

Tennessee DOT's AFAD Experience

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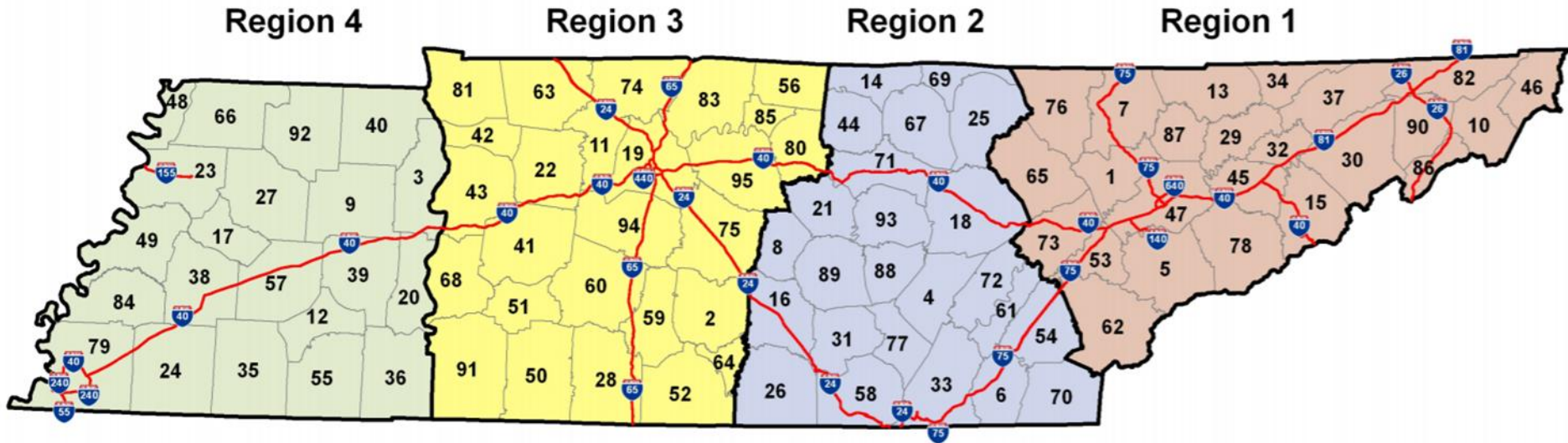
Up to 2018...

- AFADs available on general equipment rental contract, but rarely used by TDOT field crews.
- Our assessment of AFADs at ATSSA Expo was that the specs were all over the place.



2022-2023 Field Trial

- **Purchased 1 set of AFADs for each of our 4 Regions.**
- **Rotated the sets around to each District (12) to test.**
- **Intended to implement trial in 2021 but COVID funding issues pushed it back...**



2022-2023 Field Trial

- **Developed detailed guidance for AFAD usage**

Automated Flagging Assistance Device Pilot Guidance

Tennessee Department of Transportation | March 2022



2024 – AFAD Pilot Expansion

- Survey responses from field crews overwhelmingly supported the expansion of the AFAD program.
- Next step was to purchase an additional set for each of our 12 Operations Districts (\$312k)
- Our challenge was: where do we find the money?



Using HSIP \$ for Worker Safety Initiatives

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Highway Safety Improvement
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Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance.

The HSIP is legislated under Section 148 of Title 23, *United States Code* (23 U.S.C. 148) and regulated under Part 924 of Title 23, Code of Federal Regulations (23 CFR Part 924). The HSIP consists of three main components, the Strategic Highway Safety Plan (SHSP), State HSIP or program of highway safety improvement projects and the Railway-Highway Crossing Program (RHCP). In addition, some states also have a High Risk Rural Roads (HRRR) program if they had increasing fatality rate on rural roads. [Click here to view a short video about the HSIP.](#)

Additional information on each of these program components can be found by clicking the links at the left or the icons below.

[Integrating the Safe System Approach with the Highway Safety Improvement Program](#)

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Vulnerable Road Users (VRU) Safety Special Rule

Program Overview

The BIL established a new Special Rule under 23 U.S.C. 148(g)(3) for VRU safety.

Vulnerable road users are defined in 23 U.S.C. 148(a)(15) as "a nonmotorist—'(A) with a fatality analysis reporting system person attribute code that is included in the definition of the term 'number of non-motorized fatalities' in section 490.205 of title 23, Code of Federal Regulations (or successor regulations); or '(B) described in the term 'number of non-motorized serious injuries' in that section."

While the statutory definition for "vulnerable road user" includes both "number of nonmotorized fatalities" and "number of serious injuries," the VRU Safety Special Rule only considers non-motorized fatalities, per 23 U.S.C. 148(g)(3). Non-motorized fatalities, by reference to 23 CFR 490.205, refer to fatalities with the FARS person attribute codes for Pedestrian, Bicyclist; Other Cyclist, and Person on Personal Conveyance.

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A **vulnerable road user** is a nonmotorist with a fatality analysis reporting system (FARS) person attribute code for pedestrian, bicyclist, other cyclist, and person on personal conveyance or an injured person that is, or is equivalent to, a pedestrian or pedalcyclist as defined in the ANSI D16.1-2007. (See 23 U.S.C. 148(a)(15) and 23 CFR 490.205). A vulnerable road user may include people walking, biking, or rolling. Please note that a vulnerable road user:

- Includes a highway worker on foot in a work zone, given they are considered a pedestrian.

*-FHWA Vulnerable Road User Safety Assessment Guidance
October, 2022*

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Good morning:

Thank you for your inquiry on HSIP funding and eligibility for your proposed work zone related projects.

Based on our discussions, we have concluded that the following proposed projects are eligible for HSIP funds:

- ***Work Zone Equipment:*** Cone Deployment Baskets, Lane Blade Debris Removal Equipment, and Automated Flagger Assistance
- ***Software/Data Sharing Devices:*** HAAS devices, motorist information for CMV (commercial motor vehicles) platforms (i.e, in-cab CMV alerts), and One.Network platform

Next Steps...

- With the last of the most recently purchased units just now getting into the field, crews are already asking if we can get more.
- Requesting approval to use HSIP \$\$ to purchase 12 more sets in late 2025.
- We shall see...



Thank you!

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