

EXECUTIVE SUMMARY

In response to safety concerns and congestion issues, the Clark County-Springfield Transportation Coordinating Committee initiated a study of the US 68/US 40/SR 4 interchange area including the US 40/SR 4/Upper Valley Pike intersection. The objective of the study was to forecast long-range traffic demand in the area, identify the specific cause of current deficiencies, and define measures that address current deficiencies and accommodate anticipated growth. The Clark County-Springfield Transportation Coordinating Committee, acting as the lead agency, contracted with Evans, Mechwart, Hambleton, and Tilton, Inc. to perform technical analyses and environmental work for the project area. A Technical Advisory Committee was established at the outset including representatives of the Ohio Department of Transportation, Clark County, and the City of Springfield.

Problems identified by the traffic analyses were generally limited to intersections within the study area. The US 68 mainline and ramp merge/diverge areas have adequate capacity to handle existing traffic and growth that is anticipated. Weaving areas at US 40/SR 4 deliver adequate calculated levels of service, but are impacted by intersection queue's that extend into the weaving area. In addition, poor levels of service under existing and design year conditions were found at the US 40/SR4/Upper Valley Pike, and US68 Southbound Off Ramp/Upper Valley Pike intersections. The US68/Upper Valley Pike Southbound Off Ramp intersection meets a warrant for signalization under 2005 conditions.

Other concerns identified by the TCC and the technical steering committee, as well as through public input are:

- Existence of a Limited Access Right-of-Way break, which is non-standard, for the Ohio Masonic Home.
- Steep grade approaching the Upper Valley Pike intersection on US40/SR4 from the west. There is a concern that motorists traveling eastbound may have insufficient warning for stopped conditions ahead, leading to the potential for accidents approaching the intersection.
- Motorists traveling southbound through the intersection from Upper Valley Pike to the southbound on-ramp leading to US 68 experience several grade breaks that result from the normal transverse crown on the wide pavement of US40/SR4.
- Narrow pavement, lack of turn lanes, and poor geometry on Upper Valley Pike between US 40/SR 4 and Shrine Road

Three public meetings were conducted during the preparation of this study and a web site was established to make the project accessible to the public. In general, public comments supported increasing traffic capacity in the US 40/SR 4 corridor, maintaining existing access to the Ohio Masonic Home, improving existing signing in the area, and not increasing the number of signalized intersections on US 40/SR 4.

Alternate 2A is responsive to the purpose and need of the project and is recommended for further advancement. Eliminating loop ramps on the west side of the US 68/US 40/SR 4 interchange reduces conflict points in close proximity to the US 40/SR 4/Upper Valley Pike intersection. That action coupled with capacity improvements to the intersection itself, are expected to reduce crash frequency in the area by reducing stops, delay, and queues on US 40/SR 4.

To further address the stated purpose and need and respond to comments made during public involvement efforts, the following features should be included in the improvement:

- Align Columbia Street with the off ramp from southbound US 68 and signalize the intersection.
- Eliminate the westbound to southbound, and southbound to eastbound loop ramps and maintain the southbound on ramp to US 68 from US 40/SR 4.
- Add lane capacity to the US 40/SR 4/Upper Valley Pike intersection.
- Maintain existing access to the Ohio Masonic Home.
- Improve guide signing in the area and warning of the signalized condition of the US 40/SR 4 Upper Valley Pike intersection, especially for eastbound drivers.
- Improve the vertical profile of the US 40/SR 4/Upper Valley Pike intersection to eliminate sharp grade breaks.
- Coordinate signals between the proposed signal at the US 68 Southbound Off-Ramp/Upper Valley Pike intersection and the US 40/SR 4/Upper Valley Pike intersection to mitigate any queue deficiency on Upper Valley Pike. In addition, relocating the ramp intersection further north should be considered.
- Widen and improve Upper Valley Pike between the US 68 Southbound Off-Ramp and Shrine Road to add capacity and improve alignment throughout the corridor. Shrine Road should be similarly improved on its approach to Upper Valley Pike where the vertical alignment is deficient.