

Government of the District of Columbia
Department of Transportation



September 23, 2016

Tom Quinn, ANC 3E04
5322 41st Street, NW
Washington, DC 20015

Re: All-Way Stop Control request: 41st Street, NW and Chesapeake Street, NW

Dear Tom Quinn:

Thank you for your request for an All Way Stop Control (AWSC) at the intersection of 41st Street, NW and Chesapeake Street, NW. This letter summarizes the results of a traffic engineering study conducted by the District Department of Transportation (DDOT) to determine the suitability of installing this type of traffic control at the subject intersection. The study's findings are presented below, along with steps DDOT will be taking to improve safety at the intersection.

Basis of Study

The federal standard on traffic control devices, the *Manual on Uniform Traffic Control Devices* (MUTCD, 2009), provides that multi-way (all-way) stop control can be useful as a safety measure at intersections if certain traffic conditions exist, however, it should not be used indiscriminately. The 2009 MUTCD guidelines require that a traffic engineering study be performed before an all-way stop control is installed at an intersection. DDOT's traffic engineering evaluation of the intersection was conducted utilizing criteria outlined in the MUTCD, as well as other nationally-recognized standards, including guidance from the Institute of Transportation Engineers (ITE) and the Federal Highway Administration (FHWA).

Factors considered in this evaluation include traffic volumes in the area, speed data, crash statistics, roadway geometry, location of pedestrian generators (including schools), and general traffic control conditions of the intersection. Field investigations and observations were conducted at different times of the day on various days of the week.

Study Findings

The investigation of current intersections conditions, as well as a thorough review of all the data collected and gathered, resulted in the following findings:

- Per the District of Columbia's Functional Classification System, 41st Street, NW and Chesapeake Street, NW are both designated as Local roadways at the study intersection.

- Forty-first Street, NW is a two-lane, northbound one-way street, approximately 24 ft. wide with on-street parking on both sides and 2-hour parking restriction from 7:00 a.m. to 8:30 p.m. for Zone 3 Residential Permit Parking Holders.
- Chesapeake Street, NW is a two-lane, bi-directional east-west roadway, approximately 28 ft. wide with on-street parking on both sides with 4-hour parking restriction from 7:00 a.m. to 8:30 p.m., Monday to Friday.
- Traffic on 41st Street NW, traveling northbound is uncontrolled; however, traffic on Chesapeake Street, NW, traveling eastbound is controlled by a STOP sign.
- The results from peak-hour turning movement counts, conducted on June 29th, 2016, show the following:
 - Forty-first Street NW had a peak-hour traffic volume of approximately 104 units of traffic per hour (uph) during the a.m. peak and 137 uph during the p.m. peak. These volume units include 51 and 36 pedestrians in the a.m. and p.m. peak hour, respectively, crossing 41st Street using both crosswalks.
 - Chesapeake Street NW had a peak-hour traffic volume of 172 uph during the a.m. peak and 128 uph during the p.m. peak. These volume units include 71 pedestrians in the a.m. and 58 p.m. peak hour respectively, crossing Chesapeake Street using the crosswalk.
- There were no reported crashes at the study intersection from January 1, 2013 to December 31, 2015.
- The available stopping sight distance (SDD) at the intersection for right turns from Chesapeake Street exceeds the minimum AASHTO requirement of 150 feet.
- The traffic control signs in the study area are in good condition. However, the pedestrian crossing pavement markings at the intersection are in poor condition. The double-yellow pavement marking on Chesapeake Street approach is also worn out.

Based on these findings, the operating conditions at the intersection of 41st Street, NW and Chesapeake Street, NW does not meet criteria stipulated by federal standards for the installation of multi-way stop control for the following reasons:

- Based on peak hour observations, the study intersection does not operate at the minimum required volume threshold levels of at least 300 units per hour for eight (8) hours on one roadway, and conflicting traffic of 200 per hour for the same hours on the other roadway.

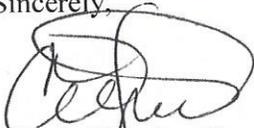
Numerous ITE and FHWA studies have shown that **stop compliance and safety decreases with the installation of all-way stop control when the federal guidelines are not followed and the warrants are not met.** For this reason, DDOT will not install this type of control at the intersection. However, DDOT will perform following improvements to enhance traffic safety for all roadway users at the study intersection.

- Refurbish the pedestrian crosswalk pavement markings on all approaches of the intersection.

- Refurbish the pedestrian crosswalk pavement markings on all approaches of the intersection.
- Refurbish the double yellow pavement markings on the Chesapeake street approach of the intersection.
- The tree blocking the STOP sign at the westbound approach of Chesapeake Street, NW should be trimmed to improve visibility.

If you have any further questions or concerns, please do not hesitate to contact me at (202) 671-4607 or connie.wheeler@dc.gov .

Sincerely,



Connie Wheeler, Supervisory Engineering Technician
Transportation Operations Administration
District Department of Transportation (DDOT)