

5.0 IMPLEMENTATION STRATEGIES

5.1 Recommended Alternative

This chapter discusses the anticipated steps needed to move each project from recommendation to construction. Since full funding for these alternatives will not be available immediately, a key issue is to be able to preserve the opportunity for future construction in these high growth locations. In the first part of this chapter, general implementation strategies are described, followed by a discussion of steps that could be taken in order to implement each of the corridor improvements identified.

Project alternatives and priorities were described in Chapter 4. It was determined that all of the projects under consideration would contribute to addressing project goals, so the priority of projects was established. The impacts of no action called the No-Build Alternative were also discussed in Chapter 4.

On December 18, 2003, the OTO Board of Directors adopted the following top five list of High Priority Projects. In this list is this study itself. The results of this study do not necessarily replace the High Priority Projects. The OTO will need to consider incorporating the recommendations of this study into this list.

- U.S. 60 and U.S. 65 interchange (including at-grade rail crossing on James River Freeway).
- U.S. 65 and I-44 interchange.
- Glenstone/Republic and James River Freeway interchange.
- Transportation planning study to enhance connectivity within the region and MPO with emphasis on North/South corridors (Kansas Expressway, West By-Pass, U.S. 160 North to Willard, Route 13 North to Bolivar, National Avenue, U.S. 65, U.S. 160/Campbell Avenue). (the North-South Corridor Study)
- Development of multi-modal corridor(s) to the new Airport Terminal.

On October 19, 2006, the OTO Board of Directors adopted the following list of High Priority Corridors. This list includes two of the corridors that were evaluated as part of this study. High Priority Corridors represent areas of focus beyond the top five High Priority Projects.

US 65 – Capacity Improvements to Include Six Lanes from I-44 to Route 14

Interchange improvements at Chestnut and US 65 including RR grade separation
Interchange improvements at Battlefield and US 65
Interchange improvements at Route 14 and US 65

US 60 – Capacity Improvements

Interchange improvements at National Avenue and James River Freeway
Interchange improvements at James River Freeway and Campbell Avenue
Upgrade to Freeway from US 65 through Rogersville
US 60 West Relocation Study (MPO portion of US 60/SR37 from AR to JRF)

I-44 – Capacity Improvements

Interchange improvements at Route 13 and I-44
Interchange Improvements at Route 266 and I-44

US 160 – Capacity Improvements

Capacity improvements from Springfield to Willard
Capacity improvements from James River Freeway south through Nixa

Route 14 – Capacity Improvements

Capacity improvements from Business 65 in Ozark to US 160 in Nixa
Bridge Widening over 65

Selected North South Corridor Resulting From Study

This North-South Corridor Study addresses some of the many areas of traffic congestion in the region. All of these corridors will need to be addressed in order for the OTO region to maintain regional mobility and ensure quality economic development. The recommendations of this study in no way preclude the OTO from addressing the other congested roadways in the region, nor does it suggest the recommendations in this report are more important than the OTO region's Top Five Priority Projects. This study provides input on the important issue of prioritizing north-south corridors for needed improvements.

Travel Time Benefits

The OTO Technical Committee requested that comparative travel time and travel speed information be provided for the alternatives. Travel time benefits of the initial four alternatives and for the Combination Alternative were estimated from the OTO Travel Demand Model. While the travel times and speeds provide comparative information, the full summation of travel benefits in terms to total hours of travel time saved was reported in Chapter 4.

The model reflects a number of inputs related to speed, capacity and delay that are approximated. The distances were calculated prior to alignment adjustments. While travel speeds obtained from a travel demand model may vary from actual driving conditions, the information does provide a good comparison between alternatives. The lower speeds shown for year 2030 travel conditions support the need for construction of a new alignment south of the James River Freeway. It also supports considering construction of more than one alignment or possibly to examine a higher classification facility such as a freeway for a portion of an alignment.

The estimated future travel speed and travel times on Campbell Avenue between Republic Road and Route 14 were compared between the No-Build and Build Alternatives. The travel times and speeds on the Build Alternatives are also shown in the table.

Given forecasted growth, travel times on Campbell Avenue are shown to worsen over current conditions, no matter which alternative is selected. However, the Combined Alternative results in the best travel speeds and travel times as compared to the other alternatives. With the Combined Alternative, travel times forecast for the year 2030 improve on U.S. 160 (Campbell) and are even better on the West Bypass/Route FF. With the Combined Alternative, year 2030 travel times on Campbell Avenue would improve from 56 minutes to 31 minutes. The estimated travel speed on Campbell would also improve from 7 mph to 12.6 mph. The travel times and speeds on the West Bypass/Route FF extended would be even better than those on Campbell Avenue for the same connection points with a travel time of 19 minutes and a travel speed would of 22 mph. The travel time comparison for all of the alternatives is listed in the appendix.

