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From: Dan.Martell@state.sd.us [mailto:Dan.Martell@state.sd.us]
Sent: Thursday, March 06, 2008 9:36 AM
To: Daniel.Staton@state.sd.us; Gary.Engel@state.sd.us
Cc: Elkins Marcia; Fisher Vicki; Joel.Jundt@state.sd.us; Pete.Longman@state.sd.us
Subject: RE: Walmart Traffic Impact Study

I have reviewed the study and have the following comments.

General: Show Catron as US 16B/Catron Boulevard.

Use the DOT research study that was done to get the trip generations for Wal-Mart.

When warranting a signal Warrant three can't be used for a retail store. Warrant three should only be applied in unusual cases, such as office complex, manufacturing plants, industrial complexes, or high vehicle facilities that attract or discharge large number of vehicles over a short time period. Warrants can be done by projecting the traffic volumes for several hours throughout the day.

Long term volumes for this study do not agree with the one done by HDR. They should be similar.

Level of Service:

I ran LOS using software based on the Highway Capacity manual and came up with lower level of service than shown on table 1. This could be due to the use of different values for ideal saturation flow rate, loss times, and other values. The ideal for saturation that we use for Rapid City is 1700 to 1800 vehicle per hour per lane. I assume the study used the 1900 value that is the default value of the software. Did the Consultant take into account grades? These changes will also change the required storage lengths.

Improvements:

I would recommend that the large depressed median be remove in the location of signalized intersection so that split phase operation would not be necessary and LOS would be improved.

Figure 6

Add turning movement volumes for traffic generated by Wal-Mart to teh southbound left and westbound rights to US16 and Catron. Some of the traffic leaving and entering Wla-mart from the east on Catron will go to US16 rather than promise drive since it will take them less time due to the higher speed on US16.