8 miles in 2020. This reflects a continuation of the trend of dispersal of households and employment throughout the region, particularly in outlying areas, requiring longer distances to be traveled to reach a variety of destinations.

The projected year 2020 county-to-county fraction of total daily work person travel that is estimated to be taken by public transit assumes the completion of the St. Clair County MetroLink extension and all three segments of the Cross-County Corridor MetroLink line. Associated improvements to Bi-State bus routes to provide feeder service to the new MetroLink stations also are assumed to be in place. The transit share of work trips produced by households in St. Louis County in 1996 is estimated to be 1.9 percent, increasing to 2.3 percent of trips in 2020. The transit share of work trips produced by households in St. Louis City in 1996 is estimated to be 10.1 percent, slightly decreasing to 9.7 percent in 2020. Due to the lower levels of car ownership in the City and corresponding higher levels of transit service, the transit share in the City is significantly higher than the transit share in St. Louis County.

Similarly, the transit share of work trips attracted to jobs located in St. Louis County in 1996 is estimated to be 0.9 percent, increasing to 1.3 percent of trips in 2020. The transit share of work trips attracted to St. Louis City is estimated to be 5.7 percent in 1996, increasing slightly to 6.2 percent in 2020. For both years the highest transit share from both St. Louis County and St. Louis City is estimated to be for those trips destined to the St. Louis CBD (a 9.9 percent share of County work trips and a 22.0 percent share of City work trips in 1996, increasing to a 12.7 percent share from the County and remaining at a 22.0 percent share from the City in 2020). The increase in share from St. Louis County is most likely due to the assumed implementation of MetroLink service in the Cross-County Corridor.

Table 2.4-1 looks at travel time to work for employed residents living in the Study Area. The Northside Study Area reasonably approximates the average travel times for the City, County and region as a whole. In the City portion of the Study Area, compared to the County and regional averages, smaller percentages of people travel to work in less than 20 minutes and in more than an hour, while the larger percentage of people travel to work in 20-39 minutes.

According to EWGCC, under 10 percent (8.3 percent) of the workers residing in the northern portion of the Northside Study Area take an hour or more to travel to work. This percentage is more than four times higher than the average for all of the “outer ring” suburbs considered as a whole. Given automobile ownership in the northern portion of the Study Area, the high concentration of downtown St. Louis City

employment and existing transit service in the far north portion of the Northside Study Area, this larger percentage likely reflects the more lengthy time required for residents of this area to access I-70, versus those workers living closer to I-70, US-40/I-64, I-44 and I-55. As discussed in Section 2.1.2, there are no direct north-south routes through the Study Area.

**TABLE 2.4-1
TRAVEL TIME TO WORK**

Time in Minutes	St. Louis City Percent	St. Louis County Percent
Less than 20	34.0%	40.6%
20-39	54.6%	44.8%
40-59	8.5%	8.9%
60 or more	2.9%	5.7%
Total	100.0%	100.0%

Source: 1990 Census (Data File STF3A).

A large percentage of employees (EWGCC, 1998) living in the northern portion of the Study Area leave for work early in the morning. More than 70 percent leave before 7:00 a.m., compared to just over 30 percent for the entire "outer ring" suburbs. While a number of reasons potentially could account for this, such as work shifts starting at odd hours, it is likely that lengthy travel time to work does play a role.

3.0 PLANNING CONTEXT

3.1 PLANNING HISTORY/BACKGROUND STUDIES

Although the corridor was originally conceptualized and roughly illustrated in the St. Louis Systems Analysis for Major Transit Capital Investments (amended June 1991), the need for conducting the MTIA was first detailed in the long-range transportation plan for the St. Louis metropolitan area titled Transportation Redefined (1995). Transportation Redefined identified the Northside Study Area as warranting consideration for transportation improvements stemming from concerns regarding personal mobility and the need for sustainable development in the area. This Study Area is considered in Transportation Redefined to have a priority for implementation of transportation improvements in the mid-term.