5.2 Implementation Strategies

The following section provides a general discussion of implementation strategies for the projects identified in this study, describing the options and steps needed to move each corridor project forward.

Corridor Preservation

1) Description

The term “corridor preservation” refers to techniques that state and local governments can implement to protect identified transportation corridors from development that conflicts with the planned improvements of the transportation corridor. Corridor preservation is used to minimize economic, social, and environmental impacts that could be associated with the future corridor. Corridor preservation is often needed to keep development from encroaching into an identified right-of-way corridor during the early stages of the project: while a location and environmental study is being completed, while the project is being designed, or when funding is being obtained for construction. Corridor preservation tools can include:

- Development agreements with land owners
- Use of land use regulations
- Acquiring property rights within the corridor

2) State Authority and Legislation

States may have either formal or informal corridor preservation policies or legislation that can be used to aid in corridor preservation. Formal programs are usually supported by state legislation that authorizes the department of transportation to actively pursue corridor preservation. In some cases, there is funding set aside to support these activities. Informal policies involve the state working aggressively with local governments to encourage corridor preservation activities through the use of zoning, building permitting, or platting.

Missouri has state legislation that allows MoDOT to file a Corridor Preservation Plan that identifies priority corridors. MoDOT is to be notified of all developments sought along a defined corridor. MoDOT then has 120 days to approve the development, negotiate with the developer, or buy the property. This program only applies to cities or counties that have zoning. The Corridor Preservation Plan has been used in St. Charles County, but not in many other locations in Missouri. When State funds are used to purchase right-of-way, the project must move forward within a 10 year period, or the property owner will have the opportunity to re-acquire the property.

When a property along an identified corridor is being considered for rezoning or platting, the planning commission or zoning board is to notify MoDOT and provide them with plans to review. MoDOT then provides feedback on the plans, which may include modifications that then become criteria for approving the development. If any modifications are not agreed to, MoDOT has the option of making a right-of-way purchase.

3) Local Land Use and Zoning

There are several ways cities and counties can take responsibility to protect or preserve land prior to the time when right-of-way can be purchased. Some local governments use the zoning and building permitting process in order to preserve a specific corridor. The subdivision platting process can be used to require future roadway right-of-way to be shown on plats. The OTO has a Major Thoroughfare Plan (MTP) that defines corridors within its planning boundary. The MTP specifies the design standards and access management considerations that should be used when a roadway is constructed. The projects identified on the MTP can be located on local zoning and land use maps. The MTP and the local maps can be updated if further location design work is completed that would further define the project corridor.

This land use planning process can be used where local land use regulations are established. Within the study area zoning and subdivision platting requirements are in place in the cities of Springfield, Battlefield, and Nixa, as well as in Greene County. These communities have sufficient land use and subdivision regulations to support corridor preservation in the zoning, subdivision, and building permit processes. These communities also have thoroughfare plans that identify future arterial routes and rights-of-way. Christian County does not have a land use plan and uses a performance based scoring system approach to zoning. The lack of zoning classifications and a zoning map adds difficulty in supporting local corridor preservation for the sections of the recommended corridors that are within Christian County. One possible solution is to create an overlay zoning district for a portion of the county where growth could potentially impact the opportunity and cost to construct the recommended projects. Another possibility is to have the county formally recognize the OTO MTP and the associated roadway standards, and then use these tools to support corridor preservation when developments are proposed. Under current policies, Christian County is able to have a platted easement for transportation corridors which specifies a set back of 50 feet from the edge of pavement for state routes and 50 feet from the center line for local streets. Christian County is anticipating asking for a voluntary preservation of corridor right-of-way for the projects identified in this study. Where possible, the county would ask for the donation of the right-of-way to better enable the project to proceed, thereby improving access for the property owner.

Major Project Development Process

1) Planning Framework

MoDOT has a major role in the development of primary arterial corridors that are on or could be placed on the state highway system. MoDOT’s long-range transportation planning initiative called *Missouri Advanced Planning (MAP)* will identify the state’s transportation vision. MoDOT has endorsed a project prioritization process called the Planning Framework. The framework is an open and transparent process for project selection and prioritization that includes public participation. The OTO provides input on project priorities within the OTO planning boundary. This information is then brought into the MoDOT planning framework.

