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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: May 6, 2019

SUBJECT: Traffic Calming Request #2019-001 – Winfield Street / Overlook Avenue

Purpose

The Transportation Advisory Committee (TAC), at their 04/10/19 meeting, reviewed the traffic calming request form (#2019-001) submitted by Tracy Forbes of 73 Winfield Street. Based upon the information provided in the form Ms. Forbes's concerns are the speed at which vehicles travel, pedestrian and bicycle safety, difficulty crossing the street, and sight distance issues for Winfield Street and Overlook Avenue, particularly in the area of the curve in the roadway where Winfield Street turns into Overlook Avenue. The TAC determined that this request warranted an initial evaluation on Winfield Street and Overlook Avenue and requested that the Engineering Department investigate this matter. This report summarizes the findings of the Engineering Department.

Study Area

The study area encompasses the entire section of Winfield Street and Overlook Avenue in their entirety.

Winfield Street

Winfield Street is a north/south thickly settled residential through street with a pavement width of approximately 22 to 24 feet. Winfield Street is approximately 1,000 feet (0.2 miles) in length extending from the East Street to Overlook Avenue. There are no continuous sidewalks on either sides of the roadway for its entire length. Some of the residents utilize Winfield Street for on-street parking.

Overlook Avenue

Overlook Avenue is a north/south thickly settled residential through street with a pavement width of approximately 22 to 24 feet and street length of approximately 600 feet (0.1 miles) extending from Winfield Street to Vincent Road. There are 4.5 to 5 foot wide continuous

asphalt sidewalks on both sides of the roadway. There are no continuous sidewalks on either sides of the roadway for its entire length. Some of the residents utilize Overlook Avenue for on-street parking.

The prima facie speed limit on all roadways within the study area is 25 mph. A prima facie speed limit is a default speed limit that applies when no other specific speed limit is posted. According to Massachusetts General Laws (MGL), Chapter 90, Section 17 & Section 17c; unless posted otherwise, your speed would not be reasonable and proper if a motor vehicle is operated in excess of:

- 20 mph in a school zone
- 25 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

Observations (Speed & Volume)

Since Winfield Street and Overlook Avenue run continuously with each other, the data collected will be attributed for both roadways. The Town of Dedham utilized a Jamar Radar Recorder to log the speed and volume of vehicles during the period beginning April 22, 2019 and ending April 26, 2019. The radar was setup on Winfield Street within the curve where Winfield Street turns into Overlook Avenue. This radar was located on Winfield Street on a utility pole at station 9+66 which is located between #72 Winfield Street and #43 Overlook Avenue (See Attached Locus Map).

The volume of traffic expressed as average daily traffic (ADT) and the speed data collected for Winfield Street/Overlook Avenue is shown below in the following table:

Table 1 – Traffic Data Station 9+66

<i>Direction of Traffic</i>	<i>ADT</i>	<i>Peak Hour Volume</i>	<i>Peak Volume Time</i>	<i>Speed Limit</i>	<i>85th Percentile Speed</i>	<i>Average Speed</i>
Southbound	49 (59%)	6	7 - 8 pm	25 mph ^a	25 mph	22 mph
Northbound	34 (41%)	4	4 - 5 pm	25 mph ^a	22 mph	18 mph
Combined	84	8	5 – 6 pm	25 mph ^a	25 mph	20 mph

^a – Prima Facie Speed Limit

The combined average speed for both directions was found to be 20 mph for Winfield Street/Overlook Avenue. The combined 85th percentile speed for both directions was found to be 25 mph. The 85th percentile speed is the speed at or below which 85 percent of vehicles travel and is the national standard utilized to determine if the speed on a given roadway is in excess, at or below the speed limit. Based upon the data, there is not an apparent speeding issue occurring along these roadways.

Crash Data (Traffic Collisions)

The Engineering Department analyzed crash data utilizing the most recent 2016-2018 data available from the Dedham Police Department to determine if the subject area was experiencing a higher than normal rate of accidents.

Table 2 – Crash Data

Road	Total # of Crashes	Crashes Per Year
Winfield St – Overlook Ave	0	0

Based upon this data, there are no overriding roadway geometric safety issues.

GIS Data (Pedestrian Generators & Residential Density)

The Engineering Department utilized our latest Geographic Information System (GIS) data to collect the types of pedestrian generators and determine the residential density located within a 1,000 foot buffer of the study area.

