



inter-office communication

To: Bonnie Teuween, District 12 Deputy Director
Attention: Dale Schiavoni, P.E., District Planning Administrator

From: Dirk B. Gross, P.E., Administrator of Office of Roadway Engineering
By: James Young, P.E., Studies Engineer

Date: May 7, 2008
Subject: LAK 44 L/A break (SR 44 Corridor Study Analysis)

Reference is made to your April, 2008 email requesting that our office review the technical memorandum for SR 44 in Lake County.

Studies/Concepts

The study addressed many of the previous comments from the January 25th Interoffice Communication. The corridor has many deficiencies with respect to safety and capacity. Our office's major concerns are the issues with the SR 44 & I-90 interchange and its interaction with the SR 44 & Auburn Road intersection. The study is demonstrating that the proposed developments in the region are necessitating improvements at the interchange. ODOT does not have improvements planned for this interchange. This is complicated by the SR 44 & Auburn intersection being identified by the Highway Safety Program (HSP). The location ranked #87 for 2006 Freeway Location and #132 for the 2006 Non-Freeway Location.

The study demonstrates that the proposed L/A break will shift traffic from Auburn Road to the new roadway connection. The study also indicated that improvements are needed through the I-90 interchange to bring it to a satisfactory operation. The study proposed a design which is not feasible. The I-90 EB loop ramp is proposed to have two lefts and two rights. This is not an acceptable design geometrically. Other interchange configurations need to be explored. Our office has provided a possible interchange configuration (Figure 1) which could provide an acceptable LOS adding fewer lanes to the interchange. It would involve adding an additional exit ramp. The ramps would function as directional ramps (northbound and southbound). Both of these ramps would be signalized. This configuration would also require widening the SR 44 northbound bridge to accept the 3rd northbound lane. This design can be phased into the Auburn road improvements. The added through lane would be required northbound beginning south of the Auburn road intersection. This would need to be developed prior to the northbound left turn at Auburn Road intersection. This lane will need to have overhead signing since it will drop to the I-90 westbound left turn lane.

The SR 44 and Auburn road intersection operation is complicated by the intersection of Auburn and Crile Road. It is in our offices' opinion that this roadway access needs to be more controlled from Auburn. Our office has provided a configuration (Figure 2) that can accommodate Criles Road with restricted movements. The figure also provides signal phasing for the intersections. This configuration would only allow southbound Auburn to turn right at SR 44. The other

movements would have to utilize Crile Road for access to SR 44 southbound and Auburn west of SR 44. The SR 44 and Auburn road intersection with improvements in conjunction with the new connector road can absorb this diverted traffic. This will also minimize the conflicts of both of these intersections being so closely spaced. This is an existing condition and its improvement should be part of improving the Auburn road intersection. This is a modification to what was provided in the study.

The Crile Road and new connector road intersection will need to be aligned as shown in the Alternative 7 in the study. This should allow for acceptable signal operations given the signal spacing which would arise if Crile we signalized in its current location.

Our office finds that the concept of the L/A break may be considered because it shows potential benefits at the existing Auburn Road & SR 44 intersection. It would also be advisable that the Concord Township's master plan be updated with information from these reports as it could impact the amount of developable land around the interchange. The report planned for development where the additional ramp is being proposed.

Our office also has another study which is labeled the Lake Hospital Systems Auburn Road Traffic Study. This study also details improvements needed at Auburn Road. It is not clear whether the traffic from this study is included in the SR 44 corridor study. If it is not included, traffic from this facility should be included.

Phasing

Our office finds that it may be allowable to phase the improvements. The first improvement should involve addressing the SR 44 & Auburn Rd. intersection. This would alleviate many of the crashes and improve mobility in the area. This would require realigning Crile road and creating a T-intersection with SR 44. This phase doesn't include the additional northbound lane at the Auburn intersection.

The second phase could involve the new connector road from Auburn to complete the four leg intersection with the relocated Crile road. It will also require building the third lane northbound into the I-90 interchange. This will require an Interchange Modification Study. It needs to be determined what improvements would have funding and what can be built and operate to provide the most benefit. These improvements should dovetail into the long rang plan for the interchange.

Funding

Before any plan can proceed, secure funding must be identified. Since much of the traffic associated with the new development, it is expected that private and/or local funding would be used for most, if not all of the proposed improvements. No access breaks will be considered without improvements for the additional traffic.

If you have any questions, please call James Young at (614) 387-1622.

DBG:JDY

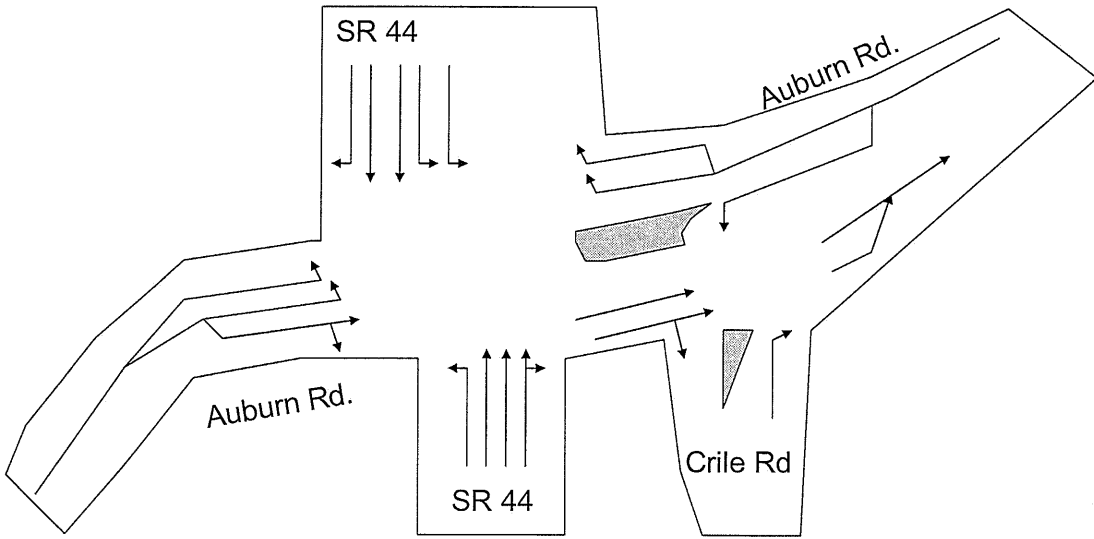
c: S. Campbell (CO) - D. Schiavoni (D-12) - Reading File – File

Possible interchange configuration:

- Add a new EB to SB ramp
- Convert the existing EB loop ramp to NB only
- Widen bridge to allow dual left northbound; Convert SB slip ramp to right turn lane.



Figure 1



Auburn & SR 44	↓ ↘ ↙ ↗	↓ ↘ ↙ ↗	← ↘ ↙ ↗	→ ↘ ↙ ↗
Auburn & Crile	← ↘ ↙ ↗	← ↘ ↙ ↗	← ↘ ↙ ↗	← ↘ ↙ ↗

Important
SR 44 NB
No Right Turn On Red

Figure 2