MUTCD

Section 2B.05 STOP Sign Applications

Guidance:
STOP signs should be used if engineering judgment indicates that one or more of the following conditions
exist:
A. Intersection of a less important road with a main road where application of the normal right-of-way rule
would not be expected to provide reasonable compliance with the law;
B. Street entering a through highway or street;
C. Unsignalized intersection in a signalized area; and/or
D. High speeds, restricted view, or crash records indicate a need for control by the STOP sign.

Standard:
Because the potential for conflicting commands could create driver confusion, STOP signs shall not be
installed at intersections where traffic control signals are installed and operating except as noted in Section
4D.01.
Portable or part-time STOP signs shall not be used except for emergency and temporary traffic control zone purposes.

Guidance:
STOP signs should not be used for speed control.
STOP signs should be installed in a manner that minimizes the numbers of vehicles having to stop. At intersections where a full stop is not necessary at all times, consideration should be given to using less restrictive
measures such as YIELD signs (see Section 2B.08).

Once the decision has been made to install two-way stop control, the decision regarding the appropriate street to stop should be based on engineering judgment. In most cases, the street carrying the lowest volume of
traffic should be stopped.
A STOP sign should not be installed on the major street unless justified by a traffic engineering study.

Support:
The following are considerations that might influence the decision regarding the appropriate street upon which to install a STOP sign where two streets with relatively equal volumes and/or characteristics intersect:
A. Stopping the direction that conflicts the most with established pedestrian crossing activity or school walking routes;
B. Stopping the direction that has obscured vision, dips, or bumps that already require drivers to use lower
operating speeds;
C. Stopping the direction that has the longest distance of uninterrupted flow approaching the intersection; and
D. Stopping the direction that has the best sight distance to conflicting traffic.
The use of the STOP sign at highway-railroad grade crossings is described in Section 8B.08. The use of

the
STOP sign at highway-light rail transit grade crossings is described in Section 10C.04.

Section 2B.06 STOP Sign Placement

Standard:

The STOP sign shall be installed on the right side of the approach to which it applies. When the STOP sign is installed at this required location and the sign visibility is restricted, a Stop Ahead sign (see Section 2C.29) shall be installed in advance of the STOP sign.

The STOP sign shall be located as close as practical to the intersection it regulates, while optimizing its visibility to the road user it is intended to regulate.

STOP signs and YIELD signs shall not be mounted on the same post.

Guidance:

Other than a DO NOT ENTER sign, no sign should be mounted back-to-back with a STOP sign in a manner that obscures the shape of the STOP sign.

Support:

Section 2A.16 contains additional information about separate and combined mounting of other signs with STOP signs.

Guidance:

Stop lines, when used to supplement a STOP sign, should be located at the point where the road user should stop (see Section 3B.16).

If only one STOP sign is installed on an approach, the STOP sign should not be placed on the far side of the intersection.

Where two roads intersect at an acute angle, the STOP sign should be positioned at an angle, or shielded, so that the legend is out of view of traffic to which it does not apply.

Where there is a marked crosswalk at the intersection, the STOP sign should be installed in advance of the crosswalk line nearest to the approaching traffic.

Option:

At wide-throat intersections or where two or more approach lanes of traffic exist on the signed approach, observance of the stop control may be improved by the installation of an additional STOP sign on the left side of the road and/or the use of a stop line. At channelized intersections, the additional STOP sign may be effectively placed on a channelizing island.

Support:

Figure 2A-2 shows examples of some typical placements of STOP signs.

Section 2B.07 Multiway Stop Applications

Support:

Multiway stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multiway stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multiway stop control is used where the volume of traffic on the intersecting roads is approximately equal.

The restrictions on the use of STOP signs described in Section 2B.05 also apply to multiway stop applications.

Guidance:

The decision to install multiway stop control should be based on an engineering study.