Pedestrian generators are those facilities that are considered points of interest that pedestrians travel to, such as parks, community centers, Town/neighborhood centers, libraries, public transit stations, churches and public schools. Based upon the available data, there are no pedestrian generators within the 1,000 foot buffer area.

Based upon the available data, the 1,000 foot buffer area (only considering residential properties within Dedham) has approximately 1 Three-Family Residential Dwelling, 2 Two-Family Dwellings and 262 Single-Family Dwellings.

Scoring

According to the latest version of the Town’s Traffic Calming Policy, for a roadway to qualify for traditional traffic calming measures, the petitioned roadway must score more than 50 points utilizing the scores calculated from the 6 criteria including; Speed, Volume, Pedestrian Route, Traffic Collisions, Pedestrian Generators and Residential Density. The table below summarizes the scoring for each criterion.

Table 3 - Scoring

Criteria	Score (Winfield St-Overlook Ave)
Speed – Based upon how many mph the combined 85 th percentile speed is over the speed limit. 2 points awarded for each mph over the speed limit from 1 to 5 mph over the speed limit and 4 points awarded for each mph over the speed limit starting at 6 mph and greater over the speed limit	0
Volume – 1 point awarded for every 100 vehicles of average daily traffic (ADT)	0
Pedestrian Route – 10 points awarded if no continuous sidewalk exist on both sides of the roadway or 5 points awarded if there is only a continuous sidewalk on one side of the roadway	10
Traffic Collisions – 2 points awarded for each preventable collision in a 3 year period that occurred along the subject roadway. 8 points awarded if a collision involved a pedestrian or bicyclist.	0
Pedestrian Generators – 3 points awarded for every park, community center, library, public transit station or church located within 1,000 feet of the subject roadway. 10 points awarded for each public school within 1,000 feet of the subject roadway	0
Residential Density – 1 point awarded for every 50 dwelling units within 1,000 feet of the subject roadway	5
TOTAL SCORE	15

Conclusion

Traffic calming is not recommended for Winfield Street/Overlook Avenue based upon the following conclusions.

- These roadways do not meet the eligibility requirements for traditional traffic calming measures since it did not score greater than 50 points based upon the criterion listed in Table 3.
- These roadways experience an 85th percentile speed of 25 mph which indicates that there is not a speeding issue.
- Based upon the 85th percentile speed of 25 mph, there is not a line of sight issue for the corner where Winfield Street meets Overlook Avenue.

Although the Engineering Department does not recommend traditional traffic calming measures for Winfield Street/Overlook Avenue, we do recommend the following low-cost traffic calming measures that could be utilized and/or taken on by the concerned residents and neighbors of these roadways.

- Purchasing a Step2 Kid Alert Visual Warning System – These can be purchased at Toys R’ Us, Wal-Mart, Amazon.com and other similar retail and online stores for about \$25 to \$35. The Step2 Kid should be placed at the end of your driveway so it is visible to motorists. This should only be placed out during times when kids are actually outside playing in the yard. By having it out all the time, it will reduce its effectiveness. Studies have shown that when used properly, it usually aids in the reduction of vehicle speeds.



Photo of Step 2 Kid Alert

- Work with your neighbors to park your cars on either side of the street in a staggered fashion as to reduce the openness of the roadway while still allowing for the safe passage of emergency response vehicles (i.e. Police, Ambulance, Fire Engine). This measure physically narrows the roadway making the motorist slow down to negotiate by the parked vehicles.
- Coordinate with the Police Department to see if they can place their mobile “Your Speed Is” indicator sign on Winfield Street/Overlook Avenue a couple of time throughout the year.