There are two primary times within the project development process in which prioritization takes place. The first is a needs assessment which is completed in order to determine which projects are to be designed. The second prioritization is when decisions are made on which projects will be constructed.

2) Needs Assessment

Within the MoDOT planning framework, there are two levels of needs identification: regional and statewide. The two levels are then classified into two groups: physical system condition needs that target the state of repair of road and bridge components, and functional needs that target how well the transportation system is operating. The projects considered in this study are regional functional system needs. Using the results of the prioritization process as a starting point, MoDOT works with the OTO and other planning partners to classify the needs as:

- **High** – Resources are focused on addressing these needs first. They are the first to be selected for project scoping and preliminary engineering.
- **Medium** – These needs may be addressed as additional resources become available.
- **Low** – No work is in progress to address these needs at this time.

The high-priority needs list is fiscally constrained to approximately 10 years of funding when needs from this list are selected for project scoping. The amount of local contribution can be a factor in obtaining MoDOT project participation.

Project scoping is a process to analyze transportation needs and select the best overall solutions. The process involves a conceptual study to address transportation problems, possible solutions, project impacts, and cost estimates. The scoping process helps identify the most complete, cost-effective solutions early in the project development process. After viable solutions have been found for high-priority needs, the project moves on to the prioritization process. Following project scoping, the level of environmental study is determined and preliminary project design may begin.

3) *Location and Environmental Study*

A location or environmental study is required for projects involving the new construction of a highway. Depending upon the complexity of the project and the potential environmental issues, the level of environmental study is determined by MoDOT and, if federal funds are to be used on the project, the Federal Highway Administration (FHWA) is also involved. For major projects, an environmental impact statement or environmental assessment is typically completed. As part of the environmental study, a location study report would also be prepared to determine the most advantageous location and roadway type based on project purpose and need, as well as engineering and environmental constraints. This step can take between 1½ and 3 years to complete.

4) *Engineering*

The FHWA will review the study and make a Record of Decision describing the location of the selected alternative to be constructed. Engineering for the project can then be completed, which typically includes preparing preliminary plans and a public hearing. Upon receiving final location and design approval from FHWA, right-of-way plans and detailed construction plans are developed.

5) *Right-of-Way Purchase*

Section 227.050 of the Missouri State Statutes requires the filing of detailed right-of-way plans in order to acquire right-of-way. A set of right-of-way plans must be filed with the clerk(s) of all counties and cities through which a project will pass, prior to advertising for the bid opening. For projects in which all right-of-way is obtained through negotiation, certification of the plans by the commission and filing with the circuit court are not required.

6) *Hardship or Early Acquisitions*

When it is in the public interest to buy hardship cases, full takes, or protective buying prior to the development of right-of-way plans, MoDOT can obtain authorization for right-of-way acquisition based on the approved preliminary plans. This procedure is restricted to special cases and is initiated at MoDOT's request. This is the most common form of corridor preservation being used by MoDOT at this time.

5.3 *Potential Funding Sources*

As stated in the LRTP, the local governments together with MoDOT normally bear the cost of constructing and upgrading expressways.

Local Government

The OTO receives an annual allocation of Surface Transportation Program (STP) funds from MoDOT. The cities of Springfield, Battlefield, Republic, Nixa, and Ozark, as well as Greene County and Christian County, also receive state allocations of motor fuel tax, vehicle sales tax, and vehicle fees. The cities of Springfield, Nixa, and Republic, as well as Greene County and Christian County, collect local sales tax revenue for transportation projects. The cities of Springfield, Nixa, and Republic have voter approved transportation sales taxes; Springfield has 1/8 cent, Nixa has 1/2 cent, and Republic has 2¼ cents sales tax. The City of Springfield also levies a 1/4 cent sales tax for capital improvements. A listing and description of other potential local revenue sources is included in the appendix.

State and Federal Government

There are separate project prioritization processes for each category in MoDOT's funding distribution method. Federal and state transportation funds from a variety of sources are brought together and divided into five funding categories:

- Safety
- Major projects
- Interstates and major bridges
- Regional and emerging needs
- System maintenance

Within each funding category, projects considered for construction are then divided into three priority levels: high, medium, and low. The high-priority project list is fiscally constrained to five years of funding. The LRTP for the OTO area has estimated the total amount of funding for high- and medium-priority projects to be \$560 million from all sources for the time period between 2009 and 2030. While this amount may appear to be large, the current funding situation is tight at the state level. There are numerous projects within the OTO area and throughout the State competing for the available transportation funds. Although some funding has been allocated for projects south of the James River Freeway, this funding may need to be re-allocated to be consistent with the recommendations of this study; the recommendations will need to receive a high-priority rating from the OTO in order to improve chances for receiving funding in the short term.

