



To:

John Burg, Acting Director of Public Works

From:

Justine Gembala, PE, Civil Engineer

Date:

June 7, 2004

Subject:

Fairfield Speed Study

The Village received an e-mail from Mr. Rob Wiemer, 1040 S. Fairfield Ave, requesting lowering the speed limit and installing speed humps on Fairfield Ave between Wilson Rd and Central Ave. Attached for your review are the results of the speed survey conducted using the Illinois Department of Transportation "Policy on Establishing and Posting Speed Limits on the State Highway System".

Both spot and 48-hour speed surveys were conducted on Fairfield Ave between the above limits. The adjusted prevailing speed on Fairfield Ave based on the spot speed survey is 30 MPH. The traffic analyzer 48-hour speed surveys revealed that most motorists are traveling at a speed of 30 MPH or less when traveling northbound and at a speed of 35 MPH or less when traveling southbound.

Accident reports were run from January 2002 through April 2004. A total of four accidents occurred during this time period; one at the intersection of Wilson and Fairfield, one involving a mailbox and two mid block involving two vehicles.

At this time, the Village does not have a policy or procedure in place to install traffic calming devices such as speed humps. It is recommended that the 30 MPH speed limit on Fairfield Ave between Wilson Rd and Central Ave remain unposted.

This item will be on the June 14, 2004 Transportation and Safety Committee agenda. The meeting is held at the Village Hall in the Community Room at 7:30 PM. This is a public meeting and public participation is encouraged.

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cc:

Rick Soderstrom, Trustee, District 6 David Dratnol, Village Engineer Mr. Rob Wiemer, 1040 S. Fairfield Transportation and Safety Committee

ESTABLISHMENT OF SPEED ZONE DISTRICT _____

ROUTE: FAIRFIELD FROM: U	DILSON
TO: CENTRAL	LENGTH:
CITY: LOMBARD C	OUNTY: Du PR 9 E
	V ACCESS CONFLICTS
	RESIDENTIAL DRIVES: $2/x 1 = 2/$ SMALL BUSINESS DRIVES: $1/x 5 = 5/$ LARGE BUSINESS DRIVES: $1/x 10 = 1/0$ ACCESS CONFLICT NO. TOTAL:
	$\frac{36}{108}$ (DCN) = $\frac{171}{\text{CONFLICT NO./MILE}}$
II TEST RUNS	VI MISCL. FACTORS
RUN NO. AVERAGE SPEED MPH NB or WB SB or EB	PEDESTRIAN VOLUME:
1 2 /A 3 4 5	CRASH RATE RATIO: STATEWIDE AVG. = N/A ROUTE PARKING PERMITTED: YES NO
III PREVAILING SPEED	VII PREVAILING SPEED ADJUSTMENT
85TH % AVG.: 35 MPH UPPER LIMIT OF 10 MPH PACE: 35 MPH TEST RUN AVG.: MPH PREVAILING SPD: 35 MPH	DRIVEWAY ADJUSTMENT: PEDESTRIAN ADJUSTMENT: CRASH ADJUSTMENT: TOTAL (Max. 20%): 35 MPH x /5 % = 29.75 (Max. 9 MPH) ADJUSTED PREVAILING SPEED: 30
IV EXISTING SPEED LIMIT	VIII REVISED SPEED LIMIT
ZONE BEING STUDIED: MPH VIOLATION RATE: % ADJACENT ZONE N or W: MPH LENGTH: MILES ADJACENT ZONE S or E: MPH LENGTH: MILES	RECOMMENDED SPEED LIMIT: 30 MPH ANTICIPATED VIOLATION RATE: 62 % RECOMMENDED BY: DATE: DATE: DATE:

MPH

Nu-Metrics Traffic Analyzer Study Computer Generated Summary Report City: Lombard

Street: N.B.Fairfield bet Wilson&Central

A study of vehicle traffic was conducted with HI-STAR unit number 2183. The study was done in the lane on N.B.Fairfield bet Wilson&Central in Lombard, II in DuPage county. The study began on 04/13/2004 at 11:00 AM and concluded on 04/15/2004 at 11:00 AM, lasting a total of 48 hours. Data was recorded in 60 minute time periods. The total recorded volume of traffic showed 3,277 vehicles passed through the location with a peak volume of 225 on 04/14/2004 at 05:00 PM and a minimum volume of 0 on 04/15/2004 at 02:00 AM. The AADT Count for this study was 1,639.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin.

						(Chart 1							
0	10	15	20	25	30	35	40	45	50	55	60	65	70	75
to	to	to	to	to	to	to	to	to	to	to	to	to	to	>
9	14	19	24	29	34	39	44	49	54	59	64	69	74	
0	29	51	206	885	1364	553	120	32	13	10	2	2	2	6

At least half of the vehicles were traveling in the 30 - 34 mph range or a lower speed. The average speed for all classified vehicles was 29 mph with 22.6 percent exceeding the posted speed of 30 mph. The HI-STAR found 22.6 percent of the total vehicles were traveling in excess of 30 mph. The mode speed for this traffic study was 30 mph and the 85th percentile was 32.75 mph.

