



Diane Nichols Tradd
 Assistant City Manager/DPD Director

Craig Thomas
 Deputy Director

MEMORANDUM

EMD

TO: Eileen M. Donoghue, City Manager

FROM: Diane N. Tradd, Assistant City Manager/DPD Director

DATE: March 26, 2019

SUBJECT: MOTION OF 1/15/19 BY COUNCILOR CONWAY
 REQUEST CITY MANAGER HAVE PROPER DEPARTMENT PREPARE A
 TRAFFIC STUDY REGARDING THE INTERSECTION OF FOSTER AND
 WESTFORD STREETS

The Transportation Engineer has made a site visit and has investigated the crash history at this intersection, as well as at the adjacent intersection of Foster and Princeton Streets. Both intersections have had numerous crashes. Below is a summary of the past 3 years.

Summary of Crashes, 2016-2019		
Year	Westford & Foster	Princeton & Foster
2016	8	4
2017	6	3
2018	8	6
2019 (to date)	1	4
Total	23	17

Both of these intersections meet the warrant for a 4-way stop sign, per MUTCD guidelines, as follows:

- 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.

From the LPD accident reports provided, the following reasons for the crashes were given:

Reasons for Crashes, by intersection		
	Westford & Foster	Princeton & Foster
Tried to cross/thought they had time	10 (43%)	5 (29%)
Didn't Stop/Didn't see Stop sign	6 (26%)	7 (41%)
Didn't see vehicle/cyclist	6 (26%)	2 (12%)
Thought it was a 4-way STOP	1 (4%)	3 (18%)

A speed study has not been performed for either crossing street, but the speed of the through traffic was mentioned as a factor in a number of the crashes. Given that the #1 cause of crashes at Westford and Foster and the #2 cause at Princeton and Foster were 'Trying to cross the intersection,' it is apparent that driver error is a large factor in crashes at these two locations. However, visibility/sight distance is also a large part of the problem.

At the intersection of Foster and Westford Streets, the following issues exist:

- On Foster headed northbound, there is a large, high hedge of shrubbery on the left which blocks the driver's view of westbound traffic on Westford Street.
- On Foster Street headed southbound, there is a chain link fence with a hedge of shrubbery on the right, which obscures the driver's view of eastbound traffic on Westford Street.
- The parking lines on Westford Street extend all the way to the intersection, which implies that vehicles can park within 20' of the intersection. One corner of Foster Street has a sign reading, "No Parking Here to Corner."
- Note that on Foster Street headed southbound, there are two STOP signs, on both sides of the road, which are clearly visible. The single STOP sign on Foster Street headed northbound is also clearly visible.

At the intersection of Foster Street and Princeton Boulevard, the following issues exist:

- There are utility poles on three corners of the intersection.
- On Foster Street headed southbound, there is a chain link fence with a hedge of shrubbery on the right, which obscures the driver's view of eastbound traffic on Princeton Boulevard.
- The single STOP signs on Foster Street from both directions are clearly visible.

The Transportation Engineer recommends the following:

1. Make both intersections a 4-way STOP. Requires a 60-day trial traffic ordinance, the installation of 4 new STOP signs and pavement markings (adding stop bars on the pavement).
2. At Westford and Foster Streets, install three (3) additional, "No Parking Here to Corner" signs to help with visibility.
3. Implementing a traffic study at both intersections to see if additional controls are needed. The traffic study would include traffic counts and turning movement counts followed by an analysis of the data collected to determine if a traffic signal is warranted. The standard rate for a consultant to perform the traffic study is approximately \$4,000-\$5,000 per intersection. Data collection only would be approximately \$750-\$1,000.

NV/ns

cc: Natasha Vance, P.E., Transportation Engineer