Cc: Board of Selectmen

Attachments: Winfield Street / Overlook Avenue Locus Map
Winfield Street / Overlook Avenue Neighborhood Locus Map
Combined Speed Statistics Report
Traffic Volume Report



Legend

- Winfield Street
- Overlook Avenue





**WINFIELD STREET / OVERLOOK AVENUE
REQUEST #2019-001
LOCUS MAP**





Legend

-  Study Roadways
-  1000' Buffer



**LOCUS MAP
WINFIELD ST/OVERLOOK AVE NEIGHBORHOOD
MAY 2019**



TOWN OF DEDHAM, MASSACHUSETTS



Town of Dedham Engineering Department

55 River Street
Dedham, MA 02026
(781) 751-9350

COMBINED

Report for 4/22/2019 11:00:00 AM to 4/25/2019 12:59:59 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	27	104	101	31	1	0	0	0	0	0	0	0	0	0
Percent	10.2	39.4	38.3	11.7	0.4	0.0	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	237	133	32	1	0	0	0	0	0	0	0	0	0	0
Percent	89.8	50.4	12.1	0.4	0.0	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	14	15	16	20	21	21	25	26	27					

Average 20
(Mean)

Pace Speed 16-25
Number in 205
Pace
Percent in 77.7
Pace



Town of Dedham Engineering Department

55 River Street
Dedham, MA 02026
(781) 751-9350

Site Code: 00000042
Station ID:

Latitude: 0' 0.0000 South

COMBINED

Speed	Volume
8	1
9	1
10	0
11	3
12	5
13	2
14	6
15	9
16	16
17	23
18	20
19	22
20	23
21	32
22	28
23	19
24	12
25	10
26	12
27	11
28	3
29	4
30	1
31	0
32	1



Town of Dedham Engineering Department

55 River Street
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Site Code: 0000042
Station ID: STA 9+66
On Utility Pole between #72 Winfield &
#43 Overlook
Latitude: 0' 0.0000 Undefined

Start Time	22-Apr-19		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South
12:00 AM	*	*	0	1	1	1	0	0	*	*	*	*	*	*	0	1
01:00	*	*	0	0	0	0	0	0	*	*	*	*	*	*	0	0
02:00	*	*	0	0	0	0	0	0	*	*	*	*	*	*	0	0
03:00	*	*	1	0	0	0	0	0	*	*	*	*	*	*	0	0
04:00	*	*	0	0	0	0	0	0	*	*	*	*	*	*	0	0
05:00	*	*	0	0	0	0	0	0	*	*	*	*	*	*	0	0
06:00	*	*	1	1	0	0	1	0	*	*	*	*	*	*	1	0
07:00	*	*	3	1	3	1	1	0	*	*	*	*	*	*	2	1
08:00	*	*	1	2	1	1	3	1	*	*	*	*	*	*	2	1
09:00	*	*	1	0	1	2	2	4	*	*	*	*	*	*	1	2
10:00	*	*	0	0	1	1	3	1	*	*	*	*	*	*	1	1
11:00	1	1	2	2	3	4	3	3	*	*	*	*	*	*	2	2
12:00 PM	4	4	2	1	2	3	4	4	*	*	*	*	*	*	3	3
01:00	1	4	2	1	2	0	*	*	*	*	*	*	*	*	2	2
02:00	3	5	1	2	3	8	*	*	*	*	*	*	*	*	2	5
03:00	2	3	4	4	3	5	*	*	*	*	*	*	*	*	3	4
04:00	3	2	2	1	6	7	*	*	*	*	*	*	*	*	4	3
05:00	1	3	5	5	3	6	*	*	*	*	*	*	*	*	3	5
06:00	3	3	4	7	5	2	*	*	*	*	*	*	*	*	4	4
07:00	2	3	0	4	3	10	*	*	*	*	*	*	*	*	2	6
08:00	1	5	2	7	1	4	*	*	*	*	*	*	*	*	1	5
09:00	0	5	0	3	1	3	*	*	*	*	*	*	*	*	0	4
10:00	0	1	2	0	1	0	*	*	*	*	*	*	*	*	1	0
11:00	0	1	0	0	0	0	*	*	*	*	*	*	*	*	0	0
Lane Day	21	40	33	42	40	58	17	13	0	0	0	0	0	0	34	49
AM Peak	11:00	11:00	07:00	08:00	07:00	11:00	08:00	09:00	-	-	-	-	-	-	07:00	09:00
Vol.	1	1	3	2	3	4	3	4	-	-	-	-	-	-	2	2
PM Peak	12:00	14:00	17:00	18:00	16:00	19:00	12:00	12:00	-	-	-	-	-	-	16:00	19:00
Vol.	4	5	5	7	6	10	4	4	-	-	-	-	-	-	4	6

Comb. Total	61	75	98	30	0	0	0	83
ADT	ADT 84	AADT 84						