Project Programming

The OTO then places priority projects into the Transportation Improvement Program. The OTO determines the projects in its area that will be programmed for construction. These transportation improvement plans are integrated into the five-year Statewide Transportation Improvement Program without modification. Projects identified from the North-South Corridor Study should be added to the LRTP and the Major Thoroughfare Plan if not already included. The study corridors are compared to the MTP in **Figure 5.1**, which indicates the additions and modifications to be made.

5.4 Corridor Project Implementation

This section details suggested steps to construct or preserve the identified transportation corridor/alignments.

West Bypass/Route FF/ Kansas Expressway Extension

The West Bypass and Kansas Expressway Extension project was identified as the highest priority and the project to initiate first. The area adjacent to portions of the potential alignments is expected to continue to develop. Because of the high level of development pressure on the Kansas Expressway corridor, the need for corridor preservation is more immediate for this corridor than for the West Bypass/Route FF alignment. This project will initially include construction of the West Bypass/Route FF as a four lane expressway and the initial construction of the Kansas Expressway as a two-lane roadway to arterial street standards.

The OTO Board of Directors approved an amendment to the Long Range Transportation Plan that included the following language:

Extend Kansas Expressway as a four-lane divided roadway south of the James River Freeway to Farm Road 190 in southern Greene County. Consider extending Kansas Expressway as a four-lane divided roadway south of Farm Road 190 to Route 14 in Christian County when:

- A. *The proposed east-west arterial in southern Greene County is constructed from National Avenue to Cox Road;*
- B. *A design for a connection from the east-west arterial to Route FF is received and approved by the Greene County Commission; and*
- C. *There is a commitment from Christian County and the City of Nixa to develop an urban service boundary for the City of Nixa.*

Source: OTO Board of Directors February, 2004

However it is the recommendation of this study that, although construction is not allowed until the above amendment is fulfilled, planning for the extension of the Kansas Expressway south of the East-West Arterial can continue, even if the conditions stated in the amendment are delayed. The following are steps that could be followed prior to project construction to progress from this concept study. The process described typically takes a minimum of five years to complete, or possibly longer.

1a) Alignment Study/Environmental Study

An earmark was included in SAFETEA-LU for which an amount of \$1.4 million is remaining and could be used for environmental and location study in the U.S. 160/Kansas Expressway Corridor. When federal funds are to be used on a project, an environmental impact study (EIS), with the goal of avoiding, minimizing or mitigating negative impacts associated with roadway construction, is required to assess impacts associated with specific alignment alternatives. Sections of independent utility could also be defined to guide the sections and phasing of the corridor to be studied. It is suggested that the entire West Bypass/Route FF extension be included in the study because if the regional traffic function is to be addressed, it will require construction of the entire route or possibly reduced to the area north of Missouri 14.

For the Kansas Expressway extension, sections of independent utility should be examined in order to determine the appropriate level of environmental study for each. For example, the section of the Kansas

Expressway extension from Republic Road to the future East-West Connector could be one section; from south of the East-West Connector to Nicholas Road as a second section; and the third section would be

from Nicholas Road to the new connection to Route FF. Separate environmental studies could be conducted for each section or conducted in total with the West Bypass/Route FF.

Following the signing of the Record of Decision by the FHWA for the EIS, actions toward the implementation of the preferred alternative must take place within a period of seven years, or the EIS becomes invalid.

1b) Local Land Use Regulations that can be used to preserve Right-of-Way

The local communities of Battlefield, Nixa, Greene County, and Christian County should monitor building permit activity immediately adjacent to the existing Route FF and within the anticipated right-of-way corridor for new sections of the expressway in anticipation of future right-of-way requirements for an expressway facility. Following completion of the draft EIS, further refine the anticipated right-of-way corridor on the local major thoroughfare and zoning maps. If a development or a sale of a property becomes apparent, work with MoDOT on hardship right-of-way purchases in order to preserve the corridor prior to the completion of right-of-way plans and initiation of right-of-way acquisition. The right-of-way width identified in the OTO LRTP is a minimum 180 feet for an expressway and 110 feet for an arterial. Additional width should be obtained at intersection areas that could potentially be expanded in the future as an interchange. Context sensitive design related to roadway width should be considered to support compatibility with existing development in the City of Battlefield.

