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DEPARTMENT OF INFRASTRUCTURE ENGINEERING

INITIAL TRAFFIC EVALUATION

TO: Transportation Advisory Committee

FROM: Jason L. Mammone, P.E., Director of Engineering

DATE: November 27, 2013

SUBJECT: Traffic Calming Request #2012-001

Purpose

The Transportation Advisory Committee (TAC), at their 11/12/13 meeting, reviewed the traffic calming request form (#2012-001) submitted by Meaghan Santom of 64 Harvard Street. Based upon the information provided in the form, Ms. Stanton's concerns were the speed at which vehicles travel on Harvard Street and the volume of vehicles that utilize Harvard Street as a cut-through street to avoid the Square to access Washington Street. The TAC determined that this request warranted an initial evaluation to determine the actual speeds and volumes on Harvard Street and requested that the Engineering Department investigate this matter. This report summarizes the findings of the Engineering Department.

Study Area

Harvard Street is a north/south thickly settled residential through street with a pavement width of approximately 25 feet between High Street and Brookdale Avenue. Harvard Street was repaved in the summer of 2011. There is generally a sidewalk on both sides of the street throughout its length. Vehicles are parked sporadically along the side of the roadway by residents.

The prima facie speed limit on Harvard Street is 30 mph. A prima facie speed limit is a default speed limit that applies when no other specific speed limit is posted. As stated in the latest version of the Commonwealth of Massachusetts Driver's Manual; unless posted otherwise, your speed would not be reasonable and proper if you drive over:

- 20 mph in a school zone
- 30 mph in a thickly settled or business district
- 40 mph outside a thickly settled or business district
- 50 mph on a highway outside a thickly settled or business district

2013 Observations

The Town of Dedham utilized a Jamar Radar Recorder to log the speed and volume of vehicles on Harvard Street during the period beginning November 19, 2013 and ending November 22, 2013. The counter was located on a utility pole at station 4+44 which is located between #64 and #68 Harvard Street (See Attached Locus Plan).

Harvard Street

The volume of traffic expressed as average daily traffic (ADT) on Harvard Street was found to be 407 vehicles per day, with 76% of vehicles travelling northbound and 24% traveling southbound. The combined average speed for both directions was found to be 20 mph. The combined 85th percentile speed for both directions was found to be 25 mph. The 85th percentile speed is significant since it is used to determine appropriate speed limit postings and eligibility requirements for traffic calming. The 85th percentile speed indicates that the majority of the vehicles are travelling below the prima facie speed limit of 30 mph.

Crash Data

The Engineering Department also analyzed crash data utilizing the most recent 2004-2010 data available from the Massachusetts Highway Department to determine if the subject area was experiencing a higher than normal rate of accidents. Upon review of the MassHighway data, it was determined that there was 1 accident on Harvard Street. For comparison purposes, there were over 4,000 crashes in Dedham during that same seven year time period.

Conclusion

Traffic calming is not recommended for Harvard Street based upon the following:

- Harvard Street does not meet the eligibility requirements for traffic calming as a means to mitigate speeding since the measured 85th percentile speed of 25mph is not greater than 5 mph above the prima facie speed limit of 30 mph.

- Although it does appear that Harvard Street is used as a cut-through for vehicles trying to access Washington Street, the ADT of 407 vehicles per day appears to be consistent with other residential streets in Dedham.

- Pedestrian and bicycle safety does not appear to be an issue since Harvard Street has a sidewalk along the entire length of the westerly side of Harvard Street and along a majority of the easterly side of Harvard Street. Also, Harvard Street experiences an extremely low percentage of accidents.

Attachments: Harvard Street Locus Map
Combined Speed Statistics Report
Traffic Volume Report

HARVARD STREET
REQUEST #2012-001
LOCUS MAP

DEDHAM GIS

TOWN OF DEDHAM, MASSACHUSETTS

Town Of Dedham
Engineering Department
55 River Street
Dedham, MA 02026
(781) 751-9350

Site Code: 00000019
Station ID: Sta 4+44
On utility pole between #64 & #68

COMBINED - Northbound, Southbound

Report for 11/19/2013 12:05:47 PM to 11/22/2013 2:12:07 PM

SPEED STATISTICS - 15 to 70+ by 5 MPH

Speed in MPH	1 - 15	16 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45	46 - 50	51 - 55	56 - 60	61 - 65	66 - 70	71 - 75	76 - 999
Count	231	434	439	166	22	1	0	0	0	0	0	0	0	0
Percent	17.9	33.6	34.0	12.8	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Over Speed	15	20	25	30	35	40	45	50	55	60	65	70	75	999
Count	1062	628	189	23	1	0	0	0	0	0	0	0	0	0
Percent	82.1	48.6	14.6	1.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Percentile	5%	10%	15%	45%	50%	55%	85%	90%	95%
Speed	12	14	15	20	20	21	25	27	28

