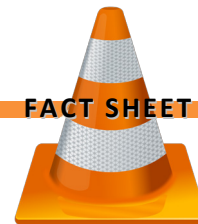


Automated Flagger Assistance Devices

FACT SHEET



Fall 2017

Automated Flagger Assistance Devices (AFADs) are remotely operated temporary traffic control equipment with high visibility signage, 12 inch red signal heads, and automated flags. These devices are intended to direct and control traffic using only one person. In a typical flagging operation, flaggers are located at each end of the lane closure and use Stop/Slow paddles to direct traffic while positioned in the travel lane. AFADs are used to remove flaggers from the traveled way in Temporary Traffic Control (TTC) zones. A flagger can operate an AFAD by using a radio control unit or 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 of this arrangement is to enhance the safety of flaggers while also maintaining positive control of traffic approaching the TTC zone.



Source: <http://northamericatraffic.com>

It is important to recognize that AFADs do not eliminate the need for qualified flaggers at work zones. Personnel should still be traditionally trained and available to step in as a manual flagger in case of a malfunction.

Two types of AFADs are recognized in Part 6E of the Manual on Uniform Traffic Control Devices (MUTCD). The first type uses a remotely controlled Stop/Slow sign mounted on a trailer or movable cart. The second type uses a remotely controlled red and yellow lens and a mechanically gated arm. A mechanically gated arm is required on the Red/Yellow lens device and may be added to the Stop/Slow device to improve conspicuity and driver compliance.

All AFAD applications must abide by the specific standards set forth in the MUTCD Section 6E.04. In accordance with National Cooperative Highway Research Program (NCHRP) Report 350 and the American Association of State Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware, AFADs must satisfy applicable crashworthiness standards based on device weight. Detailed specifications for Stop/Slow AFADs are provided in Section 6E.05; similarly, detailed specifications for Red/Yellow AFADs are listed in Section 6E.06.

Factors Affecting the Use of AFADs

Work Duration: AFADs are typically used for short-term or intermediate-term lane or road closures such as bridge maintenance, haul road crossings, guardrail repair, and pavement patching. Their use is discouraged during long-term closures. Most states permit the use of AFADs during daytime or nighttime operations; but, if used at night, the AFAD must be illuminated in accordance with Section 6E.08 of the MUTCD.



U.S. Department
of Transportation

Federal Highway
Administration

AFAD Placement: It is preferable to place the AFAD within the shoulder of the road; however, if the shoulder is not adequate, the AFAD may encroach on the travel lane provided that the appropriate sight distance is available. If this is the case, the gate arm must not extend into the adjacent lane.

Traffic Volume: AFADs have been successfully implemented on roads with a wide range of average daily traffic (ADT) counts. Although the MUTCD does not provide any limitations in this area, some States have established supplementary guidelines. For example, Virginia allows AFADs in temporary lane closures on two-way roads when the ADT is below 12,000 vehicles per day, whereas Minnesota restricts their use to roads with less than 1,500 ADT.

Operational Considerations for AFADs

There are two methods of using AFADs in a work zone. The first method employs an AFAD at each end of the work zone while the second method employs an AFAD at one end and a flagger at the other end. Two separate flaggers are commonly used to operate in either method; however, a single flagger may remotely control two flagging stations provided that the flagger has a clear view of each station, and of approaching traffic in both directions. In accordance with the MUTCD and crashworthiness standards, advanced warning signs must alert traffic in both directions of an impending stop and, when not in use, the AFADs must be removed from the clear zone and the advanced warning signs must be covered.



Source:
<http://www.autoflagger.com>

Limitations When Using AFADs

- AFADs should only be used in situations where there is one lane of approaching traffic that needs to be controlled. Additionally, since AFADs are not traffic control signals, they should not be used to replace traffic signals or other continuously operating traffic control devices.
- While AFADs are a method to improve the safety of flagging operations, they do not eliminate the need for trained flaggers. AFAD operators must be certified flaggers trained on how to operate the device correctly, and the operator must be able to step in and manually control the lane closure in the event that an AFAD malfunctions.
- While removing the flaggers from the direct flow of traffic improves the flaggers' safety, there are situations where drivers may need to receive additional verbal warnings and/or directions from flagging personnel. In these cases, placing certified flaggers on the shoulder of the road may be a more appropriate option to ensure that the drivers' needs are met. This could mean eliminating the AFAD altogether, or simply stationing the AFAD operator closer to the flow of traffic to assist road users.

To learn more, contact:

Ed Cashman
Work Zone Coordinator
Florida DOT
(850) 414-4314
EdwardCashman@dot.state.fl.us

Juan Pava
State Work Zone Safety Engineer
Illinois DOT
(217) 557-7229
Juan.Pava@illinois.gov

Andy Heidtke
Statewide Work Zone Design Engineer
Wisconsin DOT
(414) 220-6802
Andrew.Heidtke@dot.wi.gov

For additional state contacts see online Best Practices Guide at <https://ops.fhwa.dot.gov/wz/practices/best/bestpractices.htm>



U.S. Department
of Transportation
**Federal Highway
Administration**

FHWA-HOP-17-042