

Memorandum

via Electronic Mail

Subject: **INFORMATION:** MUTCD – Interim Approval for the use of Automated Flagger Assistance Devices in Temporary Traffic Control Zones (IA-4)

Date: December 1, 2004

From: Regina S. McElroy /s/EDL Huckaby (for)
Director, Office of Transportation Operations

Reply to HOTO-1
Attn. of:

To: Division Administrators
Resource Center Directors
Federal Lands Highway Division Offices

Purpose: The purpose of this memorandum is to issue an Interim Approval for the optional use of STOP/SLOW Automated Flagger Assistance Devices (AFADs) under certain specific conditions in Temporary Traffic Control (TTC) zones to reduce flagger exposure to highway user traffic.

The AFADs are portable traffic control systems that assist a flagger operation for short-term lane closures, on two-lane highways. The AFADs are used to remove flaggers from the traveled way in TTC zones. A flagger(s) can operate an AFAD by using a radio control unit or by using a cable directly attached to the AFAD. In either case, the flagger can be positioned well away from the roadway and moving traffic. The primary benefit is to enhance the safety of flaggers, while also maintaining positive control of traffic approaching the TTC zone.

Research on Automated Flagger Assistance Devices: The following two specific AFADs have undergone extensive formal experimentation in accordance with Section 1A.10 of the MUTCD, and have been deemed by FHWA to be successful under the conditions tested:

- "Autoflagger" – Formal Experimentation conducted by the Minnesota Department of Transportation(#6-102 (Ex)).
- "J4 Flagger Workstation" – Formal Experimentation conducted by the Illinois Department of Transportation (6-178 (Ex)).

The evaluation reports from the DOT agencies involved in the experimentation process for the type of devices defined in this Interim Approval include information on the purpose, evaluation method and key comments resulting from the experimentation with the specific device tested by the agency. Several key comments from the Final Evaluation Report submitted by agencies conducting the experimentation are replicated as follows:

Autoflagger – Minnesota DOT

- In operation since 1996.
- The use of the autoflagger enhances safety for both the construction workers and the traveling public. The higher visibility provided by the autoflagger allows the driver to see the work zone earlier and prepare for it. In addition, the flagger

operation will no longer require the operator to move in and out of traffic, which is consistently the most dangerous part of a (traditional) flagging operation.

- From a survey done of motorists passing through the TTC zone where the autoflagger was present.
- 85 percent of drivers were not confused by the auto flagger
- 87 percent of drivers would have acted as if it was a normal flagging operation
- 83 percent of drivers believe that Minnesota DOT should continue to use the autoflagger

J4 Flagger Workstation – Illinois DOT

- In operation since 1991.
- In all but two instances there were no observed problems with motorists reacting to the device. Except for these two incidents, all motorists stopped (within) 100 feet of the flagger and only minimal flagger hand signaling was required. This was encouraged since our experience with the flagger operations is that motorists normally stop too close to the flagger.
- The device was used in various types of weather including moderate fog, light rain, overcast, intermittent rain, as well as clear and sunny. The device was subjected to rough usage without any significant mechanical problems.
- The use of the larger 24-inch STOP/SLOW signs coupled with the use of the strobe lights provided better visibility compared to standard 18-inch STOP/SLOW signs.

Conditions of Interim Approval: The use of AFADs shall conform to the attached technical provisions, which describe the Standards, Guidance, Options, and Support that will govern use of AFADs under this Interim Approval. These technical provisions are generic and are intended to govern any and all specific products that currently exist or that may be developed as a STOP/SLOW AFAD.

Interim Approval for the use of AFADs to improve the safety of flaggers will be granted to any jurisdiction that submits a written request to the Director of the Office of Transportation Operations. A State may request Interim Approval for all jurisdictions in that State. The request must state the location(s) where the device will be used and the jurisdiction's agreement to comply with item F at the bottom of page 1A-6 of the 2003 MUTCD, Section 1A.10, which states:

An agreement to restore the site(s) of the interim approval to a condition that complies with the provisions in this Manual within 3 months following the issuance of a final rule on this traffic control device. This agreement must also provide that the agency sponsoring the interim approval will terminate use of the device or application installed under the interim approval at any time that it determines significant safety concerns are directly or indirectly attributable to the device or application. The FHWA's Office of Transportation Operations has the right to terminate the interim approval at any time if there is an indication of safety concerns.

Additional Related Information: The two specific AFADs described above have both received certification from the FHWA Office of Safety as category 4 devices and are therefore currently compliant in accordance with NCHRP 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features" for the use of traffic control devices on the

National Highway System (see MUTCD Section 6F.01). Agencies may determine their applicability for use on other categories of highways under their jurisdiction.

Other AFADs which receive certification by the FHWA Office of Safety as NCHRP 350 compliant and which satisfy the attached technical provisions for AFADs may be used on the National Highway System and other highways as determined by highway agency policy. Any questions concerning this Interim Approval should be directed to Mr. Pete Rusch at peter.rusch@fhwa.dot.gov or by telephone at 608-239-1852.

Attachment: Technical Provisions for AFADs