CLASSIFICATION

Chart 2 lists the values of the eight classification bins and the total traffic volume accumulated for each bin.

			Ch	art 2			
0	21	28	40	50	60	70	80
to	to	to	to	to	to	to	>
20	27	39	49	59	69	79	
3186	66	16	6	1	0	0	0

Most of the vehicles classified during the study were Passenger Cars. The number of Passenger Cars in the study was 3,252 which represents 99.30 percent of the total classified vehicles. The number of Small Trucks in the study was 16 which represents 0.50 percent of the total classified vehicles. The number of Trucks/Busses in the study was 6 which represents 0.20 percent of the total classified vehicles. The number of Tractor Trailers in the study was 1 which represents 0.00 percent of the total classified vehicles.

HEADWAY

During the peak time period, on 04/14/2004 at 05:00 PM the average headway between the vehicles was 15.93 seconds. The slowest traffic period was on 04/15/2004 at 02:00 AM. During this slowest period, the average headway was 3600.0 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 37 and 105 degrees Fahrenheit. The HI-STAR determined that the roadway surface was Dry 100.00 percent of the time.

05/25/2004 Page: 1

HI-Star ID: 2183 Street: N.B.Fairfield bet Wilson&Central State: II City: Lombard County: DuPage	1	1		Begir Lane Oper Poste AAD	: : EP ed: 3	0		11:0	0 AM	} F F	Hours Perio Raw (04/1 s: 48 d: 60 Coun Γ Cou	:00) it: 32		:00 A	AM
NC97 - mph Date & Time Range	0 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 >	Total
04/13/2004 [11:00 AM-12:00 PM] 04/13/2004 [12:00 PM-01:00 PM] 04/13/2004 [01:00 PM-02:00 PM] 04/13/2004 [02:00 PM-03:00 PM] 04/13/2004 [03:00 PM-04:00 PM] 04/13/2004 [04:00 PM-05:00 PM] 04/13/2004 [05:00 PM-06:00 PM] 04/13/2004 [06:00 PM-07:00 PM] 04/13/2004 [07:00 PM-08:00 PM] 04/13/2004 [07:00 PM-09:00 PM] 04/13/2004 [08:00 PM-09:00 PM] 04/13/2004 [09:00 PM-10:00 PM] 04/13/2004 [10:00 PM-11:00 PM] 04/13/2004 [11:00 PM-12:00 AM]	0 0 0 0 0 0 0 0	0 0 1 1 0 0 2 1 1 0 1	0 0 2 4 2 1 1 1 2 1 3 0	1 6 6 2 3 10 6 5 14 4 7 0 2	21 21 33 27 23 44 47 31 42 31 32 6	39 42 57 41 51 70 79 74 51 43 28 12	22 18 16 10 27 29 29 26 17 12 6 2	5 6 2 1 5 4 6 5 2 0 1 1 1	1 1 1 0 1 1 2 1 0 0 2 0	1 1 0 0 0 0 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0	000000000000000000000000000000000000000	1 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	91 95 118 86 112 159 173 144 130 91 80 21
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HI-Star ID: 2183 Street: N.B.Fairfield bet Wilson&Central State: II City: Lombard County: DuPage	Begin: 04/13/2004 11:00 AM													:00 A	М	
NC97 - mph	0	10	15	20	25	30	35	40	45	50	55	60	65	70	75	
Date & Time Range	to 9	to 14	to 19	to 24	to 29	to 34	to 39	to 44	to 49	to 54	to 59	to 64	to 69	to 74	>	Total
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04/15/2004 [12:00 AM-01:00 AM] 04/15/2004 [01:00 AM-02:00 AM] 04/15/2004 [02:00 AM-03:00 AM]	0 0 0	0 0 0	0 0 0	0 1 0	5 1 0	3 2 0	2 1 0	0 0 0	1 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	11 5 0
04/15/2004 [03:00 AM-04:00 AM] 04/15/2004 [04:00 AM-05:00 AM] 04/15/2004 [05:00 AM-06:00 AM]	0 0 0	0 0 0	1 1 1	0 0 0	1 1 1	0 1 1	0 0 0	0 1 0	0 0 0	0 0 0	0 1 0	0 0	0 0 0	0	0 0 0	2 5 3
04/15/2004 [06:00 AM-07:00 AM] 04/15/2004 [07:00 AM-08:00 AM] 04/15/2004 [08:00 AM-09:00 AM] 04/15/2004 [09:00 AM-10:00 AM]	0 0 0	1 0 0	0 0 1 0	0 4 2 3	7 7 19 9	3 34 28 22	4 7 8 9	1 0 3 1	0 3 0 0	1 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	17 55 61 44
04/15/2004 [10:00 AM-11:00 AM]	0	1	1	5	25	42	8	6	0	2	0	0	ō	0	0	90
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Report Percentages:	0.00	% 0.89°	1.56' %	% 2 6.299	7.02° % 4	% 1 1.65%	6.899 %	% 3.66'	0.98' %	% 0.40	0.31 ¹ %	% 0.06	0.06 ⁶ %	% 0.06%	0.18% %)

