



CITY OF RAPID CITY

Engineering Services

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October 5, 2007

Mr. and Mrs. Dave Blickensderfer
1701 West Boulevard
Rapid City, SD 57702

Re: West Boulevard / St. Charles Street Intersection

Dear Mr. and Mrs. Blickensderfer:

This is in response to your September 27, 2007 letter regarding the intersection of West Boulevard and St. Charles Street. When considering the installation of any traffic control device, the City of Rapid City (like most public agencies in the United States) relies upon the guidelines of the Federal Highway Administration's Manual on Uniform Traffic Control Devices. These guidelines take into account an intersection's traffic volumes and crash history and are intended to promote consistent use of traffic control devices. Based on these guidelines and existing conditions, an all-way STOP operation is not presently warranted at this intersection.

The details of each guideline and our evaluation follow:

- 1) Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

No traffic signal is planned at this intersection.

- 2) A crash problem, as indicated by five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right- and left-turn collisions as well as right-angle collisions.

The crash records from 01/01/04 to 07/01/07 were reviewed and it was found that there were no reported vehicle or pedestrian crashes at this intersection.

- 3) Minimum volumes:

- a) The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and



EQUAL OPPORTUNITY EMPLOYER

- b) The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
- c) If the 85th-percentile approach speed of the major-street traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the above values.

The existing traffic volumes do not meet the above criteria (see attached warrant check). The 85th percentile speed of West Boulevard (the major street) for northbound and southbound traffic was found to be 30.1 mph and 29.1 mph respectively.

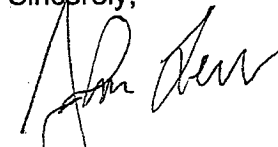
- 4) Where no single criterion is satisfied, but where Criteria 2, 3a and 3b are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

The current traffic volumes do not meet the above criteria (see attached warrant check).

In our conversation, you had raised a concern regarding vehicle speeds on West Boulevard. As part of our counting, we also collected speed data and found that the average travel speed for northbound and southbound traffic was 25.6 mph and 25.2 mph respectively. As cited above, the 85th percentile speed for northbound and southbound traffic was 30.1 mph and 29.1 mph respectively. The 85th percentile speed is one of the measures used in establishing speed limits; although the 85th percentile is greater than the posted limit of 25 mph, the results are typical for a residential street and do not indicate a significant non-compliance issue.

Please feel free to contact me if you have any questions regarding the preceding comments.

Sincerely,



John Less
Traffic Engineer

Enclosures

Cc: Robert Ellis, City Engineer

**100% VALUES -
MULTI-WAY STOP
VOLUME WARRANT**

10/04/07

HOUR BEGINNING	ST CHARLES MINOR ROAD VOLUMES				WEST BLVD MAJOR ROAD VOLUMES				WARRANT MET?
	EB	WB	TOTAL	REQUIRED FOR WARRANT	NB	SB	TOTAL	REQUIRED FOR WARRANT	
0000	0	0	0	200	10	8	18	300	NO
0100	0	0	0	200	6	6	12	300	NO
0200	0	0	0	200	7	3	10	300	NO
0300	0	0	0	200	3	5	7	300	NO
0400	0	0	0	200	4	4	8	300	NO
0500	3	1	3	200	10	14	23	300	NO
0600	6	4	9	200	60	79	138	300	NO
0700	13	28	41	200	227	229	456	300	NO
0800	5	7	12	200	185	174	359	300	NO
0900	5	7	12	200	126	147	272	300	NO
1000	3	9	12	200	124	162	286	300	NO
1100	6	12	18	200	201	203	404	300	NO
1200	7	19	26	200	201	197	397	300	NO
1300	9	17	25	200	163	172	335	300	NO
1400	12	46	58	200	183	221	404	300	NO
1500	8	17	24	200	240	236	476	300	NO
1600	9	13	22	200	231	217	448	300	NO
1700	11	13	24	200	210	231	441	300	NO
1800	9	10	19	200	159	150	309	300	NO
1900	6	8	14	200	101	111	212	300	NO
2000	6	6	11	200	84	78	162	300	NO
2100	3	3	6	200	51	40	90	300	NO
2200	1	2	3	200	26	31	57	300	NO
2300	1	1	2	200	19	16	35	300	NO
TOTAL	119	217	2		2626	2729			

HOURS
WARRANT MET 0
WARRANT MET? NO

**80% VALUES -
MULTI-WAY
STOP VOLUME
WARRANT**

10/05/07

HOUR BEGINNING	ST CHARLES MINOR ROAD VOLUMES				WEST BLVD MAJOR ROAD VOLUMES				WARRANT MET?
	EB	WB	TOTAL	REQUIRED FOR WARRANT	NB	SB	TOTAL	REQUIRED FOR WARRANT	
0000	0	0	0	160	10	8	18	240	NO
0100	0	0	0	160	6	6	12	240	NO
0200	0	0	0	160	7	3	10	240	NO
0300	0	0	0	160	3	5	7	240	NO
0400	0	0	0	160	4	4	8	240	NO
0500	3	1	3	160	10	14	23	240	NO
0600	6	4	9	160	60	79	138	240	NO
0700	13	28	41	160	227	229	456	240	NO
0800	5	7	12	160	185	174	359	240	NO
0900	5	7	12	160	126	147	272	240	NO
1000	3	9	12	160	124	162	286	240	NO
1100	6	12	18	160	201	203	404	240	NO
1200	7	19	26	160	201	197	397	240	NO
1300	9	17	25	160	163	172	335	240	NO
1400	12	46	58	160	183	221	404	240	NO
1500	8	17	24	160	240	236	476	240	NO
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2100	3	3	6	160	51	40	90	240	NO
2200	1	2	3	160	26	31	57	240	NO
2300	1	1	2	160	19	16	35	240	NO
TOTAL	119	217			2626	2729			

HOURS
WARRANT MET 0
WARRANT MET? NO