The following criteria should be considered in the engineering study for a multiway STOP sign installation:

A. Where traffic control signals are justified, the multiway stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

B. 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.

C. Minimum volumes:

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and

2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the

highest hour, but
3. If the 85th-percentile approach speed of the major-street traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the above values.
D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.
Option:
Other criteria that may be considered in an engineering study include:
A. The need to control left-turn conflicts;
B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to reasonably safely negotiate the intersection unless conflicting cross traffic is also required to stop; and
D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multiway stop control would improve traffic operational characteristics of the intersection.

RESOLUTION
OF THE COUNCIL OF THE CITY OF BOWIE, MARYLAND
ADOPTING A POLICY CONCERNING THE
INSTALLATION OF MULTIWAY STOP SIGNS

WHEREAS, the Council of the City of Bowie desires to provide guidance for the evaluation of circumstances relating to the installation of multiway stop signs within the City; and

WHEREAS, the City of Bowie frequently receives requests from citizens for the installation of multiway stop signs on residential streets; and

WHEREAS, citizens petition the City for the installation of these signs believing that such signs will reduce speed and traffic volume, and improve safety; and

WHEREAS, transportation data and research indicate that multiway stop signs installed at unnecessary locations actually serve to increase speeds after the stop, and increase the potential for accidents; and

WHEREAS, the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) published by the U.S. Department of Transportation, and adopted by the Maryland Department of Transportation, provides generally accepted warrants for the installation of multiway stop signs; and

WHEREAS, the MUTCD provides a reliable tool for determining where multiway stop signs should or should not be installed; and

WHEREAS, the City Council deems it appropriate to add local warrants to the standards included within the MUTCD and to consider those local additions in its evaluation of multiway stop sign placement situations; and

WHEREAS, those local additional warrants will include, but may not be limited to, the presence of unusual road design conditions such as curves or hills which result in reduced sight distance, the presence of youth oriented facilities such as playgrounds, bike trails or schools, the proximity of high traffic volume generators such as shopping centers, or an identifiable history of high police enforcement or accident investigation efforts.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Bowie, Maryland that, in its evaluation of requests for the installation of multiway stop signs, it shall use the warrants as established in the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) as published by the U.S. Department of Transportation and adopted by the Maryland Department of Transportation, as well as local warrants developed in a substantially similar form to those as attached hereto as Exhibit "A" and incorporated herein by reference, and as may be revised from time to time, as aids in determining whether a multiway stop shall be installed at a certain location.

INTRODUCED AND PASSED at a meeting of the Bowie City Council on November 2, 1992.

Richard J. Logue, Mayor

Attest:

Pamela A. Fleming, City Clerk

EXHIBIT A

ALL WAY STOP EVALUATION WORKSHEET

Intersection _____
(Major) (Minor)

Qualified for All-way Stop based on 50 or more points:

Yes _____ No _____ Points _____

Qualified for All-way Stop based on MUTCD warrants:

Yes _____ No _____

Attach sketch of Intersection with Visibility Data.

Local Warrant

	Points	Possible
1. Unusual Road Design Conditions Resulting in Reduced Sight Distance		
a. Curves	_____	10
b. Hills	_____	10
2. Presence of Youth Oriented Facilities.		
a. Playground/Bike Trail	_____	10
b. Schools	_____	10
3. Proximity of High Traffic Volume Generator		
a. Shopping Center	_____	10
b. Other	_____	10
4. Identifiable History of High Police Enforcement For:		
a. Speeding Violations	_____	10
b. Accident History	_____	10

5. Volume Criteria

a. Average AM and PM Peak Hours Total Intersection Volume

Vehicles	Points	Possible
501 or More		10
451 - 500		9
401 - 450		8
351 - 400		7
301 - 350		6
251 - 300		5
201 - 250		4
151 - 200		3
101 - 150		2
51 - 100		1
50 or Less		0
Subtotal	_____	

b. Traffic Volume Difference (Percent of Traffic on Major Street)

Percent of Traffic		Possible
50 - 54		10
55 - 58		9
59 - 62		8
63 - 66		7
67 - 70		6
71 - 74		5
75 - 78		4
79 - 82		3
83 - 86		2
87 - 90		1
91 or More		0
Subtotal	_____	
Total		100