Nu-Metrics Traffic Analyzer Study Computer Generated Summary Report City: Lombard

Street: S.B.Fairfield bet Wilson&Central

A study of vehicle traffic was conducted with HI-STAR unit number 6784. The study was done in the lane on S.B.Fairfield bet Wilson&Central in Lombard, II in DuPage county. The study began on 04/13/2004 at 11:00 AM and concluded on 04/15/2004 at 11:00 AM, lasting a total of 48 hours. Data was recorded in 60 minute time periods. The total recorded volume of traffic showed 2,727 vehicles passed through the location with a peak volume of 152 on 04/14/2004 at 06:00 PM and a minimum volume of 0 on 04/15/2004 at 12:00 AM. The AADT Count for this study was 1,364.

SPEED

Chart 1 lists the values of the speed bins and the total traffic volume for each bin.

							(Chart 1	<u> </u>						
	0	10	15	20	25	30	35	40	45	50	55	60	65	70	75
ļ	to	to	to	to	to	to	to	to	to	to	to	to	to	to	>
	9	14	19	24	29	34	39	44	49	54	59	64	69	74	
	0	18	42	76	290	1054	908	258	51	8	8	1	6	3	4

At least half of the vehicles were traveling in the 30 - 34 mph range or a lower speed. The average speed for all classified vehicles was 32 mph with 45.7 percent exceeding the posted speed of 30 mph. The HI-STAR found 45.7 percent of the total vehicles were traveling in excess of 30 mph. The mode speed for this traffic study was 30 mph and the 85th percentile was 35.11 mph.

CLASSIFICATION

Chart 2 lists the values of the eight classification bins and the total traffic volume accumulated for each bin.

			Ch	art 2			
0	21	28	40	50	60	70	80
to	to ·	to	to	to	to	to	>
20	27	39	49	59	69	79	
2624	61	28	8	4	1	1	0

Most of the vehicles classified during the study were Passenger Cars. The number of Passenger Cars in the study was 2,685 which represents 98.50 percent of the total classified vehicles. The number of Small Trucks in the study was 28 which represents 1.00 percent of the total classified vehicles. The number of Trucks/Busses in the study was 8 which represents 0.30 percent of the total classified vehicles. The number of Tractor Trailers in the study was 6 which represents 0.20 percent of the total classified vehicles.

HEADWAY

During the peak time period, on 04/14/2004 at 06:00 PM the average headway between the vehicles was 23.53 seconds. The slowest traffic period was on 04/15/2004 at 12:00 AM. During this slowest period, the average headway was 3600.0 seconds.

WEATHER

The roadway surface temperature over the period of the study varied between 37 and 105 degrees Fahrenheit. The HI-STAR determined that the roadway surface was Dry 100.00 percent of the time.

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HI-Star ID: 6784 Street: S.B.Fairfield bet Wilson&Central State: II City: Lombard County: DuPage			! (Lane Oper Poste	n: 04 : : ΕΡ ed: 3 Γ Fac	0	M End: 04/15/2004 11:00 AM Hours: 48:00 Period: 60 Raw Count: 2727 AADT Count: 1364									
NC97 - mph Date & Time Range	0 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 >	Total
04/13/2004 [11:00 AM-12:00 PM] 04/13/2004 [12:00 PM-01:00 PM] 04/13/2004 [01:00 PM-02:00 PM] 04/13/2004 [02:00 PM-03:00 PM] 04/13/2004 [03:00 PM-04:00 PM] 04/13/2004 [05:00 PM-05:00 PM] 04/13/2004 [05:00 PM-06:00 PM] 04/13/2004 [06:00 PM-07:00 PM] 04/13/2004 [07:00 PM-08:00 PM] 04/13/2004 [08:00 PM-09:00 PM] 04/13/2004 [09:00 PM-10:00 PM] 04/13/2004 [10:00 PM-11:00 PM] 04/13/2004 [11:00 PM-11:00 PM]	0 0 0 0 0 0 0 0	0 1 0 1 1 0 0 0 0 0	3 0 2 0 4 0 0 0 1 1 2 0	2 5 0 2 1 2 5 2 1 2 0 0	8 7 7 8 4 8 14 11 7 2 0	22 47 25 26 36 37 47 32 42 15 15 6 4	34 44 24 27 43 65 39 38 26 12 15 2	9 8 14 8 8 12 15 12 7 5 4 0	3 1 2 1 1 2 1 1 2 2 0 0	0 0 1 0 1 0 0 0 0 0	3 1 0 0 1 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0	85 114 75 73 100 126 122 99 92 45 38 8
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HI-Star ID: 6784 Street: S.B.Fairfield bet Wilson&Central State: II City: Lombard County: DuPage	Begin: 04/13/2004 11:00 AM														VI	
NC97 - mph Date & Time Range	0 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 >	Total
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