Average (Mean) 20

Pace Speed 16-25
Number in Pace 873
Percent in Pace 67.5

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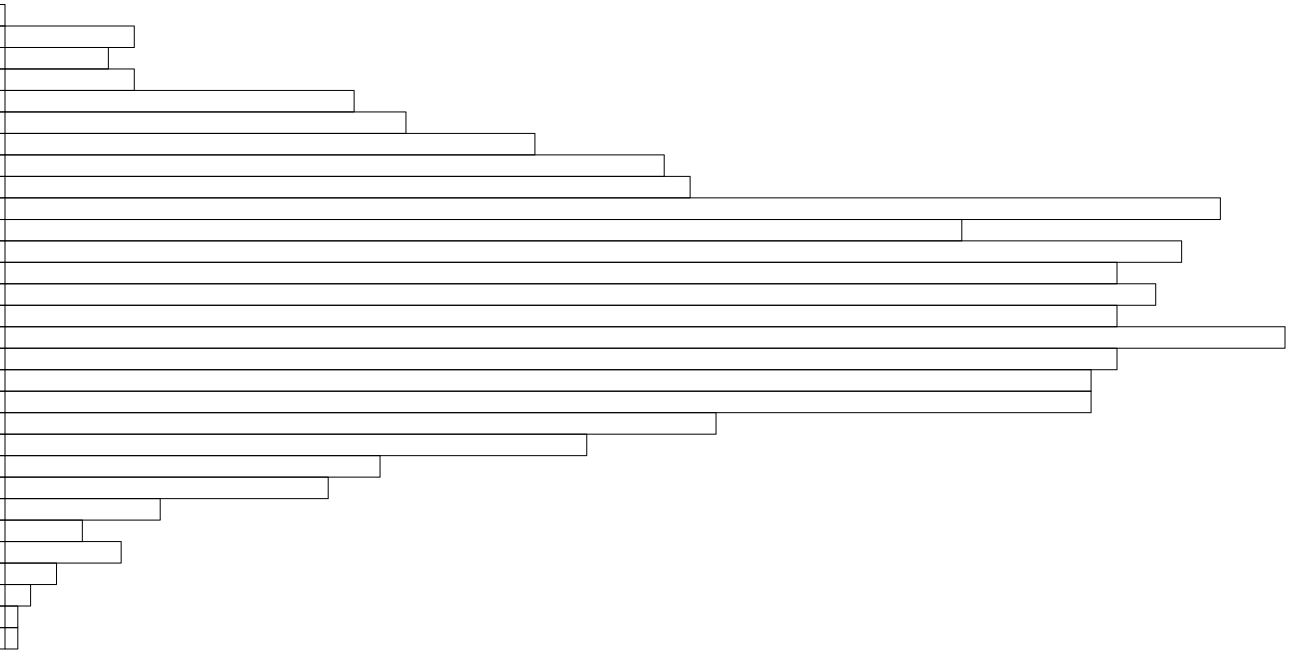
COMBINED - Northbound, Southbound

Speed	Volume
8	10
9	8
10	10
11	27
12	31
13	41
14	51
15	53
16	94
17	74
18	91
19	86
20	89
21	86
22	99
23	86
24	84
25	84
26	55
27	45
28	29
29	25
30	12
31	6
32	9
33	4
34	2
35	1
36	1



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Engineering Department

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Start	18-Nov-13		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	Northbound	Southbo	Northbo	Southbo	Northbo	Southbo	Northbo	Southbo	Northbo	Southbo	Northbo	Southbo	Northbo	Southbo	Northbo	Southbo
12:00 AM	*	*	*	*	0	0	1	1	2	0	*	*	*	*	1	0
01:00	*	*	*	*	1	0	3	0	0	0	*	*	*	*	1	0
02:00	*	*	*	*	1	0	0	0	1	0	*	*	*	*	1	0
03:00	*	*	*	*	0	0	1	0	1	1	*	*	*	*	1	0
04:00	*	*	*	*	1	1	2	2	1	0	*	*	*	*	1	1
05:00	*	*	*	*	2	0	2	0	2	2	*	*	*	*	2	1
06:00	*	*	*	*	10	5	8	3	4	4	*	*	*	*	7	4
07:00	*	*	*	*	**20**	8	12	5	23	6	*	*	*	*	18	6
08:00	*	*	*	*	20	7	15	4	19	7	*	*	*	*	18	6
09:00	*	*	*	*	18	6	23	4	23	**8**	*	*	*	*	**21**	6
10:00	*	*	*	*	9	**12**	18	6	**25**	5	*	*	*	*	17	**8**
11:00	*	*	*	*	19	5	**25**	**10**	18	7	*	*	*	*	21	7
12:00 PM	*	*	*	*	21	5	26	7	19	8	*	*	*	*	22	7
01:00	*	*	19	4	25	8	**28**	**10**	**24**	**11**	*	*	*	*	24	**8**
02:00	*	*	20	2	20	7	16	6	5	1	*	*	*	*	15	4
03:00	*	*	29	5	**26**	7	28	8	*	*	*	*	*	*	**28**	7
04:00	*	*	**30**	**8**	19	4	22	7	*	*	*	*	*	*	24	6
05:00	*	*	27	6	24	**12**	17	5	*	*	*	*	*	*	23	8
06:00	*	*	22	4	22	6	20	4	*	*	*	*	*	*	21	5
07:00	*	*	15	3	13	3	20	8	*	*	*	*	*	*	16	5
08:00	*	*	15	5	11	3	11	3	*	*	*	*	*	*	12	4
09:00	*	*	9	3	6	5	11	2	*	*	*	*	*	*	9	3
10:00	*	*	1	1	5	0	7	1	*	*	*	*	*	*	4	1
11:00	*	*	1	1	2	0	7	0	*	*	*	*	*	*	3	0
Lane	0	0	188	42	295	104	323	96	167	60	0	0	0	0	310	97
Day	0		230		399		419		227		0		0		407	
AM Peak					07:00	10:00	11:00	11:00	10:00	09:00					09:00	10:00
Vol.					20	12	25	10	25	8					21	8
PM Peak			16:00	16:00	15:00	17:00	13:00	13:00	13:00	13:00					15:00	13:00
Vol.			30	8	26	12	28	10	24	11					28	8

Comb. Total	0	230	399	419	227	0	0	407

ADT ADT 408 AADT 408