In addition, the Northside corridor encompasses the majority of the Route 367/U.S. 67 corridor identified in Transportation Redefined, extending from Halls Ferry Circle north to the Illinois state line. Based on the long-range transportation plan, this route warrants consideration for transportation improvements because of concerns regarding vehicular safety.

3.1.1 Regional Goals and Objectives

Transportation Redefined and Transportation Redefined II describe the region's goals and objectives in transportation plans. The regional goals identified in Transportation Redefined II are generally related to improving the quality of life in the region. These regional goals provide the framework for the transportation goals and objectives, which relate to planning and financing, mobility and physical design. This transportation planning framework will be used in the decision making process for major transportation investments. The planning process has the following six major integrated components:

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

Transportation Redefined II continues the seven focus areas for transportation problem solving that were originally identified in Transportation Redefined. The following focus areas ensure that priority regional needs will be addressed by any planned projects.

- Preservation of the existing infrastructure, managing and maintaining current road, bridge, transit, and intermodal assets
- Safety and security in travel, decreasing the risk of personal injury and property damage on, in, and around transportation facilities
- Congestion management, ensuring that congestion on the region's roadways does not reach levels which compromise economic competitiveness
- Access to opportunity, addressing the complex mobility needs of persons living in low-income communities and persons with mobility needs
- Sustainable development, coordinating land use, transportation, economic development, environmental quality, and community aesthetics

- Efficient movement of goods, improving the movement of freight within and through the region by rail, water, air, and surface transportation modes
- Resource conservation, ensure that the operation of the region's transportation system supports air, water, land, and energy conservation objectives

The region's short-range transportation plan includes the programming of federally-funded transportation projects. Currently, this plan, the Transportation Improvement Program (TIP), contains a three-year schedule of transportation improvement projects for the region. This program allows federal funds to be spent in the region following the framework of Transportation Redefined.

3.1.2 Local Plans and Policies

Interviews have been held as part of the community participation with representatives of many of the municipalities in the Study Area. Discussion at these interviews included future land use and/or transportation changes anticipated. Information obtained has been summarized in the Major Transportation Investment Analysis for Northside, Southside, and Daniel Boone Study Areas Community Engagement Working Preliminary Baseline Paper (1999).

For coordination among local municipalities, a Technical Advisory Committee (TAC) was formed with applicable representatives of governing agencies. On a level consistent with the planning and conceptual nature of the study, these representatives provide guidelines and oversight of the existing conditions and assumptions forming the baseline of the study. Proposed alternatives also are evaluated and critiqued on a conceptual basis. In addition, an active community engagement process ensures involvement with the public and private interests as well as local municipalities. Focus group meetings, community workshops and public open houses have all been implemented to ensure a greater understanding and consensus of proposed alternatives.

A review of the available Comprehensive Plans for the 23 incorporated communities and one Census Designated Places (CDP) within the Study Area and the unincorporated parts of St. Louis County indicates a wide variation in plans. Some communities have no plan because they are small in both size and population, while others have a totally homogeneous land use, which is almost always single-family residential. Where such plans exist they provide development guidelines.

3.1.3 Related Projects/Studies

In addition to the three concurrent MTIAs, including the Northside, Southside and Daniel Boone Study Areas, several other infrastructure-related studies have been completed or are currently in progress. These studies include the Route 367 Study-Route 367 from I-270 to Route 67 (Lindbergh Boulevard) Final Report (January 1999) and the "St. Louis Downtown Development Action Plan" (1999).

A recently-completed study, the Cross-County Major Transportation Investment Analysis, Final MTIA Report (September 1997), had a study area that borders the Northside, Southside and Daniel Boone Study Areas. This study boundary roughly followed I-64 and I-170, as well as an area extended south from I-170. This boundary followed the Northside and Southside Study Areas on the west and the Daniel Boone Study Area on the east. Findings and recommendations of this study have been implemented in the No Build Alternative of this report and incorporated into future conditions affecting this study.

