

BRIDGE TRAFFIC FORECASTS

Another component of the study process was to develop traffic forecasts for the TH Bridge to assist in determining whether and when it needs to be expanded to 4 lanes. Traffic forecasts for the years 2033 (25- year) and 2058 (50-year) were developed. These forecasts were estimated based on the historical growth pattern for the TH 43 Bridge. The forecast 2033 average daily traffic (ADT) is 17,700 vehicles/day while the forecast 2058 ADT is 27,600 vehicles/day. Based on these forecasts it can be concluded that a 4-lane road is needed to accommodate the anticipated 2058 traffic, while the 2033 traffic will draw near the threshold for what a 2-lane bridge can handle.



STUDY FINDINGS AND IMPLICATIONS

Some of the major findings and implications from the study analysis include:

- Inbound TH 43 Bridge traffic disperses quickly as it enters Winona.
- Similar to the inbound traffic, the outbound TH 43 Bridge traffic comes from a wide variety of routes that converge on the bridge touchdown point.
- It appears TH 43 Bridge traffic is primarily "local" traffic oriented to places within Winona.
- Broadway is the main east/west traffic carrier in this area, with 5th Street the next most important east/west traffic carrier. Fourth Street appears to be mainly a feeder to the TH 43 Bridge, rather than a major east/west route.
- The TH 43 route designation through downtown Winona does not appear to be a big factor in people's choice of routes. Only about 14% of the TH 43 traffic on the bridge is still on TH 43 south of Broadway.
- Overall, the TH 43 bridge traffic splits about 50% to the east and 50% to the west of Winona Street in Winona.
- Based on the Traffic Circulation Study, approximately 20% of the TH 43 Bridge traffic was destined north of 4th Street towards Riverview Drive (port area).
- The long-range (50-year) forecast traffic for the TH 43 bridge indicates that a 4-lane bridge is needed.



FOR MORE INFORMATION...

Individuals interested in obtaining additional information regarding the Winona Origin-Destination Study are encouraged to contact the Mn/DOT Project Manager:

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TH 43 River Bridge Origin-Destination and Traffic Circulation Study - Executive Summary

Mn/DOT DISTRICT 6 – ROCHESTER (FEBRUARY 2009)

The Minnesota Department of Transportation (Mn/DOT) is planning to replace the Trunk Highway (TH) 43 Bridge over the Mississippi River in Winona. Various alternatives will be considered for the project. To assist in the development of alternatives, Mn/DOT gathered information on the traffic patterns and traffic circulation on the Minnesota side of the bridge. A traffic origin-destination study was performed and traffic counts were conducted at several intersections and roadway locations near the TH 43 Bridge. The information collected is summarized in this brochure and detailed in the study report titled "Origin-Destination and Traffic Circulation Study, Trunk Highway 43 Bridge Area, February 2009." The information learned from this study will provide insights into traffic patterns for the evaluation of alternatives for the future replacement of the TH 43 Bridge.

ORIGIN-DESTINATION STUDY SUMMARY

The origin-destination (OD) survey was conducted using video cameras. Passing vehicle's license plates were captured on tape for approximately 8 hours on a typical weekday. In total, over 20,000 vehicles were recorded. These tapes were later processed to generate a database containing fields for the vehicle license plate, location, direction, time, and type. Four survey station locations were established. These survey stations were considered the most likely routes that TH 43 Bridge traffic would use in Winona.

Ten-percent of this traffic passed the Huff Street location (#2), 14% passed Main Street (#3), and 9% passed the Mankato Avenue location (#4). The remainder of the traffic dispersed to other streets in the area. The data also indicated that truck traffic is a relatively small component of overall traffic on the studied streets. The TH 43 Bridge had an average of 4.3% trucks during the study period. This compares with a statewide average of about 10-percent trucks for State Trunk Highways.

The OD survey station sites are shown in Figure 1 to the right and are as follows:

- Site 1, TH 43 Bridge
- Site 2, Huff Street
- Site 3, Main Street (TH 43)
- Site 4, Mankato Avenue

The vehicle license plate database was then used to match license plates at the four survey stations to determine which routes vehicles took in traveling to/from the TH 43 Bridge.

The results of the origin-destination analysis indicate that traffic crossing the TH 43 Bridge quickly spreads out along several routes as it enters Winona.

Figure 1: Study Area With OD Survey Sites