2) Administrative Actions

- Define the alignment on the OTO Major Thoroughfare Plan. The OTO Long Range Plan should be amended to show the Kansas Expressway Extension as a primary arterial.
- Obtain agreement with MoDOT to designate FF extension as state route (become the new U.S. 160) upon project completion
- Prioritize the project(s) in the OTO regional prioritization process as a high-priority corridor
- Include the project(s) in the OTO Transportation Improvement Program

3) Engineering

Engineering for the project will include preparing preliminary plans and a public hearing. Upon receiving final location and design approval from FHWA, right-of-way plans and detailed construction plans will be developed.

4) Fund Right-of-Way Purchase

Establish the West Bypass/Route FF and for the Kansas Expressway Extension as a high-priority project for construction within the MoDOT project development process. Allocate funding from local STP funds or from MoDOT major project funding, or obtain other funds for the purchase of right-of-way. Right-of-way in Christian County and any remaining portion needed in Greene County can be purchased using local STP funds or local funds. Given that the level of STP funding is not sufficient to fund regional project needs, other state, federal, and local funding will likely be needed for the project. The cities of Springfield and Nixa have local sales tax revenue that could be applied to this project, but Christian County does not have a dedicated transportation funding mechanism. Local funding from Christian County is currently limited to allocation from their general fund or from capital improvement budgets. It may also be possible to issue bonds that would be paid off by either the county or by adjacent land owners. Jurisdictions within the OTO area including Springfield, Nixa, Republic, Greene County and Christian County receive annual sub allocations of STP funds.

5) Construction

Based on available funding, it is estimated that approximately \$5 to \$7 million would be available for the identified capacity projects in the OTO area. If that level of funding is not increased, the projects identified in this study would need to be phased.

Following the purchase of right of way, the following project phases for the West Bypass/Route FF are suggested:

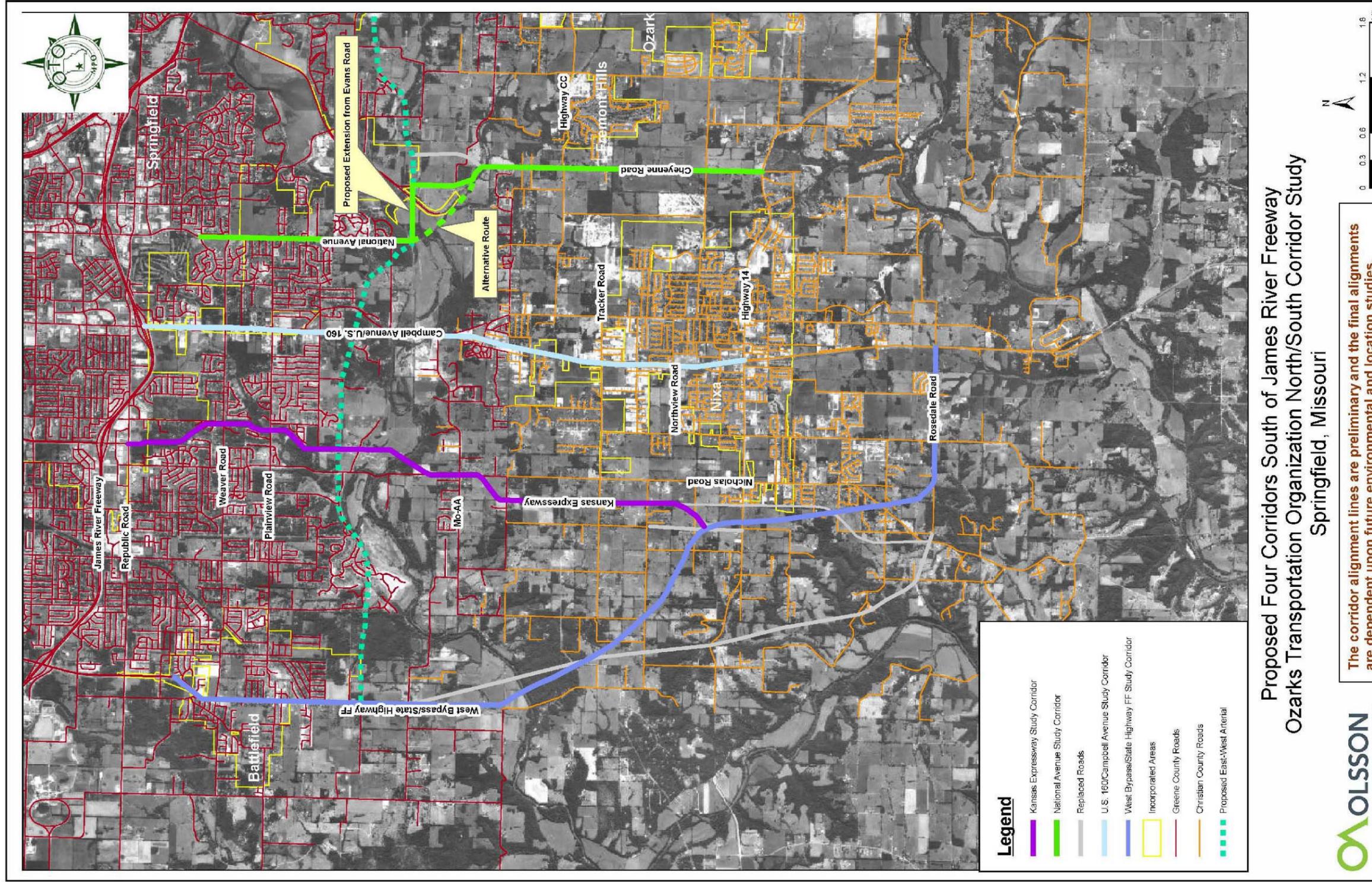
1. Extend expressway from Weaver Road to Farm Road 194 (County Line Road)
2. Improve capacity of interchange with JRF.
3. Depending on the EIS/location study extend as expressway or freeway from Farm Road 194 to Missouri 14, to possibly include sub-phases of the bridge over the James River, the roadway connection from Route 194 to the bridge, and the roadway connection from Missouri 14 to the bridge.
4. Construct expressway from Missouri 14 to U.S. 160.

