





TOPIC 10: ADVANCED WARNING FLASHER

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Office of Traffic, Safety & Technology</p> 		<p>In this topic you will be introduced to Advanced Warning Flashers (AWF).</p> <p>The information presented in this section is from the MUTCD Section 4M and the Traffic Signal Timing and Coordination Manual. A copy of the relevant sections from these documents is included at the end of this topic.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Office of Traffic, Safety & Technology</p> 	 <p>– Advanced Warning Flasher (AWF)</p>	<p>Picture of an Advanced Warning Flasher.</p>



Advanced Warning

– Advanced Warning Flasher



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Front and rear view of AWF.



Advanced Warning

– Advanced Warning Flasher



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Advanced Warning

➤ Advanced Warning Flasher

- The Advanced Warning Flasher (AWF) is a device which, at certain high speed locations, has been found to provide additional information to the motorist describing the operation of the traffic signal
- Advance Warning Flasher can assist the driver in making safer and more efficient driving decisions

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The purpose of the Advanced Warning Flasher.



Advanced Warning



➤ Advanced Warning Flasher

- The additional information includes a sign/flasher combination to get the driver's attention and a specific notice that the driver must prepare to stop

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The Minnesota AWF system consists of a flasher and a sign located on main street approaches to a high speed signalized intersection. It is connected to the traffic signal in such a way that when the main street green is about to change to yellow, the flasher is turned on to warn the approaching drivers of the impending change. Basically, the purpose of an optimally designed combination of traffic signal and AWF system is twofold: 1) to inform the driver in advance of a required drive decision (prepare to stop) and 2) to minimize the number of drivers that will be required to make that decision.

Pictures of the Advanced Warning Flasher (AWF) are shown on slides 2, 3 and 4.

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Office of Traffic, Safety & Technology</p> 	<h2 style="text-align: center;">Advanced Warning</h2> <ul style="list-style-type: none"> ➤ Advanced Warning Flasher Consideration <ul style="list-style-type: none"> – Isolated or unexpected signalized intersection – Limited sight distance – Dilemma Zone – Accidents – Heavy Truck Volume – Engineering Judgment 	<p>The guidelines in the Traffic Signal Timing and Coordination Manual indicate when the installation of advanced warning flashers (AWF) for signal change interval should be considered. Due to the complex nature of traffic flow characteristics, these guidelines should be applied along with engineering judgement. Guidelines should be reviewed for each prospective installation.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Office of Traffic, Safety & Technology</p> 	<h2 style="text-align: center;">Advanced Warning</h2> <ul style="list-style-type: none"> ➤ Guidelines for Installation (MUTCD 4M.2) <ul style="list-style-type: none"> – Advanced Warning Flasher – Advanced Warning Flasher Sign Placement – Leading Flash – Detector Placement 	<p>The AWF shall flash yellow in a wig-wag fashion manner prior to the termination of the green, and during yellow and red periods of the signal.</p> <p>The flasher shall be set back from the intersection as shown on the next slide.</p> <p>The leading flash is the amount of time, prior to the signal turning yellow, that the AWF flashes.</p> <p>The detection of the intersection shall be determined without regard to the AWF.</p>

Advanced Warning

➤ Guidelines for Installation (MUTCD 4M.2)

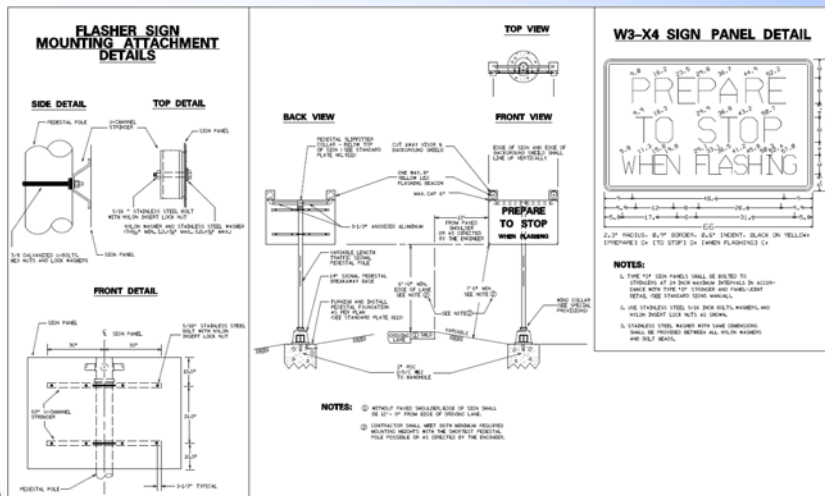
Posted Speeds (mph)	AWF Placement		Leading Flash (seconds)
	meters	feet	
40	170	560	8.0
45	170	560	7.0
50	215	700	8.0
55	215	700	7.0
60	260	850	8.0
65	260	850	7.5

The AWF set back location based on the posted speed (mph). This table can be found in the MN MUTCD.



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Advanced Warning



The figure to the left is an Advanced Warning Flasher Detail. A copy of the most current version of this can be downloaded from the website.



DATE	REVISIONS	SYSTEM 001	T.C.	S.D.P. NO.	000001-0001
		WATER ADDRESS	T.C.	DESIGNED BY	STATE PROJ. NO.
		WATER 001	T.C.	STATE PROJ. NO.	STATE PROJ. NO.

ADVANCE WARNING FLASHER DETAILS
TRAFFIC CONTROL SIGNAL SYSTEM

STATE PROJ. NO. 17-100 SHEET NO. 9 OF 12 SHEETS

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Handout

**Excerpts from the Traffic Signal Timing and Coordination Manual,
and the Minnesota Manual on Uniform Traffic Control Devices (MN
MUTCD), Chapter 4**

For the latest version, please visit:

www.dot.state.mn.us/trafficeng/publ/index.html