

## **STUDY SUMMARY**

This study was undertaken to identify the existing and potential future traffic operation problems that are occurring, or could occur, along the Rex Whitton Expressway study corridor. The concepts included in this study are not meant to be an all inclusive list, but a first attempt at defining the types of improvements that may be required to satisfy the future traffic demands. It is likely that an Environmental Assessment (EA) or an Environmental Impact Study (EIS) will be required for improvements within the downtown segment and/or CES area of the study corridor.

The Rex Whitton Expressway along the study corridor as a whole has crash experience slightly higher than would be anticipated for this type of facility under normal traffic conditions. Review of the crash history did not identify any specific locations, patterns, or deficiencies that appeared to be substantial contributors or causes of the crashes along the corridor. The crashes within the freeway type segments were well spread along the corridor and did not appear to have any definitive patterns. MoDOT has also undertaken initiatives, such as pavement grooving, to help reduce the crash rate.

Many of the existing geometric deficiencies are technical deficiencies only when compared to the standard MoDOT design criteria currently established. With the implementation of the new practical design initiative, many of these concerns shall not be required to be addressed as part of any improvement projects as they have not been found to have negative impacts on the overall operations or safety of the corridor.

Traffic projections indicate that the traffic volumes on Rex Whitton Expressway would significantly increase over the next thirty years. These increases happen throughout the corridor but are concentrated in the downtown section where traffic volumes are expected to more than double by Year 2035. Much of the congestion in the downtown area is caused by the combination of US 50 and US 63 traffic and the expected MSP traffic that will utilize this segment of the Expressway. The MSP development accounts for approximately 25% of traffic growth on the Expressway through the study corridor.

The freeway sections has adequate lanes to handle the growth of traffic with minimal or no improvements outside of the improvements needed for the downtown and CES areas, as noted, with the exception of the segment between Dix Road and the Tri-level Interchange. The Expressway will need to be widened to three lanes between Dix Road and Tri-level Interchange to accommodate the Year 2035 projected traffic volumes. The new lanes could begin and end as ramps at Dix Road.

The downtown segment needs either three to four through lanes, in addition to multiple right and left turn lanes if all downtown intersections to be maintained as at-grade signalized location for the future Year 2035 traffic conditions.

Many different concepts are possible for the handling of the projected traffic flows in the downtown segment of the Expressway. Maintaining local access through the downtown segment is critical to the local businesses along the corridor, and some of the developed

preliminary concepts would restrict the access to these businesses, or even need right of way that the businesses occupy and force relocations. The different improvement concepts should be studied in detail to determine which concept will meet the access needs of the local businesses and the area at the time the improvements are being considered.

A Central East Side (CES) interchange will be needed due to additional traffic from the MSP and the desire from the local public for the additional access to the Expressway and to handle the projected traffic volumes in the future. A CES interchange should not be constructed without addressing downtown congestion or interchange increases traffic congestion in downtown. In addition, improvements should be made to the existing Clark Avenue interchange. The ramp terminals should be modified to roundabouts to enhance access for ramps and local streets.

It is likely that a subsequent National Environmental Policy Act (NEPA) study will be required for downtown and/or CES improvements. There are a couple of Local Landmarks (i.e., The Lincoln University President's House and The Jefferson City National Cemetery) that need to be considered when transportation improvements in the area are considered. There are four bridges in the tertiary area that may be determined to fulfill NRHP eligibility criteria once they are evaluated. The probability of significant archaeological sites in the primary study area is low, and the natural environmental impacts will be minimal. The socio-economic impacts in the downtown area will be a primary issue during the subsequent NEPA study and design. Continued public involvement and context sensitive solutions to neighborhood and business impacts will be important elements of that study. Achieving informed consent or agreement on improvements will require a compromise of interested groups.