The construction of the Kansas Expressway Extension would be restricted by the Long Range Plan Amendment described above. Following the purchase of right of way, the following project phases for the Kansas Expressway Extension are suggested:

1. The first phase on the north end of the project near Republic Road will be developer driven. The project should be timed with development. The first phase will construct a two-lane roadway from Republic Road to Weaver Road.
2. Extend the two-lane roadway from Weaver Road to the new East-West Arterial. (The East-West Arterial will be extended to Campbell).
3. Improve the Kansas Expressway interchange with the James River Freeway.
4. Extend the two-lane roadway from the East-West Arterial to Route AA.
5. Extend the two-lane roadway from Route AA to Tracker.
6. Extend the two-lane roadway to connect to the West Bypass.
7. Examine the potential for Bus Rapid Transit (BRT) within the corridor.



Figure 5.1 Proposed Corridors on the Major Thoroughfare Plan



U.S. 160/Campbell

With construction of other parallel corridors, U.S. 160/Campbell was not shown as a high priority for adding new lanes, but is a high priority for congestion management. A number of lower cost projects and programs are recommended to maintain or enhance mobility along this corridor.

1) Complete a Traffic Management Plan for U.S. 160

Given priorities, funding, and timing considerations, it was determined that short range roadway improvement strategies would be considered a high-priority. The priority would be to examine minor, capacity-enhancing roadway projects rather than constructing new travel lanes. The initial step of this strategy would be to complete a traffic management plan for U.S. 160 from north of the James River Freeway to Highway 14. The study would examine capacity needs between the U.S. 60 interchange and south to the East-West Arterial. South of that point, the study would focus on intersection access including the spacing and coordination of traffic signals. It should be noted that a separate study is currently underway to evaluate and recommend improvements to the JRF/U.S. 160 (Campbell Avenue) interchange.

2) Identify, fund and construct Transportation Management Improvements

The projects identified in an access management plan would be identified and listed in the OTO's Transportation Improvement Program.

3) Review the Land Use Density along U.S. 160 and modify zoning if applicable

The land use regulations should be reviewed to determine a mix of residential and commercial oriented land uses. The degree that land uses are connected by local streets and sidewalks should be examined in order to provide alternate routes of travel. This task would include review of zoning and subdivision regulations. An overlay zone should be considered for the U.S. 160 Corridor, if city-wide and county-wide changes are not desired.

4) Require Traffic Impact Studies be completed for projects along U.S. 160

When new developments are proposed, traffic studies should be required from the developer. The study should demonstrate how the traffic generated from the site will be accommodated. The reports should describe current and future intersection operations on U.S. 160, as well as roadway modifications required to maintain the desired traffic service level given site generated traffic.

