

Fisher Vicki

Subject: FW: Stumer Road/Black Hills Boulevard Stop Control

From: Shawn White [mailto:swhite@CBBTRAFFIC.COM]

Sent: Tuesday, January 18, 2011 4:27 PM

To: Fisher Vicki

Cc: rgreen@thfrealty.com; Elkins Marcia; Tech Dale; Johnson Ted; Less John; Daniel.Staton@state.sd.us

Subject: RE: Stumer Road/Black Hills Boulevard Stop Control

Vicki,

I have reviewed the analyses and respective queues for the intersection of Black Hills Boulevard and Stumer Road with alternative STOP control. The LOS and queue length are shown in the below table. There is approximately 550 feet of storage available for the northbound approach of Black Hills Boulevard at Stumer Road before queues would impact the operations at the signal at Catron. As shown in the table, with Black Hills operated under stop control, the northbound approach queue length is 65 feet for the p.m. peak hour and 110 feet for the Saturday midday peak hour under the 2010 full build-out conditions. Additionally, the northbound approach is forecasted to operate at LOS B with only 14 seconds of delay per vehicle. The forecasted queues of 65 to 110 feet are well within the available storage of 550 feet.

With Stumer Road operated under stop control, the northbound approach would have the right-of-way and as such no delays or queues are anticipated. However, the westbound approach of Stumer Road would decline from LOS A with minimal queuing to LOS C with a queue length of 135 feet for the p.m. peak hour and 155 feet for the Saturday midday peak hour under the 2010 full build-out conditions.

In our opinion, the traffic control for the intersection of Black Hills Boulevard and Stumer Road should remain as proposed in the Traffic Study with Black Hills Boulevard operated under stop control. However, it is acknowledged that the intersection would operate acceptably if Stumer Road was operated under stop control.

Please let me know if you would like to discuss this further.

Shawn

Intersection/Movement	Weekday PM Peak Hour	Saturday Midday Peak Hour
<i>Black Hills Boulevard & Stumer Road (Black Hills STOP Control)</i>		
Westbound Stumer Road Left-Turn	A (8.3) 30 feet	A (8.6) 35 feet
Northbound Black Hills Boulevard Left-Turn/Thru	B (13.9) 65 feet	D (30.7) 15 feet
Northbound Black Hills Boulevard Right-Turn	B (13.9) 65 feet	B (14.4) 110 feet
<i>Black Hills Boulevard & Stumer Road (Stumer STOP Control)</i>		
Westbound Stumer Road Left-Turn	C (22.8) 135 feet	C (22.5) 155 feet
Northbound Black Hills Boulevard Left-Turn/Thru	A - no delay	A - no delay
Northbound Black Hills Boulevard Right-Turn	A - no delay	A - no delay