The Cross-County MetroLink Extension, Segment 1, Conceptual Design Study is currently underway. A proposed MetroLink extension from Forest Park to Clayton then south to Shrewsbury is included in this study. The EWGCC Board expects to make a decision on this future MetroLink extension alignment in June 1999.

4.0 PROBLEMS AND OPPORTUNITIES

Based upon both an analysis of technical information as presented in the Northside Existing and Future Conditions Report (1999), as well as input from stakeholders and members of the public as documented in the Major Transportation Investment Analysis for Northside, Southside and Daniel Boone Study Areas Community Engagement Working Preliminary Baseline Paper, Focus Group Notes (February 1999) and Community Forum Notes (April 1999), the following problems and/or opportunities related to surface transportation in the Northside Study Area have been identified.

4.1 ACCESS TO OPPORTUNITY

Almost 40 percent of the Study Area population are either under the age of 16 or over the age of 65, which indicates a need to provide transportation options for these potentially mobility deficient age groups. The two age groupings might not have access to automobiles due to age, either because they are too young to hold a driver's license or, having reached a more elderly age; they cannot or have chosen not to drive anymore.

The distribution of the City and County portions of the Study Area indicates lower incomes compared to the overall distributions for the City and County. The income levels in the City portion of the Study Area were significantly below those in the County portion of the Study Area. This indicates that residents of the City portion of the Study Area likely have fewer transportation options than the County portion and both have fewer options than the remainder of the region as lower incomes correlate with lower vehicle ownership and operation.

Both portions of the Study Area have lower auto ownership than the City or County overall. However, the City portion of the Study Area has significantly lower auto ownership than the County portion, with 39 percent of the households in the City portion in 1990 not having an auto available compared to only 8.5 percent in the County portion. This indicates that the mobility available to households in the Northside Study Area is restricted and that the City portion of the Study Area has a higher transit dependency than the County portion due to the greater lack of access to automobiles. However, for those County residents without automobiles, present public transit options are more limited in the County, compared to most places in the City portion of the Study Area.

Identified Problem: Lack of access to jobs and major retail/shopping/medical/places of worship located within and outside of the Study Area due to mobility limitations for portions of the population in the North City and North County portions of the Study Area.

Identified Problem: Lack of transportation choices.

According to EWGCC, in the northern portion of the Northside Study Area 8.3 percent of the workers take an hour or more to travel to work. This number is much higher than similar suburbs. These travel times likely reflect the more lengthy time required for residents of this area to access I-70, versus those workers living closer to or having direct access to I-70, US-40/I-64, I-44 and I-55. As discussed in Section 2.1.2, there are no direct north-south routes through the Study Area.

Identified Problem: Lengthy travel times in comparison to the entire region as a whole.

Identified Problem: Lack of direct north-south routes.

4.2 SAFETY AND SECURITY IN TRAVEL

There are several roadways in the Study Area that have high accident rates. Route 367 from I-270 to Lindbergh Boulevard has an accident rate greater than the statewide average. While arterials within the Study Area carry between 20,000 and 35,000 vehicles per day, Route 367 is an exception with more than 52,000 vehicles per day. These volumes are expected to increase.

Other roadways such as I-70 also show high accident rates; however, improvements to I-70 are currently under construction. Roadway improvements also are scheduled for I-64, another roadway with high accident rates.

Identified Problem: Higher accident rates than the statewide average on selected roadways, including Route 367, which provides a north-south connection between Halls Ferry Road and Lindbergh Boulevard.

4.3 SUSTAINABLE DEVELOPMENT

Year 2020 projections for the Northside Study Area indicate a continued decline in total population of about 28,300 persons, a 9.1 percent decrease from 1996. This projection assumes a further decline in population in the City of St. Louis portion of the Study Area of 12,000 persons and a decrease in population in the County portion of almost 16,300 persons. This projection is based upon the assumption that there will continue to be an out-migration of population to the outer counties of the region, particularly from the City of St. Louis and inner suburbs of the St. Louis County portion of the Study Area.