5) Consider creating a Transportation Improvement District to fund access related projects.

The purpose of a Transportation Development District (TDD) is to fund, plan, design, construct, maintain, and operate transportation projects. A TDD is created by submitting a petition to the circuit court from either 50 registered voters in each county in the district, by all of the owners of real property in the district if the property contains no registered voters, or by the municipality or county. The petition identifies the district's boundaries, each proposed project, and a proposal for funding the projects. After receiving the petition and holding a hearing to determine that the petition complies with the law, the circuit court enters a judgment. If the judgment is favorable to the petition, an election will be held. If a simple majority of registered voters or property owners within the boundaries vote in favor, the TDD is created. If the issue fails, it cannot be resubmitted to the voters for two years. If approved, a second election is held within 120 days to elect a board of directors for the district.

A TDD may fund approved transportation projects (subject to the approval of the municipality or county or the Missouri Highway and Transportation Commission, depending on the project) utilizing one or more financing mechanisms (special assessments, property taxes, tolls, and sales taxes not to exceed 1%) authorized in the election. TDDs are also authorized to issue bonds, including revenue bonds, by resolution of the board of directors without a vote of the public. These bonds do not count against a city's debt limit.

6) Consider remaining strategies in the Congestion Management System that could be implemented on U.S. 160 and adjacent area

There are two additional strategies that should be considered for a short-term solution. The first is to extend the Intelligent Transportation System (ITS) network on the U.S. 160 corridor south of the James River Freeway. The second is to expand a surveillance system housed in the Transportation Management Center in Springfield. It is currently used to provide surveillance for incident management and for signal coordination to primary arterial routes north of the James River Freeway, but it could be expanded to include U.S. 160 south of Plainview. Other actions include study of High Occupancy Vehicle (HOV) lanes and future application of BRT.

U.S. 160 (North)

This project was shown as a capacity project priority. It is anticipated that this project could be constructed within existing right-of-way. As such, corridor preservation techniques should not be necessary.

1) List as high priority project.

This project is currently and would remain listed as regional high priority by the OTO in the MoDOT project development process and is included in the LRTP in order to move forward as a project.

2) Complete engineering

The project is within existing right-of-way. This may still require completing an initial location study and environmental documentation. Then preliminary and final engineering can be completed.

3) Administrative Actions

When funding is anticipated, the project should be added to the OTO Transportation Improvement Program.

4) Construction

Widen U.S. 160 from Willard to I-44 as funding becomes available.

National Avenue

National Avenue was listed as the next capacity priority. It is likely that local corridor preservation approaches will be important to preserve area that can be used for right-of-way. The land adjacent to this corridor is under heavy development pressure. Local corridor preservation will be needed for an unknown amount of time in the future as funding for this corridor is not certain and construction may not occur for at least 10 years or more.

1) Alignment Study

The OTO Long Range Transportation Plan and Major Thoroughfare Plan should be modified to reflect the National Avenue alignment. An alignment study for the final location is necessary to identify the desired right-of-way to be preserved.

2) Local Land Use Regulations that can be used to preserve Right-of-Way

Once an alignment is shown, it will be important to identify a right-of-way corridor on zoning maps. It will need to be included on zoning maps of the cities of Springfield and Nixa. Christian County has performance based zoning and does not have zoning maps. The county is considering a revision to the zoning codes in 2007, which will allow for a platted easement for transportation corridors which specifies a set back of 50 feet from the edge of pavement for state routes and 50 feet from the center line for local streets. With these tools, Christian County will ask for a voluntary preservation of corridor right-of-way.

Where possible, they may ask for donation of the right-of-way to better enable the project to proceed, thereby improving access for the property owner. Following the design guidelines defined in the OTO LRTP, the width of a corridor is 110 feet plus intersection triangles for arterial routes such as the National Avenue extension.

3) Local Funding Options

Similar to the Kansas Expressway extension, local funding will likely be needed for the project. The cities of Springfield and Nixa have local sales tax revenues that could be applied to this project. In Christian County there is not a dedicated transportation funding mechanism, therefore local funding from the county would be limited to allocation from their general fund or from capital improvement budgets. It may also be possible to issue bonds that would be paid off by either the county or by adjacent land owners. Jurisdictions within the OTO area including Springfield, Nixa, and Christian County receive annual sub allocations of STP funds, a portion of which could be allocated to the construction of National Avenue.

