

Flagger Safety & Innovative Vest Designs

(credit – Todd Morrison P.E. – ATSSA Flagging Instructor, TCS, and TCDS)

When thinking about flagging, the main thing to consider is safety. You want to do all you can to remain safe on the job and keep others safe. One thing you can do to be safer is to be visible when working on the roadway. The best way to be visible is to wear a safety vest. Below is information regarding safety vest now and for the next generation.

DO I NEED A SAFETY VEST?

Yes. Per the National MUTCD at least a Class 2 High Visibility Safety Vest is required of anyone in the work zone exposed to construction equipment, work vehicles or traffic. Class 3 is recommended for the Flagger at night, with many states requiring Class 3 for Flaggers at night. Class 2 and 3 refers to the amount of retroreflective material on the garment and where it is placed. Class 3 has more retroreflective material, and it is placed at different points on your body to make you look more like a person and less like a large traffic drum. The background of the garment shall be fluorescent orange-red, fluorescent yellow-green or a combination of the two as defined in the ANSI standard. The best way to tell (whether or not) your garment meets the requirement is to look at the tag. It will indicate whether it meets Performance Class 2 or 3 and the latest ANSI standards.

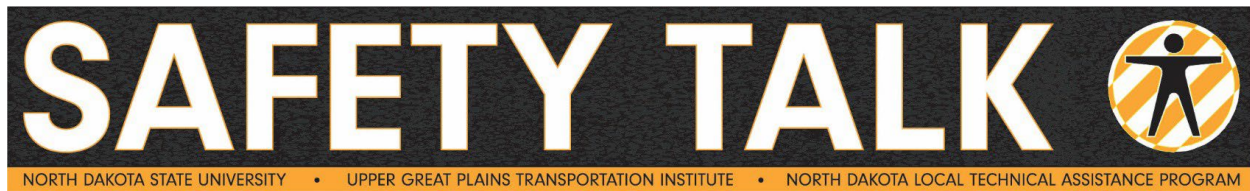
THE NEXT GENERATION OF SAFETY VESTS

Normal safety vests are required to be seen at least 1000 feet away. To help with visibility you can purchase safety vests with LED lights. These lighted vests are not only improvement coming to safety vests. The Royal Melbourne Institute of Technology is working on a “Health Vest.” The vest monitors the wearers body temperature and heart rate. It then sends this data to a smartphone app that alerts the user to any anomalies. It was developed to combat heat related illnesses on construction sites. The developers plan on pairing this up with glasses for the wearer. They will be to see their own health data in real time. More information on the “Health Vest” can be found at <https://phys.org/news/2016-03-smart-vests-workers-safety-heart.html>.

The InZoneAlert Safety Vest developed by Virginia Tech uses Connected Vehicle Technology to provide a two-way warning between the wearer of the vest and the motorist. When a collision is imminent, the vest will use the Connected Vehicle Technology to send a message to the driver through their car. The vest will alert the wearer with LED lights, sound and vibrations.



This is an example of a Class 3 safety vest, which must have at least 1,240 sq.inches of safety yellow or safety orange background and at least 310 square inches of reflective striping.



Results from initial testing indicate that the InZoneAlert vest successfully alerts the worker and driver (91% success rate). The InZoneAlert vest also provides a valuable 5-6 second reaction time for workers before any potential collision (Forsyth, Martin, and Bowman 2014). Virginia Tech and Audi have recently teamed up to take advantage of this new technology. Here's a link to a video on how it works <https://www.youtube.com/watch?v=S-1WNCmAxDY&t=1s>.

Today there are many options when it comes to Safety Vests. To reduce your chances of being one of the 842 individuals killed in work zones in 2019 or the estimated 39,000 individuals injured, be sure to choose one.

Other resources:

Transportation Learning Network - TLN (you must have an LMS account to register for this training module)
TC3 Flagger Safety Training Module <https://tln.learnflex.net/users/index.aspx>

ND Safety Council Free Flagger online training: <https://www.ndsc.org/flagger-training-online/>

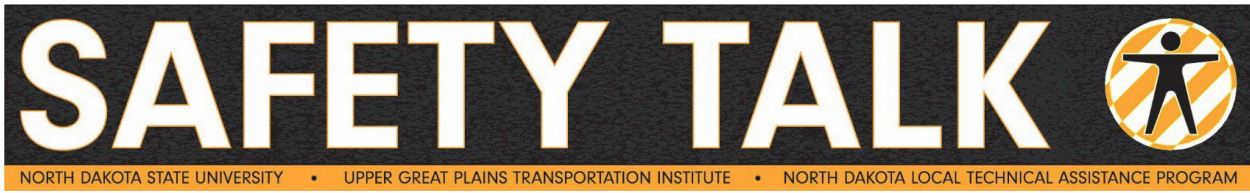
National Work Zone Safety Website: <https://workzonesafety.org/>

American Traffic Safety Services Association (ATSSA) Website: www.atssa.com



Safety Talks are published by NDLTAP in cooperation with the National Local Technical Assistance Association and participating partner organizations.





Safety Talk Sign-in Sheet Topic Flagger Safety & Innovative Vest Designs

Agency: _____

Crew: _____

Supervisor/Talk Leader: _____

Date: _____

Print Name

Signature

1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____
11.	_____	_____
12.	_____	_____

NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to: Vice Provost, Title IX/ADA Coordinator, Old Main 201, 701-231-7708, ndsu.eaaa@ndsu.edu.