The number of households also has decreased in the City portion of the Study Area but increased in the County portion. Projections for the year 2020 estimate a small, additional decrease in the number of households in the overall Study Area over 1996. This projection assumes a continued decline in the number of persons per household due to fewer children per family and increased numbers of childless households, as well as a continued trend of abandonment of households in the City portion of the Study Area. As a result of this loss of residential population, and most likely increased concerns regarding personal safety, commercial activity in the Study Area also has dropped, especially in the City portion of the Study Area. While commercial properties may not have been abandoned (property ownership retained), many large and small businesses along major arterials are closed and boarded up.

Identified Problem: The loss of residential population in the City of St. Louis portion of the Study Area.

Identified Problem: Decrease in personal safety in areas of decreased commercial activity.

Employment in the Study Area has been decreasing during the past decade and is projected to continue to decrease through the study planning horizon of 2020. However, this projected decrease is comprised of an almost 14,200 job loss in the City portion of the study area compared to a slight 1,900 job increase in the County portion of the Study Area.

The highest employment densities are generally found in the southern portion of the Study Area within the City of St. Louis. The highest employment densities include the City of St. Louis Central Business District (CBD), the BJC Medical Complex, and the Olive Street/Lindell Boulevard corridor in between with A.G. Edwards and Sons and St. Louis University. Other high employment density locations in the study area include the Mark Twain Industrial area, Emerson Electric, and along I-270, especially near New Halls Ferry Road. The employment projections anticipate relatively stable locations of these higher density employment areas, with some decreases in employment densities in the southwest portion of the Study Area.

Identified Problem: The loss of employment, particularly in the City of St. Louis portion of the Study Area.

The City portion of the Study Area has the higher population densities, generally greater than 5,000 persons per square mile, while the County's portion of the Study Area predominantly has population densities lower than 5,000 persons per square mile. Higher population densities tend to encourage transit use, as a more concentrated population is easier to serve with transit as more people live within walking distance of transit stops. Conversely, lower population densities tend to encourage automobile use and discourage transit use, as households that are dispersed are more difficult to serve effectively with fixed route transit services.

Identified Problem: Loss of population in high-density areas, particularly in the City of St. Louis portion of the Study Area.

4.4 MOVEMENT OF GOODS

The highways located within the Northside Study Area used for goods movement are I-70, I-64 (Highway 40/61) and I-270. All of these highways predominantly have east-west movements and mix with commuter traffic.

Identified Problem: Lack of direct north-south routes for goods movement.

4.5 FUNDING CONSTRAINTS

The EWGCC currently evaluates and prioritizes projects based on a 3-year plan, currently known as the Transportation Improvement Program (TIP). These projects are prioritized based on areas of greatest need and limited to available funding. The TIP is the short-term implementation program for the regional long-range transportation plan. Before a project is included in the TIP, it must be adopted into the long-range plan. Under the overall process, the preferred alternative identified by the study team for the Northside Study Area will be presented to the EWGCC Board of Directors for approval and possible incorporation into the long-range plan.

The plan identifies reasonably anticipated revenues available for both highway and transit improvements through the year 2020 and then compares the costs of proposed improvements against that revenue stream. Only projects that fit within that revenue stream are considered "committed" for the purposes of the financially constrained plan. The three corridors now under study in MTIAs (Daniel Boone, Northside and Southside) are considered "illustrative" in the current version of the plan. This indicates that the funding available through 2020 is not considered sufficient, without revenue enhancements, to cover the cost of all major improvements that might emerge from these MTIAs. As these MTIAs are completed, a new round of revenue estimates will be developed, the region's financial constraint will be reevaluated and prospects for moving Study Area improvements into the plan will be judged. There are three possible outcomes of this analysis: growth in revenues will be sufficient to produce a surplus over the 20-year horizon of the plan that can be used to fund the improvements; projects currently in the plan will be adjusted to make room for the improvements; or the improvements will be identified as illustrative, with their implementation dependent on revenue enhancements. Regardless, funding for transportation improvements in the region is competitive and the Locally Preferred Alternative (LPA) for the Northside Study Area will be competing for funding with the LPA recommendations from the Southside and Daniel Boone MTIAs as well as with other regional projects.