4) List in the OTO Transportation Improvement Program

After funds are identified, the project can be added to the OTO Transportation Improvement Program.

5) Construction

Construct this project in phases as funding is acquired. The following phases have been identified:

1. Construct new four lane arterial from Farm Road 192 to new East-West Arterial.
2. Widen to four lanes from Gaslight Road to Farm Road 192.
3. Construct new four lane arterial from East-West Arterial to Tracker Road.
4. Construct new four lane arterial from Tracker Road to Missouri 14.
5. Consideration of BRT for this corridor should be made consistent with recommendations from a future BRT study.

Highway 13 Connector

The Highway 13 connector has been studied as a grade separated freeway type facility that would be provided to maintain uninterrupted travel movement between Highway 13 and I-44. The existing Highway 13 is developing in a commercial pattern involving high retail activity, signal density and high turning movements. The function of Highway 13 is transitioning from a highway function to a commercial access function. In addition, the Highway 13 connector would shift travel away from the currently congested Kansas Expressway corridor to the less congested West Bypass corridor.

MoDOT is investigating approaches to modifying the current Highway 13/I-44 interchange. However, there are right of way restrictions that preclude a system-to-system interchange and limit the potential scope of the project to modifying the existing interchange or reconstructing a similar type of interchange with additional turning movement capacity. The modification of the current interchange will improve traffic operations, but may not fully address both local and system-to-system travel movement.

Further project refinement and discussion will need to be completed by MoDOT, the OTO, and local communities on the project needs, traffic operational benefits, potential environmental impacts and costs before this project can be prioritized. At this time, the project should be considered to be included as part of future LRTP updates.

Construction

Decisions related to the need and priority of the Highway 13 connector will be addressed following the completion of the statewide I-44 Corridor Study being led by MoDOT. As part of that study, the I-44 and Route 13 interchange will be analyzed. Additional information is anticipated from that study regarding the impact of potential improvements at I-44 and Route 13 and also the level and need for additional consideration of the Highway 13 connector.

5.5 Conclusion

The purpose of this study is to examine and prioritize transportation options that would improve regional and local north-south travel, with particular emphasis on the area south of the James River Freeway and north of I-44. The alternatives identified support the economic vitality of the OTO area by relieving current and future traffic congestion through safe, efficient, cost-effective, and environmentally sound roadway improvements.

Financial constraints impact the timing for constructing the study recommendations. The OTO LRTP includes a chapter which discusses the existing and potential financial resources available to the region through the year 2030. The OTO LRTP lists approximately \$550 million dollars worth of projects rated high or medium that would be funded with approximately \$550 million of federal, state, and local resources. The high-priority list includes \$11.6 million for capacity expansion of U.S. 160 from I-44 to Route 123 and \$3 million for U.S. 160 from Rosedale to the south OTO limit. The medium-priority list includes \$12 million for the Kansas Expressway extension, from Republic Road to FR 182. It also includes \$88 million to widen the Kansas Expressway from I-44 to the James River Freeway and to widen U.S. 160 from the James River Freeway to the south OTO limits.

The OTO Board will need to determine if the projects listed above will be kept as priorities, or they should be reconsidered given the findings of this study. If the priorities remain as currently expressed, new funding sources would need to be determined to fund the extension of the West Bypass/Route FF. If the study recommendations are to be followed and reflected in the OTO long range priority project ranking, the extension of the West Bypass/Route FF, with the connection to a future Kansas Expressway extension, should be inserted as a high-priority project. If the anticipated financial forecast has not increased sufficiently to accommodate this change, then a reallocation would need to occur. The regional priorities would need to be coordinated with MoDOT.

Local communities need to assist in the effort for future project construction by following land use regulations. Time will be required to fund and implement the project recommendations, corridor preservation techniques will be needed to coordinate the project intent with local developers and land use planners. Corridor preservation techniques should be implemented in order to provide an opportunity to make a cost-effective transportation investment in the OTO area while supporting the long-range economic development growth of the area. A focus on short-term economic opportunities by local government officials could jeopardize the ability of future local and state public officials to implement the study recommendations.

This study has identified a significant need to continue to plan for a balanced transportation system that includes not only new roadway capacity, but also access management, a walking environment, mixed land uses, and a reduction of single occupant drivers through carpool and transit. High levels of population and employment growth expected in the areas south of the James River Freeway and north of I-44, in combination with funding competition that impedes the progress of roadway improvements, emphasize the importance of coordinating a region-wide, balanced effort to develop an effective and efficient transportation network.