Traffic Safety Commission Agenda/Minutes – April 6, 2009

ITEM NO. 5: Consider request to establish a MULTI-WAY STOP at the intersection of 21st Terrace & Maple Lane.

Report:

- 1. The *Manual on Uniform Traffic Control Devices (MUTCD)* provides criteria for the establishment of a MULTI-WAY STOP; the two most common criteria are reported crashes and traffic volume.
- The *MUTCD* requires a minimum of five (5) reported crashes in a 12-month period to consider a MULTI-WAY STOP; Police Department data shows there have been no reported crashes at this intersection during the last three (3) years, 2006-2008.
- 3. The *MUTCD* requires a minimum of 300 vehicles per hour for eight (8) hours of an average day on the main street and 200 vehicles per hour for the same eight (8) hours on the minor street to consider a MULTI-WAY STOP; data collected on March 9-10, 2009 found an average of 71 vehicles per hour on the main street and 38 vehicles per hour on the minor street for the eight (8) highest hours of the day.
- 4. In addition, the data collection found the 85th percentile speed on 21st Street Terrace to be 33.2mph eastbound and 26.6mph westbound; the speed limit by state law is 30mph.

ACTION: Provide recommendation to the City Commission.

ITEM NO. 5:

Consider request to establish a MULTI-WAY STOP at the intersection of 21st Terrace & Maple Lane.

David Woosley presented the information provided in the staff report.

Public comment:

None.

MOTION BY COMMISSIONER WOODS, SECONDED BY COMMISSIONER SMITH, TO RECOMMEND THAT THE REQUEST TO ESTABLISH A MULTI-WAY STOP AT THE INTERSECTION OF 21ST TERRACE & MAPLE LANE BE DENIED; THE MOTION CARRIED 8-0.



From: Ashlee Roll-Gregory [mailto:ashlee_roll_gregory@hotmail.com] Sent: Wednesday, March 04, 2009 1:21 PM To: Traffic Safety Commission Subject: Traffic Concern

I am a relatively new parent of a child at Sunshine Acres Montessori school. We have only been attending for about a two months. However, in those eight weeks of transport we take our lives in our hands twice daily at the intersection of 21st and Maple Ln. directly in front of the school. It is an awkward intersection, granted. Maple and 21st intersect with the driveway of Sunshine Acres creating a four way stop. The only problem is there are no stop signs. While one could argue that the traffic on 21st has the right of way merely due their speed, there is a very real danger posed to all the cars that encounter this intersection. The most problematic issue for me is that if there is an accident, more than likely, there will be a child involved because the cars that are trying to cross 21st are only people either trying to enter or leave the Sunshine driveway.

Just yesterday I was pulling out of the driveway with my two year old and a black car came out of nowhere. She was going so fast that by the time I saw her I was in the middle of 21st. I had to make a decision on whether to speed up and try to make it across the street or slam on the brakes. I chose to try and make it across the street. Well, she apparently had a point to make, ran me off the road and gave me the one fingered salute. The bird doesn't bother nearly as much as a potential life flight to Children's Mercy.

I don't think that we necessarily need a Place de l'Etoile at the intersection, but I think that a four way stop sign is definitely in order.

Thank you for your time, Ashlee Roll-Gregory



Section 2B.07 Multiway Stop Applications

Support:

Multiway stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multiway stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multiway stop control is used where the volume of traffic on the intersecting roads is approximately equal.

The restrictions on the use of STOP signs described in Section 2B.05 also apply to multiway stop applications.

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Guidance:

The decision to install multiway stop control should be based on an engineering study.

The following criteria should be considered in the engineering study for a multiway STOP sign installation:

- A. Where traffic control signals are justified, the multiway 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.
- B. A crash problem, as indicated by 5 or more reported crashes in a 12-month period that are susceptible to correction by a multiway stop installation. Such crashes include right- and left-turn collisions as well as right-angle collisions.
- C. Minimum volumes:
 - 1. 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
 - 2. 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
 - 3. 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.
- D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Option:

Other criteria that may be considered in an engineering study include:

- A. The need to control left-turn conflicts;
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to reasonably safely negotiate the intersection unless conflicting cross traffic is also required to stop; and
- D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multiway stop control would improve traffic operational characteristics of the intersection.



City of Lawrence, Kansas Traffic Engineering Division ITEM NO. 5 TSC 4/6/09





ALL WAY Stop Warrant Worksheet

Date: 9-10 March 2009

Location: 21st Terrace & Maple Lane

Time	21st Terrace								Maple Lane						
Period		EB			WB		Total					SB		Total	Total
12-01		0			4		4					5		5	9
01-02		1			0		1					0		0	1
02-03		5			1		6					3		3	9
03-04		3			3		6					3		3	9
04-05		4			2		6					0		0	6
05-06		6			6		12					6		6	18
06-07		17			11		28					9		9	37
07-08		47			59		106					40		40	146
08-09		30			37		67					43		43	110
09-10		20			30		50					24		24	74
10-11		12			14		26					18		18	44
11-12		19			15		34					29		29	63
12-01		22			23		45					16		16	61
01-02		18			21		39					26		26	65
02-03		30			34		64					33		33	97
03-04		33			27		60					45		45	105
04-05		44			41		85					52		52	137
05-06		27			36		63					51		51	114
06-07		48			15		63					24		24	87
07-08		34			24		58					19		19	77
08-09		21			14		35					14		14	49
09-10		19			15		34					25		25	59
10-11		15			7		22					8		8	30
11-12		10			10		20					12		12	32
Totals	0	485	0	0	449	0	934	0	0	0	0	505	0	505	1439

The Manual on Uniform Traffic Control Devices (MUTCD) requies an average of **300** vehicles per hour entering the intersection from the main street for each of 8 hours of a day, and an average of **200** entering from the minor street during the same 8 hours.

Average entering volume on main street for 8 highest hours = 71

Average minor street volume for same 8 hours = **38**