The various sources of funding for these projects include federal, state and local taxes. Special federal funding sources are also available and include the following:

- Interstate Maintenance Program (I-M)
- National Highway System Program (NHS)
- Surface Transportation Program (STP)
- Highway Bridge Replacement and Rehabilitation Program (HBRRP)
- Congestion Mitigation and Air Quality Program (CMAQ)

Individual municipalities collect and allocate their own funds as well as prioritize projects for facilities that they maintain. Projects funded through these sources are generally smaller in nature and have less impact to regional transportation infrastructure. Some municipalities and other local agencies, however, have been successful in attracting federal funds for larger scale projects.

Identified Problem: Limited regional funding for major transportation improvements.

5.0 NEED FOR ACTION

The problems and opportunities described in Section 4.0 of this document translate into a set of inter-related issues and goals related to surface transportation in the Northside Study Area. Each of these issues/goals is further delineated into a corresponding set of specific objectives that proposed transportation projects and services should attempt to meet in the Study Area. These objectives guide the development and selection of transportation alternatives. For clarification, specific goals and objectives for the Northside Study Area are grouped into the following categories consistent with the broad-based, regional objectives outlined in Transportation Redefined (1994):

- Access to Opportunity
- Safety and Security in Travel
- Sustainable Development
- Efficient Movement of Goods

5.1 ACCESS TO OPPORTUNITY

Goal: Improve access to opportunities for Northside Study Area residents and businesses.

Objectives:

- Reduce total travel time by transit to neighborhood, Study Area and regional opportunities including:
 - jobs
 - medical care
 - shopping
 - education
 - places of worship
- Reduce travel times from the northern portion of the Study Area to downtown St. Louis
- Improve public transportation to facilitate people traveling between the Study Area and job locations, particularly from areas of high population densities to areas with relatively high employment concentrations
- Provide a balanced transportation system through increased transportation options
- Improve direct north-south connections

5.2 SAFETY AND SECURITY IN TRAVEL

Goal: Improve the personal and vehicular safety of the transportation system in the Northside Study Area.

Objectives:

- Reduce the existing accident rate on Northside Study Area roadways, particularly on Route 367, through physical and operational improvements
- Improve personal safety through enhanced neighborhood vitality; transportation supporting land uses

5.3 SUSTAINABLE DEVELOPMENT

Goal: Maintain and/or enhance Northside Study Area neighborhoods.

Objectives:

- Implement transportation improvements that will help to reverse or slow the loss of population, particularly in North City
- Invest in new and/or improved transportation services and infrastructure that contribute to maintaining and/or enhancing quality of life and personal safety in stagnating or declining neighborhoods
- Integrate transportation infrastructure investments and land development or redevelopment in ways that are economically sustainable and consistent with community values and historic preservation

5.4 MOVEMENT OF GOODS

Goal: Improve the movement of goods/freight within and through the Northside Study Area.

Objectives:

- Improve truck traffic within and through the Study Area by reducing conflicts between trucks and autos
- Improve the connectivity of the existing roadway system through roadway improvements, particularly north-south connections for trucks

5.5 COST-EFFECTIVENESS

Goal: Provide transportation system improvements that maximize attainment of the above goals within the financial constraints of the transportation-providing agencies within the region.

Objectives:

- Maximize the cost-effectiveness of the transportation system improvements within the Northside Study Area

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